



ehps2017

**31<sup>st</sup> Conference of the EHPS:**  
Innovative Ideas  
in Health Psychology


August 29 - September 2  
Padova, Italy

**CONFERENCE ABSTRACTS**


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Session Title	Aula A	Aula B	Aula C	Aula D	Aula E	Aula F	Aula G	Aula I
	Oral Session	Oral Session	Symposium	Oral Session	Symposium	Oral Session	Oral Session	Oral Session
	<p>Screening and prevention (T14) <b>Chair: Pio Enrico Ricci Bitti</b></p>	<p>Occupational health and workability – recruitment, motivation and behavior change (T18) <b>Chair: Sonia Lippke</b></p>	<p>Broadening our approaches to health behavior change: taking context into account (T12) <b>Chair: Traci Mann</b></p>	<p>Early Career Researcher Symposium: Understanding the uptake, acceptability and use of digital behaviour change interventions (T1) <b>Chair: Laura König</b></p>	<p>Novel approaches to evidence synthesis (T20) <b>Chair: Claus Vögele</b></p>	<p>Mechanisms and adherence in interventions for patients with chronic disease (T7) <b>Chair: Amy Wachholtz</b></p>	<p>Prospective studies of self – regulation processes (T4) <b>Chair: Susanne Brandstetter</b></p>	<p>Individual differences in psychological coping style: effects on health behaviours and intervention outcomes (T3) <b>Chair: Michael Mantzios</b></p>
09:00	<p><b>Anastasia Tsipa</b> Effectiveness of interventions to increase colorectal cancer screening: a systematic review, meta-analysis and meta-regression</p>	<p><b>Don Byrne</b> Does psychological screening at recruitment predict future health status in law enforcement officers?</p>	<p><b>Rachel Burns</b> Concordance in partners' health behaviours around a diabetes diagnosis: results from the Lifelines Cohort Study</p>	<p><b>Jan Keller</b> Augmenting fruit and vegetable consumption by an online intervention: psychological mechanisms</p>	<p><b>Marie Johnston</b> Constructing a behaviour change ontology for extracting and synthesising evidence in the Human BehaviourChange Project</p>	<p><b>STATE OF THE ART</b></p>	<p><b>Martin Dempster</b> Change in psychological distress in oesophageal cancer carers and associations with changes in illness perceptions</p>	<p><b>Loek van der Donk</b> Depressive symptoms in cancer patients and healthy controls: differences and similarities</p>
09:15	<p><b>Sylvia Roozen</b> State of the art and setting priorities for fetal alcohol spectrum disorder(s) prevention and management</p>	<p><b>Karen Deeny</b> Commissioning for compassion: the perceptions of healthcare commissioners about commissioning for positive staff experience</p>	<p><b>Keven Joyal-Desmarais</b> A dyadic approach to the Theory of Planned Behaviour: examining parent and teenager eating behaviours</p>	<p><b>Laura König</b> Who is willing to use mHealth apps? A stage model approach</p>	<p><b>Marijn de Bruin</b> Accounting for variability in control groups and reporting quality in systematic reviews of behavioural trials</p>		<p><b>Amy Wachholtz</b> Bench to bedside: comorbid pain and opioid addiction psycho-physiological data to develop novel psychotherapy interventions</p>	<p><b>Evangelos Karademas</b> Cardiac patient and spouse illness representations as mediators in the relationship between affect and wellbeing</p>
09:30	<p><b>Stephen Houghton</b> Electronic screen use and trajectories of depression: an accelerated longitudinal study of Australian adolescents</p>	<p><b>Tijana Radulovic</b> What role does self-esteem play between job insecurity and life satisfaction?</p>	<p><b>Chloe Huelsnitz</b> Small group discussion / workshop: Moving from 'me' to 'we' - How to think dyadically about health</p>	<p><b>Emma M. Carr</b> Reducing the patient interval for breast cancer: developing a digital intervention using the person-based approach</p>	<p><b>Rachael Powell</b> Understanding the contribution of intervention components: a network meta-analysis approach to psychological preparation for surgery</p>	<p><b>Laurence Ribeyre</b> Vestibular schwannoma surgery: personality facets, illness perceptions and coping strategies influencing long term postural recovery</p>	<p><b>Sofie van Rongen</b> Having less: the induction of a scarcity mindset and its effect on snack consumption</p>	
09:45	<p><b>Ronan O'Carroll</b> Reciprocity priming and organ donation</p>	<p><b>Sonia Lippke</b> What motivates individuals with temporary disability pension to return to work?</p>	<p><b>Mary Panos</b> An examination of the mechanisms by which an acute exercise session influences subsequent eating behavior</p>	<p><b>Eimear Morrissey</b> Digital interventions to manage hypertension: general practitioners perspectives</p>	<p><b>Xinru Li</b> Identification of effective combinations of behavior change techniques using meta-CART</p>	<p><b>Annie Jones</b> I can see clearly now: developing an active visualisation device for ART in South Africa</p>	<p><b>Ari Haukkala</b> Self-control, socioeconomic status, physical activity and weight changes in a 7-year population-based study</p>	<p><b>Jenny Groarke</b> Does listening to music support coping with induced stress? An RCT</p>
10:00	<p><b>Anastasios Bastounis</b> Testing the validity of an integrated resilience model in predicting mental well-being in adolescents</p>	<p><b>Elin Frögéli</b> Development of a behaviour change intervention for preventing stress-related ill health among new registered nurses</p>	<p><b>Heather Scherschel</b> "But it makes me feel better!" Sacrificing dietary health goals for emotional comfort</p>	<p><b>Olga Perski</b> Developing an operational definition and a self-report measure of engagement with e-/mHealth interventions: critical reflections</p>	<p><b>David French</b> Systematic reviews of systematic reviews: communicating personalized disease risk to change behaviour as an exemplar</p>	<p><b>Krista van Mourik</b> Motivation to participate in parenting interventions: a Q methodology study among parents with adolescents</p>	<p><b>Susanne Brandstetter</b> Beliefs about medicines and medication adherence: a prospective study in persons with chronic lung disease</p>	<p><b>Shahnaz Safav</b> Coping style, social support and sexual distress in infertility: a path analysis</p>
10:15	<p><b>Antanas Goštautas</b> Behavioural risks for mortality of ischemic heart disease in longitudinal study</p>	<p><b>Zsuzsanna Kerekes</b> Exploring perceptions of the effect of psychosocial hazards on workers' mental health</p>	<p><b>Lisa Auster-Gussman</b> Small group discussion / workshop: The Whole story: Specifying the mechanisms of health behavior change using mixed-methods.</p>	<p><b>Felix Naughton</b> Discussion</p>	<p><b>Molly Byrne</b> Discussion</p>	<p><b>Hanna Kampling</b> Psychological interventions for patients with Parkinson's disease: a systematic meta-review</p>	<p><b>Hannah Durand</b> Medication adherence for resistant hypertension: treatment-related beliefs, experiential feedback, and habit strength</p>	-
10:30	Coffee Break (ESU University Restaurant)							

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	Oral Session	Oral Session	Symposium	Symposium	Symposium	Symposium	Oral Session	Oral Session
	Eating habits in children and adolescents (T10) <b>Chair: Emely de Vet</b>	Coping and adjustment in chronic illness (T5) <b>Chair: Trudie Chalder</b>	Innovative ideas in physical activity and walking research targeting older adults (T8) <b>Chair: Nanna Notthof</b>	e-Pain: technology-based innovations for the study of pain (T1) <b>Chair: Edmund Keogh</b>	Women's health in socio-cultural context (T17) <b>Chair: Karen Morgan</b>	New developments in approach bias modification across clinical disorders and health behaviours (T13) <b>Chair: Reinout Wiers</b>	Improving health care service delivery (T16) <b>Chair: Noleen McCorry</b>	Risk communication (T15) <b>Chair: Anne Marie Plass</b>
11:00	<b>Karolina Zarychta</b> Healthy and restrictive eating as mediators between appearance evaluations and BMI reduction in healthy adolescents	<b>Laia Briones-Buixassa</b> The stress effect and the role of psychosocial factors in multiple sclerosis: a prospective study	<b>Florian Metzger</b> Walking while talking – a special kind of walking	<b>Brian McGuire</b> Translating in pain research into patient care: evidence, challenges and opportunities	<b>Anita Kinney</b> Designed for dissemination: stakeholder engagement in a genomic risk communication intervention in breast cancer survivors	<b>Reinout Wiers</b> Is approach bias modification a useful tool in smoking cessation?	<b>Kirstie McClatchey</b> Suicide risk assessment in emergency departments: a mixed-methods study of clinician practices in Scotland	<b>Myriam Pannard</b> Lived experience of French professionals practising genetic testing in oncology, a qualitative study
11:15	<b>Riikka Kaukonen</b> Associations between preschool children's temperament and vegetable and sugar-rich food intake	<b>Wieke van der Borg</b> The challenge to balance: how dialysis patients manage fatigue	<b>Nanna Notthof</b> Putting their best foot forward: walking is positively associated with social activities of homecare clients	<b>Jennifer Stinson</b> iCanCope™: User-centered design approach to develop integrated smartphone and web-based pain selfmanagement programme for adolescents	<b>Heidi Preis</b> Fear of childbirth: cross-validation and comparison between two cultures	<b>Brian Sherman</b> The effect of approach bias modification on cue-reactivity in individuals with cannabis use disorder (CUD)	<b>Noleen McCorry</b> Quality indicators in palliative care day services	<b>Josianne Kollmann</b> Speed of ageing – a new approach to risk perception?
11:30	<b>Hazel Wolstenholme</b> Fussy eating in school-aged children: a mixed-method study	<b>Anna Banik</b> Health-related quality of life and self-efficacy among patients with cardiovascular diseases: a meta-analysis	<b>Vjenka Garms-Homolová</b> The meaning of walking and gait training in nursing facilities in Germany	<b>Siobhán O'Higgins</b> Clinical effectiveness of an internet-delivered Acceptance and Commitment Therapy (ACT) intervention for chronic pain	<b>Yael Benyamini</b> The role of dispositional and situated optimism in psychological adjustment to high-risk pregnancy	<b>Timo Brockmeyer</b> Approach bias modification in bulimic eating disorders	<b>Fabiana Lorencatto</b> Do intervention components target key barriers? Review and synthesis of interventions to increase diabeticretinopathy screening attendance	<b>Christelle Chrea</b> Effects of claims and warnings on the risk perception of a novel heat-not-burn tobacco product
11:45	<b>Emely de Vet</b> Exposure to tempting foods as an intervention strategy to improve delay of gratification in children	<b>Shira Peleg</b> Changes in SAH are associated with initial and change levels of affect among cardiac patients	<b>Carl-Philipp Jansen</b> Pushing the boundaries: intervention effects on indoor life-space utilization in nursing home residents	<b>Jonathan Egan</b> Will WebMap, an on-line intervention for children with chronic pain, translate into the Irish context?	<b>Irina Todorova</b> Becoming a mother through egg donation: women's reflections in on-line discussion forums in Bulgaria	<b>Naomi Kakoschke</b> The effect of approach bias modification on healthy food consumption	<b>Joanna Bhaskaran</b> Does categorization of suicide risk affect patient outcomes? A study of emergency department presentations	<b>Fraukje Mevissen</b> The impact of (un)certainly information and source expertise on risk perception and vaccination decision making
12:00	<b>Mattea Dallacker</b> Longer meal duration increases healthy eating in children. An experimental study	<b>Ângela Maia</b> Relationship between HIV / AIDS and depressive symptomatology: analysis of individual, health and social predictors	<b>David French</b> Discussion	<b>iCANCOP eHealth Intervention</b> Video	<b>Adriana Baban</b> Biofeedback and serious game system for pelvic floor muscle training in women with urinary incontinence	<b>Boris Cheval</b> Effect of retraining approach-avoidance tendencies on an exercise task: a randomized controlled trial	<b>Ana Coneo</b> Effectiveness of a training course (RESPECT) on attitudes about causes/ management of aggression in Northern Uganda	<b>Marinella Sommaruga</b> Emotional intelligence and communication skills: preliminary results of a training in a rehabilitation team
12:15	<b>Jutta Mata</b> Happy meals are healthy meals: Family mealtime practices and their relation to child nutritional health	<b>Konstadina Griva</b> Depression predicts hospitalization in patients with coexisting diabetes and end-stage renal disease: a prospective study	<b>David French &amp; Nanna Notthof</b> Audience engagement	<b>Edmond Keogh</b> Discussion	<b>Karen Morgan</b> Discussion	<b>Reinout Wiers</b> Discussion	<b>Sara Fernandes</b> Let's play about children's hospitalization and surgery	<b>Olga Damman</b> The role of 'heart age' and infographics in helping people understand cardiovascular disease risk
12:30	Lunch (ESU University Restaurant) & EHPS Discussion Forum (Aula A)							

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	Oral Session	Oral Session	Symposium	Oral Session	Symposium	Oral Session	Roundtable	Oral Session
	Caregiving and relationships in health (T9) <b>Chair: Mariët Hagedoorn</b>	Interventions (T14) <b>Chair: Frank Eves</b>	StrokeCog Study: modelling and modifying stroke-related cognitive impairment through innovative application of health psychology principles (T7) <b>Chair: Frank Doyle</b>	Methods for building better behavior change interventions (T20) <b>Chair: Gertraud Stadler</b>	Occupational stress and job strain (T18) <b>Chair: Renato Pisanti</b>	Exercise (T12) <b>Chair: Benjamin Gardner</b>	<b>Division of Health Psychology of the British Psychological Society event</b> Training healthcare professionals in novel health psychology strategies and tools (T13) <b>Chair: Wendy Lawrence, Kate Hamilton-West</b>	Health Care Provider (HCP) - Patient communication (T15) <b>Chair: Gozde Ozakinci</b>
14:00	<b>Lorenza Entilli</b> Psychosocial support in liver transplantation. A dyadic study with patients and their family caregivers	<b>Gareth J Hollands</b> Changing environments to change behaviour: development of TIPPME (Typology of Interventions in Proximal Physical Micro Environments)	<b>Anne Hickey</b> Addressing post-stroke cognitive impairment through innovative application of health psychology principles	<b>Rachel Carey</b> A taxonomy of modes of delivery of behaviour change interventions: development and evaluation	<b>Renato Pisanti</b> The mediating role of self efficacy beliefs in the job demands-resources model	<b>Tom St Quinton</b> A theory-based approach to identify the critical beliefs underlying university recreational sports participation	<b>Kate Hamilton-West, Sarah Hotham</b> Training in (self-) management of long-term conditions and disabilities	<b>Barbara Bucki</b> Quality of doctor-patient communication in cardiovascular diseases and secondary preventive adherence: the role of gender
14:15	<b>Fabiola Müller</b> Daily partner responses have divergent effects on cancer patient's fatigue interference and relationship satisfaction	<b>Richard de Visser</b> Participation in alcohol abstinence challenges can lead to improvements in general well-being	<b>Daniela Rohde</b> Cognitive function and outcomes post-stroke: a five-year follow-up of the ASPIRE-S cohort	<b>Marta Marques</b> Development of population and setting taxonomies: advancing our understanding of behaviour change interventions	<b>Beata Basinska</b> Patterns of job-related affect and their relation with burnout syndrome: cross-sectional and longitudinal studies	<b>Stefanie Gomez Quiñonez</b> The importance of plan enactment for physical activity	<b>Emma Godfrey</b> PACT - Physiotherapy informed by Acceptance and Commitment Therapy	<b>Tessa Dekkers</b> Intuitive tailoring in medical consultations: how perceived patient characteristics influence physicians' communication
14:30	<b>Currie Moore</b> Prioritising the patient: a qualitative study exploring the impact of dialysis on dyadic relationships	<b>Laura Kassel</b> Prevention Network Ortenaukreis – establishing a communal network of health promotion for children and families	<b>Eithne Sexton</b> Post-stroke cognitive impairment: a systematic review of disease progression models	<b>A. Jess Williams</b> Beyond BCTs and published materials: reliability coding of behaviours and application methods within smoking cessation	<b>Margot van der Doef</b> Bullying at work: a test of the work environment hypothesis	<b>Kirsten Verkooijen</b> Psychosocial predictors of running adherence and maintenance among participants of Dutch running clinics	<b>Graciela Rovner</b> ACTiveRehab: Development of a taxonomy of patients' pain acceptance to inform triage, pre-assessment & tailoring of ACT-based rehabilitation	<b>Julie McLellan</b> Student midwives' perceived facilitators and barriers to discussing weight management with obese pregnant women
14:45	<b>Anne Haase</b> Supporting physical activity in adults with learning disabilities: exploring care-givers' attitudes. Beliefs and motivation	<b>Eleni Mantzari</b> Impact of sit-stand desks at work on energy expenditure and sedentary time: a feasibility study	<b>Niamh A. Merriman</b> Perspectives of healthcare professionals involved in providing stroke care on impact of post-stroke cognitive impairment	<b>Neza Javornik</b> Can we rely on published reports of control group support? Review of smoking cessation trials	<b>Didier Truchot</b> The Farmers Stressors Inventory. Antecedents of burnout and depression among farmers	<b>Kimberley McFadden</b> Theory of Planned Behaviour over an exercise program in adults with and without chronic disease	<b>Wendy Lawrence</b> 'Healthy Conversation Skills' to support health behaviour change	<b>Kathrina Connabeer</b> A conversation analytic study examining how general practitioners tailor lifestyle advice in primary care consultations
15:00	<b>Noa Vilchinsky</b> PTSD among cardiac patients and their caregivers	<b>Frank Eves</b> Stair climbing interventions at work; more than 700,000 reasons for caution	<b>Nora-Ann Donnelly</b> Acute care utilisation patterns post-stroke: an analysis from Ireland	<b>Stefan Grujters</b> Introducing the Numbers Needed for Change (NNC): an effect size that connects research to practice	<b>Cristiano Violani</b> Discussion	<b>Anne-Marie Selzler</b> Examining relationships of self-efficacy, performance attainments, and outcome achievement over a 1 year exercise program	<b>Wendy Lawrence</b> Facilitated discussion & debate on useful boundaries for sharing psychological expertise with nonpsychologists	<b>Clare Uytman</b> "If you've never been through it, you can't understand" An IPA exploration of prosthetist-patient communication
15:15	<b>Stephanie Alves</b> Does dyadic coping predict couple's postpartum quality of life? Exploring longitudinal actor and partner effects	-	<b>Marie Johnston</b> Discussion	 <b>Jorinde Spook</b> The Experience Room: studying food consumption in a more ecologically valid lab setting	<b>Annalisa Casini</b> Discussion	<b>Benjamin Gardner</b> The invisibility of sitting: mental representations of sedentary behaviour	Roundtable discussion	-
15:30	Interactive Posters & Coffee (ESU University Restaurant)							
17:00	<b>Keynote Lecture</b> (Aula C) <b>Fabio Lucidi</b> Social cognitive mechanisms regulating doping intention and use: research and intervention ( <b>Chair: Claudio Gentili</b> )							

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	mHealth for understanding and changing behaviour (T1) <b>Chair: Falko Sniehotta</b>	Obesity and weight management in children (T10) <b>Chair: David Hevey</b>	7 <sup>th</sup> methods in health psychology symposium: The replication crisis in (health) psychology: reflections and solutions (T20) <b>Chair: Rik Crutzen</b>	Colorectal cancer screening: innovation in understanding screening behaviour, developing interventions and disseminating research results (T14) <b>Chair: Katie Robb</b>	Dyadic regulation processes to promote health and well-being in romantic couples (T9) <b>Chair: Corina Berli, Janina Lüscher</b>	Applications of health psychology for investigating fatigue: clinical and non-clinical perspectives (T6) <b>Chair: Daniel Powell</b>	Lifestyle and self-management intervention in chronic disease (T7) <b>Chair: Silke Schmidt</b>	Novel approaches in self-regulation (T4) <b>Chair: Simone Dohle</b>
09:00	<b>Diana Taut</b> Positive and negative emotions' effects on food preferences: evidence from an online experimental study	<b>Varda Soskolne</b> Protective factors, not only risk factors for child obesity among low socio-economic populations	<b>Martin S. Hagger</b> A pre-registered multi-lab replication of ego-depletion: implications for the replication "crisis" and health psychology	<b>Katie Robb</b> Improving colorectal screening uptake: lessons from higher uptake of breast and cervical screening using mixed-methods	<b>Diana Hilda Hohl</b> Physical activity-specific support provision and self-efficacy in couples: inter-relations over time	<b>Derek Johnston</b> Fatigue in health professionals: does hard work wear you out?	<b>Jeroen Deenik</b> The effects of a multidisciplinary lifestyle-enhancing treatment for severe mentally ill inpatients (MULTI-study)	<b>Christel Salewski</b> How effective is a short CSM-based online intervention on intended flu prevention behaviour?
09:15	<b>Karoline Villinger</b> A visual analysis of the behavioural signature of eating: the case of breakfast	<b>Laura Cutler</b> Parental perceptions of their obese child's weight status and health-related quality of life	<b>Gjalt-Jorn Ygram Peters</b> How to achieve replicability: illustrations and guidelines at the hand of effect size sampling distributions	<b>Benedicte Kirkøen</b> Gender differences in acceptance for colorectal cancer screening: pain as the explanation	<b>Janina Lüscher</b> Companionship in dual-smoker couples' everyday life	<b>Johanna M. Doerr</b> Stress differentially affects fatigue in women with depression or somatic symptom disorder	<b>Lauren Schumacher</b> Preliminary results from feasibility trial of a workbook intervention to support return-to-work for cancer survivors	<b>Simone Dohle</b> The impact of implicit theories on health attitudes
09:30	<b>Samantha van Beurden</b> ImpulsePal: a smartphone app-based intervention to help people manage impulsive in-the-moment eating	<b>David Hevey</b> Capturing complexity: a network approach to understanding child and parent causal attributions in childhood obesity	<b>Matti Heino</b> Disentangling replicable mechanisms of complex interventions: what to expect and how to avoid fooling ourselves?	<b>Teresa Gavaruzzi</b> Using patients' narratives to promote colorectal cancer screening: a review and an experimental investigation	<b>Andrea B. Horn</b> Couples coping with the transition to retirement: interpersonal emotion regulation and wellbeing in daily life	<b>Trudie Chalder</b> Cancer-related fatigue and functional impairment – towards an understanding of cognitive and behavioural factors	<b>Gemma Pearce</b> Systematic meta-review of self-management support for people with type 2 diabetes	<b>Maartje van Stralen</b> Determinants of weight loss maintenance: a systematic literature review
09:45	<b>Hilmar G. Zech</b> Pulling smartphones. An app-based approach-avoidance task	<b>Jessica Gubbels</b> Interaction between parenting and childcare practices: mesosystem influences on children's energy balancerelated behaviour and overweight	<b>Rik Crutzen</b> Targeting next generations to change the common practice of underpowered research	<b>Lesley McGregor</b> Using screening practitioners as navigators in the Bowel Scope Screening Programme: a feasibility study	<b>Corina Berli</b> Goal disengagement in health behavior change: examining affective and behavioral consequences within romantic couples	<b>AnnMarie Groarke</b> Feasibility and pilot testing of an online intervention for post-treatment cancer survivors	<b>Wendy Clyne</b> Comparing two approaches to outcome measurement of an online self-management programme for people with epilepsy	<b>Meike Rosemeyer</b> Self-regulation and the embodiment of hunger
10:00	<b>Falko Sniehotta</b> Effectiveness of a digital intervention for weight loss maintenance in obese adults: the NULevel RCT	<b>Elizabeth Evans</b> Preadolescent eating disorder risk longitudinally predicts later psychological symptoms, weight-gain and lower activity in girls	<b>Marie Johnston</b> Discussion	<b>Marie Kotzur</b> Involving future users in developing colorectal cancer screening interventions: a case study	<b>Nina Knoll</b> Long-term findings from a dyadic planning intervention with couples motivated to increase physical activity	<b>Susan Carroll</b> "Finding your feet": the development of a self-management treatment for fatigue in paediatric multiple sclerosis	<b>Silke Schmidt</b> Impact of a generic transition-oriented patient education program on adolescents' patient-reported outcomes	<b>Jessica Rassart</b> Illness perceptions in adult congenital heart disease: a multi-center international study
10:15	<b>Efrat Neter</b> Better ask than tell: addressees' response to mHealth interrogative reminders	<b>Marita McCabe</b> Preadolescent boys' investment in masculine gender norms and their use of body change strategies	General discussion	<b>Ronan O'Carrol</b> Discussion	<b>Gertraud Stadler</b> Discussion	<b>Daniel Powell</b> Discussion	<b>Jacob Crawshaw</b> HCP-led interventions targeting medication adherence following acute coronary syndrome: systematic review and meta-analysis	<b>Meaghan Barlow</b> Goal adjustment capacities and health: a meta-analysis
10:30	Coffee Break (ESU University Restaurant)							

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	Interventions to change eating behavior (T13) <b>Chair: Eva Kemps</b>	Well-being in the presence of adversity (T11) <b>Chair: Suzanne Skevington</b>	Job demand and resources – theory and model testing (T18) <b>Chair: Anne Kouvonen</b>	New directions in individual difference research in dermatological care: putting the patient's needs first (T5) <b>Chair: Andrew Thompson, Kerry Montgomery</b>	Innovative ideas in online computer-tailoring (T1) <b>Chair: Eline Smit</b>	Sex and smoking (T12) <b>Chair: Karlijn Massar</b>	Complex research designs in health psychology: chance or challenge? (T20) <b>Chair: Urte Scholz, Aleksandra Luszczynska</b>	Behaviour change theory and interventions in implementation research (T15) <b>Chair: Lucie Byrne-Davis</b>
11:00	<b>Eva Kemps</b> Can attentional bias modification inoculate people to withstand exposure to food advertising?	<b>Suzanne Skevington</b> Understanding cultural resilience to the threat of climate change through quality of life analysis	<b>Johanna Frisch</b> Applying the Job-Demand-Resources Model in a student population: testing the interaction between resources and demands	<b>Andrew Thompson</b> A mixed methods survey of social anxiety, anxiety, depression, and wig use in alopecia	 <b>Eline Smit</b> Online computer-tailoring. Past, present & future	<b>Jamie Frankis</b> Harnessing salutogenesis to improve sexual health in men-who-have-sex-with-men: an empirical, assets based study	Introduction <b>Aleksandra Luszczynska</b>  Input <b>Gertraud Stadler, David French, Urte Scholz, Gerjo Kok, Nina Knoll</b>	<b>Stephen McIntyre</b> Theory use in process evaluations alongside randomised trials targeting healthcare professional behaviour change: systematic review
11:15	<b>Richie Lenne</b> Reducing sugar use in coffee with mindfulness: a painless way to cut calories	<b>Mike Jestico</b> The positive health and wellbeing of low income British men	<b>Anne Kouvonen</b> Changes in psychosocial and physical working conditions and subsequent psychotropic medication	<b>Jennifer Schmidt</b> The role of skin picking and dysmorphic concerns for impaired mental health accompanying skin conditions	<b>Dennis de Ruijter</b> Is an online computer-tailoring program for practice nurses effective in improving their smoking cessation counseling?	<b>Dimitra Strongyloou</b> Exploring emotional competency among men who have sex with men		<b>Andrea Patey</b> Changing behaviour 'more or less': do interventions include different BCTs for increasing and decreasing behaviours?
11:30	<b>Sophie Schumacher</b> Investigation of naturalistic food cravings: a two-week online diary study	<b>Shu Ling Tan</b> Physical activity, subjective health, and emotions: patterns in rehabilitation patients up to 8 years	<b>Angela Koolmees</b> Relationships between the number- and impact of negative life events, burnout and organizational support	<b>Rachael Thorneloe</b> Identifying medication belief groups in psoriasis: a latent profile analysis	<b>Felix Naughton</b> Smokers' engagement with a context-tailored cessation smartphone app: real-time engagement, context effects and disengagement profile	<b>Gaby de Lijster</b> Determinants of adolescent sexual harassment behavior: do adolescents intend to reject or stop sexual harassment?		<b>Lucie Byrne-Davis</b> Implementing health psychology to strengthen health systems in low income countries: the change exchange
11:45	<b>Sanne Raghoobar</b> To eat or not to eat: following the subtly communicated norm	<b>Behnaz Joudifar</b> Predicting model of quality of life in breast cancer: spiritual well-being, body image and coping	<b>Maria José Esposito</b> Psychosocial factors, psychological wellbeing, sleep quality and burnout levels in health and social professionals	<b>Kerry Montgomery</b> Mindfulness based cognitive therapy: effectiveness and mechanisms of action in people with visible skin conditions	<b>Maria Altendorf</b> I must not! Identifying the most autonomy-supportive message frame for online computer-tailored health communication	<b>Karlijn Massar</b> Male body dissatisfaction and relationship quality: the mediating role of sexual self-consciousness		<b>Milou Fredrix</b> Goal-setting in DAFNE: content and fidelity of the goal-setting component in a diabetes educational programme
12:00	<b>Daniela Caso</b> SMS intervention for reducing processed meat consumption: anticipated regret and self-monitoring	<b>Anne-Sophie Baudry</b> Effects of emotional competences on esogastric cancer patients' quality of life and distress after surgery	<b>Ewa Wilczek-Ruzyczka</b> Job burnout and empathy in physicians and nurses	<b>Kerry Montgomery</b> Activity: Alopecia UK Film	<b>Hao Nguyen</b> Can one size fit all? Tailoring the mode of information presentation of health information online	<b>Anne Buitenhuis</b> Conflicts about smoking and its consequences for smokers with a non-smoking partner		<b>Lou Atkinson</b> Review, development and manualisation of a family weight management programme, using Behaviour Change Taxonomy V.1
12:15	<b>Cristiano Violani</b> Increasing healthy eating behaviours among HP students and in their trainees: a self-regulation training	<b>Mayumi Hirosaki</b> The association between frequency of laughter and socioeconomic status after the Great East Japan Earthquake	-	<b>Andrew Thompson</b> Discussion	<b>Ciska Hoving</b> Discussion	<b>Sabina Pereira</b> "A smoker among smokers": the importance of social norms and group identification in smoking behavior		<b>Astrid Coxon</b> Assessing the implementation of a new Enhanced Recovery Pathway in three hospitals
12:30	Lunch (ESU University Restaurant) & EHPS Members Meeting (Aula A)							

Session Title	Aula A	Aula B	Aula C	Aula D	Aula E	Aula F	Aula G	Aula I
	Oral Session	Oral Session	Symposium	Oral Session	Symposium	Symposium	Oral Session	
	Ethnicity, religion, stigma and health (T17) <b>Chair: Sahdia Parveen</b>	Psychobiological mechanisms in physical and psychological health (T19) <b>Chair: Daniel Powell</b>	Developing and evaluating interventions to promote physical activity: issues in special settings and populations (T13) <b>Chair: Lisa Marie Warner</b>	Stress and coping within the family (T10) <b>Chair: Maria Nicoleta Turliuc</b>	In control of pain: a cognitive-affective analysis (T6) <b>Chair: Dimitri Van Ryckeghem, Geert Crombez</b>	Automatic and voluntary processes influencing eating behaviour (T12) <b>Chair: Giorgia Zamariola</b>	Health and work – Psychosocial factors, technology and training (T18) <b>Chair: Annalisa Casini</b>	
14:00	<b>Mark Tarrant</b> Understanding alcohol consumption in student participants of the night time economy: a three-wave longitudinal study	<b>Lisa Olive</b> Youth stress and depression effect early markers for Type 2 diabetes: LOOK longitudinal study	<b>Blathin Casey</b> Modifiable psychosocial constructs associated with physical activity participation in people with Multiple Sclerosis: a meta-analysis	<b>Maria Nicoleta Turliuc</b> The relations between parental stress and family resilience. A model of mediation	<b>Geert Crombez</b> Attention and pain: a narrative review	<b>Giorgia Zamariola</b> Social exclusion and visual memory bias towards high-calorie food: the role of interoceptive accuracy	<b>Julia Allan</b> How many calories do nurses burn at work? A real-time study of nurses' energy expenditure	
14:15	<b>Laian Z. Najjar</b> Religious perceptions of alcohol consumption and drinking behaviours among religious and non-religious individuals	<b>Gary Donohoe</b> Does early life adversity affect mental health and social cognition via an inflammatory response	<b>Caragh Flannery</b> Enablers and barriers to physical activity in pregnancy: drawing on the TDF and COM-B model	<b>Erin Brown</b> Addressing parent distress during paediatric medical procedures	<b>Vera Araujo Soares</b> Incremental dual-task paradigm to investigate pain attenuation by task: the role of difficulty and light	<b>Valérie Broers</b> Comparing determinants of vegetable consumption rich in Inulin-type fructans of a student and representative sample	<b>Cristina Quinones</b> Daily intense technology use after work: does it help with psychological recovery?	
14:30	<b>Filipa Teixeira</b> Keeping HIV/Aids a secret: a coping strategy to deal with the burden of stigmatization	<b>Daryl O'Connor</b> Childhood trauma, cortisol reactivity to stress and resting cortisol in suicide attempters and ideators	<b>Laura McGowan</b> The acceptability of reducing sedentary behaviour to older adults: a qualitative study	<b>Melanie Jagla</b> Siblings of chronically ill and/or disabled persons - a look at stress and resources	<b>Claus Vögele</b> Daily affect regulation in patients with fibromyalgia	<b>Maria Mulders</b> Promoting the consumption of fresh products: can nutrition claims help?	<b>Annalisa Casini</b> Exposure to psychosocial risk factors and consequences for elderly home care and support workers' health	
14:45	<b>Zahra Masoodian</b> Social Capital, infertility stigma and quality of life in infertile women: a SEM model	<b>Shunta Maeda</b> Post-event rumination and impaired cortisol recovery following social-evaluative stressors in social anxiety	<b>Lisa Marie Warner</b> Self-regulation in physical activity interventions for older adults: what makes action planning (in) effective?	<b>Julia Eggermann</b> Impact of perceived versus actual similarity in coping with stress on relationship functioning	<b>Judy Veldhuijzen</b> Effects of inhibitory control training on pain sensitivity	<b>David Marchiori</b> Promoting healthy food choices among (aware) customers	<b>Dorota Molek-Winiarska</b> The use of psychological training in stress management intervention for extractive sector employees	
15:00	<b>Mohammadali Amini</b> Stigmatization and psychological distress (anxiety, stress, depressive symptoms) among Iranian breast cancer patients	<b>Cristina Scarpazza</b> The still under-appreciated role of cognitive neuropsychology in the diagnosis of progressive multifocal leukoencephalopathy	<b>Pedro J. Teixeira</b> The EuroFIT project: promoting physical activity and reduced sedentary time in elite football clubs	<b>Seyedeh Ayda Mousavi Moghadam</b> Predicting quality of life of children with cancer by parent's personality and coping	<b>Dimitri Van Ryckeghem</b> Attention bias modification and its impact on experimental pain and task performance	<b>Simone Dohle</b> Discussion	<b>Mária Mihálka</b> Burnout among Hungarian teachers: its association with life satisfaction and psychosomatic health	
15:15	-	<b>Cristina Ottaviani</b> Blood pressure-related hypoalgesia: insights from heart-brain pathways	<b>Molly Byrne</b> Discussion	<b>Hadi Zamanian</b> Predicting quality of life of mothers of autistic children: a structural equation model	<b>Geert Crombez</b> Discussion	<b>Stephan van den Boucke</b> Group activity / general discussion	-	
15:30	Interactive Posters & Coffee (ESU University Restaurant)							
17:00	<b>Keynote Lecture (Aula C)</b> <b>Sherry Pagoto</b> Healthcare social media (#HCSM): A new approach to studying and promoting health behavior ( <b>Chair: Gerry Molloy</b> )							
18:15	Short Tour & Conference Dinner (City of Padova & Villa Foscari Rossi) / Meeting point in front of the Hotel NH Padova							

Session Title	Aula A	Aula B	Aula C	Aula D	Aula E	Aula F	Aula G	Aula I
	Oral Session	Oral Session	Symposium	Symposium	Symposium	Oral Session	Oral Session	Oral Session
	Determinants of wellbeing (T11) <b>Chair: Ann Ojala</b>	Predicting behavior and health (T14) <b>Chair: James Green</b>	Attitudes towards, efficacy, cost-effectiveness and moderators of internet-and-mobile-based interventions for promoting mental well-being (T1) <b>Chair: David Daniel Ebert</b>	Social exchange processes and health behavior: new findings from innovative studies (T9) <b>Chair: Pamela Rackow</b>	Confusion, Blues but Marchin' on: what is the state of Cognitive Bias Modification in addiction? (T13) <b>Chair: Oulmann Zerhouni, Marilisa Boffo</b>	Intentions and behaviour (T12) <b>Chair: Mark Conner</b>	Individual differences, health behaviors and self-regulation (T2) <b>Chair: Noa Vilchinsky</b>	Multimethod assessment of emotional and cognitive factors in pain and fatigue (T6) <b>Chair: Frank Doyle</b>
09:00	<b>Melanie Hausler</b> The positive effects of character strengths on the well-being of medical students over time	<b>Paulo Vitória</b> Smoking behaviour, wrong beliefs and smoking risks perception in Portuguese adolescents	<b>Anna-Carlotta Zarski</b> Activity: Presentation of different internet-and mobile based interventions for mental health promotion	<b>Gertraud Stadler</b> A dyadic process perspective for social interactions: social support and companionship in couples	<b>Ruben van Beek</b> This but a scratch! Comparing frequentist and Bayesian meta-analysis on CBM on addictive behaviours	<b>Yingqiu Wu</b> Effects of high treatability information on preventative intention of bowel cancer	<b>Michael Daly</b> Can childhood self-control compensate for the health impact of social disadvantage? Results from two cohorts	<b>Frank Doyle</b> Network analysis of depressive symptoms and vital exhaustion in patients with acute coronary syndrome
09:15	<b>Ann Ojala</b> The role of relationship with nature and outdoor recreation on people's health and wellbeing	<b>Anne van Dongen</b> Positive, but not negative, emotions prior to donation predict first-time whole blood donor return	<b>Claudia Buntrock</b> Effectiveness of a web-based intervention in treating subthreshold depression and in preventing major depression	<b>Karolina Horodyska</b> Parental and child perceptions of environment on physical activity and BMI. Longitudinal dyadic study	<b>Oulmann Zerhouni</b> Effect of evaluative conditioning on implicit and explicit attitudes toward alcohol and intentions to drink	<b>Mark Conner</b> The role of degree of intention formation in the relationships between intentions, habits and behaviour	<b>Maryanne Martin</b> Do people with food intolerance share characteristics with those with food allergy? A new approach	<b>Alice Sibelli</b> Emotional processing as mediator of positive/negative affect on social adjustment in Irritable Bowel Syndrome (IBS)
09:30	<b>Paul M. Camic</b> Museums on prescription: a social prescribing intervention for isolated older adults	<b>James Green</b> Branded and generic medicines: does pharmacy education change preferences?	<b>Kiona Weisel</b> Effect modifiers of internet-based stress-management. Results from three randomized trials	<b>Pamela Rackow</b> Helped by your friend and controlled by your partner? Social exchange processes and exercise	<b>Andrew Jones</b> Randomized controlled trial of inhibitory control training for alcohol use disorders	<b>Gabriel Nudelman</b> Combining factors in predicting behavioural clusters: a connectionist approach	<b>Heather Herriot</b> Self-compassion, age-related stressors, and cortisol secretion in older adulthood	<b>Iana Alexeeva</b> Identification with illness in patients with Irritable Bowel Syndrome and its relationship with somatic symptoms
09:45	<b>Siobhan O'Neill</b> Sleep disruption in adulthood: the effects of technology use on quality and duration	<b>Sarah Elbert</b> A new psychological perspective on the relation between socioeconomic status and health	<b>Fanny Kahlke</b> Acceptance of internet- and mobile-based mental health promotion in university students	<b>Helge Giese</b> How friends in college influence students' alcohol consumption: a social network perspective	<b>Hans van der Baan</b> Cognitive Bias Modification targeting the cannabis and alcohol consumption of youth in juvenile detention centers	<b>Cyril Forestier</b> Integrating intention and self-control variables to better predict health behaviors	<b>Talma Kushnir</b> Low frustration tolerance and sleep quality: negative associations found in four independent studies	<b>Federica Picariello</b> A qualitative exploration of fatigue in End-Stage Kidney Disease (ESKD)
10:00	<b>Maria Bacikova-Sleskova</b> Developmental changes in resilience and life satisfaction during early adolescence	<b>Loes Kessels</b> Effects of self-affirming messages on smokers' responses to health warnings	<b>David Daniel Ebert</b> Cost-effectiveness of an internet-based guided recovery training for better sleep and psychological detachment from work	<b>Jennifer Inauen</b> Can digital support groups promote healthy eating? A randomized trial in daily life	<b>Si Wen</b> Online cognitive bias modification and motivational interviewing in Chinese smokers: a single-case experimental study	<b>Ines Pfeffer</b> Executive functions, self-report self-control and the intention-behaviour relationship	<b>Vivien Swanson</b> Body image and breastfeeding maintenance – a comparison of obese and healthy weight postnatal women	<b>Jieun Lee</b> Time-course of attentional bias for pain-related information: the role of pain catastrophizing
10:15	-	<b>Loes Janssen</b> Frightfully funny: combining threat and humour in health messages for men and women	<b>David Daniel Ebert</b> Discussion	 <b>Urte Scholz</b> Discussion	<b>Reinout W. Wiers</b> Discussion	<b>Ryan Rhodes</b> Reviving the conceptual intricacies of the intention construct in health research: recommendations and future directions	<b>Hedieh Majidi Tehrani</b> Emotion regulation, psychological capital and altruism in patients with cardiovascular disease: a case-control study	<b>Alexandra Husivargova</b> The association between fatigue and self-esteem in patients with rheumatoid arthritis
10:30	Coffee Break (ESU University Restaurant)							



Session Title	Aula A	Aula B	Aula C	Aula D	Aula E	Aula F	Aula G	Aula I
	Oral Session	Oral Session	Oral Session	Oral Session	Symposium	Symposium	Roundtable	Oral Session
	Resilience and adaptation in coping with stressful life experiences (T3) <b>Chair: Paula Repetto</b>	Testing theories of health behavior change (T13) <b>Chair: Ralf Schwarzer</b>	Innovative approaches to user acceptance and engagement in mHealth (T1) <b>Chair: Arie Dijkstra</b>	Physical and cognitive function in later life (T8) <b>Chair: Samuel Nyman</b>	A biopsychosocial view on eating behavior (T14) <b>Chair: Gudrun Sproesser</b>	Beyond the qual/quant divide: doing rigorous and innovative qualitative research in health psychology (T20) <b>Chair: Maria Del Rio Carral</b>	Health psychology: part of behavioral medicine to produce strategic big-data medical research? (T21) <b>Chair: Sven Ingmar Andersson, Anne Marie Plass</b>	Training and supporting health care professionals (T16) <b>Chair: Daryl O'Connor</b>
11:00	<b>Monika Maria Małkiewicz</b> Can the experience of hope increase the propensity to cope actively in a stressful situation?	<b>Ralf Schwarzer</b> Mechanisms of Health Behaviour Change with dental hygiene as an example	<b>Pepijn van Empelen</b> User centered design methods to promote acceptance, comprehension and utility of eHealth	<b>Joanna McHugh Power</b> Social asymmetry and physical health outcomes: results from the Irish longitudinal study on ageing	<b>Marijn Stok</b> Reactance to persuasive health messages as a function of message framing and message source	<b>Chamberlain, Kerry</b> What story should we tell? Issues of representation in quantitative and qualitative health psychology research	Introduction (5 mins) <b>Sven Ingmar Andersson</b>  Presentations (40 mins) <b>1. Anne Marie Plass</b> Definition of Health Psychology in Europe <b>2. Angelos Kassianos</b> Recognition of HP in Europe <b>3. Ewa Gruszczyńska</b> Survey Data <b>4. Sven Ingmar Andersson</b> Big (Large) Data  Discussion (35 mins)  Summarizing and ending of the session (10 mins) <b>Sven Ingmar Andersson, Anne Marie Plass</b>	<b>Véronique Thébaud</b> Understanding barriers to collaboration between parents and healthcare professionals in the care of premature children
11:15	<b>Khatuna Martskvishvili</b> The ways of coping: does it lead to post traumatic growth?	<b>Paul Norman</b> Using theory-based messages and implementation intentions to reduce binge drinking in new university students	<b>Arie Dijkstra</b> Studying the learning model of smartphone feedback applications: the case of the step counter	<b>Damir Lucanin</b> Longitudinal psychosocial predictors of cognitive function in old adults	<b>Gudrun Sproesser</b> The positive eating scale: relationship with objective health parameters and validity in three countries	<b>Maria del Rio Carral</b> Challenging beliefs in qualitative health psychology: how can interpretation be integrated in the research process?		<b>Louise Hall</b> Workplace factors influencing General Practitioner wellbeing, potential coping strategies, and consequences for patient care
11:30	<b>Paula Repetto</b> Flexible coping and the relationship between secondary stressors associated with a earthquake/tsunami and PTSD	<b>Ineke Keizer</b> Self-efficacy for quitting vs. temporary abstinence: two aspects of the complex smoking process	<b>Lena Fleig</b> Valuable steps ahead? Engagement and satisfaction with a wearable activity tracker matter for successful self-regulation	<b>Anaick Besozzi</b> What influences quality of life in people with memory complaints?	<b>Aleksandra Luszczynska</b> Why are you eating, mom? Mothers' emotional, restrained, and external eating explaining children's eating styles	<b>Angélick Schweizer</b> Innovative way of analysing qualitative data: the combined use of lexicometric and thematic analyses		<b>Kate Hamilton-West</b> Does mindfulness meditation have the potential to reduce stress and burnout in NHS General Practitioners?
11:45	<b>Nelly Goutaudier</b> Religious coping strategies as a way to cope with stillbirth	<b>Christopher Armitage</b> Evidence that implementation intentions support self-regulatory effort and improve adolescent sleep	<b>Amy Chan</b> Review of electronic adherence monitoring devices in chronic disease – effect on adherence and outcomes	<b>Nicola Cellini</b> Metacognitive beliefs affect sleep quality in older adults	<b>Theda Radtke</b> Involving children in meal planning and preparation: dyadic effects on liking and consumption of vegetables	<b>Antonia Lyons</b> Methodological flexibility in Health Psychology		<b>Claire Willis</b> Treatment innovation for Medically Unexplained Symptoms: developing clinical competence, a case study
12:00	<b>Magdalini Dargentas</b> Healthcare practitioners' experiences and relationship issues in the neonatal intensive care unit context	<b>Philine Harris</b> Comparing the effects of self-affirmation and positive affect on reactions to a health message	<b>Raquel Paz Castro</b> Adolescents engagement with an Internet- and mobile phone-based smoking cessation program	<b>Samuel Nyman</b> Systematic review of behaviour change techniques used to increase physical activity among people with dementia	<b>Hanna Kontinen</b> Genetic predisposition to obesity, restrained eating and changes in body weight over adulthood	<b>Olivier Luminet</b> Discussion		<b>Wendy Maltinsky</b> Navigating the 'MAP' of behaviour change: developing effective training for health professionals working in diabetes
12:15	<b>Sahdia Parveen</b> The role of obligation, willingness and preparedness for caregiving when supporting a relative with dementia	<b>Bas van den Putte</b> Does self-efficacy information improve the effects of pictorial fear labels on cigarette packages: real-life experiment	<b>Katerina Kassavou</b> Implementation and evaluation of an Interactive-Voice-Response intervention to support medication adherence. A pilot study	<b>Yolanda Barrado-Martín</b> Acceptability of a tai chi intervention for people living with dementia and their informal carers	<b>Gudrun Sproesser</b> Discussion	General discussion		<b>Eva Diniz (De)</b> humanization and health care: an integrative review
12:30	Lunch (ESU University Restaurant) & EHPS National Delegates Meeting (Aula H)							

Session Title	Aula A	Aula B	Aula C	Aula D	Aula E	Aula F	Aula G	Aula I	
	Oral Session	Oral Session	Oral Session	Symposium	Oral Session	Oral Session	Roundtable	Oral Session	
	Adherence to treatment and self-management (T5) <b>Chair: Falko Sniehotta</b>	Interventions to change physical activity (T13) <b>Chair: Nelli Hankonen</b>	Social change and health (T17) <b>Chair: Benjamin Schuez</b>	Pain as a social phenomenon: state-of-the art and new research trends (T6) <b>Chair: Liesbet Goubert</b>	Cognitive behavioral intervention in chronic disease (T7) <b>Chair: Robbert Sanderman</b>	Relationships and psychological issues around pregnancy and child birth (T10) <b>Chair: Wim Nieuwenboom</b>	Behaviour change: investigating mechanisms of action (T12) <b>Chair: Susan Michie, Rachel Carey</b>	Risk and health communication (T15) <b>Chair: Ciska Hoving</b>	
14:00	<b>Myfanwy Morgan</b> Modes of adjustment and adherence with photoprotection: a qualitative study of Xeroderma Pigmentosum patients	<b>Keegan Knittle</b> Movement as medicine for CVD prevention: piloting two behaviour change interventions delivered in primary care	<b>Benjamin Schuez</b> Socioeconomic status and health behaviour self-regulation: moderating effects in social-cognitive theories	<b>Edmund Keogh</b> Exploring sex differences in pain expression communication	<b>STATE OF THE ART</b>	<b>Anthony Cassidy</b> Psychological developmental benefits for children of mothers taking folic acid supplementation throughout pregnancy	Welcome and opening remarks <b>Susan Michie, Rachel Carey</b>	<b>Nadine Lages</b> Avian Influenza 2006 and 2016: are there differences in risk perception and intention?	
14:15	<b>Kirby Sainsbury</b> Using n-of-1 methods to understand a complex behaviour: photoprotection in patients with xeroderma pigmentosum	<b>Camille Short</b> Exploring the interplay between message format, personal-relevance & need for cognition on physical activity message processing	<b>Periklis Papaloukas</b> Incorporating photographic data in health psychology research: the LGBT persons living with MS study	<b>Sónia Bernardes</b> Beyond solicitousness: a scoping review on informal pain-related social support		<b>Rona Moss-Morris</b> Which exercise or behavioral interventions are most effective for treating fatigue in multiple sclerosis?		<b>Ana Camarneiro</b> Psychopathological symptoms in low risk pregnancies and obstetrical outcomes	<b>Hilde van Keulen</b> Usability, acceptability and effect of a comprehensive preconception care intervention targeting low SES women
14:30	<b>Alexandra Dima</b> Long-term adherence to inhaled corticosteroids: does it make a difference for asthma control?	<b>Dominika Kwasnicka</b> Applying motivational, self-regulatory and habit-formation techniques in a computer-tailored physical activity intervention in healthcare professionals	<b>Lauren Gating</b> What does cancer screening mean to women from deprived neighbourhoods	<b>Liesbet Goubert</b> Help provision within couples faced with chronic pain: a motivational approach		<b>Rute Brites</b> Testing Dyadic Coping, Marital Adjustment and Anxiety as moderators of Fathers Pre-Natal Attachment		Overviews and discussion <b>Susan Michie, Jennifer Sumner</b>	<b>Ciska Hoving</b> Identifying clusters in practice nurses' adherence to smoking cessation counselling guidelines
14:45	<b>John de Wit</b> Treatments continue to improve but adjustment challenges remain: self-management and wellbeing in people with HIV	<b>Nelli Hankonen</b> Process evaluation of the Let's Move It intervention: protocol and results on implementation fidelity	<b>Lucy Hackshaw-McGeagh</b> Behaviours of young mothers from areas of deprivation; implications for health promotion and cancer prevention	<b>Line Caes</b> The role of parental versus partner support in how young females cope with menstrual pain	<b>Joanna Hudson</b> "I see myself as a little warrior": patient perceptions of online-CBT for distress in haemodialysis	<b>Wim Nieuwenboom</b> Strengthening the building of realistic expectations: first time fathers with realistic expectations have happy wives	Synergies, collaborations and discussion <b>Marie Johnston</b>	<b>Eva Janssen</b> Do demographic characteristics moderate differences in don't know responding between cognitive and affective risk questions?	
15:00	<b>Kasia Banas</b> It helps to be connected: association between HIV self-management and measures of social support	<b>Adrie Bouma</b> Barrier-belief lifestyle counseling in primary care: a randomized controlled trial of efficacy	<b>Roberto De Vogli</b> The health effects of the global financial crisis	<b>Cynthia Van Gampelaere</b> Parental psychological flexibility, catastrophizing, and parents' goals regarding their child in pain: a diary study	<b>Clelia Malighetti</b> Self-construing during body psychotherapy for chronic depression – a secondary analysis of RCT trial data	<b>Nawel Hannachi</b> PTSD after childbirth and mother-infant bonding on French / Tunisian samples	Summing up and next steps	<b>Marleena Vornanen</b> Perceived risk, self-efficacy and outcome beliefs as predictors of physical activity and BMI: 5-year follow-up	
15:15	-	<b>Scott Carvajal</b> Health behavior changes in Latino US-Mexico border residing adults participating in chronic disease preventive interventions	<b>Kate Adkins</b> "You can't walk around with Photoshop on your face": experiences of acne and contemporary media	<b>Sónia Bernardes</b> Discussion & interaction with the audience	<b>James Coyne</b> A skeptical look at mindfulness-based training for physical health problems	<b>Mirna Kostović Srzentić</b> Stress experienced by parents in the neonatal intensive care units	-	-	
15:30	Interactive Posters & Coffee (ESU University Restaurant)								
17:00	<b>Keynote Lecture</b> (Aula C) <b>Rory O'Connor</b> Suicide as (health) behaviour: towards a psychological understanding of suicidal behaviour ( <b>Chair: Valerie Morrison</b> )								

Session Title	Aula A	Aula B	Aula C	Aula D	Aula E	Aula F	Aula G	Aula I
	Oral Session	Oral Session	Oral Session	Symposium	Symposium	Symposium	Oral Session	Oral Session
	Contextual influences and interventions around children's well-being and healthy habits (T10) <b>Chair: Laura Belmon</b>	Predictors of adherence and behavioural change (T12) <b>Chair: Madelynne A. Arden</b>	Systematic reviews and new approaches: which health behavior change interventions work? (T13) <b>Chair: Martin S. Hagger</b>	Maximising the value of qualitative methods in the development and evaluation of behaviour change interventions (T20) <b>Chair: Jenny McSharry, Elaine Toomey</b>	Public health promotion in developing countries: recent findings, challenges, and opportunities for health psychology (T14) <b>Chair: Jennifer Inauen</b>	Tailored eHealth methods: innovations and cost-effectiveness (T1) <b>Chair: Hein de Vries</b>	Psychological functioning after surgery/transplantation (T5) <b>Chair: Marijke Melles</b>	Social support and health (T9) <b>Chair: Ewa Gruszczyńska</b>
09:00	<b>Jaroslava Kopcakova</b> Is adolescent's perceived activity-friendly environment associated with more physical activity and fewer screen-based activities?	<b>Julia Baenziger</b> Can the theory of planned behaviour help explain follow-up attendance of childhood cancer survivors?	<b>STATE OF THE ART</b> <b>Susan Michie, Robert West</b> The Human Behaviour Change Project: harnessing computer science to advance behavioural science	<b>Karen Matvienko-Sikar</b> Parental experiences and perceptions of infant complementary feeding: a qualitative evidence synthesis	<b>Giorgia Gon</b> Hand hygiene compliance during labour and delivery in maternity units in Zanzibar	<b>Santiago Hors-Fraile</b> Integrating principles of recommender systems into mHealth for smoking cessation in patients	<b>Oana Petre</b> Living with a kidney transplant: a phenomenological study	<b>Ewa Gruszczyńska</b> Social support, stress and affect among people with HIV/AIDS: a diary study of buffering hypothesis
09:15	<b>Laura Shanna Belmon</b> Determinants of children's sleep behavior: a systematic review of longitudinal studies	<b>Jade KY Chan</b> Psychosocial predictors of adherence after bariatric surgery: a 6 month follow-up study		<b>Jenny McSharry</b> Understanding the intervention context: exploring barriers and facilitators to attendance at diabetes structured education programmes	<b>Miriam Harter</b> The role of social identity in reducing unhealthy sanitation practice: a cluster-randomized trial in Ghana	<b>José Manuel Martínez-Montilla</b> Cultural adaptation and feasibility assessment of a web-based-computer-tailoring programme for binge drinking prevention in Spanish adolescents	<b>Aleksandra Kroemeke</b> Effects of daily coping on mood in couples dealing with hematopoietic stem cell transplantation	<b>Koen Raymaekers</b> The influence of peers on diabetes management in adolescents and emerging adults: a longitudinal study
09:30	<b>Carole Fantini-Hauwel</b> Nail-Patella syndrome : impacts of psychological suffering generated by a genetic disease on children development	<b>Suzanne McDonald</b> Changing multiple health behaviours prior to major surgery: surgery as a teachable moment		<b>Molly Byrne</b> Developing intervention content through qualitative research and stakeholder engagement: the D1 Now intervention	<b>Max Friedrich</b> Promoting effective handwashing: a cluster-randomized controlled trial testing the effectiveness of theorybased interventions	<b>Maria Karekla</b> AcceptME: Evaluation of a digital gamified prevention program based on Acceptance and Commitment Therapy	<b>Marijke Melles</b> Early recovery trajectories after total hip replacement: the role of patient characteristics	<b>Christine Hofheinz</b> Family members of persons with chronic illnesses – Burden and social support
09:45	<b>Jiyoung Park</b> Ecological predictors of health-related quality of life among children from low-income families in South Korea	<b>Madelynne A. Arden</b> Understanding nebuliser adherence in adults with Cystic Fibrosis: comparing high, medium and low adherers	<b>Justin Presseau</b> Cochrane review and meta-analysis of trials of action and/or coping planning for health behaviour change	<b>Annegret Schneider</b> Interventions to reduce antibiotic prescribing in general practice: a process evaluation of a randomisedcontrolled trial	<b>Mícheál de Barra</b> Everything works? Bangladeshi patients' evaluation of informal medical care quality is independent of treatment quality	<b>Hein de Vries</b> Two tailored eHealth programs for alcohol control	<b>Edward Callus</b> Psychological functioning in patients referred to in-hospital cardiac rehabilitation after cardiac surgery	<b>Jessica Walburn</b> Self-management goals and response to social support: a qualitative study of patients with Xeroderma Pigmentosum
10:00	<b>Mary Jung</b> Evaluation of a community-based, family-focused healthy weights initiative using the RE-AIM framework	<b>Ksenia Eritsyian</b> Differences in vaccination patterns: applying the diffusion of innovation theory	<b>Dominic Conroy</b> Imagery interventions in health behaviour: a meta-analysis	<b>Elaine Toomey</b> Activity: Supporting qualitative research in behaviour change interventions – two brains are better than one!	<b>Jurgita Slekiene</b> Identifying psychosocial factors to explain Ebola preventive behaviours in Guinea-Bissau	<b>Kei Long Cheung</b> Overview and cost-effectiveness of internet-based interventions for smoking cessation in the Netherlands	-	<b>Cornelia R. Karger</b> Decision-making in dementia care from the viewpoint of affected relatives: a qualitative study
10:15	<b>Maarit Lassander</b> School-based mental health promoting programs enhance neurocognitive skills: examining working memory and mindfulness practice	-	<b>Ainslea Cross</b> Mental contrasting as a health behaviour change technique: a systematic review and meta-analysis	<b>Val Morrison</b> Discussion	<b>Jennifer Inauen</b> Roundtable discussion	<b>Aleksandra Luszczynska</b> Discussion	-	<b>Tina Jalali</b> Which domains of social support better predict quality of life of breast cancer patients?
10:30	Coffee Break (ESU University Restaurant)							
11:00	<b>Keynote Lecture</b> (Aula C) <b>Annamarie Cano</b> Partner responses to emotional disclosures of pain-related distress: Thinking outside the operant box ( <b>Chair: Mariët Hagedoorn</b> )							
12:00	Closing Ceremony & Reception (Aula C)							
13:30	Social Programme Excursions (Optional)							

# Wednesday, 30 Aug

## Keynote Lecture

17:00 - 18:00 **Fabio Lucidi**

Social cognitive mechanisms regulating doping intention and use: research and intervention (Aula C)

## Roundtable

14:00 - 15:30 **Division of Health Psychology of the British Psychological Society event**

Training healthcare professionals in novel health psychology strategies and tools (Aula G)

## Symposiums

9:00 - 10:30 Broadening our approaches to health behavior change: taking context into account (Aula C)

Novel approaches to evidence synthesis (Aula E)

11:00 - 12:30 Innovative ideas in physical activity and walking research targeting older adults (Aula C)

e-Pain: technology-based innovations for the study of pain (Aula D)

Women's health in socio-cultural context (Aula E)

New developments in approach bias modification across clinical disorders and health behaviours (Aula F)

14:00 - 15:30 StrokeCog Study: modelling and modifying stroke-related cognitive impairment through innovative application of health psychology principles (Aula C)

Occupational stress and job strain (Aula E)

## Oral Presentation Sessions

9:00 - 10:30 Screening and prevention (Aula A)

Occupational health and workability – recruitment, motivation and behavior change (Aula B)

Early Career Researcher Symposium: Understanding the uptake, acceptability and use of digital behaviour change interventions (Aula D)

Mechanisms and adherence in interventions for patients with chronic disease (Aula F)

Prospective studies of self – regulation processes (Aula G)

Individual differences in psychological coping style: effects on health behaviours and intervention outcomes (Aula I)

11:00 - 12:30 Eating habits in children and adolescents (Aula A)

Coping and adjustment in chronic illness (Aula B)

Improving health care service delivery (Aula G)

Risk communication (Aula I)

14:00 - 15:30 Caregiving and relationships in health (Aula A)

Interventions (Aula B)

Methods for building better behavior change interventions (Aula D)

Exercise (Aula F)

Health Care Provider (HCP) - Patient communication (Aula I)

## Interactive Posters (ESU University Restaurant)

15:30 - 17:00 Health Apps

mHealth education and support

Individual differences and health: the gender perspective

Health perceptions in younger people and health professionals

Psychological processes and outcomes

Interventions for patients with cancer or irritable bowel syndrome

Health behaviours in later life

Social support and caregiving in the illness context

Serious illness and chronic conditions in childhood and adolescence

Health-related behaviours across the lifespan

Positive psychology interventions to improve well-being

Quality of life and well-being after disease

Predictors of healthy and (un)healthy behaviors

Underlying cognitions for behaviors in the illness context

Prevention and interventions in health psychology

Screening, prevention and donation

Physical and mental health promotion

Interventions in health services research

Gender, Sexuality and Health

Job stress and burnout

Innovative assessment tools in health psychology

# Thursday, 31 Aug

## Keynote Lecture

17:00 - 18:00 **Sherry Pagoto**

Healthcare social media (#HCSM): A new approach to studying and promoting health behavior (Aula C)

## Roundtable

11:00 - 12:30 Complex research designs in health psychology: chance or challenge? (Aula G)

## Symposiums

9:00 - 10:30 The replication crisis in (health) psychology: reflections and solutions (Aula C)

Colorectal cancer screening: innovation in understanding screening behaviour, developing interventions and disseminating research results (Aula D)

Dyadic regulation processes to promote health and well-being in romantic couples (Aula E)

Applications of health psychology for investigating fatigue: clinical and non- clinical perspectives (Aula F)

11:00 - 12:30 New directions in individual difference research in dermatological care: putting the patient's needs first (Aula D)

Innovative ideas in online computer-tailoring (Aula E)

14:00 - 15:30 Developing and evaluating interventions to promote physical activity: issues in special settings and populations (Aula C)

In control of pain: a cognitive-affective analysis (Aula E)

Automatic and voluntary processes influencing eating behaviour (Aula F)

## Oral Presentations

- 9:00 - 10:30 mHealth for understanding and changing behaviour (Aula A)  
Obesity and weight management in children (Aula B)  
Lifestyle and self-management intervention in chronic disease (Aula G)  
Novel approaches in self-regulation (Aula I)
- 11:00 - 12:30 Interventions to change eating behavior (Aula A)  
Well-being in the presence of adversity (Aula B)  
Job demand and resources – theory and model testing (Aula C)  
Sex and smoking (Aula F)  
Behaviour change theory and interventions in implementation research (Aula I)
- 14:00 - 15:30 Ethnicity, religion, stigma and health (Aula A)  
Stress and coping within the family (Aula D)  
Health and work – Psychosocial factors, technology and training (Aula G)  
Psychobiological mechanisms in physical and psychological health (Aula B)



## Poster Presentations (ESU University Restaurant)

15:30 - 17:00 mHealth, mood, stress and wellbeing

Social media and online support

Individual differences and health promoting behaviors

Stress and coping in youth and adolescence

Self-regulation in chronic illness

Coping and quality of life in long-term conditions

Emotional and cognitive factors in pain and psychosomatic illness

Therapeutic approaches and adherence in chronic diseases

Cognition in older adults

Caring for the elderly

Emotional and mental health in the family

Parents, children and health

Well-being across the life span

Cognitions and eating behaviors

Changing physical activity and smoking behavior

Sexuality, lifestyle and health

Risk and health communication

Migration and cross-cultural health

Cardiovascular health and wellbeing

Questionnaire development

Health psychology approaches to implementation research

# Friday, 01 Sep

## Keynote Lecture

17:00 - 18:00 **Rory O'Connor**

Suicide as (health) behaviour: towards a psychological understanding of suicidal behaviour (Aula C)

## Roundtables

11:00 - 12:30 Health psychology: is it part of behavioral medicine and big-data medical research? (Aula G)

14:00 - 15:30 Behaviour change: investigating mechanisms of action (Aula G)

## Symposiums

9:00 - 10:30 Attitudes towards, efficacy, cost-effectiveness and moderators of internet-and-mobile-based interventions for promoting mental well-being (Aula C)

Social exchange processes and health behavior: new findings from innovative studies (Aula D)

Confusion, Blues but Marchin' on: what is the state of Cognitive Bias Modification in addiction? (Aula E)

11:00 - 12:30 A biopsychosocial view on eating behavior (Aula E)

Beyond the qual/quant divide: doing rigorous and innovative qualitative research in health psychology (Aula F)

14:00 - 15:30 Pain as a social phenomenon: state-of-the art and new research trends (Aula D)

## Oral Presentations

- 9:00 - 10:30 Determinants of wellbeing (Aula A)  
Predicting behavior and health (Aula B)  
Intentions and behaviour (Aula F)  
Individual differences, health behaviors and self-regulation (Aula G)  
Multimethod assessment of emotional and cognitive factors in pain and fatigue (Aula I)
- 11:00 - 12:30 Resilience and adaptation in coping with stressful life experiences (Aula A)  
Testing theories of health behavior change (Aula B)  
Innovative approaches to user acceptance and engagement in mHealth (Aula C)  
Physical and cognitive function in later life (Aula D)  
Training and supporting health care professionals (Aula I)
- 14:00 - 15:30 Adherence to treatment and self-management (Aula A)  
Interventions to change physical activity (Aula B)  
Social change and health (Aula C)  
Cognitive behavioral intervention in chronic disease (Aula E)  
Relationships and psychological issues around pregnancy and child birth (Aula F)  
Risk and health communication (Aula I)

## Poster Presentations (ESU University Restaurant)

15:30 - 17:00 Acceptance and adoption of mHealth

Individual differences and mental health

Individual differences in special health-related conditions

Severe forms of stress

Self-regulation in health promotion and disease prevention

Adherence to treatment and self-management

Psycho-oncology

Factors contributing to functional outcomes in pain and psychosomatic illness

Interventions in Health psychology

Social and familial support in times of severe illness

School-based factors and interventions in health

Determinants of well-being

Innovative concepts in health psychology

Interventions on ingestive behaviors

Promoting healthy behavior

Health care delivery: perspectives of professionals and patients

Measures and assessments in occupational health

Psychophysiology of health and behaviour

# Saturday, 02 Sep

## Keynote Lecture

11:00 - 12:00 **Anmarie Cano**

Partner responses to emotional disclosures of pain-related distress:  
Thinking outside the operant box (Aula C)

## Symposiums

9:00 - 10:30 Maximising the value of qualitative methods in the development and evaluation of behaviour change interventions (Aula D)

Public health promotion in developing countries: recent findings, challenges, and opportunities for health psychology (Aula E)

Tailored eHealth methods: innovations and cost-effectiveness (Aula F)

## Oral Presentations

9:00 - 10:30 Contextual influences and interventions around children's well-being and healthy habits (Aula A)

Predictors of adherence and behavioural change (Aula B)

Systematic reviews and new approaches: which health behavior change interventions work? (Aula C)

Psychological functioning after surgery/transplantation (Aula G)

Social support and health (Aula I)

17:00 - 18:00

## Social cognitive mechanisms regulating doping intention and use: research and intervention

Fabio Lucidi

Full Professor in Psychometrics Department of Developmental and Social Psychology, Sapienza University of Rome



Doping use is an illicit behavior which is unhealthy and intentionally adopted to achieve specific objectives or goals mainly related to performance enhancement or to aesthetic purposes.

Doping use goes well beyond the realm of high-level or professional sports. International epidemiological data from different research suggests that about 1-7% of adolescents and young adults use doping substances. The aim of the talk is to provide:

1. Some data on doping use among adolescent amateur athletes.
2. Some premises on doping and on social cognitive variables able to predict intentions to use doping. This theoretical framework provides the basis for identifying some antecedents of doping use, in order to identify target variables for intervention's programs.
3. Data from national and international research programs focusing on a general hypothesis that intentions to use doping use in young sports partly depends on athletes' belief systems and self-regulative mechanisms.
4. Data and information about national and international intervention programs focused on doping use in adolescent and young adults.

14:00 - 15:30

## Division of Health Psychology of the British Psychological Society event Training healthcare professionals in novel health psychology strategies and tools

Chairs: Wendy Lawrence, Kate Hamilton-West

### Rationale:

Health psychology as a discipline has a huge contribution to make to the practice of healthcare and the management of long-term conditions. However, there are too few health psychologists working in front-line roles to achieve significant reach and impact. One solution is to adopt a multidisciplinary approach and train the existing healthcare workforce to use psychological strategies and tools. This has the advantage of enabling health psychologists to share knowledge and skills to maximise the benefits from millions of daily healthcare consultations worldwide. Disadvantages may include the potential to devalue health psychology and undermine the fidelity with which interventions are delivered. The EHPS annual conference provides the ideal opportunity to bring together health psychologists with diverse backgrounds and opinions to debate this fundamental issue of practice.

### Summary:

We will present four innovative strategies/tools developed from health psychology theory and international research, plus a facilitated discussion of the advantages/disadvantages of training non-psychologists in their use.

1. Training has been developed for healthcare professionals and carers of children with disabilities, based on health psychology theory, in particular Leventhal's Common-Sense Model and Bandura's Social Cognitive Theory. Training increases awareness of the factors affecting (self-)management of long-term conditions and disabilities.
2. Physiotherapy informed by Acceptance and Commitment Therapy (PACT) is a novel treatment for people with chronic lower back pain. Physiotherapists are trained and supported to use PACT to address psychological issues and improve function.
3. A taxonomy based on patients' pain acceptance has been developed to identify differential treatment needs and predict response to rehabilitation programs. Any healthcare professional working in the area of chronic pain can be trained to use the taxonomy to achieve more precise matching of treatment to patient need.
4. 'Healthy Conversation Skills' support behaviour change, and are designed to enhance the existing communication and reflection skills of front-line practitioners. The skills are flexible and can be used opportunistically in any healthcare consultation to better support lifestyle change and disease management.

Strategies and tools will be demonstrated with interactive activities. The concluding discussion aims to generate consensus on useful boundaries for sharing psychological expertise with non-psychologists.

# Symposium: Broadening our approaches to health behavior change: taking context into account

9:00 - 10:30

Aula C

Lisa Auster-Gussman



9:00 - 9:15

## Concordance in partners' health behaviours around a diabetes diagnosis: results from the Lifelines Cohort Study

R. Burns<sup>1</sup>, J. Fillo<sup>2</sup>, S. Deschenes<sup>1</sup>, N. Schmitz<sup>1</sup><sup>1</sup>McGill University, Canada<sup>2</sup>University at Buffalo State University of New York, United States

**Objective:** To examine the possible influence of spouse health behaviour on the health behaviour and wellbeing of a person who has recently been diagnosed with diabetes.

**Methods:** Data came from the first three assessment waves (i.e., questionnaires) of the Lifelines Cohort Study, a cohort study in the Netherlands. Data were collected at three time points approximately 1.5 years apart (baseline, follow-up 1, follow-up 2). These analyses include 155 couples in which one partner was diagnosed with diabetes during the second assessment wave (i.e., questionnaire). The health behaviours examined were self-reported frequency of eating breakfast and engaging in physical activity. Dyads were distinguishable, so Pearson correlations examined associations between partners' health behaviours before and after diagnosis.

**Findings:** On average, individuals with diabetes were 55.4 years old (SD = 10.5) at baseline. Preliminary findings indicate that before diagnosis, partners were concordant on both behaviours (breakfast  $r=.30$ ,  $p < .001$ ; physical activity  $r=.22$ ,  $p=.008$ ). This concordance remained soon after diagnosis (breakfast  $r=.14$ ,  $p=.01$ ; physical activity  $r=.23$ ,  $p=.005$ ) and 1.5 years later (breakfast  $r=.23$ ,  $p=.004$ ; physical activity  $r=.21$ ,  $p=.009$ ).

**Discussion:** This study suggests that the behaviours of individuals with newly-diagnosed diabetes is associated with those of their partners. Future work will examine change over time in these health behaviours. This study contributes to a broader literature that highlights the importance of considering dyadic influences on health behaviour change.

9:15 - 9:30

## A dyadic approach to the Theory of Planned Behaviour: examining parent and teenager eating behaviours

K. Joyal-Desmarais<sup>1</sup>, R. Lenne<sup>1</sup>, L. Auster-Gussman<sup>1</sup>, C. Huelsnitz<sup>1</sup>, W. Johnson<sup>1</sup>, M. Panos<sup>1</sup>, J. Simpson<sup>1</sup>, A. Rothman<sup>1</sup>

<sup>1</sup>University of Minnesota, United States

**Background:** The Theory of Planned Behaviour (TPB) provides an intrapersonal framework for understanding how a person's beliefs influence behaviour. We situate the TPB in a dyadic framework and examine how teenagers' and parents' beliefs about eating may influence not only their own behaviour ("actor effects"), but also each other's behaviour ("partner effects").

**Methods:** Our sample consisted of 1646 parent-teen dyads from the Family Life, Activity, Sun, Health, and Eating (FLASHE) study conducted by the National Cancer Institute. Each person reported on their consumption of: (1) fruits/vegetables, and; (2) junk foods/sugary drinks. Additionally, each person reported on their attitude, subjective norm, and perceived behavioural control (PBC) for both types of behaviour (a measure of behavioural intention was not completed).

**Findings:** Dyadic path analyses indicated actor effects, such that each individual's beliefs (attitude, norm, PBC) significantly predicted their own eating behaviour ( $\beta=0.061-0.308$ ,  $p<.05$ ). Furthermore, teenager and parent beliefs significantly predicted each other's fruit/vegetable consumption, and the magnitude of these partner effects was similar from teen-to-parent ( $\beta=0.092-0.107$ ,  $p<.05$ ), as from parent-to-teen ( $\beta=0.083-0.098$ ,  $p<.05$ ). For junk food/sugary drink consumption, parents appeared to have a greater impact on their teen's behaviour than vice versa.

**Discussion:** By approaching TPB variables from a dyadic perspective, we were able to show that a person's behaviour is associated with both their own beliefs and the beliefs held by an important other (i.e., a parent/child). These findings may help expand our understanding of the determinants of people's behaviour and lead to the identification of new intervention strategies.

9:45 - 10:00

## An examination of the mechanisms by which an acute exercise session influences subsequent eating behavior

M. Panos<sup>1</sup>, T. Mann<sup>1</sup>, A. Rothman<sup>1</sup>

<sup>1</sup>University of Minnesota, United States

**Background:** Regular performance of multiple health behaviors additively benefits well-being (Loef & Walach, 2012); however, little is known about the psychological pathways by which the performance of one health behavior affects the subsequent performance of a second health behavior. A theoretical model was developed to examine select psychological constructs that might mediate this effect and is tested using exercise and eating behaviors.

**Methods:** In a naturalistic study, participants completed measures assessing the psychological constructs before and after an acute exercise session. They were then given the choice of a healthy or an unhealthy snack.

**Findings:** If the variables of health self-efficacy, health identity strength, and commitment to health goals increase after the exercise session and are related to an increased likelihood of selecting the healthy snack, it will support the hypothesis that a completed exercise session may lead to healthier eating (i.e., a promotion spillover).

**Discussion:** Theoretically, understanding the changes in an individual's psyche after the performance of a health behavior (e.g., an acute exercise session) and how those changes affect the performance of a subsequent, different health behavior (e.g., snack choice) provides information about how to expand current behavior change models to delineate how people manage multiple health behaviors over time. Practically, elucidating these pathways can be used to design more effective interventions that increase the performance of multiple health behaviors that ultimately would improve overall health.

10:00 - 10:15

## “But it makes me feel better!” Sacrificing dietary health goals for emotional comfort

H. Scherschel<sup>1</sup>, T. Mann<sup>2</sup><sup>1</sup>Washington and Lee University, United States<sup>2</sup>University of Minnesota, United States

**Background:** When experiencing social isolation, individuals seek out and consume their comfort foods. Does the decision to consume a comfort food improve emotional health at the cost of maintaining dietary health?

**Methods:** In a preliminary online survey, 101 participants rated 93 foods on a 7-point scale based on their belief that the food would provide emotional comfort. The top ten food choices ( $m=5.92$ ) were high in fat (i.e., bacon), high in sugar (i.e., ice cream), or both (i.e., grilled cheese sandwich), providing evidence that individuals' comfort food preferences are at odds with maintaining a healthy diet. In a lab-based study, participants ( $n=146$ ) were socially excluded during an online game (i.e., Cyberball) and then received their comfort food (i.e., chocolate bar or potato chips) to consume or as a gift, either before or after the social exclusion task, or they received nothing. A two-way repeated measures ANCOVA was conducted on negative mood scores.

**Findings:** Participants who consumed a comfort food after being socially rejected were less distressed compared to those who received nothing during the study  $t(223.52) = -3.4$ ,  $p = .0004$ ,  $d = .41$ , those who ate their comfort food before the distressing task  $t(223.52) = 4.83$ ,  $p < .0001$ ,  $d = .65$ , and those who received a gift after the task  $t(223.52) = -3.52$ ,  $p = .0003$ ,  $d = .47$ .

**Discussion:** Therefore, consuming a comfort food improves emotional well-being but interferes with our ability to maintain a healthy diet, especially if this coping mechanism is frequently relied on.

# Symposium: Novel approaches to evidence synthesis

9:00 - 10:30

Aula E

Claus Vögele

9:00 - 9:15

## Constructing a behaviour change ontology for extracting and synthesising evidence in the Human Behaviour-Change Project

M. Johnston<sup>1</sup>, R. West<sup>2</sup>, M. Kelly<sup>3</sup>, S. Michie<sup>2</sup><sup>1</sup>University of Aberdeen, United Kingdom<sup>2</sup>University College London, United Kingdom<sup>3</sup>University of Cambridge, United Kingdom

### Background

Developments in machine learning and artificial intelligence make it increasingly possible to identify the very large published literature on behaviour change and interventions. Natural Language Processing methods have made the selection of included studies more efficient but the process of data extraction is typically done manually and is highly labour intensive. However, for machines to contribute to the extraction of data from papers we need an ontology of behaviour change interventions i.e. an unambiguous organisation of the elements to identify these elements in published reports.

### Methods

Three methods were used: intensive discussion amongst behaviour change experts to develop a preliminary ontology; a combination of literature review and consensus methods to populate elements in the ontology; and a review of existing relevant ontologies and annotation methods.

### Findings

The preliminary ontology included the elements: intervention (content; delivery), context, exposure, mechanisms of action, behaviour and effect on outcome. The consensus-based Behaviour Change Technique Taxonomy populates intervention content with 93 techniques. Based on literature reviews, a hierarchical taxonomy of delivery methods and a large number of mechanisms of action have been identified.

### Discussion

While some parts of the ontology have been developed work is needed on unpopulated elements. The Behaviour Change ontology will be linked to existing ontologies and provide a basis for machine learning. Further stages of the Human Behaviour-Change Project will develop an artificial intelligence system capable of extracting and interpreting evidence in the large literature on behaviour change interventions.

9:15 - 9:30

## Accounting for variability in control groups and reporting quality in systematic reviews of behavioural trials

M. de Bruin<sup>1,2</sup><sup>1</sup>University of Aberdeen, United Kingdom<sup>2</sup>University of Amsterdam, Netherlands

**Background:** Intervention and control groups in behavioural trials tend to be exposed to different levels of behavioural support. Systematic reviews ignoring variability in control group support may draw inaccurate conclusions about the effectiveness of intervention (components). Additionally, relying only on published intervention and control group descriptions may be problematic due to poor reporting. This presentation discusses these methodological problems and some solutions.

**Methods:** The results from two (ongoing) systematic reviews (SR1: HIV treatment adherence (k=34), SR2: smoking cessation (k=148)) collecting additional intervention and control group descriptions from study authors, and coding these for behaviour change techniques (BCTs), are used to examine these issues using descriptive and correlation analyses.

**Findings:** A minority of BCTs (about 40% for interventions and 20% for control group support in SR2) were described in publications; the remaining BCTs were only found in additional information obtained from study authors. The number of BCTs delivered to intervention and control groups varies widely between trials (1-60 and 1-45 BCTs respectively in SR2). The overlap in type of BCTs delivered to intervention and control groups in the same trial, varied between trials (SR1: 0-50%, SR2: 0-67%), and increased with the number of BCTs delivered to controls (SR1:  $r=.68$ , SR2:  $\rho=.69$ ,  $p's<.01$ ). Bivariate mixed-effects regression models can be used to account for variability in control group support (SR1).

**Discussion:** Collecting additional information from study authors is essential for ensuring comprehensive intervention and control group descriptions and meaningful meta-analyses. Variability in control groups between trials strongly affects interventions' ability to demonstrate superiority.

9:30 - 9:45

## Understanding the contribution of intervention components: a network meta-analysis approach to psychological preparation for surgery

R. Powell<sup>1</sup>, S. Freeman<sup>2</sup>, N. Scott<sup>3</sup>, A. Sutton<sup>2</sup>, N. Cooper<sup>2</sup>, A. Manyande<sup>4</sup>, C. Vögele<sup>5</sup>, J. Bruce<sup>6</sup>, L. Byrne-Davis<sup>1</sup>, M. Johnston<sup>3</sup>

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**Background:** Our 2016 Cochrane systematic review and standard meta-analysis of randomised controlled trials found that patients receiving psychological preparation had reduced length of stay (LOS) but could not unpick the impact of different intervention components (e.g. procedural information, sensory information, relaxation, behavioural instruction). The present study used a network meta-analysis approach to explore which components, and combinations of components, were most effective.

**Methods:** Component-based network meta-analyses using WinBUGS following Welton et al. (2009) examined four models: 1) Single treatment effect: all interventions were grouped together and compared with control. 2) Additive main effects: assumed each intervention component has a separate effect. 3) Two-way interaction: model 2 with additional terms for combinations of components. 4) Full interaction model: each combination of interventions was considered.

**Findings:** Model 1 identified a half day reduction in length of stay for any intervention compared to control, but clinical and statistical heterogeneity was also identified in the network. Modelling intervention specific effects suggested beneficial effects of 'procedural information' and 'sensory information' in combination with 'behavioural instruction' or 'relaxation'. However, accounting for different effects of treatments did not explain heterogeneity. A proportion of the heterogeneity was explained by an association between the treatment effect and the mean LOS in the control group.

**Discussion:** This analysis demonstrates an effective, rarely used approach to teasing apart the impact of intervention components on outcomes in evidence synthesis and the information gained from increasingly complex statistical models. The results obtained inform both theory and practice of psychological preparation for surgery.



9:45 - 10:00

## Identification of effective combinations of behavior change techniques using meta-CART

X. Li<sup>1</sup>, E. Dusseldorp<sup>2</sup>, J. Meulman<sup>1</sup><sup>1</sup>Mathematical Institute, Leiden University, Netherlands<sup>2</sup>Leiden University, Institute of Psychology, Netherlands

**Background:** In health psychology meta-analyses usually multiple moderators, such as behavior change techniques (BCTs), are available. In these cases, the question arises which combinations of moderators influence treatment effectiveness. However, traditional meta-analysis methods often lack sufficient power to investigate interaction effects between moderators, especially high-order interactions. To solve this problem, meta-CART was proposed by integrating Classification and Regression Trees (CART) into meta-analysis. This method appeared to be successful in detecting combinations of BCTs that result in a higher average treatment outcome.

**Method:** The meta-CART method was improved upon two aspects: 1) the stepwise approach was changed into one integrated approach; 2) the fixed- or random-effects assumption was taken into account in the interaction detection procedure. The performance of the improved meta-CART was investigated via an extensive simulation study on different types of moderator variables (i.e., dichotomous, ordinal, and multinomial variables).

**Results:** The method can achieve satisfactory performance (power > 0.80 and Type I error < 0.05) if the number of studies is large enough. The required minimum number of studies ranges from 40 to 120 depending on the complexity and strength of the interaction effects, and the residual heterogeneity.

**Discussion:** The improved version of meta-CART applies the fixed- or random-effects assumption consistently in both detection and test procedure. This method is able to identify effective combinations of behavior change techniques. Knowledge about such combinations is useful for evaluating existing treatments and designing new treatments.

10:00 - 10:15

## Systematic reviews of systematic reviews: communicating personalized disease risk to change behaviour as an exemplar

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**Background:** With increasing numbers of systematic reviews being published, which often overlap in scope, it is problematic to form a clear overview of an area. One solution is to apply systematic review methods to reduce the risk of bias in identifying, appraising and synthesising the findings of existing systematic reviews. This approach is applied with regard to systematic reviews that examine the effects of communicating disease risk information that is personalized to the individual on four key health-related behaviours: smoking, physical activity, diet and alcohol consumption.

**Methods:** This systematic review of systematic reviews involved searching four databases. A two-stage screening procedure with good reliability identified nine eligible systematic reviews, which each included between three and 15 primary studies.

**Results:** Methods of personalizing risk feedback included imaging/visual feedback, genetic testing, and numerical estimation from risk algorithms. The reviews were generally high quality. For a broad range of methods of estimating and communicating risk, the reviews found no evidence that risk information had strong or consistent effects on health-related behaviours. The most promising effects came from interventions using visual or imaging techniques and with smoking cessation and dietary behaviour as outcomes, but effects were inconsistent. Few interventions explicitly used theory, few targeted self-efficacy or response efficacy, and a limited range of Behaviour Change Techniques were used.

**Discussion:** Across reviews employing a broad range of methods of communicating personalised risk information, there is no good evidence that this is sufficient to produce sustained behaviour change on the four key health-related behaviours considered.

# Symposium: Innovative ideas in physical activity and walking research targeting older adults

11:00 - 12:30

Aula C

Nanna Notthoff

11:00 - 11:15

## Walking while talking – a special kind of walking

F. Metzger<sup>1</sup>, A. Ehli<sup>1</sup>, S. Schneider<sup>2</sup>, F. Häussinger<sup>1</sup>, P. Schneeweiss<sup>1</sup>, J. Hudak<sup>1</sup>, A. Fallgatter<sup>1</sup>

<sup>1</sup>University Hospital of Tuebingen, Germany

<sup>2</sup>HELP University Kuala Lumpur, Malaysia

### Abstract

**Background:** Dual tasking is challenging with increasing age, particularly when one of the components is walking. The mechanisms of reduced dual task abilities caused by age or neurodegenerative diseases have not been sufficiently understood yet. Functional brain imaging would be a useful diagnostic procedure, but functional magnetic resonance imaging is not feasible for whole body movements. Functional near-infrared spectroscopy (fNIRS) may be a suitable technique to measure body movement effects on fronto-temporo-parietal cortical activation in single and dual task paradigms.

**Method:** 12 young healthy adults walked on a treadmill at different speeds (3 and 5 km/h; single task (ST) paradigms) and, additionally, during a simultaneous performing of a verbal fluency task (while walking at 3km/h; dual task (DT) paradigm). Brain activation was measured using fNIRS at the scalp over the frontal, temporal and parietal cortex of both hemispheres with two large 4 x 4 probe-sets with 24 channels each during single and dual tasks.

**Findings:** With increasing challenge, Broca's area showed an increased activation during the more advanced conditions (ST-5km/h > ST-3km/h, DT > ST-3km/h, DT > ST-5km/h), while the corresponding area on the right hemisphere was also activated.

**Discussion:** DT paradigms combining walking and a cognitive task elicit wide-spread cortical activation patterns across fronto-temporo-parietal areas. fNIRS is a suitable method for functional measurements of walking and dual tasking. Due to the high ecological validity and the good acceptance of fNIRS also for aged participants the next steps are dual task measurements of elderly and subjects with neurodegenerative diseases.

11:15 - 11:30

## Putting their best foot forward: walking is positively associated with social activities of homecare clients

N. Notthoff<sup>1</sup>, V. Garms-Homolová<sup>2</sup>, A. Declercq<sup>3</sup>, L. Van Eenoo<sup>3</sup>, P.V. Jónsson<sup>4</sup>, H. van der Roest<sup>5</sup>, H. van Hout<sup>5</sup>

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<sup>5</sup>VU Medical Center Amsterdam, Netherlands

**Background:** Walking speed and distance have emerged as reliable predictors of physical and cognitive health in old age. We examined whether these measures and two related items (time spent exercising, number of days outside in the last three days) are relevant predictors of everyday activities (housework) and for components of socioemotional status (depressed mood, negativity, fear, anger, social participation, loneliness).

**Methods:** Participants were 2,584 community-dwelling homecare clients (65–105 years, M=83.09) from six European countries assessed with the interRAI Homecare instrument. Exclusion criteria were severe foot problems, being bedridden or comatose, and receiving palliative care. Cross-sectional path models were implemented in MPlus.

**Findings:** Longer distances walked were associated with higher scores on capacity for and actual performance of housework ( $b=-.48$  SE=.06,  $p<.01$ , and  $b=-.42$ , SE=.06,  $p<.01$ , respectively). A longer duration of walks was associated with more frequent participation in hobbies ( $b=.29$ , SE=.06,  $p<.01$ ) and more visits with family and friends ( $b=.13$ , SE=.04,  $p<.01$ ). More time spent exercising was associated with higher scores on capacity for and actual performance of housework ( $b=-.39$ , SE=.06,  $p<.01$  and  $b=-.32$ , SE=.06,  $p<.01$ , respectively), more participation in hobbies ( $b=.25$ , SE=.05,  $p<.01$ ) and less decrease in social participation ( $b=-.19$ , SE=.05,  $p<.01$ ). All associations held when controlling for ADLs and health.

**Discussion:** Walking and physical exercise may help to preserve homecare clients' engagement in everyday and social activities. Distinct facets of walking and exercise seem to be relevant for activities in different domains.

11:30 - 11:45

## The meaning of walking and gait training in nursing facilities in Germany

V. Garms-Homolová<sup>1</sup>, N. Notthoff<sup>2</sup><sup>1</sup>HTW Berlin, Germany<sup>2</sup>Humboldt-Universität zu Berlin, Germany

**Background:** Physical activities are beneficial for health – even in nursing facilities (NF). We consider walking and movement as important determinants of social interaction. Only NF-residents “who move” can actively seek contact persons. Immobile residents wait for visits. Therefore, gait and movement training should be prioritized in NFs.

**Methods:** Residents of German NFs participating in the “Berlin Project” underwent a comprehensive, standardized assessment RAI 2.0 ([www.interrai.org](http://www.interrai.org)) once a year. We used data from 2014 (N14=2,034) and 2015 (N15=1,841). Exclusion: residents <65years, coma, and end of life. Average age=83.7 years (SD=24.47), female: 71.3%.

**Findings:** 54.5% of NF-residents like walking. This preference is positively associated with uncomplicated interaction, accepting of visits, self-determination (own plans, participation in the community and its programs), etc. Locomotion training is rare: Only 26.1% have gait, 32.4% transfer training. Of those residents, the majority is trained daily. The lower clients’ ADL performance in walking, the more walking training they receive (e.g., ADL walking between rooms and training:  $b = .62$ ,  $SE = .07$ ,  $p < .001$ ). Whether trainings are provided frequently depends on the goodwill of staff. “Troublemakers” who have conflict with staff or other residents, and exhibit adjustment deficits are overrepresented among residents without training, and underrepresented among those trained daily.

**Discussion:** Walking training is seemingly not provided for preventive purpose, since impaired walking performance qualifies residents for walking training rather than some remaining performance in this activity. Not surprisingly, after one year, neither overall functional status, nor cognition, mood, or ADLs are influenced by the trainings.

11:45 - 12:00

## Pushing the boundaries: intervention effects on indoor life-space utilization in nursing home residents

C. Jansen<sup>1</sup>, M. Diegelmann<sup>1</sup>, O. Schilling<sup>1</sup>, H. Wahl<sup>1</sup>, K. Hauer<sup>2</sup>

<sup>1</sup>Heidelberg University, Germany

<sup>2</sup>AGAPLESION Bethanien Hospital, Germany

**Background:** Life-space has been associated with important psychosocial and physical outcomes related to quality of life in older people. In nursing home residents, these associations persist despite life-space being highly determined by institutional factors in this setting. We investigated whether participating in a 12-week, multi-component, individually tailored physical activity intervention led to an enhancement of life-space utilisation.

**Methods:** 143 permanent residents (53–100 years, M=83.1 years; 70% female) of two nursing homes in Germany either participated in intervention and assessment (intervention group; N=78) or assessment only (control group; N=65). They were measured at baseline, post-intervention, and at 3-month follow-up. Indoor life-space was assessed via a wireless sensor network spanning both facilities; three life-space parameters were derived from raw data. To test the intervention effect, a generalized linear mixed model approach was applied.

**Findings:** At posttest, the intervention group had a significantly higher overall life-space ( $p=.002$ ), spent more time away from their private room ( $p=.015$ ), and travelled further away from their private room ( $p=.006$ ) as compared to controls. At follow-up, this effect was partially sustained.

**Discussion:** In nursing home residents, an individually tailored physical activity program can be effective for enhancing life-space utilisation within the facility. Expanding residents' life-space may provide new opportunities for pleasant and emotionally meaningful encounters and include higher potential for establishing new social contacts within the facility. However, further research is needed to confirm this impact of life-space utilisation on social participation.

# Symposium: e-Pain: technology-based innovations for the study of pain

11:00 - 12:30

Aula D

Edmund Keogh



11:00 - 11:15

## Translating in pain research into patient care: evidence, challenges and opportunities

B. McGuire<sup>1</sup><sup>1</sup>National University of Ireland, Galway,, Ireland

**Background:** This paper provides a high-level overview of the future challenges and opportunities for technology-based psychological interventions to help with management of chronic pain.

**Methods:** A review of the literature shows that there has been rapid growth in pain management psychological interventions using online technologies and phone apps but many of these interventions have been developed in the absence of health professional involvement or adequate scientific evaluation.

**Findings:** While online psychological interventions are generally well received and effective in reducing distress and disability, there remains a dearth of information regarding the effectiveness of technology-based pain management interventions based on phone apps. Furthermore, many of these effective interventions have been developed in educational institutions and with a few notable exceptions, there is little evidence of widespread dissemination or uptake within health services.

**Discussion.** Some of the reasons for the challenges in disseminating and implementing e-pain programmes are explored and suggestions for integrating e-pain treatments into existing health service systems are offered.

11:15 - 11:30

## iCanCope™: User-centered design approach to develop integrated smartphone and web-based pain self-management programme for adolescents

J. Stinson<sup>1</sup>, C. Lalloo<sup>2</sup>, L. Harris<sup>2</sup>, J. Cafazzo<sup>3</sup>, F. Campbell<sup>2</sup>, B. Dick<sup>4</sup>, B. Feldman<sup>2</sup>, A. Gordon<sup>5</sup>, L. Montgomery<sup>6</sup>, L. Spiegel<sup>2</sup>

<sup>1</sup>The Hospital for Sick Children, Canada

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<sup>4</sup>University of Alberta, Canada

<sup>5</sup>Mount Sinai Hospital, Canada

<sup>6</sup>Alberta Health Services Chronic Pain Centre, Canada

**Background:** Persistent pain in adolescents and young adults (AYA) can negatively impact all aspects of health related quality of life. AYA living with a persistent pain condition, such as chronic pain or arthritis, are expected to assume increasing responsibility for managing their pain. However, the vast majority of AYA with persistent pain never receive comprehensive education or coping skills training to promote pain self-management and improve their function.

**Aim:** to address this problem by development of iCanCope™ App, the first integrated smartphone and web-based pain self-management programme tailored for AYA aged 12-25 years with persistent pain.

**Method:** Phase 1, we explored pain self-management needs of AYA from the perspective of patients and healthcare providers. We also held a two-day consensus meeting where experts in pediatric pain and software development, as well as patients, developed standardised self-care pain treatment algorithms for the app.

Phase 2, iCanCope™ prototype created in collaboration with Centre for Global eHealth Innovation. This involved consultation with knowledge users and healthcare providers. Prototype was refined through iterative usability testing involving semi-structured, audio-recorded individual interviews with AYA.

**Results:** A pilot randomized controlled trial is now comparing iCanCope App to an app that monitors pain in youth with painful arthritis and chronic pain.

**Discussion:** The use of smartphone technology to deliver tailored pain self-management therapy may help to optimize and solidify positive health behaviours and prevent pain-related disability in youth with persistent pain.

If found to be effective, the iCanCope™ self-management platform will be adapted for other conditions and populations.

11:30 - 11:45

## Clinical effectiveness of an internet-delivered Acceptance and Commitment Therapy (ACT) intervention for chronic pain

S. O'Higgins<sup>1</sup>, C. Dwyer<sup>2</sup>, H. Durand<sup>2</sup>, B. Slattery<sup>1</sup>, B. McGuire<sup>3</sup>

<sup>1</sup>National University of Ireland Galway, Ireland

<sup>2</sup>National University of Ireland, Galway, Ireland

<sup>3</sup>National university of Ireland, Galway, ireland, Ireland

**Background:** Internet-delivered psychological interventions have the potential to overcome environmental and economic barriers in the provision of evidence-based psychological treatment for people living with chronic pain. While the use of internet-delivered cognitive-behavioural therapy programmes has been consistently shown to have small-to-moderate effects in the management of chronic pain, there is a dearth of research regarding the effectiveness of online Acceptance and Commitment Therapy (ACT) programmes for this population.

The current study compared the clinical-effectiveness of an online ACT intervention with a waitlist control condition in the management of pain-related functional interference among people with chronic pain.

**Methods:** Participants n= 240 with non-malignant pain of at least 3 months' duration were randomised to one of two study conditions. The experimental group (n=70) underwent an eight-session internet-delivered ACT programme over an 8-week period. The waitlist control group was offered the ACT intervention after a 3-month follow-up period. The primary outcome was pain-related functional interference. Secondary outcomes included: pain intensity, depression, global impression of change, acceptance of chronic pain and quality of life. Participants were assessed pre-intervention, post-intervention and at 3-month follow-up.

**Results:** Between groups ANCOVA analyses revealed a significant effect of the intervention on pain severity, activity engagement, and pain-specific cognitive anxiety over time.

**Conclusions:** Findings provide preliminary support for the clinical effectiveness of an 8-week internet-delivered ACT intervention for reducing pain-related functional interference among people with chronic pain. Further research comparing the clinical and cost-effectiveness of online versus face-to-face ACT programmes is warranted.

11:45 - 12:00

## Will WebMap, an on-line intervention for children with chronic pain, translate into the Irish context?

J. Egan<sup>1,2</sup>, G. Darina<sup>3</sup>, B. McGuire<sup>4,5</sup>, L. Caes<sup>6</sup>, T. Palermo<sup>7</sup>

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<sup>2</sup>Centre for Pain Research, National University of Ireland, Galway, Ireland

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<sup>6</sup>University of Stirling, United Kingdom

<sup>7</sup>Seattle Children's Research Institute Seattle, United States

**Background:** Chronic pain is a common problem among children and adolescents, and can have a severe impact on youth across several areas of a child's daily functioning and quality of life. Family-based cognitive behavioural therapy (CBT) is a commonly used, effective intervention for the treatment of chronic pain and disability in children. WebMAP has been shown to be effective in reducing pain intensity and activity limitations in a North-American sample of children but the implementation of such online interventions has not yet been tested with an Irish sample.

Our aim is to conduct a preliminary evaluation of the feasibility, acceptability and effectiveness of the Web-MAP programme with an Irish sample of adolescents aged 10 – 16 years old who suffer from chronic pain.

**Method:** N= 20 families. The outcomes were assessed using a mixed design. Quantitative, subjective measures of pain (using web-based questionnaires and a diary) were taken from participants and their parents at baseline and post-treatment. Qualitative data were gathered from post-treatment interviews.

**Findings:** Preliminary analyses suggest substantial but non-significant reductions in pain intensity, disability and catastrophizing pre to post-treatment. Qualitative information revealed that participants find the programme useful, attractive, age-appropriate and interesting with sufficient information, but quite restrictive and time-intensive.

**Discussion:** The creation of a more flexible treatment approach to complement standard face-to-face care, appears to be feasible. But further research is necessary to explore how to improve the intervention to be more engaging for Irish children.

# Symposium: Women's health in socio-cultural context

11:00 - 12:30

Aula E

Karen Morgan

11:00 - 11:15

## Designed for dissemination: stakeholder engagement in a genomic risk communication intervention in breast cancer survivors

A. Kinney<sup>1</sup><sup>1</sup>University of New Mexico, United States

**Background:** Cancer Genetic Risk Assessment (CGRA) is a precision medicine strategy that facilitates informed decision making for effective health management among women at increased risk for inherited cancer. Yet only one-third of high-risk women have accessed CGRA. Widespread adoption of guidelines for informed decision-making is needed to achieve a population-level reduction in cancer morbidity, mortality and disparities. We aimed to engage stakeholders in the design of interventions to maximize effectiveness, dissemination, and implementation. **Methods:** Five focus groups of cancer survivors diagnosed at a young age and community stakeholders were conducted to inform the design of a trial of 1206 ethnically and geographically diverse women randomized to one of 3 study arms (targeted intervention vs. a tailored counseling/navigation intervention vs. usual care). The interventions draw upon evidence-based behavior change strategies and are theoretically guided by the Extended Parallel Process Model and the Health Action Planning Approach. Implementation intention and navigation strategies are used to bridge the intention-behavior gap. **Findings:** Common CGRA barriers included lack of perceived personal relevance, coached assistance and fear. Women provided critical feedback on the intervention prototypes and recommended increasing emotional appeal, strategies for communicating risk statistics, and increasing motivation. Analysis of pre- and post-interview surveys indicated that women did not become excessively worried their risk ( $p > 0.05$ ), validating their sentiments expressed during the focus groups. **Discussion:** Participants recommended various strategies for intervention implementation and embraced a fear management and motivational approach. Stakeholder engagement is a key foundational step in intervention design, implementation, and dissemination.

11:15 - 11:30

## Fear of childbirth: cross-validation and comparison between two cultures

H. Preis<sup>1</sup>, Y. Benyamini<sup>1</sup>, M. Eberhard-Gran<sup>2,3</sup>, S. Garthus-Niegel<sup>2,4</sup>

<sup>1</sup>Tel Aviv University, Israel

<sup>2</sup>Department of Child Health, Norwegian Institute of Public Health, Oslo, Norway, Norway

<sup>3</sup>HØKH, Research Centre, Akershus University Hospital, Norway, Norway

<sup>4</sup>Institute and Outpatient Clinics of Psychotherapy and Psychosomatic, University Hospital Carl Gustav Carus, Technical University Dresden, Germany, Germany

**Background:** Fear of childbirth (FoC) could have significant physical and emotional consequences. In a large Norwegian study, six different factors of the widely-used instrument to measure FoC, Wijma Delivery Expectancy/Experience Questionnaire (W-DEQ), were identified. In the current study, we wished to confirm those factors and compare levels of the different dimensions between expectant mothers from Israel and Norway.

**Methods:** Women from Israel (n=490) and Norway (n=2918) were recruited during prenatal check-ups around 32 weeks of gestation. They were recruited in community clinics and a university hospital. All participants filled in self-administered questionnaires, including the 33-item W-DEQ.

**Findings:** The Norwegian 6-factor solution of the W-DEQ fit well with the Israeli data. Overall, primiparae reported more FoC than multiparae. When comparing Israeli and Norwegian Primiparae, Israelis were more concerned about negative outcomes for the child while Norwegians were more concerned about loneliness, feeling less self-efficacy, negatively appraising birth, and lacking positive anticipation. Similar results were found among multiparae, except that Israelis had more general and pain fear, and Norwegians did not report more lack of positive anticipation.

**Discussion:** Cultural differences between Israel and Norway are reflected in the levels of FoC subscales. Israeli birth culture is very medicalized, motherhood is highly revered and there is emphasis on having "perfect babies". In contrast, Norwegian women have fewer children and birth is less medicalized. This could explain why Israeli women are more concerned their child might be harmed during birth, while Norwegian women are more concerned with physical and emotional expectations during birth.

11:30 - 11:45

## The role of dispositional and situated optimism in psychological adjustment to high-risk pregnancy

Y. Benyamini<sup>1</sup>, M. Atlan<sup>1</sup>, M. Gozlan<sup>2</sup>, U. Dan<sup>2</sup>

<sup>1</sup>Tel Aviv University, Israel

<sup>2</sup>Maccabi Health Services, Israel

**Background:** The uncertainty and lack of control involved in high-risk pregnancy (HRP) expose women to stressors beyond those experienced in low-risk pregnancies. Hence, their psychological adjustment is expected to be lower compared to low-risk pregnancies. Dispositional optimism is known to be related to better outcomes in health risk settings. According to Carver and Scheier's theory of self-regulation, this association should be partially mediated by situated optimism, yet existing research is equivocal.

**Methods:** Pregnant women were recruited at women's health centers and pre-natal classes (high-risk n=228; low-risk n=160). All participants filled in measures of distress and well-being; HRP also rated optimism, maternal-fetal attachment, perceived uncertainty, treatment control and personal controllability.

**Findings:** Psychological adjustment was lower among women in HRP ( $t_s > 2$ ,  $p_s < .05$ ). Dispositional optimism, lower perceived uncertainty regarding the pregnancy, treatment and personal control were related to better psychological adjustment to HRP. Regression models using PROCESS showed that situated optimism (=perceived uncertainty) mediated the associations between dispositional optimism and wellbeing/distress, controlling for control perceptions and already having children (e.g., for distress  $R^2 = .21$ , direct effect =  $-.18$ ,  $p = .03$ , indirect effect =  $-.16$ ,  $p < .001$ ). Attachment was related only to treatment and personal control.

**Discussion:** The findings support the assertion that dispositional optimism may operate via situated optimism. When possible, and especially for women low in dispositional optimism, it is important to promote situated optimism by relieving unnecessary uncertainty and providing confidence in the treatment; when impossible, women with HRP may need more psychosocial support to facilitate adjustment. Perceived lack of control can impede the normal attachment process.



11:45 - 12:00

## Becoming a mother through egg donation: women's reflections in on-line discussion forums in Bulgaria

I. Todorova<sup>1</sup>, Y. Panayotova<sup>1</sup>, T. Kotzeva<sup>2,3</sup>, R. Todorova<sup>4</sup>, S. Röttschke<sup>5</sup>

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<sup>3</sup>Burgas Free University, Bulgaria

<sup>4</sup>City University of New York Graduate Center, United States

<sup>5</sup>Freie Universität Berlin, Germany

**Background:** We aim to understand how motherhood is constructed in on-line discussion forums, dedicated to the assisted reproductive technology (ART) of egg donation. In Bulgaria egg donation is available and regulated, synchronized with EU legislation. We follow women's discussions to understand how recipients of donated eggs construct identities and negotiate discourses of genetics, motherhood and femininity.

**Methods:** We analyze texts from 8 discussion forums (2007 – 2016). A total of 765 postings were selected, with inclusion criteria of minimal length of 10 lines from women who were recipients of donated eggs or were considering it. Data were analyzed through thematic analysis with a focus on language, informed by a discursive perspective.

**Findings:** We identified the following themes regarding constructions of motherhood: Dilemmas about genetic continuity and discontinuity between mother and child; Motherhood through egg donation as a last resort; Motherhood as gestation and nurturing; Becoming a mother at any price - fighting and persisting.

**Discussion:** The current visibility and accessibility of infertility treatment in Bulgaria has shifted meanings of infertility away from those of stigma and defectiveness, to those of persistence in achieving pregnancy. The procedure of egg donation in the treatment for infertility however adds an additional dimension which provokes dilemmas. In pronatalistic societies such as the Bulgarian one, the genetic link between parents and children is highly valued, while egg donation modifies this link. In this case women construct identities through sustaining the motherhood mandate and at the same time disrupting the genetic definitions of parenthood.

12:00 - 12:15

## Biofeedback and serious game system for pelvic floor muscle training in women with urinary incontinence

A. Baban<sup>1</sup>, D. Taut<sup>1</sup>, E. Vodegel<sup>2</sup>, S. Angles<sup>3</sup>, O. Airaksinen<sup>4</sup>, J.W. Roovers<sup>2</sup>, M. Espuna<sup>3</sup>, J. Ramos<sup>5</sup>, M.A. Mananas<sup>5</sup>

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<sup>4</sup>Department of Physical and Rehabilitation Medicine, Finland University Hospital, Kuopio, Finland

<sup>5</sup>Biomedical Engineering Research Centre, Universitat Politècnica de Catalunya, Barcelona, Spain

**Background:** Pelvic floor muscle training (PFMT) is the recommended approach to address mild to moderate urinary incontinence (UI), although the adherence is variable. This makes elements of training delivery important in treatment effectiveness. Hence, the conversion of biofeedback approach into serious games played on a mobile phone is innovative and may prove effective in motivating women to adhere to their PFMT schedules.

**Methods:** A mixed approach was implemented to develop serious game scenarios and test the biofeedback and games in a pilot trial. The game functionalities were amended and further tested together with biofeedback system in a trial with 21 women with UI, recruited in 2 hospitals. We collected quantitative (number of sessions performed, rating of different game functionalities etc) and qualitative data (interviews focused on satisfaction with using the system and barriers to adherence; think aloud protocols focused on the momentum experience of women with using the system).

**Results:** Women performed on average 33 sessions, range [4; 70] with the game and biofeedback system. The evaluation of the games was overall favourable and motivated women to carry their scheduled sessions. The feedback received at the end of the training was perceived by women as being the most important game feature in improving future PFMT performance.

**Discussion:** The results show that biofeedback incorporated in a serious game system is a promising approach to motivate women to adhere to PFMT. This study illustrates an innovative, evidence based and iterative approach to develop a system of game-based biofeedback.

# Symposium: New developments in approach bias modification across clinical disorders and health behaviours

11:00 - 12:30

Aula F

Reinout Wiers

11:00 - 11:15

## Is approach bias modification a useful tool in smoking cessation?

R. Wiers<sup>1</sup>, H. Larsen<sup>1</sup>, G. Kong<sup>2</sup>, G. Guiquinto<sup>1</sup>, B. van Bockstaele<sup>1</sup>, M. Boffo<sup>1</sup>, S. Krishnan-Sarin<sup>2</sup>

<sup>1</sup>University of Amsterdam, Netherlands

<sup>2</sup>Yale Univ School of Medicine, United States

**Background:** Approach bias modification (ApBM) has shown great promise as an add-on to treatment for alcohol use disorders, with replicated improvements in clinical outcomes (Wiers et al, 2011; Eberl et al., 2013; Manning et al., 2016). Earlier research had demonstrated that ApBM in addictive behaviours only exerts effect when participants are motivated to change their behaviours (review: Wiers et al., 2016). This can be achieved through motivational interviewing or motivated quitters can be selected. Here we present initial studies applying this method as add-on to a Cognitive and Motivational Intervention (CMI) for smoking cessation.

**Methods:** In a first study we tested CMI combined with real vs. placebo ApBM in 60 smoking adolescents. We are currently running a second study in a young adult population.

**Findings:** The expected specific effect in the reduction of an approach bias for smoking in the experimental condition was not found. Intent-to-treat (ITT) analyses showed that ApBM, when compared with sham trended toward higher end-of-treatment, biochemically confirmed, seven-day point prevalence abstinence, (17.2% vs. 3.2%, p.0.071). Initial results in the young adult population will be presented.

**Discussion:** Initial results suggest that ApBM could be a useful add-on to smoking cessation interventions, especially for individuals motivated to quit who experience strong approach-tendencies, as has been shown in alcohol use disorders. More research is needed into integrating ApBM into effective cognitive-motivational smoking cessation interventions.

11:15 - 11:30

## The effect of approach bias modification on cue-reactivity in individuals with cannabis use disorder (CUD)

B. Sherman<sup>1</sup>, N. Baker<sup>1</sup>, A. McRae-Clark<sup>1</sup><sup>1</sup>Medical University of South Carolina, United States

### Background:

Evidence suggests that biases in cognitive processing of drug-related stimuli are central to the development and maintenance of addiction. The current study examines the effect of approach bias modification (ABM) on approach bias and cannabis cue-reactivity, and seeks to advance novel interventions for CUD.

### Methods:

A randomized, double-blind, sham-controlled pilot study investigated the effect of a 4-session computerized ABM paradigm on cue-reactivity (N=33) in non-treatment seeking adults with CUD. ABM procedures utilized a cannabis adaptation of the Alcohol Approach-Avoidance Task, which requires subjects to push or pull a joystick in response to a non-content related stimulus feature (i.e. border color) and uses a zoom feature to simulate approach or avoidance behavior. Generalized linear mixed models were used to examine the effect of ABM on approach bias, cue-reactivity, and cannabis use.

### Findings:

Participants receiving ABM showed a trend for blunted cannabis cue-induced craving at the end of treatment compared to controls ( $p = 0.065$ ). A gender effect on cannabis use was also found; men receiving ABM reported fewer sessions per day at the end of treatment compared to women ( $p = 0.022$ ), while there were no differences in the control group. Approach bias did not differ between groups at end of treatment or follow-up.

### Discussion:

This pilot data indicates that ABM may be efficacious in reducing cue-reactivity and improving cannabis use outcomes, and that gender may moderate this effect. The efficacy of ABM as an adjunct to psychosocial interventions warrants investigation in larger clinical trials in treatment-seeking adults with CUD.

11:30 - 11:45

## Approach bias modification in bulimic eating disorders

T. Brockmeyer<sup>1</sup>, U. Schmidt<sup>2</sup>, H. Friederich<sup>1</sup><sup>1</sup>Heinrich-Heine-University Düsseldorf, Germany<sup>2</sup>King's College London, United Kingdom

**Background:** Obesity is considered a major public health concern and overeating as its most important cause. Automatic approach behaviour towards food that occurs early in information processing is thought to contribute to heightened food cue-reactivity, food craving and overeating. Bulimia nervosa (BN) and Binge Eating Disorder (BED) can be considered extreme forms of overeating. We tested whether Approach Bias Modification (ABM), a computerised cognitive training that targets biased approach behaviour towards food, can reduce binge-eating, food craving and intake in subclinical and clinical samples.

**Methods:** First we tested ABM in an uncontrolled proof-of-concept study in a subclinical sample of n=30 people with high levels of food craving. In a subsequent randomised controlled trial, n=54 BN/BED patients underwent 10 sessions of either real or sham ABM. In both studies, eating disorder psychopathology, trait and cue-elicited food craving, and food intake was assessed before and after treatment.

**Findings:** In the proof-of-concept study, ABM was associated with significant reductions in approach bias towards food, eating disorder psychopathology, trait and cue-elicited food craving. Data collection and analysis of the RCT will be finished by July 2017, final results will be presented at the conference. Preliminary analysis (n=35) showed that real CBM was superior to sham CBM in terms of reducing global eating disorder symptoms.

**Discussion:** If successful, this novel intervention could be used as a cost-effective, easy-to-administer treatment module for reducing food craving and overeating in clinical and subclinical BN and BED.

11:45 - 12:00

## The effect of approach bias modification on healthy food consumption

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**Background:** Previous research has shown that automatic tendencies to approach unhealthy food can be modified using the approach-avoidance task. To date, few studies have investigated whether approach bias can be re-trained toward healthy food cues. Thus to increase the practical application of approach bias modification in the eating domain, this study aimed to examine the effect of modifying approach bias for healthy and unhealthy food cues on subsequent food consumption. In addition, the potential moderating role of trait impulsivity was examined in determining the effect of training on consumption.

**Methods:** Participants were 200 undergraduate women (17-26 years) randomly allocated to one of five conditions of an approach-avoidance task varying in the training of approach bias for healthy food, unhealthy food, and non-food cues. Outcome variables were approach bias for healthy and unhealthy food and the proportion of healthy relative to unhealthy food consumed.

**Findings:** As predicted, approach bias for healthy food significantly increased in the 'avoid unhealthy/approach healthy food' condition. Importantly, the effect of training on consumption was moderated by trait impulsivity. Participants with high trait impulsivity consumed a greater proportion of healthy snack food following the 'avoid unhealthy/approach healthy food' training.

**Discussion:** The findings support the suggestion that automatic processing of appetitive cues has a greater influence on eating behaviour among individuals who have poor self-regulatory control. They further suggest that approach bias modification may be one way to effectively encourage highly impulsive people, such as overweight and obese individuals, to eat more healthy food and less unhealthy food.

12:00 - 12:15

## Effect of retraining approach-avoidance tendencies on an exercise task: a randomized controlled trial

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**Background:** Promoting regular physical activity (PA) and lessening sedentary behaviors (SB) constitute a public health priority. Recent evidence suggests that PA and SB are not only related to reflective processes (e.g., behavioral intentions), but also to impulsive approach-avoidance tendencies (IAAT). This study aims to test the effect of a computerized IAAT intervention on an exercise task.

**Methods:** Participants (N = 115) were randomly assigned to one of three experimental conditions, in which they were either trained to approach PA and avoid SB (ApPA-AvSB condition), to approach SB and avoid PA (ApSB-AvPA condition), or to approach and avoid PA and SB equally often (active control condition). The main outcome variable was the time spent carrying out a moderate intensity exercise task.

**Findings:** IAAT towards PA decreased in the ApSB-AvPA condition ( $p=.042$ ), tended to increase in the ApPA-AvSB condition ( $p=.084$ ), and remained stable in the control condition ( $p=.815$ ). Most importantly, the ApPA-AvSB manipulation led to more time spent exercising than the ApSB-AvPA condition (108.99 vs. 60.6 seconds,  $p=.020$ ). Sensitivity analyses excluding individuals who were highly physically active further revealed that participants in the ApPA-AvSB condition spent more time exercising than participants in the control condition (122.43 vs. 70.96 seconds,  $p=.047$ ).

**Discussion:** These findings provide preliminary evidence that a single intervention session can successfully change impulsive approach tendencies towards PA and can increase the time devoted to an exercise task, especially among individuals who need to be more physically active. Potential implications for health behavior theories and behavior change interventions will be outlined.



**Symposium: StrokeCog Study:  
modelling and modifying stroke-related  
cognitive impairment through innovative  
application of health psychology  
principles**

14:00 - 15:30

Aula C

Frank Doyle

14:00 - 14:15

## Addressing post-stroke cognitive impairment through innovative application of health psychology principles

A. Hickey<sup>1</sup>, N.A. Merriman<sup>1</sup>, E. Sexton<sup>1</sup>, N. Donnelly<sup>2</sup>, N. Pender<sup>3</sup>, F. Horgan<sup>4</sup>, M. Wren<sup>2</sup>, K.E. Bennett<sup>1</sup>, F. Doyle<sup>1</sup>, D. Williams<sup>5,6</sup>

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**Background:** Cognitive impairment (CI) is a pervasive outcome of ischaemic stroke, with implications for stroke recovery, medication and rehabilitation adherence, and progression to dementia. Intervention for post-stroke cognitive impairment has received considerably less attention than rehabilitation for physical deficits. Through a series of studies conducted in the Republic of Ireland, the prevalence of post-stroke cognitive impairment and the absence of appropriate rehabilitation have been identified.

**Methods:** Two national audits of acute and community stroke care (2008 and 2015) and a cohort study (ASPIRE-S) of 256 patients with acute ischaemic stroke followed up at 6 months (2011-2012) and being recalled at 5 years (2016-2017) will be described. Methods used include analysis of national hospital discharge data, qualitative interviews with healthcare professionals and surveys of patients with stroke and their carers.

**Findings:** Cognitive impairment is reported in over half of patients six months post-stroke. It is identified as a common stroke outcome in national audits, with rehabilitation provision minimal to non-existent. While over 90% of Irish stroke patients interact with a stroke specialist nurse and 81% receive physiotherapy, 1.6% receive input from psychological services, with no recorded indication of rehabilitation provided for cognitive difficulties.

**Discussion:** Findings of studies conducted in Ireland to date highlight a substantial unmet need for rehabilitation for cognitive impairment post-stroke. This issue is not unique to Ireland. These findings have led to the establishment of a research programme - the StrokeCog study - to develop an intervention for post-stroke cognitive impairment using principles of behavior change theory.

14:15 - 14:30

## Cognitive function and outcomes post-stroke: a five-year follow-up of the ASPIRE-S cohort

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<sup>5</sup>Royal College of Surgeons in Ireland, Ireland

**Introduction:** Impairments in cognitive function are common following stroke and can increase disability and levels of dependency, resulting in increased burden on family members or carers, as well as the healthcare system. The aims of this study were to examine cognitive function trajectories in a cohort of stroke patients from six months to five years post-stroke, and to explore the outcomes associated with post-stroke cognitive decline.

**Methods:** 5-year follow-up of the ASPIRE-S (Action on Secondary Prevention Interventions and Rehabilitation in Stroke) cohort study of stroke patients, involving a detailed assessment of cognitive function, secondary prevention and health care utilisation. 256 patients were last assessed at six months post-stroke, with c.180 being reassessed at 5-year follow up. Logistic regression analysis is based on data from the first half of this follow-up study.

**Findings:** Out of 256 patients last seen six months post-stroke, 52 (20.3%) had died at 5-year follow-up. Cognitive impairment (MoCA <26) at six months was significantly associated with death at five years (aOR 2.98, 95%CI 1.12 to 7.91), controlling for age, modified Rankin Scale assessed 72 hours post-stroke, and number of cardiovascular risk factors. Associations between cognitive decline and secondary prevention, recurrent events, and costs in terms of quality of life and healthcare utilisation, will also be presented.

**Discussion:** Post-stroke cognitive impairment is associated with mortality at five years, highlighting the potential importance of cognitive interventions and rehabilitation post-stroke.

14:30 - 14:45

## Post-stroke cognitive impairment: a systematic review of disease progression models

E. Sexton<sup>1</sup>, N. Donnelly<sup>2</sup>, N.A. Merriman<sup>1</sup>, A. Hickey<sup>1</sup>, M. Wren<sup>2</sup>, K.E. Bennett<sup>1</sup>

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**Background:** The aim was to review models of post-stroke cognitive impairment (CI) and dementia disease progression, to inform development of the StrokeCog epidemiological modelling platform for use in planning and economic decision-modelling for psychological services for stroke.

**Methods:** Pubmed, EMBASE and the NHS Economic Evaluations Database were searched for relevant articles published in English since 2000. Included articles described an epidemiological or economic model tracking disease progression of CI and/or stroke over time, e.g., Markov or microsimulation models. Models that focussed on prevention rather than disease progression, or that focussed solely on resource utilisation, were excluded. Titles and abstracts were screened by one reviewer, followed by the full text of potentially relevant articles. Data was abstracted from eligible articles using a standard form. Models were evaluated against pre-specified criteria for the StrokeCog model, agreed by expert consensus.

**Findings:** 4,638 abstracts were screened, followed by full text review of 345 articles. There were 61 eligible articles for CI and 47 for stroke (only two articles modelled both stroke and CI). Two modelling options were identified in most eligible articles: 1) a cohort-level state-transition model with disease states defined by categories of CI and/or disability, and 2) an individual-level discrete event simulation model with continuous modelling of CI, disability, behaviour and/or mood. In stroke models, transitions between disease states were assumed to be dependent on stroke recurrence.

**Discussion:** A systematic, rigorous review of current modelling approaches was used to develop options for an epidemiological model of pathways of post-stroke CI over time.

14:45 - 15:00

## Perspectives of healthcare professionals involved in providing stroke care on impact of post-stroke cognitive impairment

N.A. Merriman<sup>1</sup>, N. Donnelly<sup>2</sup>, E. Sexton<sup>1</sup>, M. Wren<sup>2</sup>, K.E. Bennett<sup>1</sup>, N. Pender<sup>3</sup>, D. Williams<sup>4,5</sup>, F. Horgan<sup>6</sup>, A. Hickey<sup>1</sup>

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<sup>6</sup>School of Physiotherapy, RSCI, Dublin, Ireland

**Background:** Cognitive impairment (CI) is a pervasive outcome of ischaemic stroke, reported in over half of patients six months post-stroke. However, cognitive rehabilitation receives considerably less attention than physical rehabilitation. This qualitative study explores the perspectives of healthcare professionals on the impact of post-stroke CI and necessary components of a cognitive rehabilitation programme.

**Methods:** Healthcare professionals involved in providing stroke care were identified from a method of snowballing in a hospital and community setting. Following informed consent, qualitative in-depth interviews were conducted face-to-face, audio-recorded (with participant permission) and transcribed. Thematic analysis was employed to analyse the data.

**Findings:** Twelve healthcare professionals were interviewed and had between 1 and 10 years clinical experience. Four major themes were identified from the analysis: i) absence of a coherent cognitive rehabilitation infrastructure for stroke patients following hospital discharge, ii) rehabilitation of post-stroke CI not seen as a priority, iii) impact of patient's insight into their deficits on rehabilitation gains and, iv) need for cognitive rehabilitation delivered in a way that is meaningful for the patient.

**Discussion:** These findings provide an insight into the fractured cognitive rehabilitation programmes available to stroke patients post-discharge and the prioritisation of more 'visible' deficits in the face of such limited resources. These qualitative data, in combination with a systematic review of cognitive interventions for post-stroke cognitive impairment and qualitative interviews with patients and family members, are being used to inform the development of a cognitive intervention that will be tested in a pilot feasibility randomised controlled trial.

15:00 - 15:15

## Acute care utilisation patterns post-stroke: an analysis from Ireland

N. Donnelly<sup>1</sup>, N.A. Merriman<sup>2</sup>, E. Sexton<sup>2</sup>, K.E. Bennett<sup>2</sup>, M. Wren<sup>1</sup>, A. Hickey<sup>2</sup>

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<sup>2</sup>Division of Population Health Sciences, Royal College of Surgeons in Ireland, Ireland

**Background:** As part of the StrokeCog research programme, this study built on previous research from the research group by analysing acute care utilisation patterns post-stroke in Ireland, with a specific focus on healthcare utilisation by those with post-stroke cognitive impairment.

**Methods:** Secondary data analysis of the Irish Hospital Inpatient Enquiry (HIPE) dataset. Bivariate and multivariate statistics were conducted to compare acute care utilisation and discharge destinations (death, home, rehabilitation or nursing home) as well as length of stay (LOS) post-stroke. The implications of cognitive impairment for all of these parameters was also examined.

**Findings:** Findings from previous research from this research group indicated that the mean length of hospital stay for those with stroke in Ireland was 24 days (SD: 47). Those discharged to a nursing home had a considerably longer length of stay (M: 50; SD: 82) compared to those discharged home (M:17; SD 32). In total, fifteen per cent of stroke discharges were discharged to a nursing home. The current study builds on these findings by comparing hospital utilisation and discharge pathways for those with a long LOS with and without post-stroke cognitive impairment.

**Discussion:** The research findings from this analysis will inform the estimation of costs of cognitive impairment post-stroke in Ireland as part of an overall programme of work focussed on developing and delivering effective interventions for post-stroke cognitive impairment.

# Symposium: Occupational stress and job strain

14:00 - 15:30

Aula E

Renato Pisanti

14:00 - 14:15

## The mediating role of self efficacy beliefs in the job demands-resources model

R. Pisanti<sup>1</sup>, C. Cardinali<sup>1</sup>, V. Rosati<sup>1</sup>

<sup>1</sup>Niccolò Cusano University Rome, Italy

**Background:** The central aim of the present study was to expand the Job Demands-Resources (JD-R) model by examining the mediating role of two self efficacy beliefs (occupational coping self efficacy and recovery self efficacy) in the association between psychosocial job characteristics and psychological distress and job-related well-being among Italian teachers.

**Methods:** Questionnaire data from 246 teachers (83% female, with a mean age of 43.2 years, SD=9.1) were analyzed. Participants completed the following measures: the Leiden Quality of Work Questionnaire for Teachers, Teachers self efficacy, Recovery self efficacy, Maslach Burnout Inventory-Education Survey, and Utrecht Work Engagement Scale (short version). A cross-sectional study design was applied. Hierarchical multiple regression analyses were conducted.

**Findings:** Results show that self efficacy beliefs do not mediate the relationship between job demands and burnout dimensions (emotional exhaustion and depersonalization). Instead, teacher self efficacy mediates the relationship between job resources and positive dimensions (engagement, personal accomplishment and job satisfaction).

**Discussion:** Results are partially in line with previous studies (e.g., Llorens et al., 2007): only professional efficacy beliefs play a mediating role between psychosocial job resources and positive dimensions. The implications of these findings for the JD-R model are discussed.



14:15 - 14:30

## Patterns of job-related affect and their relation with burnout syndrome: cross-sectional and longitudinal studies

B. Basinska<sup>1</sup><sup>1</sup>Gdansk University of Technology, Poland

**Backgrounds.** Taxonomy of job-related well-being (Bakker & Oerlemans, 2011), including the relationship between affect and indicators of health, requires empirical verification. The aim of the study is the identification of affective patterns and their relationship with job burnout. Affective patterns are a configuration of four groups of affect as a function of valence and arousal (Russell, 2003). The bottom-up paradigm from the inner layers (affect) to outer layers of occupational well-being (job burnout) is applied.

**Methods.** Two cross-sectional and one longitudinal studies (average time 6 weeks) were conducted in a group of police officers (n=391) and two heterogeneous groups of employees (n=271 and n=151). The Job-related Affective Well-being Scale and the Oldenburg Burnout Inventory were used. Two-steps cluster analyses (Silhouette method) and the ANOVA (bootstrapping method with 95% confidential interval) were applied.

**Findings.** The results showed three affective patterns that these cause in the level of job burnout in a police officers and a heterogeneous group of employees. Individuals of positive affective pattern were not burned out (flourishing group). In contrast, employees of negative affective pattern were burned out. They had a high level of exhaustion and disengagement (languishing group). Individuals represented mixed affective pattern demonstrating a moderate level of job burnout (realistic group). In the longitudinal study, these groups were different from each other in the level of future exhaustion, but not in disengagement.

**Discussion.** The bottom-up paradigm revealed that exhaustion can be the most vulnerable to affective experience at work.

**Founding.** The National Science Centre, Poland, UMO-2015/17/B/HS6/04178

14:30 - 14:45

## Bullying at work: a test of the work environment hypothesis

M. van der Doef<sup>1</sup>, B. Verkuil<sup>2</sup><sup>1</sup>Health, Medical, and Neuropsychology, Leiden University, Netherlands<sup>2</sup>Clinical Psychology, Leiden University, Netherlands

**Background:** Workplace bullying has been shown to have severe negative consequences for individual employees and for organisations. The current study examines whether - in line with the work environment hypothesis – stressful working environments are associated with the prevalence of bullying.

**Methods:** Secondary analyses were conducted on self-report data on psychosocial work characteristics and organisational factors, derived from 30,428 employees working in organisations providing care for mentally and/or physically disabled individuals. Aggregated scores at the unit level were used to determine on which work aspects units where bullying was present (n=99) differed from 'non-bullying' units (n=784).

**Findings:** Univariate analyses showed significant differences between bullying and non-bullying units on nearly all psychosocial work characteristics and organisational factors. In contrast to expectations, high job demands were not associated with bullying status. Multivariate logistic regression analysis identified inadequate planning and work procedures, inadequate material and equipment, and high physical demands / working under unsafe conditions as main predictors (Nagelkerke  $R^2=.276$ ,  $p<.001$ ).

**Discussion:** The findings from this cross-sectional study provide some evidence for the work environment hypothesis, suggesting that improving the working environment might contribute to the reduction of bullying in organisations.

14:45 - 15:00

## The Farmers Stressors Inventory. Antecedents of burnout and depression among farmers

D. Truchot<sup>1</sup>, M. Andela<sup>2</sup><sup>1</sup>University of Bourgogne-Franche-Comté, France<sup>2</sup>Université of Bourgogne Franche-Comté, France

**Background :** Farming is a stressful occupation with a high rate of suicide. However, few studies have been conducted on the antecedents of stress, burnout and suicide among farmers. In addition, we lack a methodologically sound instrument for assessing farmers' stressors.

**Method :** Based on the literature and interviews with farmers, we designed a scale of 58 stressors. Then, we designed a questionnaire including the stressors, and, inter alia, a measure of burnout, the MBI-GS, and a measure of depression (the Beck Hopelessness Scale), which can be used as a suicidal risk indicator.

**Findings :** 2142 French farmers answered our questionnaire. In order to test the factor structure of the scale and observe if it could be replicated, we split our sample into two equal groups. The first group was subjected to an exploratory factor analysis, while the second group was subjected to a confirmatory factor analysis.

The analysis revealed eight factors (all Cronbach alpha >.70) : legislation pressure, workload, uncertainty about the future, physical isolation, financial concerns, conflicts with associates, meteorology and technical problems, family transmission of the farm. Regression analyzes revealed that workload and financial concerns are related to burnout and depression. Isolation and conflicts are associated with burnout but not depression. On the other hand, uncertainty about the future is associated with depression but not burnout. Consequently, burnout and depression are not necessarily associated with the same factors. We will discuss the results according to their theoretical and practical implications.

# Screening and prevention

9:00 - 10:30

Aula A

Pio Enrico Ricci Bitti

9:00 - 9:15

## Effectiveness of interventions to increase colorectal cancer screening: a systematic review, meta-analysis and meta-regression

A. Tsipa<sup>1</sup>, D. O'Connor<sup>1</sup>, M. Conner<sup>1</sup>, L. Hall<sup>1</sup>, B. Sykes-Muskett<sup>1</sup>, D. Branley<sup>1</sup>, F. Day<sup>2,3</sup>

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**Background:** Colorectal cancer (CRC) is the third most commonly diagnosed cancer worldwide. Screening is linked to significant reductions in CRC incidence and mortality, however, uptake rates remain alarmingly low.

**Methods:** We conducted a systematic review, meta-analysis and meta-regression to examine the effectiveness of interventions aimed at increasing CRC screening uptake. We conducted a sensitivity analysis of studies that recruited vulnerable populations (minority, underserved, poor). Meta-regression examined whether intervention type, duration, gender, age, number of behaviour change techniques (BCTs) and other components of the intervention or methodology modified the overall intervention effect.

**Findings:** A total of 102 RCTs involving 1.94 million participants were included. Meta-analysis showed significant benefit of all interventions combined ( $g = 0.26$ ; OR 1.60; 95% CI 1.49-1.71,  $p < 0.001$ ); sensitivity analysis showed that interventions were significantly more beneficial when restricted to vulnerable population studies ( $k = 36$ ,  $g = 0.43$ , OR 2.18; 95% CI 1.78-2.67,  $P < 0.001$ ). Meta-regression showed that age, duration, number of BCTs and type of intervention did not modify intervention effects. Interventions that incorporated the BCTs 'prompts/cues' and techniques from the categories of 'Social Support', 'Goals and Planning' and 'Shaping Knowledge' were more effective than other interventions. Quality of the majority of the studies was unclear or poor ( $k = 86$ , 84.3%).

**Discussion:** Techniques reducing structural barriers to screening were effective in increasing uptake, especially among vulnerable populations. The meta-analysis and meta-regression led to the identification of specific intervention components and BCTs potentially effective in increasing CRC screening uptake for different populations. A lack of psychosocial and theory-driven interventions was observed.

9:15 - 9:30

## State of the art and setting priorities for fetal alcohol spectrum disorder(s) prevention and management

S. Roozen<sup>1,2</sup>, G.Y. Peters<sup>3</sup>, G. Kok<sup>1,2</sup>, D. Townend<sup>1,2</sup>, G. Koek<sup>2,4</sup>, J. Nijhuis<sup>2,4</sup>, L. Curfs<sup>2</sup>

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<sup>4</sup>Maastricht University Medical Centre, Netherlands

**Background:** Fetal Alcohol Spectrum Disorders (FASD) is an umbrella term for one of the leading preventable forms of mental retardation affecting individuals and societies worldwide. Alcohol and its interference with the development of the fetus and child are complex and highly variable. The aim of this study is to assess the current state of the art and setting priorities for FASD prevention and management.

**Methods:** We began by conducting several scoping reviews in multiple databases up to January 2017, including PubMed, PsychINFO, PsychARTICLES, ERIC, CINAHL, EMBASE, MEDLINE, HeinOnline, Web of Science, EconLit, and gray literature (e.g., international FASD guidelines). This was followed by various focus group sessions including (inter)national stakeholders (e.g., professionals within preconception healthcare, government, behavioral science, law and ethics, social economics, youth healthcare, parents of persons with FASD, European Alcohol Policy Alliance). Important topics and knowledge questions were captured and rated for their importance and changeability. The process was based on an iterative path from problem identification to clear recommendations and resulted in a comprehensive report of the current state of art (knowledge synthesis).

**Findings:** The findings resulted in the identification of 18 important topics and knowledge questions for FASD prevention, management, and care (e.g., FASD etiology, maternity care, stigma, legal and ethical issues, intervention). Results showed that priority is given for a dual-track policy including short-term (consensus and action is needed directed at prevention) and long-term (evidence-based preventive messages and training programs) research and development activities.

**Discussion:** Priorities and action for FASD prevention and management are discussed.

9:30 - 9:45

## Electronic screen use and trajectories of depression: an accelerated longitudinal study of Australian adolescents

S. Houghton<sup>1</sup>, D. Lawrence<sup>1</sup>, S. Hunter<sup>2</sup>, C. Zadow<sup>1</sup>, M. Rosenberg<sup>1</sup>, K. Glasgow<sup>1</sup>

<sup>1</sup>The University of Western Australia, Australia

<sup>2</sup>University of Strathclyde, United Kingdom

**BACKGROUND:** Adolescents' screen use has been linked to adverse mental health, yet longitudinal studies are rare. The objectives were to (i) identify the optimum number of latent trajectories of depressive symptoms among adolescents; and (ii) establish associations between depressive trajectories and time spent using screens (and across different screen activities).

**METHODS:** An accelerated longitudinal cohort sequential design to assess and represent change spanning 10-18 years of age was implemented. Three cohorts randomly recruited at 10, 12/13, and 15/16 years of age (N = 2,620) were assessed on screen use and depressive symptoms (Children's Depression Inventory: CDI 2) over three school years (i.e., 3 months, 12 months and 24 months after initial recruitment). A latent growth curve model using MPlus, was fitted to the trajectories of the depression measure (CDI 2 T-scores).

**FINDINGS:** Three latent groups ("Normal", "Depression at Time 1" and "Developing depression") were identified. Substantial associations were observed between time spent using screens and depression, especially in the "developing depression" trajectory. The strongest association between the developing depression trajectory and changes in screen use over time were seen in those 12/13 years old at the start of the study. Associations between developing depression and screen use varied according to sex and type of screen activity.

**DISCUSSION:** Approximately 8% of adolescents are on a developing depression trajectory and this is associated with increasing screen use in specific screen activities. This research provides health psychologists with empirical evidence to educate young people, their families and health services about appropriate screen use.

9:45 - 10:00

## Reciprocity priming and organ donation

R. O'Carroll<sup>1</sup>, L. Haddow<sup>1</sup>, L. Foley<sup>1</sup>, J. Quigley<sup>1</sup><sup>1</sup>University of Stirling, United Kingdom

**Objective:** There are approximately 6,500 people on the UK national transplant waiting list, and around 400 of these die every year. Only 35% of the UK population are currently on the organ donation register. We report 2 studies examining whether a reciprocity prime, in which participants were asked whether they would accept a donated organ, increased organ donation intentions and behaviour.

**Design:** Between participants, randomized-controlled design

**Methods:** In 2 studies, participants who were not currently registered organ donors took part in a face-to-face setting or online, and were randomly allocated to a reciprocity prime or control condition. Following the manipulation they were asked to indicate their intention to join the organ donor register. In Study 2, participants were then offered an organ donation information leaflet or the opportunity to click a link for further information (proxy behavioural measure).

**Results:** In both studies, reciprocity primed participants reported greater intentions to register than controls. However, in Study 2, no effect on donation behaviour was found.

**Conclusions:** Reciprocal altruism may be a useful tool in increasing intentions to join the organ donor register. Further evaluation is required to determine whether this increase in intention can be translated into organ donation behaviour.



10:00 - 10:15

## Testing the validity of an integrated resilience model in predicting mental well-being in adolescents

A. Bastounis<sup>1</sup>, P. Callaghan<sup>1</sup>, A. Aubeeluck<sup>1</sup>, M. Michail<sup>1</sup>

<sup>1</sup>University of Nottingham, United Kingdom

**Background:** Resilience interventions have been found effective in reducing depressive and anxiety symptoms in adolescents with mental health problems. There is a dearth, however, of evidence regarding the effectiveness of the universal application of such interventions. One reason for the under-developed evidence-base of the universal resilience interventions might be the poorly understood mechanisms underpinning the relationship between individual protective factors and mental well-being. This study aims to inform the development of a school-based, universal resilience intervention within the context of MRC Framework for developing and evaluating complex interventions, by testing the validity of an integrated resilience model in predicting mental well-being in UK students.

**Methods:** A 2-wave longitudinal, feasibility study with a baseline assessment and 6-month follow-up, testing the predictive validity of a moderated mediation model, was conducted. Participants at baseline were 561 students aged 11-16. Measures of perceived stress (PSS), self-efficacy (SEQ-C), emotion-regulation strategies (ERQ-CA), mental well-being (WEMWBS), positive & negative emotions (PANAS), anxiety (RCMAS) and social-emotional learning skills (SDQ), were collected. A multilevel modelling approach was adopted.

**Preliminary Findings:** Significant correlations of stress perceptions and self-efficacy with anxiety, negative emotions and social-emotional learning skills were evident, while significant correlations between emotion regulation strategies and mental well-being were detected. Stress perceptions constitute a significant predictor of anxiety, negative emotions and social emotional learning skills, while self-efficacy significantly predicts mental well-being.

**Discussion:** The preliminary findings suggest that universal, school-based, resilience interventions could be benefited, by targeting specific intrapersonal factors in relation to specific school stressors.

10:15 - 10:30

## Behavioural risks for mortality of ischemic heart disease in longitudinal study

A. Goštautas<sup>1</sup><sup>1</sup>Vytautas Magnus University, Lithuania

Background: in early 70-ties WHO developed conceptual systematic multifactorial approach explaining health and disease prevention. Psychosocial risk factors of ischemic heart disease (IHD) were included in comprehensive epidemiological studies (KRIS, 1972), Multifactorial prevention of myocardial infarction and stroke (MP) 1976 in Lithuania. Outcomes of these studies were widely publicised until 1995. The aim of present analysis is to check the long lasting continuing influence of behavioural risk factors on mortality of IHD in longitudinal study up to 2014.

Methods: 3459 males, 40 - 59 years old, were investigated in psychosocial sub-study of MP by using scales for evaluation of self-rated health and health related behaviours. Clinical scales of original MMPI were used for evaluation of person's psychological – emotional adjustment. Survivors group included 1231 persons up to 2014. Mortality causes were provided by Data Register, coded according to ICD, processed in University of Health Sciences. Kaplan – Meyer curves and Cox regression model were used for statistical analysis.

Findings: The strongest prognostic value for mortality of IHD had smoking, regular usage of ethanol, self-rated health and somatic complaints expressed during health screening and combined indicators of emotional adjustment (MMPI scales). Indicators such as introversion, anxiety, low self-confidence had no prognostic value.

Discussion: It was reconfirmed, that well known behavioural risks, such as smoking and alcohol consumption as well as self-rated health and selected indicators of emotional adjustment were found influencing mortality. The data confirms the possibility of preventing early death of IHD on personal and social levels.

# Occupational health and workability – recruitment, motivation and behavior change

9:00 - 10:30

Aula B

Sonia Lippke

9:00 - 9:15

## Does psychological screening at recruitment predict future health status in law enforcement officers?

D. Byrne<sup>1</sup>, S. Miller<sup>2</sup>, L. Olive<sup>3</sup><sup>1</sup>Australian National University, Australia<sup>2</sup>Charles Sturt University, Australia<sup>3</sup>Deakin University, Australia

**Background:** Law enforcement is a stressful profession with documented consequences for both physical and mental health. This study examined the capacity of targeted psychological screening at recruitment to predict those who would go on to manifest both high stress and poor health early in their careers as police officers.

**Methods:** Recruits to a large law enforcement agency (N=1543, mean age 25 years, 68% male) were assessed at intake for existing mental health, Resilience (R), and Neuroticism (N). Follow-up 1, 6 to 12 months into training involved N and R Scales, and General Health Questionnaire 12 (GHQ-12). Follow-up 2, 6 months into first operational deployment involved N and R Scales, GHQ-12, and scales of police operational and organizational stress.

**Results:** The cohort was mentally healthy at intake; N and R scores consistent with international norms; N and R were significantly negatively correlated. Both N and R correlated with existing psychopathology; N and R remained stable over follow-ups. Neither N nor R predicted GHQ-12 scores at follow-up 1; female recruits reported significantly higher levels of psychological distress than males. Both N and R at intake significantly predicted psychological distress at follow-up 2, with N being the stronger predictor. N at intake (but not R) significantly predicted both operational and organizational stress at follow-up 2.

**Conclusions:** Intake screening for N and R predicted psychological distress 2 years later and N also predicted police-specific stress. Prospective associations may be influenced by gender. Longer follow-up must be undertaken to confirm associations in functioning police officers.

9:15 - 9:30

## Commissioning for compassion: the perceptions of healthcare commissioners about commissioning for positive staff experience

K. Deeny<sup>1</sup>, W. Clyne<sup>2</sup>, S. Pezaro<sup>3</sup>, R. Kneafsey<sup>3</sup>

<sup>1</sup>NHS England, United Kingdom

<sup>2</sup>Covetnry University, United Kingdom

<sup>3</sup>Coventry University, United Kingdom

**Background:** Healthcare staff that show compassion towards patients tend to be more effective at delivering care. Latterly, the concept of compassion has been applied to the way in which healthcare is designed and delivered at the organisational level. Given healthcare employers have a responsibility to ensure the health and safety of their staff, and the evidence that positive staff experience is associated with positive patient experience, compassion towards healthcare staff potentially benefits both staff (directly) and patients (indirectly).

**Methods:** We conducted structured interviews with eleven commissioners and other key stakeholders in England to explore their perceptions of the role of workplace compassion for healthcare staff, and the barriers and drivers to achieving positive staff experience for healthcare staff in healthcare provider organisations. Thematic analysis was conducted by two researchers with any discrepancies resolved through discussion.

**Results:** Commissioning services from organisations that are compassionate workplaces was seen as highly important, yet participants expressed doubt about whether this is achievable in light of current service pressures. Emotional intelligence, non-blame cultures, kindness, investment in staff, flexibility and compassionate leadership were described as requirements to achieve workplace compassion. Yet challenges remain in that compassion has traditionally been reserved for patients. As such, there was some hesitancy by healthcare commissioners about whether compassion can be afforded to staff in equal measure.

**Discussion:** Implications will be discussed, particularly the ways in which commissioning for positive staff experience could be both supported and incentivised by and for healthcare commissioners.

9:30 - 9:45

## What role does self-esteem play between job insecurity and life satisfaction?

N. Berat<sup>1</sup>, V. Kalaj<sup>1</sup>, T. Radulovic<sup>1</sup>, D. Cerveni<sup>1</sup>, R. Mimic<sup>1</sup>

<sup>1</sup>University of Novi Sad, Faculty of Philosophy, Serbia

Job insecurity is defined as the perceived threat of job loss and the related concerns which make employees' future unclear. It is evident that life satisfaction is lower among respondents who feel insecure about their jobs. There are many assumptions about what may be the main cause. Previous studies mention the significant role of self-esteem, one of the strongest predictors of life satisfaction, but there is still a question about the nature of it. The aim of this research is providing the answer whether self-esteem plays a mediating or moderating role between job insecurity and life satisfaction.

The study included 383 employees in IT companies from Serbia (69% male), with an average age of 36, and six years of employment in average. The following questionnaires were administered: Satisfaction With Life Scale, Rosenberg Self-esteem Scale, Job Insecurity, and the list of demographic characteristics. As expected, regression analyses indicated that people with higher level of self-esteem have a higher level of life satisfaction ( $r = .47, p < .001$ ), and that those more insecure about their job manifest lower level of life satisfaction ( $r = .24, p < .001$ ). Multiple linear regression showed that self-esteem doesn't play moderating role, while Sobel test analysis ( $STT = 3.19, p < .001$ ) showed a significant mediating role of self-esteem in the relation between job insecurity and life satisfaction.

One of the main implications is that HR psychologists should focus on improving a perception of job security for their employees so that it wouldn't affect employees' self-esteem, and indirectly their life satisfaction.

9:45 - 10:00

## What motivates individuals with temporary disability pension to return to work?

S. Lippke<sup>1</sup>, E. Zschucke<sup>2</sup>, J. Steinkopf<sup>1</sup>, A. Hessel<sup>3</sup>

<sup>1</sup>Jacobs University Bremen, Germany

<sup>2</sup>Jacobs University Bremen gGmbH, Germany

<sup>3</sup>Deutsche Rentenversicherung Oldenburg-Bremen, Germany, Germany

**Background:** Individuals with a chronic health condition without work on a regular basis should be enabled to return to work (RTW) after temporary disability pension. However, statistics show that very few manage this spontaneously. As hardly any interventions exist to support them in an evidence-based way, this study investigated on basis of the CCAM (Lippke, 2014) the research questions: (1) How does the health condition of the individuals with Time-Limited Reduced Earning Capability Pension develop over time? (2) Do more people plan to RTW over time and with increasing duration of the temporary disability pension? And (3) which factors predict the plan to RTW?

**Methods:** A longitudinal study collected computer-assisted-telephone-interview (CATI)-data from N=415 participants. Frequency analyses, MANOVA, and regression analyses were run.

**Findings:** (1) While the health condition of the individuals with temporary disability pension developed significantly positive over time ( $p < .01$ ) no gender differences transpired. (2) Contrary to our expectation, fewer proportions of study participants planned to RTW with 74% at T1, 48% at T2 and 50% at T3. (3) Plans to RTW at T3 were significantly predicted by motivation to learn (OR=1.6), expectation to get distracted from worries (OR=2.1), age (OR=0.91) and physical activity (OR=1.4), yet not by monetary reward, self-efficacy, social support, BMI or gender (all  $p > .15$ ).

**Discussion:** Interventions helping individuals with temporary disability pension to RTW should make use of lifestyle interventions including physical activity and carry positive expectations towards RTW and help to overcome dysfunctional age stereotypes.

10:00 - 10:15

## Development of a behaviour change intervention for preventing stress-related ill health among new registered nurses

E. Frögéli<sup>1</sup>, A. Rudman<sup>1</sup>, B. Ljótsson<sup>1</sup>, P. Gustavsson<sup>1</sup>

<sup>1</sup>Karolinska Institutet, Sweden

**Background:** Stress-related ill health and turnover intentions are common among new registered nurses (RNs) with serious consequences for the quality and provision of health care. This study sought to identify behaviours contributing to stress-related ill health in this professional group and develop a behaviour change intervention to target this problem.

**Methods:** Data was collected through interviews with 12 new RNs, transcribed, and analysed using functional behavioural analysis. A behaviour change model and intervention was developed using principles from organizational socialization and learning theory. Furthermore, the feasibility of conducting an evaluation of the effect of the intervention as part of a transition-to-practice program for new RNs was investigated in a trial with a within-group design with 65 new RNs. Feasibility objectives included recruitment, randomization, data collection, participation, acceptability, and deliverability.

**Findings:** Engagement in proactive behaviours was found to reduce new RNs' experiences of stress. The socialization processes role clarity, social acceptance, and task mastery were suggested to mediate this effect. Fear of aversive consequences was found to function as an antecedent for engaging in avoidance behaviours that hindered proactive behaviours and increased experiences of stress. An intervention was developed to increase proactive behaviours and reduce avoidance behaviours using behavioural activation, action planning, and systematic exposure. The feasibility of conducting an effect evaluation was confirmed and the intervention was highly accepted by the participating nurses.

**Discussion:** A behaviour change intervention can support new RNs engagement in proactive behaviours and could potentially reduce the risk of stress-related ill health in this professional group.



10:15 - 10:30

## Exploring perceptions of the effect of psychosocial hazards on workers' mental health

Z. Kerekes<sup>1,2</sup>, M. Lariviere<sup>1</sup>, C. Dignard<sup>1</sup>, B. Nowrouzi-Kia<sup>1</sup>

<sup>1</sup>Laurentian University, Canada

<sup>2</sup>University of Pecs, Hungary

**Background:** Previous literature has demonstrated that mining present significant hazards to workers (ILO, 2010, Gyekye, 2003, Amponsah-Tawiah et al, 2013) both mentally and physically. This presentation will consider some of the more controllable psychosocial hazards, defined by Leka and Cox (2010), in a population of mining workers with the additional objectives; 1) better understanding the relationship between the various hazardous factors, and 2) suggesting what could be targeted to improve workers' mental health and safety from a mental health promotion point of view.

**Methods:** Using qualitative methodologies (focus groups and individual interviews), a heterogeneous sample of participants (n=31) were recruited. These participants were chosen using random sampling strategy from a mining company in Ontario, Canada. A thematic analysis was used to explore perceptions of the effect of psychosocial hazard on workers' mental health.

**Findings:** Work schedule, rotation, and shiftwork were listed among priorities highlighted by the workers to improve their mental health and well-being. Shiftwork was identified as a major occupational risk as well as a significant influence on work-family balance.

**Discussion:** Some degree of control and autonomy over work schedules may prevent or mitigate deleterious occupational health outcomes and positively influence family and community life. The presentation will offer commentary on the usefulness of qualitative methodologies in occupational health research to improve health promotion strategies.

# Early Career Researcher Symposium: Understanding the uptake, acceptability and use of digital behaviour change interventions

9:00 - 10:30

Aula D

Laura König

9:00 - 9:15

## Augmenting fruit and vegetable consumption by an online intervention: psychological mechanisms

J. Keller<sup>1</sup>, S. Motter<sup>1</sup>, M. Motter<sup>1</sup>, R. Schwarzer<sup>2</sup>

<sup>1</sup>Freie Universität Berlin, Germany

<sup>2</sup>Freie University Berlin, Germany

**Background:** Fruit and vegetable (FV) intake is examined among men and women who participated in an online intervention. The main purpose of the analyses regards the role of psychological mechanisms that might be responsible for individual differences in the process of behavior change. The psychological constructs involved are outcome expectancies, motivation, planning, and self-efficacy. The secondary purpose of the analyses is the evaluation of a self-efficacy treatment component.

**Methods:** A two-arm online intervention focusing on FV planning was conducted to improve FV intake with follow-ups at two and four weeks. The only difference between the standard and the enhanced intervention group was the additional inclusion of a self-efficacy ingredient in the latter. Participants were N=275 adults of whom n=148 completed the four-week follow-up. Their age range was 18 to 81 years (M=32.5, SD=14). Data were analyzed using linear mixed models and longitudinal structural equation models.

**Findings:** Analyses yielded an overall increase in self-reported FV intake. Moreover, a triple interaction between time, sex, and experimental groups on self-efficacy emerged, indicating that men reported an increase in FV self-efficacy independent of groups, whereas women in the enhanced group developed higher FV self-efficacy. Planning, self-efficacy, and motivation mediated between outcome expectancies, and follow-up FV intake.

**Discussion:** Both intervention arms produced overall improvements in self-reported FV intake. The mediation sequence leading from initial outcome expectancies via planning, self-efficacy, and motivation towards final FV intake underlined the importance to include psychological strategies such as planning and self-efficacy in (online) interventions on FV intake.

9:15 - 9:30

## Who is willing to use mHealth apps? A stage model approach

L. König<sup>1</sup>, G. Sproesser<sup>1</sup>, H. Schupp<sup>1</sup>, B. Renner<sup>1</sup><sup>1</sup>University of Konstanz, Germany

Mobile technologies are promising means for motivating a large number of people to adopt a healthier lifestyle. The present study investigated the readiness for behaviour change in the realm of nutrition and fitness apps use using a newly developed behaviour stage model for identifying a person's position in the change process.

Participants (N = 1.236) were recruited within the longitudinal cohort study Konstanz Life Study. Readiness for changing nutrition and fitness apps use behaviour, healthy eating style, and preference for intuition and deliberation when choosing food (PID) were assessed using questionnaires.

Results show that the majority of participants did not yet contemplate using a nutrition app or even decided against its use (50.6% and 18.2%). Conversely, only 28.6% did not yet contemplate using a fitness app and 20.3% decided against its use. In the planning stage were 6.6% (nutrition) and 9.0% (fitness). Nutrition/ fitness apps were currently used by 7.8%, respective 25.0%. Further 13.3% / 14.7% reported to have previously used a nutrition/ fitness app. Readiness for behaviour change differed as a function of age ( $F(4, 252.00/398.291) \geq 15, p < .001$ ), and PID ( $F_s(4, 1012) \geq 7, p_s < .001$ ), indicating that younger participants and those who prefer a more deliberate decision style, are more ready to change. Using a stage model approach, users of available mHealth apps can be described and compared to non-users which in turn may inform the development of new digital interventions. Furthermore, the model may be used to predict stage transitions.

9:30 - 9:45

## Reducing the patient interval for breast cancer: developing a digital intervention using the person-based approach

E. M. Carr<sup>1</sup>, J. Walsh<sup>1</sup>, A. Groarke<sup>1</sup>

<sup>1</sup>National University of Ireland, Galway, Ireland

**Background:** The objective of this study was to facilitate broad discussion about the acceptability of a planned digital intervention (DI) with end-users. Eliciting end-user feedback at the outset of the design phase is central to the Person-Based Approach (PBA) to DI development.

**Methods:** A qualitative design was used to collect data via focus group interviews which were audio-recorded, transcribed verbatim and thematically analysed. Participants (n=28) were sampled purposively based on age, sex and occupation and were either individuals who would potentially use the DI i) for their own healthcare purposes or ii) in an official capacity to recommend to others e.g. Doctors.

**Findings:** Five themes were generated: uncertainty, interest, legitimacy, aesthetics/usability, efficiency. Participants were uncertain if a website could help them manage their health but they were interested in trying it. Participants highlighted time as a primary barrier to using a website for this purpose. It was stressed that the website would have to be aesthetically pleasing and easy to use. Furthermore it was discussed that it should be obvious that it was provided by a reputable source e.g. a university/hospital so that they could trust the information.

**Discussion:** Participants were eager and motivated to contribute to research at this early stage. It is now accepted as good practice to elicit end-user/patient views at the design phase of interventions. It is hoped that incorporating the views of these participants into the development of the DI will enhance its acceptability and therefore success.

9:45 - 10:00

## Digital interventions to manage hypertension: general practitioners perspectives

E. Morrissey<sup>1</sup>, L. Glynn<sup>1</sup>, M. Casey<sup>1</sup>, J. Walsh<sup>1</sup>, G. Molloy<sup>1</sup>

<sup>1</sup>National University of Ireland, Galway., Ireland

**Background:** Digital behavioural interventions could potentially be a useful modality for hypertension control. While it is important to examine the use and effectiveness of these technological interventions at a patient level, it is also crucial to examine them at a practitioner level. The majority of hypertension care happens at general practice. This research aims to (1) explore general practitioners (GPs) experience of managing antihypertensives, including the use of guidelines and resources available and (2) elicit GPs attitudes towards the use of technology to support adherence behaviour change.

**Method:** In this qualitative study 10 GPs (sampled purposively based on age, sex, practise size, location and years of practise) were interviewed. A semi-structured topic guide consisting of open-ended questions and prompts about hypertension care, antihypertensive medications, issues with adherence, behaviour change and the use of technology was used. Data were analysed using thematic analysis.

**Findings:** Five main themes were identified. These were responsibility, empowerment, opportunity/cost, current reach and credibility. A number of subthemes were identified within these.

**Discussion:** Primary care has a significant role in managing hypertension. GPs in this study discussed several barriers and possible solutions to integrating digital interventions for hypertension management. Future research should evaluate the effectiveness of using digital interventions alongside traditional primary care to manage hypertension and identify models of best practice.

10:00 - 10:15

## Developing an operational definition and a self-report measure of engagement with e-/mHealth interventions: critical reflections

O. Perski<sup>1</sup>, A. Blandford<sup>1</sup>, R. West<sup>1</sup>, S. Michie<sup>1</sup>

<sup>1</sup>University College London, United Kingdom

**Background:** The plethora of existing definitions and related measures of engagement with digital behaviour change interventions hinders the aggregation of data from multiple studies to address the question as to what mechanisms link engagement with successful behaviour change. The aims of this study were to develop 1) an operational definition of engagement with e-/mHealth interventions and 2) a self-report scale to measure the construct of interest.

**Methods:** Informed by classical test theory, the operational definition of engagement was developed using a combination of a deductive (i.e. a systematic review) and an inductive (i.e. 'think aloud' and interviews) approach. A pragmatic approach to item generation and scaling was taken. A "sorting task", asking participants to assign items to one of a finite number of categories, was designed to assess the content validity of initial scale items.

**Findings:** Based on the two different approaches to construct development, engagement was conceptualised as a state-like construct, manifested by the following subdimensions: attention, interest, enjoyment, 'amount of use' and 'depth of use'. Eighteen initial items were generated, scored using 7-point Likert scales where possible. Results from the first round of the "sorting task" (N = 51) suggested that task instructions may not have been sufficiently clear, as a low proportion of participants correctly classified reverse-worded items.

**Discussion:** Key decisions made during the development of an operational definition and measure of engagement with e-/mHealth interventions are reflected on critically, highlighting issues of construct development, item generation, item scaling and content validity.

# Mechanisms and adherence in interventions for patients with chronic disease

9:00 - 10:30

Aula F

Amy Wachholtz



9:00 - 9:45

## STATE OF THE ART

### Bench to bedside: comorbid pain and opioid addiction psycho-physiological data to develop novel psychotherapy interventions

A. Wachholtz<sup>1,2</sup><sup>1</sup>University of Colorado Denver, United States<sup>2</sup>University of Massachusetts Medical School, United States

**Aims:** This study series developed a novel psychotherapy treatment for comorbid pain and opioid addiction (COAP) based on psycho-physiological data. Study 1 evaluated psychophysiological changes pain sensitivity and tolerance with opioid treatments; and duration of this effect after treatment cessation. Study 2 developed a 12-week rolling entry CBT with Self-regulation psychotherapy treatment based on the psychophysiological data. Study 3 piloted this novel treatment, entitled Self-regulation Therapy for Opioid addiction and Pain(STOP).

**Method:** 120 chronic pain individuals were recruited in 4 groups(n=30): 1-current methadone for opioid addiction; 2-current buprenorphine for opioid addiction; 3-history of opioid treatment for opioid addiction but with current opioid abstinence (M=121 weeks;SD=23.3);and 4-opioid-naïve and completed psychopsychological assessment during a pain task, recording time to first pain (sensitivity) and time to disengagement from the pain task (tolerance). Analyses used survival analysis. In the pilot study, 20 participants completed pre-post intervention and psychophysiological testing, with weekly craving and urine toxicology.

**Results:** Kaplan-Meier-Cox analyses showed group differences for pain sensitivity and tolerance (Log rank=20.11;p<.001). Opioid treatment groups showed sensitivity differences compared to opioid-naïve(p's<.01). Tolerance improved across methadone-use to prolonged abstinence to opioid-naïve participants (p's<.001). Within prolonged abstinent, pain tolerance increased as duration since last opioid increased (R=.37;p<.05); but abstinence duration did not alter sensitivity(ns). Intervention pre-post data showed improvements in pain tolerance, daily activity, decreased cravings, and no illicit substance use after week 8.

**Conclusion:** Long-term differences in pain sensitivity do not resolve with discontinuation of opioid treatment. Although sensitivity does not change, pain tolerance increases after opioid cessation which has implications for treating COAP. The STOP pilot shows potential for improving treatment of COAP.

9:45 - 10:00

## I can see clearly now: developing an active visualisation device for ART in South Africa

A. Jones<sup>1</sup>, B. Coetzee<sup>2</sup>, A. Kagee<sup>2</sup>, N. Hassan<sup>2</sup>, E. Cleveland<sup>3</sup>, J. Fernandez<sup>1</sup>, K. Petrie<sup>1</sup>

<sup>1</sup>University of Auckland, New Zealand

<sup>2</sup>Stellenbosch University, South Africa

<sup>3</sup>New Roads School, United States

**Background:** Adherence to antiretroviral therapy (ART) remains a significant and costly issue for healthcare in South Africa, where few interventions have been implemented. Active visualisation is a new area of health research, where tools are created to visually demonstrate a disease or treatment process to patients in order to improve understanding and adherence. We developed an active visual demonstration depicting how adherence and non-adherence to ART affects HIV disease progression.

**Methods:** The active visualisation using a Perspex body-shaped container, standard laboratory chemicals, and aspirin tablets was used in a randomised controlled intervention study to improve adherence to ART in a South African community hospital. We recruited 78 patients from Helderberg Hospital in Western Cape from May to November 2016. 34 participants were randomised to the intervention and answered quantitative and qualitative questions regarding feasibility and acceptability of the device.

**Findings:** There were no significant changes in illness perceptions from baseline to after seeing the device in the intervention group. Participants reported high levels of satisfaction with the device. Participant's thoughts when they saw the device were most frequently related to adherence (53.8%, 21/39), and an improved understanding after seeing the device (43.6%, 17/39). Some participants also reported concern beliefs after seeing the device (17.9%, 7/39).

**Discussion:** A brief, visualisation device showing the purpose of ART appears to have high feasibility and acceptability in a community sample of patients in South Africa. The device may have high clinical applicability as an adherence tool to use with non-adherent patients.

10:00 - 10:15

## Motivation to participate in parenting interventions: a Q methodology study among parents with adolescents

K. van Mourik<sup>1</sup>, W.A. Gebhardt<sup>2</sup>, S. van der Veek<sup>3</sup>, M. Crone<sup>1</sup>

<sup>1</sup>Leiden University Medical Center; Public Health and Primary Care, Netherlands

<sup>2</sup>Health, Medical and Neuropsychology, Leiden University, Netherlands

<sup>3</sup>Child and Family studies, Leiden University, Netherlands

Parents play an important role in the psychosocial development of children, and their successful transition from childhood to adulthood. Parenting interventions are effective in improving parenting skills, but it is a challenge to actively engage parents. Research reports lower levels of participation for parents of adolescents when compared with parents of young children. Using the Protection Motivation Theory (PMT) as a theoretical framework, we studied factors related to parents' motivation to participate in parenting interventions.

Using Q-methodology, 34 parents provided information about the PMT domains concerning perceived child problem severity and susceptibility, intervention benefits and barriers, and self-efficacy. Interviews were conducted to provide additional insight in parental concerns that were most prevalent.

Five distinct factors emerged, representing five groups of parents with similar opinions and accounting for 78% of variance. Differences emerged between factors based on severity of problem behaviors, effectiveness of interventions, and parental self-efficacy. Most parents experienced concerns about adolescents' emotional and behavior difficulties, but views differ in regard to the lasting impact of these difficulties on the child. Perceived intervention benefits were associated with a higher intention to participate. Parents with a low self-efficacy, regardless of the severity of their concerns, were less inclined to use parenting interventions.

The current study suggests that the perceived self-efficacy influences parents' motivation to participate in parenting interventions, regardless of the severity of the concerns. Results will be discussed with providers of parenting interventions, in order to investigate possibilities to increase participation of parents with low self-efficacy.

10:15 - 10:30

## Psychological interventions for patients with Parkinson's disease: a systematic meta-review

H. Kampling<sup>1</sup>, L.K. Brendel<sup>1</sup>, J. Bengel<sup>2</sup>, J. Küst<sup>3</sup>, O. Mittag<sup>1</sup>

<sup>1</sup>Medical Center - University of Freiburg, Section of Health Care Research and Rehabilitation Research, Germany

<sup>2</sup>Department of Rehabilitation Psychology and Psychotherapy, Institute of Psychology, University of Freiburg, Germany

<sup>3</sup>Klinik Lengg AG, Zürich, Switzerland

**Background:** Main objectives of (neuro)psychological treatment are improvement of cognition and affective disorders, as well as promotion of activities and participation. They are conducted in a multidisciplinary and multimodal setting. We aimed to review the evidence on therapeutic or educative interventions based on psychological principles for patients with Parkinson's disease (PD).

**Methods:** Electronic bibliographic databases (MEDLINE, PsycINFO, PSYINDEX, CINAHL) were systematically searched for systematic reviews and meta-analyses on psychological interventions for patients with PD (published January 2000-2016). Psychological interventions for non-motor outcomes were extracted, and the corresponding grade of evidence was assigned.

**Findings:** We identified 12 meta-analyses and 23 narrative reviews out of 812 search results. In total, 13 different types of psychological (plus multidisciplinary) interventions (eg, psychotherapy, cueing, mind and body interventions) were applied to 9 different non-motor outcomes (eg, depression, quality of life, cognitive symptoms).

**Discussion:** The available evidence on the effectiveness of psychological interventions for the treatment of symptoms in patients with PD is heterogeneous. Still, this meta-review shows that some interventions are effective for a variety of symptoms. Even though, statistically significant results are reported in many reviews present, these often lack clinical relevance. Further high-quality research is needed to confirm existing evidence, and to explore the potential of psychological interventions for patients with PD. The results of this meta-review will guide the development of practice guidelines for psychological interventions in the rehabilitation of patients with PD (this project is funded by the German Statutory Pension Insurance).

# Prospective studies of self – regulation processes

9:00 - 10:30

Aula G

Susanne Brandstetter

9:00 - 9:15

## Change in psychological distress in oesophageal cancer carers and associations with changes in illness perceptions

M. Dempster<sup>1</sup>, L. Graham<sup>2</sup>, N. McCorry<sup>3</sup>

<sup>1</sup>Queen's University, Belfast, United Kingdom

<sup>2</sup>Marie Curie Cancer Care, United Kingdom

<sup>3</sup>Queen's University Belfast, United Kingdom

**Background:** Carers of people with cancer are often referred to as “secondary survivors”, reporting equivalent levels of psychological morbidity to survivors, but there is a relative dearth of attention given to the psychological sequelae from caregiving. Illness perceptions have been shown to be related to psychological distress among people with a range of physical health conditions, but there is less research that examines the role of illness perceptions on psychological outcomes for carers. This study aimed to examine levels of distress in family carers of oesophageal cancer survivors, and the role of illness perception schemas as a correlate of change in distress over time.

**Methods:** Oesophageal cancer carers (n=171) were assessed at two time points, 12-months apart with the Illness Perception Questionnaire-Revised, Cancer Coping Questionnaire, Hospital Anxiety and Depression Scale and Concerns About Recurrence Scale.

**Findings:** Findings report deterioration from normal to probable anxiety in 35.7% of carers and probable depression in 28.7% carers over time. Fear of recurrence remained stable. Changes in control, consequence and cause beliefs were identified as key correlates of a change in psychological morbidity.

**Discussion:** This study indicates that psychological wellbeing in a sizeable proportion of oesophageal cancer carers deteriorates over time. Illness perception schema have been identified as a key determinant of this change, with enhancing control beliefs, lessening focus on illness cause, and setting realistic expectations for consequences as important elements. These illness perceptions appear to be valuable targets for psychological intervention to improve wellbeing among carers of people with oesophageal cancer.

9:15 - 9:30

## Cardiac patient and spouse illness representations as mediators in the relationship between affect and well-being

E. Karademas<sup>1</sup>, E. Barouxi<sup>1</sup>, G. Mavroeides<sup>1</sup>, I. Tsaousis<sup>1</sup><sup>1</sup>University of Crete, Greece

**Background:** Positive and negative affect has often been related to patients' well-being. Affect seems to convey important information regarding the person/environment interaction and thus may affect perception and behavior and, through these, well-being. The aim of this study was to examine whether illness representations mediate the relation of positive and negative affect to quality of life in a sample of cardiac patients. Also, given the crucial role of patients' partners in adaptation to illness, a further aim was to examine this indirect relationship at a dyadic level (i.e., patient and spouse). **Methods:** One hundred and four cardiac patients (25% women) and their spouses participated in the study. Affect was assessed three times at 15-day intervals so as to form a better picture of each person's recent overall emotional state. Illness representations of control and consequences were assessed two months later, and quality of life four months later. Dyadic responses were examined with the actor-partner interdependence mediation model. **Findings:** After controlling for couple and illness related factors, patients' positive and negative affect was related to both partners' physical and psychological quality of life, but only through patient illness representations. Spouses' positive and negative affect was associated with both partners' quality of life through their own and also patients' illness representations. **Discussion:** These results highlight the interplay between patient and partner self-regulation process. They also emphasize the role of both partners' illness representations as a mediator between their interaction with the environment, as depicted by affect, and quality of life.

9:30 - 9:45

## Vestibular schwannoma surgery: personality facets, illness perceptions and coping strategies influencing long term postural recovery

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**Background:** The vestibular schwannoma is a benign tumour and its surgery increases balance disorders, which are followed by a gradual recovery. This study aimed to identify psychological predictors influencing short, mid and long term postoperative postural recovery.

**Methods:** Nineteen patients were included in this study. Before surgery, eight days, one month, three months and one year after, they performed posturography test and completed questionnaires (NEO-PI-R, IPQ-R, Brief-COPE).

**Results** Anxiety, Altruism-Tender-Mindedness and Openness to feeling are personality facets influencing illness perceptions and coping strategies.

Daily consequences, doubts about surgery as curative for VS and negative emotions are predictive of illness perceptions of postural recovery mediated by coping strategies.

Denial, difficulties accepting the situation and avoidance of the therapeutic process could impair short, mid and long term postural recovery.

Psychological predictors explain 77.3% of the variability of short term postural recovery (one month), 36.6% of the variability of mid-term postural recovery (three months) and 79.3% of the variability of long term postural recovery (one year).

**Discussion** High anxiety, attention to negative emotions and difficulties taking care of yourself are personality facets that could impair postural recovery. Attentive listening to patients may help to identify doubts about surgery as curative for VS, to estimate daily consequences and to consider negative emotions related to illness. Health professionals may also pay attention to patients who have difficulties accepting their situation and who avoid the therapeutic process. The identification of these factors of vulnerability may allow screening patients for psychological help before and after surgery.



9:45 - 10:00

## Self-control, socioeconomic status, physical activity and weight changes in a 7-year population-based study

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<sup>2</sup>National Institute for Health and Welfare, Finland

**Background:** Dispositional self-control is a part of the self-regulation system indicating capability to resist impulses and control thoughts and actions. Self-control has found to have a small effect on weight-related behaviours, but prospective studies with long-term follow-up are lacking. We examined whether self-control predicts physical activity (PA), and weight changes in a 7-year follow-up study and does gender, education or income moderate these effects.

**Methods:** The participants were Finnish men and women aged 25-74 years who took part in the DILGOM study at baseline in 2007 and follow-up in 2014 (N=3735). A 13-item Brief Self-Control Scale (Tangney et al. 2004), physical activity (PA), PA and nutrition related self-efficacy, years of education, and income were self-reported. Body Mass Index (BMI kg/m<sup>2</sup>) was calculated based on measured height and weight.

**Findings:** Those with higher self-control at baseline had lower BMI and more leisure time PA. Higher baseline self-control predict changes in leisure time PA. Those with higher self-control gained less weight ( $b=-.06$ ,  $p<.001$ ) after controlling for age, education and baseline weight. However, this association was significant only among women (gender\*self-control interaction  $p=.001$ ). Self-control was not related to weight loss in either gender. Education or income did not moderate these effects.

**Discussion:** In the present population sample, lower self-control was related to weight gain only among women. This association was mediated by behaviour specific cognitions. Lack of association among men could be related to lower pressures to maintain a thin body.

10:00 - 10:15

## Beliefs about medicines and medication adherence: a prospective study in persons with chronic lung disease

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### Background:

Adherence to medication is crucial for achieving treatment control in chronic lung diseases. This prospective study refers to the “necessity-concerns framework” and examines the associations between patients’ beliefs about medicines at baseline and self-reported medication adherence after three and twelve months.

### Methods:

402 patients (49% asthma, 51% COPD; 49% female; mean age 56.7 years (SD=15.9)) were included in the study and completed the “Beliefs about Medicines-Questionnaire” (BMQ) at baseline. The “Medication Adherence Report-Scale” (MARS) was administered at 3-months (N=255) and at 12-months follow-up (N=171). Logistic regression models with the BMQ-subscales (“necessity”, “concerns”, “harm”, “utility”, “overuse”) as explanatory variables and the dichotomized MARS score as dependent variable were computed for the asthma and the COPD sample, respectively. Sociodemographic, disease and treatment related variables were considered as potential confounders.

### Findings:

Overall, one third of patients were completely adherent (16% in the asthma sample, 45% in the COPD sample). Among patients with COPD, “necessity” was significantly associated with medication adherence at three months (OR= 2.36, 95%-CI: 1.35-5.12) and “concerns” were significantly associated with medication adherence at three (OR= 0.55 95%-CI: 0.32-0.95) and at 12 months (OR= 0.36, 95%-CI: 0.17-0.79). However, in the asthma sample, no significant associations between beliefs about medicines and medication adherence were observed.

### Discussion:

Beliefs about the necessity of medicines and concerns were relevant for medication adherence behaviour of patients with COPD, but not of patients with asthma. Findings emphasize the need of a disease-specific approach when studying influential and potentially modifiable factors for medication adherence in chronic conditions.

10:15 - 10:30

## Medication adherence for resistant hypertension: treatment-related beliefs, experiential feedback, and habit strength

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<sup>3</sup>Health Research Board Primary Care Clinical Trials Network, Ireland

**Background:** Medication non-adherence is a considerable problem that contributes to poor patient health and high healthcare costs. Basic and applied research has tended to focus on behaviour initiation factors, such as illness- and treatment-related beliefs. More recently, processes that occur after behaviour initiation have been proposed to predict long-term adherence. This paper aims to examine two such processes, i.e. coherence of patients' beliefs from treatment experiences and habit development, among patients taking multiple medications for a chronic asymptomatic condition.

**Methods:** The sample consisted of the first 100 participants recruited to an on-going cross-sectional cohort study of apparent treatment-resistant hypertension in primary care (M age = 69.18, SD = 11.39; 42.4% female). Patients reported their medication adherence, treatment-related beliefs, experiences related to treatment efficacy and medication-taking habit strength via self-report questionnaire.

**Findings:** Preliminary analyses revealed patients' medication habit strength was the strongest predictor of adherence, explaining 9% incremental variance in adherence to that explained by patients' treatment-related beliefs. Patients' beliefs and experiences did not predict overall adherence, even for patients with lower scores on the medication habit measure. Neither treatment-related beliefs nor habit strength predicted intentional non-adherence; whereas only habit strength was found to predict unintentional non-adherence.

**Discussion:** Healthcare practitioners may examine patients' medication-taking habits to get an initial view of their likely adherence to long-term medications. However more research is needed to elucidate the mechanisms of intentional non-adherence specifically. Future research should assess the current theoretical predictions using objective measures of non-adherence and in populations with symptomatic conditions.

# Individual differences in psychological coping style: effects on health behaviours and intervention outcomes

9:00 - 10:30

Aula I

Michael Mantzios

9:00 - 9:15

## Depressive symptoms in cancer patients and healthy controls: differences and similarities

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Literature on depressive symptoms prevalence among cancer patients is diverse. Several studies report higher levels compared to healthy controls, whereas others report only minimal differences or even similar levels. This diversity may be explained by the complex construct of depression and associated psychosocial factors. Instead of merely focusing on prevalence, it may be beneficial to investigate if depression among cancer patients is caused by similar mechanisms compared to healthy individuals. This way, psychological treatment can be more tailored.

249 curative treated patients were matched to 249 healthy controls on age, gender and education. Both samples received questionnaires, measuring depressive symptoms (CES-D), positive and negative affect, stress and coping. Conducted analyses involved t-tests for means and regression analyses for predictors.

Patients scored higher on depressive symptoms ( $p=0.002$ ) compared to healthy controls, with a prevalence of 21.7% and for healthy controls 12.6% ( $p=0.008$ ). Positive ( $p=0.024$ ) and negative affect ( $p=0.018$ ) were significantly higher among cancer patients. Highest positive affect was reported by non-depressed cancer patients. Predictors of depressive symptoms including stress and coping were comparable between the groups.

Higher levels of depressive symptoms were found among cancer patients compared to healthy controls, but predictors were comparable, with the exception of positive affect. This suggests that not diagnosis of cancer is indicative for depressed mood, but more the impact and coping with the disease. Future research may investigate the relationship between depressive symptoms and positive affect, with respect to a potential role of positive affect as a buffer for depressive symptoms in this population.

9:15 - 9:30

## Mindfulness and colouring books: a randomised control investigation on state anxiety and mindfulness

M. Mantzios<sup>1</sup>, K. Giannou<sup>2</sup><sup>1</sup>Birmingham City University, United Kingdom<sup>2</sup>University of Manchester, United Kingdom

Mindfulness has been associated with the use of adult colouring books, and 'mindfulness colouring books' have become a new trend in the marketing of colouring books. While the popularity of these 'mindfulness colouring books' steadily increases, the question of whether they do increase mindfulness has not been addressed. In a randomized controlled experiment, university students (n = 88) were assigned to a mandala group, which is a colouring exercise utilising a circular shape known as a mandala (and is described as a mindfulness colouring exercise) or to a free-drawing group (i.e., drawing on a blank piece of paper without any indications that it is a mindfulness practice). Measurements of state mindfulness and state anxiety were taken before and after the experiment. Results indicated that both conditions increased mindfulness and decreased anxiety (although not significantly), but there was no significant difference between the groups in both state mindfulness and anxiety. Findings suggest that drawing itself can be mindful, but more guidance or instructions on how to draw may be required to develop a truly mindful practice with the use of colouring books. Limitations and future directions are discussed.

9:30 - 9:45

## Having less: the induction of a scarcity mindset and its effect on snack consumption

S. van Rongen<sup>1</sup>, K. Verkooijen<sup>1</sup>, E. de Vet<sup>1</sup><sup>1</sup>Wageningen University, Netherlands

**Background:** Scarcity theory suggests that scarcity of resources causes trade-off thinking and hence, cognitive load, leading to diminished cognitive functioning. This may be a relatively new explanation of poor diet quality among low-income groups, since there are indications that cognitive load can lead to less controlled eating behaviour. The aims of this study were, firstly, to develop a scarcity manipulation and self-report instrument, and secondly, to investigate whether this scarcity induction results in more snack consumption.

**Methods:** In study 1, 81 students completed a choice task directed at organising a party. The number of choices within categories consisting of 3 options was budgeted. The scarcity condition was restricted to choose 1 option per category, whereas the no-scarcity condition was allowed to choose all options. Subsequently, participants rated 16 items related to their experience of scarcity, trade-off making, and engagement. In study 2 (currently running), 80 participants perform the choice task while being presented with snacks. They are requested to taste the snacks as part of a measurement of influence of party atmosphere on taste perception. The amount consumed is covertly weighed.

**Findings:** Factor analysis yielded 4 reliable subscales, (all  $\alpha > .7$ ), related to subjective scarcity, trade-off making, engagement, and uncertainty. The scarcity condition indeed experienced more scarcity,  $t(53) = 2.42$ ,  $p < .05$ , and trade-off making,  $t(67) = 8.80$ ,  $p < .05$ .

**Discussion:** Evidence of a causal relationship between scarcity and control of eating provides new perspectives on relatively unhealthy diets of people with low-income.

9:45 - 10:00

## Does listening to music support coping with induced stress? An RCT

J. Groarke<sup>1</sup>, P. McKenna-Plumley<sup>1</sup>, M. Hogan<sup>1</sup>

<sup>1</sup>National University of Ireland, Galway, Ireland

### Background:

Affect regulation is a central component of wellbeing and is generally considered the most important function of music listening. The current study used experimental methods to examine the affect regulating effects of music listening, aiming to extend the scope of previous research which has employed university-aged samples, researcher-prescribed music, and silent control conditions.

### Method:

Forty younger (18-30 years old) and forty older (60-81 years old) adults completed demographic and music training questionnaires and The Adaptive Functions of Music Listening Scale, and indicated 15 minutes of music they would listen to in a stressful situation. Negative affect (NA) was induced using the Trier Social Stress Test, followed by 10 minutes of the intervention (listening to their chosen music) or control (listening to a radio documentary) condition. Self-reported affect was measured at baseline, post-induction, and post-intervention.

### Findings:

Examining reduction in induced NA as the dependent variable, a 2x 2 ANCOVA controlling for baseline affect and reactivity to the NA induction found significant main effects of group, with the intervention group experiencing greater reductions in NA across a range of discrete measures. There were also significant main effects of age, with older adults experiencing greater NA reduction in both conditions. Perceived efficacy of music listening for the function of anxiety regulation did not predict greater regulation.

### Discussion:

These findings suggest that self-chosen music listening may provide a cost-effective and easily applied means of supporting emotion regulation in response to stressful events, such as awaiting medical procedures.



10:00 - 10:15

## Coping style, social support and sexual distress in infertility: a path analysis

S. Safavi<sup>1</sup>, S. Mahmoodi<sup>2</sup>, Z. Masoodian<sup>1</sup>, F. Ardeshiri<sup>1</sup>, F. Barkhordari<sup>1</sup>, R. Andikolaei<sup>1</sup>, H. Zamanian<sup>3</sup>

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<sup>2</sup>Tehran University of Medical Sciences, Tehran, Iran

<sup>3</sup>Qom University of Medical Sciences, Iran

**Background:** As a stressful situation, infertility increase sexual distress of infertile women which predicted by their coping styles and the amount of support they receive specially from spouse. This study aimed to determine the relationship between coping and sexual distress with mediating role of social support in infertile women.

**Methods:** 109 infertile women referring to Infertility Center of Akbar Abadi hospital in Tehran were selected via convenience sampling and completed main instrument of social support questionnaire (Sherborne and Stewart), Sexual distress Scale (FSD-R) and Brief COPE (by Carver)

**Findings:** Data analysis showed that problem-focused and emotion-focused coping have respectively negative ( $r = -0.32$ ) and positive correlation ( $r = 0.43$ ) with sexual distress. Regression analysis showed that problem-focused coping ( $\text{Beta} = 0.124$ ,  $t = 1.27$ ), emotion-focused coping ( $\text{Beta} = 0.369$ ,  $t = 4.08$ ) and social support ( $\text{Beta} = 2.99$ ,  $t = 2.23$ ) can predict 19.8 percent of sexual distress variance. Path analysis confirmed the mediating role of problem-focused coping in correlation of social support with sexual distress, but the effect of emotion-focused coping on sexual distress was direct without social support role. In path analysis, direct effect of emotion-focused coping on sexual distress was significant and positive and indirect effect of problem-focused coping on sexual distress was significant and negative.

**Discussion:** Social support play an important role in sexual distress of infertile women by changing their coping styles. Psychological interventions with aim of taking problem-focused coping strategies by infertile woman and family therapy with aim of social support development can lead to sexual distress decrease and quality of life improvement in these women.

# Eating habits in children and adolescents

11:00 - 12:30

Aula A

Emely de Vet

11:00 - 11:15

## Healthy and restrictive eating as mediators between appearance evaluations and BMI reduction in healthy adolescents

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<sup>3</sup>University of Colorado at Colorado Springs, United States

**Background:** Perceptions of one's appearance are among key determinants of eating disorders, which may lead to underweight, serious health consequences, or death. This study tested the relationships between appearance evaluations and body mass index mediated by healthy or restrictive eating in a non-clinical sample of underweight and normal weight adolescents.

**Methods:** Data were collected twice, with a eleven-month interval between Time 1 (T1) and Time 2 (T2). Underweight and normal weight adolescents (N = 922) aged 13-20 filled out The Multidimensional Body-Self Relations Questionnaire, assessing appearance evaluations and restrictive eating, and answered the questions evaluating their eating behaviors. Body weight and height were measured objectively.

**Findings:** Restrictive eating (T2) mediated the relationship between appearance evaluations (T1) and BMI (T2). No mediating effects of healthy eating (T2) were found.

**Discussion:** Lower levels of appearance evaluations predicted restricted dieting (but not healthy eating), which in turn predicted adolescents' lower body mass index. Weight reduction in adolescents with underweight and normal body weight may lead to serious health consequences. Appearance evaluations should be carefully considered in screening for eating disorders among adolescents and during the development of eating disorder prevention programs.

11:15 - 11:30

## Associations between preschool children's temperament and vegetable and sugar-rich food intake

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<sup>1</sup>Folkhälsan research center, Finland

<sup>2</sup>University of Helsinki, Finland

<sup>3</sup>University of Tampere, Finland

**Background:** Research has suggested that certain temperament traits might predispose to increased weight already in childhood. Associations between children's temperament and food intake are less studied. The purpose of this study is to examine the association between temperament and vegetable and sugar-rich food intake among 3-6 year old children.

**Methods:** A cross-sectional study was conducted among Finnish preschoolers (n=864) between autumn 2015 and spring 2016. One caregiver of the participating child reported their child's temperament (n=751) and food intake (n=820) by completing the very short form of Children's Behavior Questionnaire (CBQ-VSF) and a food frequency questionnaire. Linear regression analysis (n=679) was used to examine the associations of three temperament traits: negative affectivity, effortful control and surgency (sum variables based on CBQ-VSF) with vegetable (fresh and cooked) and sugar-rich food (including e.g. sweets, sweet pastries, sugared cereals and yoghurts) intake adjusted for parental educational level, child's age, gender, and birth order.

**Findings:** A positive association between children's effortful control and vegetable intake (beta 0.09 (0.01-0.09) and inverse association between negative affectivity and vegetable intake (beta -.09 (-.07 - -.00) were found. No associations were found between surgency and vegetable intake or any of the three temperament traits and sugar-rich food intake.

**Discussion:** A few associations were found between temperament and vegetable intake among preschoolers. The mechanisms of the associations should be examined in further studies. A third factor such as parenting practices or children's eating behaviors could operate between temperament and food intake explaining these associations.

11:30 - 11:45

## Fussy eating in school-aged children: a mixed-method study

H. Wolstenholme<sup>1</sup>, C. Heary<sup>1</sup>, C. Kelly<sup>1</sup>

<sup>1</sup>National University of Ireland, Galway, Ireland

**Background:** Fussy eating refers to an unwillingness to eat familiar and novel foods. It is associated with increased mealtime conflict, can impact nutritional intake, and if persistent can influence the development of chronic health conditions. School-aged children have been neglected in the literature with a larger focus on preschoolers. This research aims to explore factors associated with school-aged children's fussy eating and to develop a deeper understanding of the perceptions and experiences of parents of both fussy and non-fussy eaters.

**Methods:** This mixed-method study integrates quantitative and qualitative data. A questionnaire consisting of the Child Eating Behaviour Questionnaire and family demographics was completed by parents of 73 6-9 year-old children and was used to explore factors associated with fussy eating. This quantitative component also informs sampling and focus of follow up interviews which provide a deeper insight into parents' perceptions and experiences. Both correlation analysis and thematic analysis are used.

**Findings:** Moderate to severe fussy eating was reported in 34% of cases. Food fussiness correlated with birth order ( $r = .234$ ,  $p < .05$ ), household income ( $r = -.35$ ,  $p < .05$ ) and number of problematic eating behaviours reported by parents ( $r = .64$ ,  $p < .05$ ), but was not associated with parents' diet. Thematic analysis provides insight into the influences, impact, experiences and management of school-aged children's fussy eating.

**Discussion:** Findings inform future qualitative work with children and health professionals and may inform future policies and guidelines that promote healthy family food behaviours.

11:45 - 12:00

## Exposure to tempting foods as an intervention strategy to improve delay of gratification in children

E. de Vet<sup>1</sup>, A. Verdonshot<sup>1</sup><sup>1</sup>Wageningen University and Research, Netherlands

**Objective:** Growing up in a world where unhealthy foods are abundantly available, urges the need for intervention strategies building resilience against tempting foods. We investigated whether exposure to attractive and salient foods can function as an intervention strategy to enhance children's ability to delay gratification.

**Methods:** A total of fifty-nine 4 to 6 year-olds participated in a between-subjects experiment. Children in the experimental condition (n=30) did a creative task with candy (fill in a colouring), while children in the control condition (n= 29) did the same task with beads. Next, a classical delay of gratification paradigm was used: children were offered one candy to eat immediately, or two if they could wait till the researcher returned. The researcher left the room and observed children's use of strategies to resist the food temptation through a hidden live camera. After 10 minutes the researcher returned and offered the child candy if delay of gratification was successful.

**Findings:** No significant intervention effect was found on subsequent delay of gratification, temptation avoidance and temptation approach strategies. However, this effect was moderated by liking of candy. The intervention improved the use of self-regulation strategies, but only if the liking of candy was moderate or low.

**Conclusion:** Exposing children to tempting foods in a controlled way may not have negative effects on resisting food temptations at a later occasion, even if they feel strongly attracted to it. It may even be beneficial for those who like candy moderately.

12:00 - 12:15

## Longer meal duration increases healthy eating in children. An experimental study

M. Dallacker<sup>1</sup>, J. Mata<sup>1,2</sup>, R. Hertwig<sup>1</sup>

<sup>1</sup>Max Planck Institute for Human Development, Germany

<sup>2</sup>University of Mannheim, Germany

**Purpose:** Family meal frequency has been shown to be associated with better diet quality and lower body weight in children. But what aspects of family meals are healthy for children? Several cross-sectional studies show that longer family meal duration is associated with better nutritional health. Importantly, randomized control trials on family meal duration have not been conducted. This study, for the first time, took an experimental approach to investigate the causal relationship between meal duration and children's nutritional health.

**Methods:** A within-subject experiment with 40 parent-child pairs was conducted. In the control condition parent-child pairs have as much time as usual, in the experimental condition they have 50% longer than usual. The laboratory family dinners were video taped. Food consumption was analyzed and mealtime interactions were coded using the Action, Behavior Control, Communication (ABC) mealtime coding scheme.

**Results:** Results indicate a higher fruit and vegetables intake ( $p=.03$ ) and a lower sweet dessert intake ( $p=.12$ ) in the longer meal duration condition compared to the usual meal duration condition. No differences were found in the absolute intake of other food items such as bread, cheese or cold meat ( $p=0.56$ ).

**Conclusion:** These results suggest that taking more time to eat together as a family may be one lever to improve children's nutritional health.

12:15 - 12:30

## Happy meals are healthy meals: Family mealtime practices and their relation to child nutritional health

J. Mata<sup>1</sup>, M. Dallacker<sup>2</sup>, R. Hertwig<sup>2</sup><sup>1</sup>University of Mannheim, Germany<sup>2</sup>Max Planck Institute for Human Development, Germany

Eating behavior needs to be understood in a social context. Particularly for children, family meals are associated with healthier nutrition. However, what about family meals is “healthy”? One meta-analysis (Dallacker, Hertwig, & Mata, 2017) – based on cross-sectional, observational studies – identified six family mealtime practices that are associated with healthier nutrition in children: positive mealtime atmosphere, TV off, longer meal duration, children’s involvement in meal preparation, homemade food, and parental role modeling. Importantly, longitudinal field studies on endorsement of these practices in daily meals, their intercorrelations, and their predictive value for children’s nutritional health are missing. Daily, for seven consecutive days, N=309 parents described their most important family meal of the day (e.g., foods, duration, participants), food intake for a target child (mean age 9.0 years), and indicated which mealtime practices were present during each meal. On average, each parent responded to 5.6 (SD=1.4) daily surveys. Correlations between mealtime practices were small ( $r_s < .22$ ), suggesting distinct behaviors. The most endorsed mealtime practices were turning TV off (on average across the measurement week, 76% reported having the TV turned off entirely during meals) and creating a positive mealtime atmosphere (78% described mealtime atmosphere as positive). The best predictors of higher nutritional quality of children’s meal intake were homemade food, parental role modeling, and creating a positive mealtime atmosphere ( $p_s < .05$ ). The results suggest that the mealtime practices deduced from independent meta-analyses are distinct practices, endorsed by families in everyday family meals, and predictive of healthier nutrition in daily family meal settings.



# Coping and adjustment in chronic illness

11:00 - 12:30

Aula B

Trudie Chalder

11:00 - 11:15

## The stress effect and the role of psychosocial factors in multiple sclerosis: a prospective study

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**Background:** studies assessing the stress effect on Multiple Sclerosis (MS) progression yielded disparate results. Under a transactional approach this study aims to investigate: a) how stress and MS progression may be related over time; and b) the moderator effect of coping, social support, anxiety, alexithymia and early-life stress.

**Methods:** twenty-six MS patients participated in this one year follow-up longitudinal observational study. The following data was collected. Stress: weekly, a self-reported diary; monthly, the Perceived Stress Scale (PSS). Psychosocial factors: at baseline, the Strategic Approach to Coping Scale (SACS), the Multidimensional Scale of Perceived Social Support (MSPSS), the State-Trait Anxiety Inventory (STAI), the Toronto Alexithymia Scale (TAS) and the Childhood Trauma Questionnaire (CTQ). Disease progression: trimonthly, the self-reported Functionality Assessment of MS (FAMS) questionnaire, at baseline and at the end, impairment (EDSS), and at any moment the relapse rate. Multiple hierarchical regression models were conducted to test the stress-MS relationship and the moderator effect of psychosocial factors.

**Findings:** perceived stress and functionality were negatively related in both directions in the trimonthly assessments [PSS-FAMS:  $\beta=-1.38$ , CI(-2.21 to 0.56);  $p=.002$ ; FAMS-PSS:  $\beta=-0.18$ , CI(-0.22 to -0.13);  $p<.001$ ]. Impairment and relapses did not show any relationship with stress. Active coping and low anxiety showed a moderator effect between perceived stress and functionality [PSSxCoping:  $\beta=0.96$ , CI(0.19 to 1.72);  $p=.01$ ; PSSxSTAI:  $\beta=-1.60$ , CI(-2.90 to -0.29);  $p=.01$ ].

**Discussion:** the bidirectional hypothesis was confirmed only with self-reported measures. Psychotherapeutic interventions should be implemented at early stages of MS focusing on coping and anxiety as they are potentially modifiable factors.

11:15 - 11:30

## The challenge to balance: how dialysis patients manage fatigue

W. van der Borg<sup>1</sup>, K. Schipper<sup>1</sup>, T. Abma<sup>1</sup>

<sup>1</sup>VU University Medical Center, Netherlands

### Background:

Patients on dialysis treatment commonly experience severe fatigue. Fatigue is known as a stressful and intrusive symptom that strongly affects perceived quality of life. The aim of this study is to explore how dialysis patients respond to fatigue symptoms and manage its daily life impact.

### Methods:

A qualitative study was conducted comprising 24 semi-structured interviews with patients with End-Stage Renal Disease (ESRD). All of them were on haemodialysis (HD), peritoneal dialysis (PD) or were able to retrospectively reflect on dialysis related fatigue after kidney transplantation. Participants were purposively recruited via the Dutch Renal Association and via the professional network of the involved researchers. Data were subjected to thematic analysis.

### Findings:

Responses to immediate and enduring feelings of fatigue differed among patients, as well as strategies to manage and mitigate its consequences and causal and perpetuating factors. The analysis revealed six main themes of importance regarding response and strategies to manage fatigue: sleep behaviour, physical activity, energy distribution, mind-set, social context and purpose in life.

### Discussion:

The way dialysis patients respond to fatigue symptoms and try to manage its consequences, involve physical, psychological, behavioural and social processes. Mitigating fatigue and adjusting to its daily life impact is often a solitary and individual process in which many ambiguities and difficulties are encountered. Person centered psychosocial support may be helpful in the search for the ultimate balance to reduce the burden of fatigue and contribute to the quality of life of dialysis patients.

11:30 - 11:45

## Health-related quality of life and self-efficacy among patients with cardiovascular diseases: a meta-analysis

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**Background:** The aim of this study was to meta-analyse the association between health-related quality of life (HR-QoL) and self-efficacy beliefs (SE) among patients with cardiovascular diseases (CVD). Furthermore, the role of potential moderators (e.g., patients' age, the type of CVD diagnosis) of this relationship was examined.

**Methods:** A systematic 5 databases search was performed to obtain relevant studies. Correlation coefficients were used as the effect size indicator. Findings from 17 studies including 4,048 participants were analysed. Effects of the following moderators were tested: the type of measurement of HR-QoL and SE, the type of CVD diagnosis, mean age of participants, cultural differences, and study design.

**Findings:** Results revealed a significant small-to-moderate mean effect size of the association between HR-QoL and SE (0.369,  $p < .000$ ). The results of moderation analyses indicated that the effect was significantly stronger when: (1) a generic HR-QoL measures were used, compared to disease-specific; (2) SE beliefs for physical activity or general SE beliefs were assessed, comparing to disease-specific beliefs; and (3) in patients scheduled for or patients who have underwent a surgical intervention before the assessment compared to those with heart failure or coronary heart disease (no recent surgery).

**Discussion:** The strength of the self-efficacy - HR-QoL relationship depends on HR-QoL and SE measurement and the CVD treatment. This should be taken into account when designing and evaluating interventions addressing SE or HR-QoL.

11:45 - 12:00

## Changes in SAH are associated with initial and change levels of affect among cardiac patients

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**Background.** Self-assessed health (SAH) - measured on a single self-rating scale - predicts health outcomes above and beyond medical variables. One of the explanations for this robust finding is the sensitivity of SAH to changes in multiple aspects of health, including emotional factors. In the present study we assessed the dynamic nature of SAH by longitudinally examining the associations between initial and change levels of SAH and positive and negative affect. **Methods.** Participants were 138 cardiac patients undergoing coronary angioplasty. Self-report questionnaires measured SAH and positive and negative affect, one day and one month after catheterization.

**Findings.** Means of SAH did not change between measurement points. However, there were significant intra-individual changes in all the measured variables. A latent change model analysis revealed that after controlling for medical and socio-demographic variables: lower initial levels of negative affect were linked to increases in SAH; increases in positive affect and decreases in negative affect were linked to increases in SAH; negative affect (both initial and change levels) had a stronger association with SAH change compared to positive affect; and initial SAH did neither predict change in negative affect nor in positive affect.

**Conclusions.** These findings highlight the importance of both positive and negative affect as independent indicators of SAH and SAH change, and provide further insights into the dynamics of SAH among cardiac patients.

12:00 - 12:15

## Relationship between HIV / AIDS and depressive symptomatology: analysis of individual, health and social predictors

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<sup>1</sup>School of Psychology - University of Minho, Portugal

**Background:** Depression is the most prevalent mental disorder among people infected with HIV/Aids. However, the source of infection has not been explored as an explanatory variable for the mental health conditions of people living with HIV/AIDS.

**Method:** This study involved 371 participants in outpatient treatment for HIV/AIDS in hospitals in the North of Portugal. Participants were referred to this study by the attending physician/nurse, and data were collected through an interview, at a single evaluation moment. Participants were mostly males (70%), with an average age of 46.63 (SD = 11.77), and a known diagnostic of HIV/AIDS for 10.13 years (SD = 6.42).

**Findings:** Severe depressive symptomatology was identified in 18% of the participants. We identified several significant predictors of depressive symptoms: being a female, being in a situation of social exclusion, having adverse experiences throughout life, infection by sexual contact in a context of the marital relationship, daily concerns regarding health, having negative family relationships, and dissatisfaction with social support.

**Discussion:** These findings suggest the need to include regular mental health assessments and referral for specialized psychological support services in the health services, since the moment of HIV/Aids diagnosis.

12:15 - 12:30

## Depression predicts hospitalization in patients with coexisting diabetes and end-stage renal disease: a prospective study

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**BACKGROUND:** Patients with comorbid diabetes and end stage renal disease (DM ESRD) represent the fastest growing and most frail segment of dialysis population, with elevated rates of hospitalization and mortality. It is important to examine psychosocial factors that may compromise health outcomes. We evaluated whether depressive symptoms (hereafter "depression") are associated with hospitalization and mortality.

**METHODS:** Depression was assessed in a prospective outpatient cohort of patients with DM ESRD and defined as scores  $\geq 8$  on the Hospital Anxiety and Depression Scale (HADS). Primary outcome was all-cause admission (number of events; days of hospitalization, emergency department visits) or mortality over 12 months. Negative binomial or Cox regressions were used to model risk factors for hospitalization and mortality respectively.

**FINDINGS:** Of 221 participants [median age 59 years, 39.4% women, 54.8% Chinese], 95 (43.0%) screened positive for depression. Risk for depression was higher for Chinese patients (OR 2.499, 95%CI 1.436 - 4.349,  $P = .001$ ). Compared with non-depressed patients, those with depression were more frequently hospitalized in the ensuing 12 months: [Incidence rate ratio (IRR) = 1.436 (1.019 - 2.024),  $p = 0.039$ ], adjusted for age, comorbidity, time on dialysis and housing. The association with mortality was not significant.

### DISCUSSION:

Depression is common, under-recognized and predicts hospitalization rates independent of clinical risk factors. Additional research is warranted to ascertain if effective interventions for depression in patients with multimorbidity could reduce the risk of hospitalizations and associated adverse events.

# Improving health care service delivery

11:00 - 12:30

Aula G

Noleen McCorry



11:00 - 11:15

## Suicide risk assessment in emergency departments: a mixed-methods study of clinician practices in Scotland

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<sup>2</sup>EDINBURGH NAPIER UNIVERSITY, United Kingdom

**Background:** Despite suicide being a global public health issue, limited research exists exploring suicide risk assessment practices in emergency departments. This study investigated current suicide risk assessment practices and clinician experiences across a national sample of emergency department clinicians in Scotland.

**Methods:** All emergency departments in Scotland (n = 23) were eligible to participate in this mixed-methods study. In total, 51 clinicians across 17 emergency departments completed a descriptive survey of current suicide risk assessment practices, and six clinicians participated in follow-up semi-structured interviews to investigate their experiences. Interviews were analysed using thematic analysis.

**Findings:** The survey identified substantial variation in practice between emergency department clinicians in Scotland. Thirty-five (68.6%) participants were using a suicide risk assessment tool in their workplace, with most using locally developed proformas (n = 20, 62.5%) or the SAD PERSONS scale (n = 13, 40.6%). Remaining participants (n = 16, 31.4%) did not use a suicide risk assessment tool. The qualitative analysis of clinicians' experiences identified four major themes including: current experiences, e.g., challenges with assessment; components of suicide risk assessment, e.g., risk and protective factors; clinical decision-making; and suicide risk assessment needs, e.g., training.

**Discussion:** This novel study concluded that there is substantial variation in suicide risk assessment practices between emergency department clinicians in Scotland. Furthermore, clinicians find this challenging and discuss further training needs, clearer guidelines, and the improvement of risk assessment tools. These findings should be considered in the development of suicide risk assessment practices; in particular, to encourage consistency across practice.

11:15 - 11:30

## Quality indicators in palliative care day services

N. McCorry<sup>1</sup>, M. Dempster<sup>2</sup>, S. O'Connor<sup>3</sup><sup>1</sup>Queen's University Belfast, United Kingdom<sup>2</sup>Queen's University, Belfast, United Kingdom<sup>3</sup>QUB, United Kingdom

**Background:** Quality indicators can be used to monitor quality of care, compare health settings and support patient choice. They allow us to see how healthcare professionals and services function to provide for the needs of patients and carers. The main aim of this project is to produce a list of quality indicators for evaluating care in palliative care day services (PCDS).

**Methods:** We used a modified Delphi technique to generate candidate quality indicators through a process of expert consensus and evidence appraisal. Using the RAND/UCLA Appropriateness Method, these experts rated the appropriateness of potential quality indicators using their own experience and knowledge, as well as evidence summary tables based on a literature review. Expert panel members also identified indicators not on the original list. A panel meeting was held at which the indicators were discussed and re-rated (on appropriateness and necessity).

**Findings:** The initial list of 185 quality indicators, identified in the literature review was reduced to 55 after the two rounds of panel ratings. This was subsequently reduced to 25 indicators by the project team, in an attempt to consolidate the indicators chosen by the expert panel.

**Discussion:** The final list of quality indicators are the first to be produced for PCDS, and highlight elements of structure, process and outcome (including psychological issues), which are important in any good quality PCDS. Despite the variation in the content of PCDS across the UK, the set of quality indicators are sufficiently flexible to apply to a range of PCDS.

11:30 - 11:45

## Do intervention components target key barriers? Review and synthesis of interventions to increase diabetic-retinopathy screening attendance

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**Background:** Diabetic retinopathy screening attendance (DRSA) rates are suboptimal despite wide availability of screening programs and numerous interventions to increase attendance. Variation in intervention effectiveness is largely unexplained. Whether interventions target theoretical determinants (barriers/enablers) of screening behaviour is unknown. **Aims:** to identify and synthesise: component behaviour change techniques (BCTs) comprising interventions targeting DRSA; modifiable barriers/enablers to DRSA; and whether BCTs in existing interventions target key barriers/enablers.

**Methods:** Three phases: 1-Cochrane systematic review of 66 randomised trials of interventions targeting DRSA. Intervention content was coded into BCTs. Meta-regression identified BCTs associated with higher attendance; 2- Systematic review of 62 published/grey literature studies reporting perceived barriers/enablers to DRSA. Extracted barriers/enablers classified using Theoretical Domains Framework (TDF); 3-Coherence between identified BCTs and key barriers/enablers investigated using TDF/taxonomy mapping matrices to examine proportion of BCTs mapped to each TDF domain.

**Results:** 1- Interventions contained 0-30 BCTs (median 7). Eleven BCTs were associated with higher attendance, including: 'goal setting' [Risk Difference:0.26 (95%CI:0.16-0.36)], 'Feedback' [0.22(0.15-0.29)]. 2- Key barriers/enablers corresponded to TDF domains: 'environmental context/resources,' 'social influences,' 'memory/attention/decision making,' 'knowledge,' 'beliefs about consequences,' and 'emotions.' 3- On average, 33% (0%-75%) of BCTs mapped to key domains have been frequently used ( $\geq 10$  interventions). Coherence was lowest for domains 'emotions' and 'beliefs about consequences (0% BCTs mapped frequently used).

**Discussion:** BCTs associated with increased DRSA and important determinants of DRSA were identified. However, existing interventions incorporate only a third of potentially

relevant BCTs to target key barriers/enablers to DRSA. These findings may thus inform design/refinement of DRSA interventions.

11:45 - 12:00

## Does categorization of suicide risk affect patient outcomes? A study of emergency department presentations

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<sup>1</sup>University of Manitoba, Canada

**OBJECTIVE:** This study examined psychiatric emergency room presentations that were assessed for suicide risk. These individuals were assessed to determine whether active suicide ideation differentially predicted future suicide attempts compared to ambivalence about living (passive suicide ideation), or a combination of both subtypes.

**METHOD:** Participants were individuals presenting to psychiatric services in the emergency department between January 2009 and December 2014 (11886 presentations) at two hospitals in Manitoba, Canada. Patients were classified into four categories: Ambivalence about living, Active suicide ideation, Combined suicide ideation and No suicide ideation.

**RESULTS:** Of the 5077 individuals presenting to the emergency room during the study, 155 (3.0%) presented with a suicide attempt in 6 months. Ambivalence about living was predictive of suicide attempts in 6 months [Adjusted odds ratio (AOR)= 3.66 (95% confidence interval (CI): 2.35-5.83,  $p < .001$ )] as were the Combined presentations [AOR]= 6.40 (95% CI: 4.42-9.33,  $p < .001$ )] whereas Active suicide ideation did not predict risk for future suicide attempt [AOR=2.12 (95% CI: 0.99 - 4.51),  $p > .05$ ].

**CONCLUSION:** Suicide ideation is a common presentation to emergency departments. Treatment decisions are often made by categorizing presentations according to level of risk, with active suicide ideation often classified as being higher risk. However, the results of this study demonstrate that the current terminology may be downplaying the severity of presentations that include ambivalent suicide ideation. Mental health professionals should view presentations involving any form of suicidal ideation as a serious risk for future attempts and consider appropriate resources, support and treatment.

12:00 - 12:15

## Effectiveness of a training course (RESPECT) on attitudes about causes/management of aggression in Northern Uganda

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<sup>1</sup>University of Sheffield, United Kingdom

<sup>2</sup>Sheffield Health and Social Care NHS Foundation Trust, United Kingdom

**Background:**One of the main hazards within health care practice comes from occupational violence; this is even more salient in certain countries of sub-Saharan Africa, as there is a lack governmental policies and procedures to guarantee health and safety standards. This study aims to evaluate the impact of a 4-day aggression management training (RESPECT) on staff's attitudes regarding management and causes of aggressive episodes in the Gulu Regional Referral Hospital (GRRH), Uganda.

**Methods:**This was a quasi-experimental pre-test and post-test study. Sample (N=97) was composed by employees of the GRRH taking part in the 4-day RESPECT training. Attitudes were measured with the Management of Aggression and Violence Attitude Scale (MAVAS).

**Findings:**Participants showed greater agreement with environmental or external factors as main cause of patient aggression at post-test ( $Z=-4.18$ ,  $p<0.001$ ). Perceptions about the effectiveness of non-physical methods showed significant changes after the training ( $Z=-3.19$ ,  $p=0.001$ ). Likewise, it was observed a significant change on responses to the item 'It is difficult to prevent patients from becoming aggressive', with participants showing less agreement with it at post-test ( $Z= -3.01$ ,  $p=0.003$ ). Data from semi-structured interviews confirm quantitative results; participants report increased feelings of compassion, confidence and safety when handling aggressive/violent patients.

**Discussion:**The RESPECT training had a significant impact on attitudes towards management and causes of aggression within this sample. Participants reported a change on the approach to incidents of violence/aggression, primarily seeking to understand the cause of the outbreak and implementing non-physical strategies before applying traditional forms of management such as restrain or involuntary medication.

12:15 - 12:30

## Let's play about children's hospitalization and surgery

S. Fernandes<sup>1</sup>, P. Arriaga<sup>1</sup>, F. Esteves<sup>1,2</sup><sup>1</sup>ISCTE-Instituto Universitário de Lisboa; CIS-IUL, Portugal<sup>2</sup>Mid Sweden University, Sweden

Hospitalization and surgery are stressful life events for children and their family. The preoperative period is the most critical moment of the surgical process, involving negative emotions, cognitions and stress overload. The present study aimed to develop preoperative educational programs, in different formats, and test efficacy on cognitive, affective and physiological responses of children's undergoing outpatient surgery. 190 children aged 8 to 12 (and their parents) were randomly assigned to one of the three conditions: 1) preoperative educational group, in which children received educational materials to provide them information about surgery, hospitalization and medical procedures; 2) preoperative distraction group, in which children use distractive materials intended only to entertain; and 3) control group, with no intervention. According to the preliminary results, there was a statistically significant and positive effect of the preoperative educational intervention on children's worries about surgery ( $p < 0.001$ ). In more detail, children in educational groups reported less worries (in all preoperative worries dimensions), compared to those in both distraction and control groups. Similarly, there was also a statistically significant decrease in parental anxiety in the preoperative educational group. These results do however support the hypothesis that providing preoperative materials with educational information reduce children's preoperative negative responses. In conclusion, educational preoperative studies must be implemented on pediatric services to enhance all the surgical experience.

# Risk communication

11:00 - 12:30

Aula I

Anne Marie Plass



11:00 - 11:15

## Lived experience of French professionals practising genetic testing in oncology, a qualitative study

M. Pannard<sup>1</sup>, M. Préau<sup>1,2</sup><sup>1</sup>Université Lyon 2, Groupe de Recherche en Psychologie Sociale (GRePS), France<sup>2</sup>INSERM U912/ORS PACA, Marseille, France

**Background:** Over 25000 oncogenetic consultations are held every year in France by oncogeneticists and genetic counsellors. These consultations allow the assessment individual risk of hereditary cancer and provide surveillance guidelines to individuals presenting a deleterious genetic mutation. This research aims to investigate three dimensions of lived experience of oncogenetic professionals and patients: doctor-patient relationship (practical dimension), social sharing of emotions (emotional dimension), social and professional representations (knowledge dimension).

**Methods:** We collected data from a qualitative study based on 27 semi-structured interviews with oncogeneticists (9) and genetic counsellors (18). Data were analysed using both thematic analysis and interpretative phenomenological analysis.

**Findings:** Three key elements have been identified as structuring practises and doctor-patients relationship in oncogenetics: providing reliable genetic testing, being able to convey clear and understandable information, and providing tailored care to patients at higher risk of developing cancer. Despite an obvious inequality of knowledge that characterize doctor-patient relationships, genetic counselling aims to promote shared decision making and respect the individual and family's experience of each patient in order to provide tailored care. Social and emotional skills are developed by professionals over the course of their career and considered as necessary to insure their efficiency. However, this communication model seems to be at risk because of complex technological innovations and a major increase in the number consultations.

**Discussion:** This research allowed us to explore the evolving context of oncogenetics, where professionals experience tensions between worries over ethical issues and enthusiasm over technological innovations.

11:15 - 11:30

## Speed of ageing – a new approach to risk perception?

J. Kollmann<sup>1</sup>, N. Lages<sup>1</sup>, L.J. Debbeler<sup>2</sup>, H. Schupp<sup>1</sup>, B. Renner<sup>1</sup>

<sup>1</sup>University of Konstanz, Germany

<sup>2</sup>Universität Konstanz, Germany

**Background:** A realistic perception of health risks is a precondition for preventive behaviour. However, virtually all measures of risk perception focus on the perceived likelihood of contracting a specific disease. We suggest a more intuitive and comprehensive risk perception measure that is the speed of ageing (SOA) caused by one's own lifestyle. The present study assessed the perceived SOA in a community sample and tested the accuracy of perceptions in relation to lifestyle factors (eating behaviour, physical activity) and objective health status measures (clinical biomarkers, metabolic syndrome).

**Methods:** Blood samples for clinical biomarkers (blood pressure, blood lipids, blood sugar) were collected at baseline as part of a longitudinal cohort study (Konstanz Life Study, Germany). Standardised written risk feedback based on these samples was given six weeks later. Risk perception was assessed concomitantly. Additionally, perceived SOA, physical activity and eating habits were assessed six months after receiving risk feedback (N = 105).

**Findings:** Regression analyses revealed that physical activity ( $\beta \geq -.46$ ,  $p \leq .01$ ) and healthy eating behaviour ( $\beta \geq -.22$ ,  $p \leq .05$ ) significantly co-varied with SOA, indicating that both health behaviours contributed to a decreased perceived speed of aging. However, no significant relation between SOA and biomarkers was found.

**Discussion:** The present results suggest that perceived speed of ageing accurately reflects lifestyle behaviours. Importantly, it offers a behaviour-oriented rather than a disease-oriented measure of perceived health risk. Since it reflects risk perception across behaviour domains, it may offer a comprehensive but parsimonious new way of risk assessment.

11:30 - 11:45

## Effects of claims and warnings on the risk perception of a novel heat-not-burn tobacco product

C. Chrea<sup>1</sup>, G. Kallischnigg<sup>2</sup>, E. Sanders<sup>3</sup>, F. Beacher<sup>4</sup>, P. Magnani<sup>4</sup>, A. Ramazzotti<sup>4</sup>, R. Weitkunat<sup>5</sup>

<sup>1</sup>Philip Morris Products SA, Switzerland

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<sup>3</sup>Edward Sanders Scientific Consulting, Switzerland

<sup>4</sup>Philip Morris International Management S.A., Switzerland

<sup>5</sup>Philip Morris Products S.A., Switzerland

A modified risk tobacco product (MRTP) is a legal designation in the United States for any tobacco product that is sold or distributed for use to reduce harm or the risk of tobacco-related disease associated with commercially marketed tobacco products such as cigarettes. Clear communication on the risks associated with these products is important to ensure that adult consumers understand these products features, benefits and risk profile.

We report an analysis on three studies (1510, 1509, and 1534 participants, respectively), in which adult smokers and non-smokers were exposed to communication materials for a candidate MRTP, the Tobacco Heating System (THS). In the three studies, participants assessed risk perceptions of THS based on different combinations of THS communication materials (brochure or pack) and warnings (THS-tailored (PMI) or US Surgeon General's warnings), along with benefit claims that were study-specific. Multiple linear regression analyses were conducted to assess the covariate-adjusted influence of communication-based factors on risk perception.

In all three studies, the PMI warning produced higher levels of perceived risk (both for health and addiction) than the US Surgeon General's warnings, and the brochure produced higher levels than the pack. Both adult former and never smokers perceived higher levels of health and addiction risks of THS than adult current smokers, a perception that was also influenced by race. Pooling of the results across the three studies showed a similar pattern of results and no effect of the claims on levels of perceived risk. These findings can help developing effective risk communications on MRTPs.

### Declaration of interests

*C. Chrea and R. Weitkunat are employees of Philip Morris Products S.A.*

*F. Beacher, P. Magnani and A. Ramazzotti are employees of Philip Morris International Management S.A.*

*G. Kallischnigg and E. Sanders are consultants paid by PMP S.A. for the work presented.*

11:45 - 12:00

## The impact of (un)certainty information and source expertise on risk perception and vaccination decision making

F. Mevissen<sup>1</sup>, V. Visschers<sup>2</sup><sup>1</sup>Maastricht University, Netherlands<sup>2</sup>University of Applied Sciences and Arts Northwestern Switzerland, Switzerland

**Background:** People often make health-related decisions (e.g. to undergo medical treatment or not) based on (risk) information that includes ambiguous information from different, conflicting sources. However, ambiguous information is distrusted which in turn influences risk perceptions and decision-making. We explored how (un)certainty in information regarding vaccination efficacy and source expertise influence risk perception and decision making regarding vaccination to prevent Lyme disease.

**Methods:** Participants (N = 190; 63.5% female, Mage = 58.4) of an online Swiss panel were randomly distributed in a between subjects 2(Information: certain vs uncertain) x 2(source: expert vs. lay) design. All participants read a (fake) newspaper article on Lyme disease, including information on symptoms and consequences. They were then offered additional information from either an internet forum or a medical information website (manipulation of source of information: expert vs. lay). The information they received communicates about the efficacy of the vaccine in a certain way (80% effective) vs in an uncertain way (70-90% effective). Main outcome measures included risk perception, vaccination efficacy, vaccination intention and measures evaluating the information.

**Findings:** No information x source interaction effects were found on the main outcome measures ( $p$ 's > .11). Main effects of source showed that people rate the efficacy of the vaccine higher ( $p < .05$ ) and the perceived uncertainty lower ( $p < .001$ ) if the message comes from an expert.

**Discussion:** The finding that information from experts is still rated more positively is promising. The lack of interaction effects is likely explained by a too small uncertainty range.

12:00 - 12:15

## Emotional intelligence and communication skills: preliminary results of a training in a rehabilitation team

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**INTRODUCTION:** It's known that emotional intelligence (EI) improves the communication skills of health personnel. This study aimed to evaluate the effect of a training focused on EI in improving the ability of a rehabilitation team to deliver Patient Centered Care (PCC).

**METHODS:** Twenty-nine participants were randomly assigned to the intervention group (n = 15) or to the control group (n = 14) and evaluated at T0 and T1. Only the intervention group participated in a 10-hours training focused on EI. Evaluation was based on participants' self-assessed EI (Emotional Intelligence Scale; EIS) and ability to relate to the patient using the PCC principles (Patient-Provider Relationship Questionnaire; PPRQ), and patients' (n = 84) rating of participants' relational skills (PPRQ-patient form).

**RESULTS:** Self-rated EI significantly increased in all three factors of EIS ( $p = 0.001$ ,  $0.02$ , and  $0.03$ , respectively) only in the intervention group. Self-assessed relational skills also improved in the intervention group, although only in relation to Involvement of the patient in care ( $p = 0.003$ ). Patients' rating of health professionals' relational skills significantly improved only in the intervention group in three of the four factors of the PPRQ: Interest in the patient's agenda ( $p = 0.006$ ), Involvement of the patient in care ( $p = 0.009$ ), and Effective communication ( $p = 0.006$ ).

**CONCLUSIONS:** The results underline the importance of ad-hoc training, aimed primarily at enhancing emotional intelligence and interpersonal skills, to improve the delivering of PCC by healthcare professionals working in a rehabilitation unit.

12:15 - 12:30

## The role of 'heart age' and infographics in helping people understand cardiovascular disease risk

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<sup>1</sup>VU University Medical Center, Netherlands

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<sup>3</sup>National Institute for Public Health and the Environment (RIVM), Netherlands

**Background:** We aimed to study how lay users' comprehension of disease risks as provided by a risk calculator is influenced by: (1) using infographics about qualitative risk information, either with or without risk numbers; (2) emphasizing different qualitative risk dimensions in this information; (3) providing heart age versus a traditional risk number.

**Methods:** One data collection (N=727) in which multiple experimental designs were used. For aim 1, a 2 (infographics vs. text) x 2 (risk number vs. no risk number) between-subjects design was used. For aim 2, the effects of three pieces of information were tested within-subjects, each emphasizing one risk dimension (causes, timeline, consequences). For aim 3, a post-test only control group design was used in which an additional condition who received only heart age was contrasted with the first condition of the 2x2 design (risk number). Participants received a hypothetical risk from a cardiovascular disease risk calculator. Outcome variables concerned recall, risk appraisals, behavioral intentions and information evaluation. ANOVA's, ANCOVA's and paired sampled t-tests were performed.

**Findings:** The infographics negatively affected risk recall, subjective risk comprehension and evaluations. Risk perception was not influenced by type of risk dimension. Heart age appeared to positively influence recall, comprehension, and evaluations. It also increased affective risk appraisals.

**Discussion:** Although infographics are widely used in health communication, they may have detrimental effects on lay users' comprehension of disease risk. Heart age does seem to have positive effects on comprehension, but may also strongly influence negative affect, which is not always warranted.

# Caregiving and relationships in health

14:00 - 15:30

Aula A

Mariët Hagedoorn

14:00 - 14:15

## Psychosocial support in liver transplantation. A dyadic study with patients and their family caregivers

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<sup>6</sup>General Psychology, University of Padua, Italy

**Background:** Our objectives were to investigate how perceived social support and tendency of either self-reliance or reliance on others correlated with emotional and physical overload, anxiety, depression and psychoticism in patients waiting for transplantation and their caregivers.

**Methods:** 93 participants were recruited at Liver Transplantation Center of Padua Hospital: 51 patients waiting to be included in liver transplantation list (19 with alcohol-related illness) and 42 family caregivers. Both patients and caregivers filled in Kelly's Dependency Grids and Symptom Checklist (SCL-90). Patients also compiled the Medical Outcomes Study Social-Support Survey (MOS-SSS) and caregivers the Family Strain Questionnaire Short-Form (FSQ-SF).

**Findings:** Patients' and caregivers' symptomatology positively correlated ( $\rho=.32$ ,  $p<.05$ ). When patients perceived more social support, their symptomatology decreased ( $\rho=-.31$ ,  $p<.05$ ). Family strain was higher than the mean level. The breadth of patients' and caregivers' networks correlated with a decrease in caregivers' symptomatology only. In alcohol-related pathologies the caregiver's strain positively correlated with several subscales of the patients' SCL-90 and negatively with their network extension. The dependency on one's own self correlated negatively with the symptoms of patients without alcohol problems. When caregivers depended on other people, Anxiety ( $\rho=.37$ ,  $p<.05$ ) and Hostility increased ( $\rho=.39$ ,  $p<.05$ ).

**Discussion:** Waiting for transplantation affects both the patient and the caregiver as a dyad. Social support and the breadth of available resources are important variables in patients' and caregivers' wellbeing. These results suggest the usefulness of a dyadic approach in research, prevention and care.



14:15 - 14:30

## Daily partner responses have divergent effects on cancer patient's fatigue interference and relationship satisfaction

F. Müller<sup>1</sup>, M.A. Tuinman<sup>2</sup>, E. Stephenson<sup>3</sup>, A. Smink<sup>1</sup>, A. DeLongis<sup>3</sup>, M. Hagedoorn<sup>1</sup>

<sup>1</sup>University Medical Center Groningen; University of Groningen, Netherlands

<sup>2</sup>University Medical Center Groningen; University of Groningen, Netherlands

<sup>3</sup>University of British Columbia, Canada

**Background:** Fatigue is an interfering symptom many cancer patients experience even after treatment completion. Support provided by the partner may help limit the negative effects of fatigue on daily life, but may erode the couple's relationship. This study aimed to investigate the effects of different partner responses on the patient's fatigue interference and relationship satisfaction.

**Methods:** One-hundred-and-one post-treatment colorectal cancer patients (66% male, mean age 64 years) and their partners completed daily diaries for 14 days on perceived and provided partner responses (punishing, solicitous) and co-rumination (ruminating together about fatigue). Within-person multilevel modelling analyses were applied, with patient's fatigue interference and relationship satisfaction as outcomes and daily fatigue and gender as control-variables.

**Findings:** The within-person effect of co-rumination on fatigue interference was significant ( $b=0.25$ ,  $p<0.01$ ), that is cancer patients who reported higher than usual levels of daily co-rumination experienced higher fatigue interference. The main-effects of neither punishing ( $p=0.48$ ) nor solicitous ( $p=0.82$ ) responses on fatigue interference were significant. However, as expected, punishing responses predicted a decrease of relationship satisfaction during the day ( $b=-0.35$ ,  $p<0.01$ ) while solicitous responses ( $b=0.11$ ,  $p<0.05$ ) and co-rumination ( $b=0.10$ ,  $p<0.05$ ) predicted an increase in relationship satisfaction.

**Discussion:** Co-rumination is beneficial for the spousal relationship, but increases the negative impact of fatigue on daily activities. Punishing responses were not found to decrease fatigue interference but seem to erode the couple's relationship. In order to limit fatigue interference, partners should withdraw from co-rumination. Couples should be supported to apply strategies to discourage fatigue interference while maintaining a healthy relationship.

14:30 - 14:45

## Prioritising the patient: a qualitative study exploring the impact of dialysis on dyadic relationships

C. Moore<sup>1</sup>, S. Skevington<sup>1</sup>, A. Wearden<sup>1</sup>

<sup>1</sup>University of Manchester, United Kingdom

### Background:

Research suggests that the period leading up to, and commencement of, dialysis is burdensome for patients and their significant others as they adjust to the demands of the treatment. Few studies have examined how dyads manage their relationship during this time period. The aim of this qualitative study was to explore the impact of pre-dialysis and dialysis on the dyadic relationship.

### Methods:

22 dyads (2 female patients, 20 female significant others) were recruited from a UK hospital's outpatient clinics. Interviews conducted with each member of the dyad explored the effects of dialysis, or preparation for it, on this relationship. Dyadic thematic analysis was used to examine dialysis' effects within each relationship and to identify patterns occurring across the sample.

### Findings:

Prioritising the patient emerged as the central theme. The majority of the dyads reported that preparing for and starting dialysis had minimal negative impact their relationship despite patients being actively prioritised. However, when relationship factors were examined in these dyads, significant others often assumed key roles which emerged as the themes carrying the burden and managing the relationship. Adopting these roles had both positive and negative effects on their identity, social relationships and mental health during these stages.

### Discussion:

This study showed the crucial role that significant others play during the early yet critical stages of treating renal failure. By engaging with and offering support focused on significant others, health care professionals may see positive outcomes for patients as well.

14:45 - 15:00

## Supporting physical activity in adults with learning disabilities: exploring care-givers' attitudes. Beliefs and motivation

E. Dixon<sup>1,2</sup>, A. Haase<sup>2</sup><sup>1</sup>Hertfordshire Council, United Kingdom<sup>2</sup>University of Bristol, United Kingdom

**Objective:** Adults with Learning Disabilities participate in less physical activity (PA) than the general population. Social support (positive and negative), and beliefs about PA from care-givers have been identified as being significant determinants of PA in their clients. The aim was to understand workplace and social norms, organizational ethos and how these influence carers' perceptions, willingness and ability to support PA, as well as views on issues of choice, responsibility and risk.

**Method:** Adopting a phenomenological approach, interviews with ten care-workers were digitally recorded, transcribed verbatim and thematic analysis was conducted. Triangulation was employed to ensure credibility of identified themes.

**Results:** Views on the importance of PA for all clients, perceptions of client-related barriers and motivation to support PA are influenced by the carer's own physical activity levels and previous experience of the positive impact of PA on their clients. 'Levers and drivers', 'Choice versus duty-of-care' and 'Risk-management' emerged as main themes, alongside the Theory of Planned Behavior variables of attitude, norms and perceived behavioral control. However, care-givers did not experience support from colleagues and managers, while PA promotion was not common in some organisations.

**Conclusion:** Some factors which impact on carers' motivation and intentions to support clients' PA may be amenable to training or organizational changes. There is a clear need for increased understanding of the complexities of the legislation on duty-of-care, capacity, choice, risk and for care plans, which explicitly include physical activity and could impact upon care-givers supporting PA in adults with learning difficulties.

15:00 - 15:15

## PTSD among cardiac patients and their caregivers

N. Vilchinsky<sup>1</sup>, K. Fait<sup>1</sup><sup>1</sup>Bar-Ilan University, Israel

**Background:** Post-traumatic stress disorder (PTSD) is a severe emotional reaction to a concrete stressor such as a manmade atrocity or a natural disaster. In recent years, much scientific attention has been devoted to exploring the possibility that illnesses and especially cardiac illness might also be regarded as causes of PTSD. However, only a handful of studies have focused on cardiac-disease-induced PTSD (CDI-PTSD) among patients' caregivers. The current talk will focus on PTSD as a consequence of cardiac illness, among both patients and their spouses-caregivers.

**Methods:** I will shed light on the state-of-the-art knowledge in this field, focusing specifically on evidence regarding to family members. Then I will present our lab retrospective, qualitative and prospective studies which focused on cardiac induced PTSD in the family.

**Findings:** Our literature review detected only 4 studies ever published on the subject of caregivers' CDI-PTSD. Our retrospective study showed that caregivers had twice as much CDI-PTSD as patients. Finally, preliminary longitudinal findings detect that CDI-PTSD hamper the support transactions among patients and caregivers and its effectivity to promote patients' self-management.

**Discussion:** I will discuss the unique ramifications of PTSD resulting from cardiac illness in the family in terms of wellbeing, support transactions and self-management. Ultimately, this kind of comprehensive understanding will be translated into effective interventions for both patients and their family caregivers.

15:15 - 15:30

## Does dyadic coping predict couple's postpartum quality of life? Exploring longitudinal actor and partner effects

S. Alves<sup>1</sup>, A. Fonseca<sup>1</sup>, M.C. Canavarro<sup>1</sup>, M. Pereira<sup>1</sup>

<sup>1</sup>Faculty of Psychology and Educational Sciences, University of Coimbra, Coimbra, Portugal

**Background:** The transition to parenthood can negatively impact couple's quality of life (QoL). Although the role of partner against poorer adjustment has been acknowledged, existing research mainly focused on psychopathological outcomes and a dyadic approach has been rarely undertaken. This study examined changes in dyadic coping (DC) and QoL over time, and explored DC long-term influences on the QoL of both women and their partners.

**Methods:** 105 couples completed the Dyadic Coping Inventory and the EUROHIS-QOL 8-item index, during the second trimester of pregnancy (T0) and at 6 weeks postpartum (T1).

Repeated-measures MANOVAs and multiple linear regressions were performed.

**Findings:** Women reported higher DC enacted by oneself than men ( $p < .001$ ), and a significant decrease in common DC (how couples cope together with stress) from T0 to T1 was found ( $p < .01$ ). Women's QoL at T1 was negatively predicted by men's perception of common DC at T0 ( $p < .05$ ). Men's QoL at T1 was positively predicted by their own perception of common DC ( $p < .01$ ), and by women's perception of DC enacted by oneself ( $p < .05$ ), but negatively influenced by women's perception of DC enacted by partner ( $p < .01$ ).

**Discussion:** Further attention to the different effects of DC on women and their partners' postpartum QoL is needed, as men seem to benefit most from a shared coping process than women. Given the dyadic interdependence observed in this study, preventive partner-inclusive approaches should be considered, and adjusted to the gender-specific needs of support.

# Interventions

14:00 - 15:30

Aula B

Frank Eves

14:00 - 14:15

## Changing environments to change behaviour: development of TIPPME (Typology of Interventions in Proximal Physical Micro-Environments)

G.J. Hollands<sup>1</sup>, G. Bignardi<sup>1</sup>, M. Johnston<sup>2</sup>, M.P. Kelly<sup>3</sup>, D. Ogilvie<sup>4</sup>, M. Petticrew<sup>5</sup>, A. Prestwich<sup>6</sup>, I. Shemilt<sup>7</sup>, S. Sutton<sup>3</sup>, T.M. Marteau<sup>1</sup>

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<sup>5</sup>Department of Social and Environmental Health Research, London School of Hygiene & Tropical Medicine, United Kingdom

<sup>6</sup>School of Psychology, University of Leeds, United Kingdom

<sup>7</sup>EPPI-Centre, UCL Institute of Education, United Kingdom

**Background:** Reflecting widespread interest in concepts of ‘nudging’ and ‘choice architecture’, increasing research and policy attention is being applied to altering aspects of the small-scale physical environment, such as portion sizes or product positioning, to change health-related behaviour at population level. However, there is no reliable framework that incorporates standardised labels and definitions, hampering both the synthesis of cumulative evidence about intervention effects, and the identification and discussion of intervention opportunities. To address this, a new tool, TIPPME (Typology of Interventions in Proximal Physical Micro-Environments) has been developed.

**Methods:** TIPPME was developed and assessed over three phases of work (identifying need for a typology; developing and elaborating on this typology; reliability testing and finalising), comprising seven main stages of development. This included two reliability testing exercises completed by behaviour change experts (n=37) to assess how reliably it can be used to characterise intervention content.

**Findings:** TIPPME comprises a matrix classification structure defining six intervention types (Availability; Position; Functionality; Presentation; Size; Information) and three different spatial foci (Product; Related objects; Wider environment). The typology can be applied reliably, with reliability testing exercises demonstrating strong levels of agreement between participants (kappa =.77 (exercise 1) and .87 (exercise 2)).

**Discussion:** TIPPME provides a framework to reliably classify and describe an important class of interventions, and enable more systematic design, reporting and analysis of interventions to change health-related behaviour. It makes a distinct, novel contribution to collective efforts to build the cumulative evidence base for effective ways of changing behaviour across populations.

14:15 - 14:30

## Participation in alcohol abstinence challenges can lead to improvements in general well-being

E. Robinson<sup>1</sup>, R. de Visser<sup>2</sup><sup>1</sup>Alcohol Concern, United Kingdom<sup>2</sup>University of Sussex, United Kingdom

**BACKGROUND:** Periodic abstinence from alcohol may convey physiological benefits, but its effects on general well-being are less well-known. Nor is it known how use of different forms of support during alcohol abstinence challenges affects success rates.

**METHODS:** 4232 British adults participating in the “Dry January” alcohol abstinence challenge completed a baseline questionnaire and a 1-month follow-up questionnaire. Key variables assessed at baseline included measures of alcohol consumption and drink refusal self-efficacy (DRSE). Key variables assessed at follow-up related to whether respondents completed the abstinence challenge, and their use of support provided by Dry January

**FINDINGS:** Participation in Dry January was related to increases in DRSE and well-being among all respondents, but these changes were larger among people who successfully completed the challenge. In multivariate analysis, greater use of support provided by Dry January was a significant independent predictor of completing the abstinence challenge (along with more moderate alcohol intake at baseline, greater emotional DRSE, and being male).

**CONCLUSIONS:** Participation in alcohol abstinence challenges can lead to improvements in general well-being. There is a need to continue to provide support to people undertaking alcohol abstinence challenges.



14:30 - 14:45

## Prevention Network Ortenaukreis – establishing a communal network of health promotion for children and families

K. Fröhlich-Gildhoff<sup>1</sup>, L. Kassel<sup>1</sup>

<sup>1</sup>Research Center ZfKJ, FIVE e. V. , Evangelische Hochschule Freiburg, Germany

**Background:** Funded by the German Federal Ministry of Research, the project aims to promote the physical and psychological well-being and social inclusion of children between 3 and 10 years and their families in a German district by a two-track process, based on fundings of health promotion (z.B. Farquhar, 2014; Alexander et.al., 2010): (1) prevention agents are building communal networks of stakeholders from the health, youth welfare and educational system, (2) 18 month long organizational development processes with specially trained coaches in a setting approach with 30 ECEC institutions and 20 primary schools are implemented, based on a adaptive curriculum of prevention and health promotion, as educational institutions are playing a vital role when gaining access to children and their families.

**Methods:** A comprehensive research design to evaluate the different outcomes including (1) qualitative interview data from community prevention agents, stakeholders, and at-risk families, (2) quantitative data on community network development, (3) a multi-level waiting-list control group design with mixed methods in educational institutions.

**Findings:** First analysis from the prevention network and strategy development show substantial new co-operations and multidisciplinary networks. The waiting-list control group evaluation in ECEC institution show a significantly higher competence level of professionals in the pre-post-analysis (n=122), as well as significant pre-post-effects in the children (n=132) in the treatment group concerning self-concept and resilience.

**Discussion:** The first results show positive effects of the health promotion strategy on the communal and institutional level. As all project components are evaluated, successful implementation factors will be identified and can be transferred.

14:45 - 15:00

## Impact of sit-stand desks at work on energy expenditure and sedentary time: a feasibility study

E. Mantzari<sup>1</sup>, K. Wijndaele<sup>2</sup>, S. Brage<sup>2</sup>, S. Griffin<sup>2</sup>, T. Marteau<sup>1</sup>

<sup>1</sup>Behaviour and Health Research Unit, University of Cambridge, United Kingdom

<sup>2</sup>MRC Epidemiology Unit, University of Cambridge, United Kingdom

**Background:** Sitting time, a risk factor for disease and premature mortality, is high amongst office-based workers. The use of sit-stand desks could reduce workplace sitting but key uncertainties remain about their impact. This study assessed the feasibility of running an RCT on the impact of sit-stand desks at work on energy expenditure and longer-term sitting time.

**Methods:** Office-based employees from two companies in Cambridge, England completed a survey to assess trial participation interest. The workspaces of 100 of those interested were assessed for sit-stand desk suitability and 20 participants were randomised to the use of sit-stand desks at work for three months or existing workplace desks. Outcomes included energy expenditure, sitting time, cardio-metabolic, anthropometric and other outcomes relating to health and work performance. Participants were also interviewed about their sit-stand desk use experiences.

**Results:** Recruitment and trial implementation were feasible: 92% of survey respondents were interested in participating; 80% of assessed workspaces were suitable for sit-stand desk installation; desks were installed with minimal disruptions to work; conducting all assessments in workplaces was feasible. The interviews revealed insights into the factors affecting desk use, including, the office 'culture', sit-stand desk familiarity and personal working practices.

**Discussion:** The results of this feasibility study provide the basis for conducting an RCT involving 500 participants, to assess the impact of sit-stand desks on energy expenditure and workplace sitting. The findings of this RCT are expected to inform discussions regarding sit-stand desks' potential to alleviate the harm to cardio-metabolic health arising from prolonged sitting.

15:00 - 15:15

## Stair climbing interventions at work; more than 700,000 reasons for caution

F. Eves<sup>1</sup>, A. Puig Ribera<sup>2</sup>, A. Sene-Mir<sup>2</sup><sup>1</sup>University of Birmingham, United Kingdom<sup>2</sup>University of Vic, Catalunya, Spain

**Background:** Stair climbing is a vigorous lifestyle activity with a range of health benefits. Increased stair climbing at work is currently promoted to improve population health by CDC and NICE. Nonetheless, consistent effects of point-of-choice stair climbing interventions in public access settings have not been replicated at work. Pedestrian movement within buildings has major effects on stair use, independent of any intervention. This paper used pooled data from workplace studies in the UK and Spain to test the effects of stair climbing interventions when pedestrian movement was measured, and controlled for, throughout.

**Methods:** Automated counters measured stair and lift usage throughout the working day. Point-of-choice interventions employed previously successful campaigns, further refined in focus groups. In the UK, minute-by-minute measures of choice estimated effects of momentary traffic at the choice-point (n=426,605). In Spain, measures of traffic every 30 minutes estimated effects for 'busyness' of the building (n=293,300). Analyses employed hierarchical regression with bootstrapping, in which effects of pedestrian movement were added to effects of intervention alone.

**Findings:** Significant intervention effects on stair descent (3 of 4 analyses) were more frequent than effects on stair climbing (1 of 4 analyses). Where effects occurred, they were at least an order of magnitude smaller than the effects of pedestrian movement. Momentary traffic at the choice-point reduced stair climbing whereas 'busyness' of the building generally increased it.

**Discussion:** These pooled data provide no encouragement for recommendations from CDC and NICE that stair climbing interventions at work will enhance health at a population level.

# Methods for building better behavior change interventions

14:00 - 15:30

Aula D

Gertraud Stadler

14:00 - 14:15

## A taxonomy of modes of delivery of behaviour change interventions: development and evaluation

R. Carey<sup>1</sup>, E. Jenkins<sup>1</sup>, P. Williams<sup>1</sup>, F. Evans<sup>1</sup>, M. Horan<sup>1</sup>, M. Johnston<sup>2</sup>, R. West<sup>1</sup>, S. Michie<sup>1</sup>

<sup>1</sup>University College London, United Kingdom

<sup>2</sup>University of Aberdeen, United Kingdom

**Background:** A well-reported behavioural intervention clearly describes its components – for example, its behaviour change techniques. Another important component is how those techniques are delivered (i.e. their modes of delivery), which has been found to impact on intervention effectiveness. The aim of this research was to develop a clear, usable, and reliable classification system with which to describe modes of delivery of behavioural interventions.

**Methods:** The research was conducted in three phases. First, a preliminary mode of delivery taxonomy was developed by extracting information from 100 articles reporting behaviour change interventions. Secondly, the international research community was invited to send feedback on the taxonomy through an open peer-review exercise, and the taxonomy was revised accordingly. Finally, to assess inter-rater reliability and to identify limitations, the refined taxonomy was then applied to a set of 55 articles.

**Findings:** A four-level hierarchical taxonomy was developed, including four top-level categories (Human, Hard-Copy, Digital, and Somatic) as well as a separate classification system for eight cross-cutting features (e.g. ‘tailoring’), which were applicable to all levels of the hierarchy. There was high inter-rater reliability (Kappa > .85) for the revised taxonomy.

**Discussion:** This research has developed a reliable classification system for describing mode of delivery of behavioural interventions, and demonstrated the value of including open peer-review in the process. The findings will contribute to a broader programme of research that aims to build an ontology to specify relationships between techniques, modes of delivery, exposure, behaviours, context, and mechanisms of action in behavioural interventions.

14:15 - 14:30

## Development of population and setting taxonomies: advancing our understanding of behaviour change interventions

M. Marques<sup>1</sup>, R. Carey<sup>1</sup>, P. Williams<sup>1</sup>, E. Jenkins<sup>1</sup>, A. Finnerty<sup>1</sup>, E. Norris<sup>2</sup>, M. Johnston<sup>3</sup>, R. West<sup>1</sup>, S. Michie<sup>1</sup>

<sup>1</sup>University College London, United Kingdom

<sup>2</sup>University College London, Afghanistan

<sup>3</sup>University of Aberdeen, United Kingdom

**Background:** The Human Behaviour-Change Project brings together behavioural, computer, and information scientists to develop an Artificial Intelligence system for extracting, synthesising, and interpreting behaviour change evidence. The lack of standardised terminology in reporting behaviour change interventions is a challenge in building such a system that Ontologies can address, by providing a formal structure that characterises and coherently organises its components (e.g., content). These components are classified in taxonomies (e.g. Behaviour Change Techniques Taxonomy v1). This study aims to develop two taxonomies that specify the contextual component of an Ontology for Behaviour Change Interventions – target population and setting.

**Methods:** The taxonomies were developed in an iterative process, reviewing existing taxonomies (e.g., WHO ICF), ontologies (e.g., Cochrane PICO), and behaviour change interventions evaluation reports, alongside expert discussions. Inter-rater reliability of the taxonomies was assessed using a set of 55 evaluation reports (focusing on physical activity and smoking).

**Findings:** The preliminary versions of the Population and Setting Taxonomies (v1) present four-level hierarchical structures containing 204 and 63 unique codes, respectively. There was variability in the inter-rater reliability across levels, reflecting the lack of systematisation in reporting the context of behaviour change interventions.

**Discussion:** This research has developed classification systems for describing target population and setting. Findings suggest the need for improvement in these taxonomies. Next steps include the annotation (manual and automatic) of a larger set of evaluation reports, expert consensus procedures, and the establishment of inter-relationships within the common ontological structure of behavior change interventions.

14:30 - 14:45

## Beyond BCTs and published materials: reliability coding of behaviours and application methods within smoking cessation

A.J. Williams<sup>1</sup>, N. Javornik<sup>1</sup>, M. Johnston<sup>1</sup>, R. West<sup>2</sup>, S. Michie<sup>2</sup>, M. Eisma<sup>3</sup>, C. Scott<sup>4</sup>, M. de Bruin<sup>1</sup>

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<sup>3</sup>Groningen University, Netherlands

<sup>4</sup>NHS Education for Scotland, United Kingdom

**Background:** The behaviour-change-technique (BCT) taxonomy v1 (BCTTv1) is widely used for describing and identifying BCTs in interventions. This systematic review of smoking cessation interventions extends BCTTv1 coding by evaluating whether the behaviour targeted by coded BCTs (ie quitting, abstinence, medication adherence, intervention engagement) and the method of BCT application (BCT tailoring, active/passive engagement of BCT recipient) can be reliably determined. We also evaluated the usefulness of requesting additional intervention materials from study authors.

**Methods:** Published articles and supplementary materials were examined by 2 independent coders for BCTs regarding targeted behaviour and method of delivery. First, second and last authors of all studies were contacted for additional intervention materials. Inter-coder reliability analyses were used to examine the data.

**Findings:** 148 randomised controlled trials were identified. In total 2546 intervention BCTs were coded (Kappa=0.984, PABAK=0.999, %agreement =99.93 [Yes=2.24, No=0.07]). Inter-coder reliability for BCTs tailoring (PABAK=0.993, 2577 instances), for passive/active recipient (PABAK=0.991, 2547 instances) and for targeted behaviours [quitting, abstinence, medication adherence, or intervention engagement] (PABAK=0.996-0.999) were produced. Authors of 64/148 trials (43.24%) provided additional intervention material in which 930/1757 (52.93%) of the BCTs from these 64 intervention trials were identified.

**Discussion:** Method of BCT application (tailoring, active/passive recipient) were coded with moderate to good reliability, whereas targeting specific smoking cessation behaviours produced excellent reliability coding. Contacting study authors for additional intervention materials adds substantial amounts of information to intervention content. Both methods are recommended for future systematic reviews

14:45 - 15:00

## Can we rely on published reports of control group support? Review of smoking cessation trials

N. Javornik<sup>1</sup>, A.J. Williams<sup>1</sup>, M. Johnston<sup>1</sup>, M. Eisma<sup>1</sup>, S. Michie<sup>2</sup>, R. West<sup>2</sup>, M. de Bruin<sup>1</sup>

<sup>1</sup>University of Aberdeen, United Kingdom

<sup>2</sup>University College London, United Kingdom

**Background:** Control groups in behaviour change trials often receive some form of behavioural support, which may vary between studies and influence trial effect sizes. Reporting of the content of this support in published papers is often minimal. We examined the quality of control group descriptions in smoking cessation trials and the value of a novel instrument for assessing the content of behavioural support provided to the control groups.

**Method:** As part of a systematic review, authors (first, second, last) of trials (k=148) were requested to complete a specially-developed, 60-item control group support checklist and send any additional materials on control group support. Two independent coders examined published articles, supplementary materials and the checklist for the presence of behaviour change techniques (BCTs). Descriptive and reliability analyses were conducted.

**Results:** The number of control group BCTs delivered was 1775 (MBCTs=14.20, SDBCTs=14.03) and varied within and between types of controls (e.g., usual care (MBCTs=16.83, SDBCTs=15.27) versus brief advice (MBCTs=5.33, SDBCTs=3.45)). Authors of 60 trials completed the control group checklist ( $\alpha=0.97$ ); 59.3% (786) of their BCTs were identified through this checklist, 19.7% in other materials sent, and 21.1% from publically-available materials. Across 148 trials, 34% (606) of coded BCTs could be extracted from published materials.

**Discussion:** Reporting of control group support in smoking cessations trials is often poor. The proposed methodology for collecting additional information from study authors seems both reliable and valuable, revealing almost 80% of the control group BCTs. Systematic reviewers should consider adopting a similar methodology in their projects.



15:00 - 15:15

## Introducing the Numbers Needed for Change (NNC): an effect size that connects research to practice

S. Gruijters<sup>1</sup>, G.Y. Peters<sup>2</sup><sup>1</sup>Maastricht University, Netherlands<sup>2</sup>Open University of the Netherlands, Netherlands

Effect size indices are valuable to research in health psychology, but generic measures (e.g. Cohen's  $d$  or point-biserial correlation) are limited in their ability to convey practical information about intervention effects. Researchers rely on concepts such as 'standardized mean difference' or 'proportion explained variance' to express information about effect size. Practitioners, policymakers, and lay-people use concepts such as counts or percentages. Partial solutions provided to this discrepancy are offered by rules-of-thumb (e.g. Cohen's categories of 'small', 'moderate' and 'large' effects), but such categories are somewhat arbitrary and of little nuance. More importantly, a 'small' intervention effect in terms of Cohen's  $d$  does not imply that an intervention is practically meaningless, and conversely, a 'large'  $d$  value does not imply that an intervention is meaningful. To arrive at conclusions about the practical significance of an intervention, effect size estimates have to include population characteristics; specifically, the prevalence of undesired behavior prior to intervention. We introduce the Numbers Needed for Change (NNC), an effect size that fills this communicative gap between research and practice, and is particularly suited to provide information about health intervention effectiveness in the 'real world'. The measure is an analogue to the Numbers Needed to Treat (NNT) index which is popular in the medical literature. We adapt and extend the index into the NNC to suit health psychology research purposes, and argue that the measure can strengthen the translation of intervention research to practice. The procedure to estimate the NNC is explained and illustrated with examples.

15:15 - 15:30

## The Experience Room: studying food consumption in a more ecologically valid lab setting

J. Spook<sup>1</sup>, R. de Wijk<sup>1</sup>, E. de Vet<sup>1</sup><sup>1</sup>Wageningen University & Research, Netherlands

Background: Research has shown that ambient noise in restaurants reduces one's ability to monitor satiety levels and results in overeating. However, it is hard to examine the unique effects of ambient noise in real-life settings that are inherently intertwined with social aspects of the context, including social facilitation and modelling. Therefore we aim to investigate the isolated effects of ambient noise on individuals' food consumption in a novel more ecologically valid lab setting, the so-called Experience Room. This room was programmed to mimic the grand café of Wageningen University & Research.

Methods: 51 students were allocated to the experimental (i.e., ambient noise) or control (i.e., no ambient noise) condition, following a time-based cluster randomized controlled trial design. All students were seated by a waitress and received a menu, water, and garlic butter and bread. The menu contained starters, main courses and deserts that were identified as "healthy" or "unhealthy" during a pre-test. Actual consumption of bread and garlic butter was measured and food choices were registered by the waitress. Additionally, (pre- and) post-test self-reported data on e.g. mood, food choice and lab experience were gathered and analysed.

Preliminary results suggest that the manipulation of ambient noise was successful, but it did not affect food consumption ( $p=.51$ ), food decisions ( $p=.13$ ), or mood ( $p=.45$ ).

Discussion: We advocate the use of more ecologically valid lab settings, as they allow for higher overall validity. However, further research on the setting and isolated effects of ambient noise on food consumption is key.

# Exercise

14:00 - 15:30

Aula F

Benjamin Gardner

14:00 - 14:15

## A theory-based approach to identify the critical beliefs underlying university recreational sports participation

T. St Quinton<sup>1</sup>, J. Brunton<sup>2</sup><sup>1</sup>Leeds Trinity University, United Kingdom<sup>2</sup>University of Leeds, United Kingdom

**Background:** Recently funded atheoretical interventions attempting to increase participation in university recreational sport have demonstrated limited success. The present study is the second phase of formative research using specifications outlined within the Theory of Planned Behaviour aimed at identifying the key beliefs associated with participation. Such beliefs can facilitate the development of interventions promoting the behaviour.

**Methods:** A cross-sectional design was used with a four-week follow-up. A purposive sample of 206 participants (88 male, mean 19.04,  $\pm$  2.3) responded to a TPB informed questionnaire measuring baseline cognitions. Behaviour at follow up was measured using self-report questionnaires.

**Analysis:** Correlations were found between TPB variables and beliefs. Beliefs significantly correlating with intention and behaviour were then entered into a multiple regression to identify those that independently predicted the outcome variables.

**Findings:** The model accounted for 56% of the variance in intention, with past behaviour adding an additional 14%. Intention and Perceived Behavioural Control (PBC) explained 27% of the variance in behaviour. Attitude, subjective norm and PBC significantly predicted intention. The key beliefs related to intention were; “be enjoyable” ( $\beta = .58$ ), “be time consuming” ( $\beta = .23$ ), “friends” (injunctive;  $\beta = .21$ ), “family” (injunctive;  $\beta = .33$ ), and “friends” (descriptive;  $\beta = .17$ ). Two beliefs predicted behaviour; “be enjoyable” ( $\beta = .28$ ) and “be time consuming” ( $\beta = .27$ ).

**Discussion:** Using a well-established theory of behaviour change, the study identified the key beliefs underpinning participation in university recreational sport. Successfully targeting these beliefs would hopefully lead to an increase in participation rates.

14:15 - 14:30

## The importance of plan enactment for physical activity

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**Background:** Many studies have shown the importance of planning for health behaviour (change). While both interventions and models often include planning they rarely focus on the enactment of these plans. This study investigates the role of plan enactment for both preparatory and coping plans in a theoretical model (the I-Change Model).

**Methods:** A total of 2067 participants filled in an online survey at three points in time (baseline, after 3 month, and after 6 months). Structural equation modelling (SEM) was used to investigate the role of plan enactment for both preparatory plans and coping plans.

**Findings:** Structural equation modelling indicates that the effects of planning on physical activity are fully mediated by the enactment of these plans for both preparatory and coping plans. While for preparatory plans the effect of plans on enactment is the strongest, for coping plans the effect of enactment on behaviour is most determined.

**Discussion:** The results give an indication for the importance of plan enactment with regard to physical activity. The results show that when plans are not enacted healthy behaviour is less likely to occur. The study suggests that interventions should not only target the construction of preparatory plans, but also should monitor and support the enactment of these plans, by for example sending reminders or boosters. To understand the enactment of plans better subsequent analyses will focus on the determinants of plan enactment.

14:30 - 14:45

## Psychosocial predictors of running adherence and maintenance among participants of Dutch running clinics

K. Verkooijen<sup>1</sup>, R. Maddison<sup>2</sup><sup>1</sup>Wageningen University and Research, Netherlands<sup>2</sup>Deakin University, Australia

**Background:** Recreational running has become increasingly popular in the Netherlands. To accommodate this trend, various organisations offer 6-weeks running clinics to help engage inexperienced runners. Little is known about how many clinic participants maintain running during and after the clinic, and what (if any) psychosocial factors predict this behaviour. **Methods:** Self-report data were collected among running clinic participants at three points in time: at the start of the clinic (T1: n=140, 22.5% male, age range: 16-65), after six weeks (T2: n=94), and after three months (T3: n=74). Psychosocial predictors were assessed including intention, self-efficacy, affect, past behaviour, self-identity, motives, goal setting, and basic psychological needs satisfaction. Linear and logistic regression analysis was used to identify significant predictors of running adherence and short-term maintenance. **Findings:** 61% of the respondents were still running three months after the start of the clinic, although this might be an overestimation due to selective drop-out. Affect appeared to be the sole predictor of running adherence and maintenance. Running injuries were frequently reported as a reason for discontinuation. **Discussion:** Contrary to cross-sectional studies on the psychosocial correlates of exercise behaviour, this longitudinal study shows that few of the studied psychosocial variables predict running adherence and short-term maintenance. Yet, positive affect (i.e., enjoyment while running) shows important. The results imply that running instructors may want to focus on positive affect and injury prevention, and not so much on motivational factors, to enhance running continuation.

14:45 - 15:00

## Theory of Planned Behaviour over an exercise program in adults with and without chronic disease

K. McFadden<sup>1</sup>, A. Selzler<sup>1</sup>, T. Berry<sup>1</sup>, W. Rodgers<sup>1</sup>, C. Hall<sup>2</sup>

<sup>1</sup>University of Alberta, Canada

<sup>2</sup>Western University, Canada

**Background:** The purpose of this study is to use the Theory of Planned Behaviour (TPB) model to explore differences in predictors of physical activity (PA) over time for adults with and without a chronic disease during an exercise program.

**Methods:** Adult participants with (n=103) and without (n=155) a chronic disease (e.g., diabetes, asthma), as indicated by PAR-Q form, began a year-long exercise program. Enrolled participants completed assessments of TPB constructs (affective attitudes, instrumental attitudes, descriptive norms, injunctive norms, perceived behavioural control [PBC], intentions) and self-reported PA behaviour at baseline, 3, 6, 9, and 12 months. A path analysis comparing adults with and without a chronic disease was conducted to test the TPB model at each individual time point.

**Findings:** PBC was the strongest predictor of intentions in adults with and without a chronic disease across all time points ( $\beta$ 's .26-.60). At baseline and 3 months, intentions predicted PA in adults with a chronic disease only ( $\beta$ 's=.19 and .23, respectively), and PBC predicted PA in the adults without a chronic disease only ( $\beta$ 's=.30 and .30, respectively). At 9 and 12 months, PBC was the strongest predictor of behaviour in both groups ( $\beta$ 's .29-.49).

**Discussion:** In adults without a chronic disease, PBC was directly related to behaviour across all time-points. In adults with a chronic disease, intention was the strongest predictor of PA until 3 months and then PBC became a stronger correlate of PA. The changing influence of these constructs for participants with and without a chronic disease will be discussed.

15:00 - 15:15

## Examining relationships of self-efficacy, performance attainments, and outcome achievement over a 1 year exercise program

A. Selzler<sup>1</sup>, W. Rodgers<sup>1</sup>, T. Berry<sup>1</sup>, C. Hall<sup>2</sup>

<sup>1</sup>University of Alberta, Canada

<sup>2</sup>Western University, Canada

**Background:** In Social Cognitive Theory, Bandura states that self-efficacy will lead to performance attainments, which in turn will lead to outcome expectancies. The purpose of this research is to test this sequence in individuals participating in an exercise program.

**Methods:** Adult participants (30-65 years old) enrolled in a supervised exercise program 3 days per week for 1 year completed assessments of self-efficacy (task, coping, scheduling), performance attainments (change in: body fat percent, lean mass, VO<sub>2</sub> max, chest press, leg press), and outcome achievement (i.e., noticing changes in physical appearance, strength, health, affect) at baseline, 6, and 12 months. In total, 276 participants began the exercise program with 156 and 104 participants completing assessments at 6 and 12 months, respectively. Path analytic models were tested at 6 months and 12 months such that self-efficacy predicted performance attainments and outcome achievement, and performance attainments predicted outcome achievement.

**Findings:** At 6 and 12 months, scheduling self-efficacy significantly predicted outcome achievement ( $\beta$ 's=.28 and .34, respectively); however, performance attainments did not. At 6 months, task self-efficacy significantly predicted change in body fat percent ( $\beta$ =.27) and VO<sub>2</sub> ( $\beta$ =.20), while coping self-efficacy significantly predicted change in leg press ( $\beta$ =.27).

**Discussion:** While people more confident in scheduling exercise had greater perceptions of outcome achievement, the effect cannot be explained by performance attainments. The lack of association between performance attainments and outcome achievements suggests that the level of performance attainments achieved during the exercise program may not have been noticeable enough to impact perceptions of outcome achievement.



15:15 - 15:30

## The invisibility of sitting: mental representations of sedentary behaviour

B. Gardner<sup>1</sup>, S. Dewitt<sup>1</sup>, L. Smith<sup>2</sup><sup>1</sup>King's College London, United Kingdom<sup>2</sup>Anglia Ruskin University, United Kingdom

**BACKGROUND:** Sitting time is a health risk factor independent of physical activity. Sitting research has been based on self-report, which assumes people are aware of sitting. Drawing on action representation theories, this paper presents three studies addressing the hypothesis that sitting is mentally encoded not as action in its own right, but rather as a procedural subcomponent of more purposeful actions (e.g. reading, driving).

**METHOD:** In three experimental studies, participants categorised actions performed by people in photographs. Photographs unambiguously portrayed at least one person engaged in an activity while either seated or standing (e.g. a lady reading while sitting by a fountain). We examined the frequency with which participants organised actions according to posture (i.e. sitting or standing; Study 1) versus other action elements that we hypothesised to be more purposeful (e.g. reading; Studies 2 and 3).

**FINDINGS:** When describing actions (Study 1; N = 89), participants rarely cited posture (<39% of descriptions). In a sorting task (Study 2; N = 268), participants were less likely to pair photos according to posture than other action elements ( $\chi^2 = 174.09$ ,  $p < .001$ ). In a memory test (Study 3; N = 50), participants recalled posture less (62%) than other action elements (90%;  $p < .001$ ).

**DISCUSSION:** People tend not to represent sitting as 'sitting'. Sitting time may be more accurately recalled indirectly, using measures of time in typically-seated activities, rather than direct reflections on sitting. Sitting reduction interventions should acknowledge that sitting is a nonconscious action predominantly incurred by more meaningful seated activities.

# Health Care Provider (HCP) - Patient communication

14:00 - 15:30

Aula I

Gozde Ozakinci

14:00 - 14:15

## Quality of doctor-patient communication in cardiovascular diseases and secondary preventive adherence: the role of gender

B. Bucki<sup>1,2</sup>, E. Le Bihan<sup>2</sup>, M. Baumann<sup>2</sup>

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<sup>2</sup>University of Luxembourg, Luxembourg

**Background:** The doctor-patient communication intervenes on the preventive behaviours of chronic patients by reducing their risk factors – in cardiovascular diseases: hypertension, overweight, obesity, hypercholesterolemia, diabetes. What are the associations between the quality of communication and the improvement of secondary preventive behaviours? How does gender influence these relationships?

**Methods:** 1,289 patients who underwent a coronary angiography in 2008/09 in Luxembourg completed a self-administered questionnaire at the time of the visit, and at a five-year follow-up. The probability of improving each preventive eating behaviour (decrease of salt, sugar, fat consumption and increase of fruits/vegetables), and the quality of doctor-patient communication (5-item scale) were evaluated using logistic regression models. Sex was introduced in interaction with the communication score.

**Findings:** Among hypertensive respondents, a higher quality of communication was associated with a higher probability of decreasing the salt intake in women (OR [95% CI]: 1.139 [1.060; 1.223]) whereas in men, the OR was only 1.086 [1.017; 1.159]. ORs were also higher in women among patients with hypertension, overweight and hypercholesterolemia regarding the increase of fruits/vegetables consumption; among patients with diabetes and hypercholesterolemia regarding sugar decrease or cessation; and among patients with overweight and hypercholesterolemia regarding fat reduction or stop. ORs were slightly higher among men only among diabetic and obese patients, regarding the increase of fruits/vegetables consumption.

**Discussion:** The quality of the communication showed an effect on the adoption of secondary preventive eating behaviours, especially in women patients. Motivational interviews could encourage, especially men patients, to adhere to the recommendations about lifestyle change.

14:15 - 14:30

## Intuitive tailoring in medical consultations: how perceived patient characteristics influence physicians' communication

T. Dekkers<sup>1</sup>, H. de Ridder<sup>1</sup>, N. Mathijssen<sup>2</sup>, S. Vehmeijer<sup>2</sup>, M. Melles<sup>1</sup>

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<sup>2</sup>Reinier de Graaf Hospital, Netherlands

High-quality communication during perioperative care contributes to surgical patients' health outcomes. It is assumed that physicians can enhance the communication's quality in a process known as tailoring by using objectively-assessed information about individual patients to determine the appropriate content, context and channel of communication. Physicians may already intuitively tailor when they adjust communication on the basis of their perception of a patient; however, understanding about this topic is limited. The aim of the current study was to examine if and how physicians' perception a patient influences physicians' communication.

The transcripts of 80 short semi-structured interviews with orthopaedic physicians (N = 7) were submitted to qualitative content analysis. Correspondence analysis was used to explore the association between perceived patient characteristics and communication.

Physicians perceived patients' illness management and communication abilities, autonomy, and preferences for interpersonal behaviour. This resulted in changes in communication in two-thirds of the consultations. Specific associations between perceived patient characteristics and changes in communication include: (1) higher patient competence—extensive information provision or no changes, (2) less autonomy and less competence in communication—reassurance and direction, (3) high autonomy—inhibitory discussions about pace and expectations, and (4) sociability—communication about personal circumstances.

A physician's perception of a patient influences how information, guidance and personal circumstances are communicated during medical consultations. However, not all physicians tailor communication and limited evidence exists for the appropriateness of the tailoring approaches employed. The intuitively applied approaches identified in this study can be used to formulate and test empirical tailored communication strategies.

14:30 - 14:45

## Student midwives' perceived facilitators and barriers to discussing weight management with obese pregnant women

J. McLellan<sup>1</sup>, S. Currie<sup>2</sup>, G. Ozakinci<sup>3</sup>

<sup>1</sup>Stirling University, United Kingdom

<sup>2</sup>University of Stirling, United Kingdom

<sup>3</sup>University of St Andrews, United Kingdom

**Background:** Maternal obesity and excessive gestational weight gain is of growing concern within maternity care. However, many qualified midwives do not feel comfortable discussing weight management with pregnant women whose BMI is  $\geq 30$ . This can result in these women being unaware of the risks. Student midwives are at a unique stage in their professional development and should receive up-to-date teaching about the risks of maternal obesity, but it is unclear if this recently acquired knowledge improves confidence, comfort and engagement in discussing weight management. This research aimed to investigate the barriers and facilitators student midwives encounter in discussing weight management with pregnant women whose BMI is  $\geq 30$ .

**Methods:** Eight student midwives took part in one-to-one semi-structured interviews. Interviews were transcribed verbatim and analysed thematically according to the Theoretical Domains Framework.

**Findings:** Students were motivated to discuss weight management with pregnant women whose BMI is  $\geq 30$ . They viewed the discussion as part of their professional role and had a high degree of awareness of the impact of maternal obesity. However, these facilitators were outweighed by perceived barriers, similar to those reported by qualified midwives, including overcoming personal issues (e.g. BMI status), low self-efficacy in highlighting the risks of obesity and a fear of damaging the relationship with the woman in their care.

**Discussion:** The factors which influence the discussion of weight management should be considered and addressed in midwifery training. Applying health psychology principles into midwifery training may improve students' confidence and skills at approaching this topic with at risk women.

14:45 - 15:00

## A conversation analytic study examining how general practitioners tailor lifestyle advice in primary care consultations

K. Connabeer<sup>1</sup><sup>1</sup>Loughborough University, United Kingdom

### Background:

Tailoring of health care is increasingly referred to in both health research and practice guidelines. Health care professionals can employ a range of strategies to individualize health care to their patients', which has been found to improve treatment adherence. However, little is known about how health professionals should, and already do, tailor health care interactionally. The study aimed to identify the specific interactional features involved in the design and structure of tailoring lifestyle advice.

### Methods:

Ethics approval of the study was granted by the Health Research Authority, UK. An observational design was used to conduct a secondary analysis of n=86 video and audio recordings of primary care consultations from the 'One in a Million' archive. Data were transcribed according to the conventions used in conversation analysis. The conversation analytic method was employed to examine both; spoken language and non-verbal actions.

### Findings:

Analysis of lifestyle advice sequences revealed ways in which general practitioners tailor lifestyle advice to the particular health needs of the patient. Doctors topicalise the patients' health problem as the framework within which the ensuing/prior advice is offered and should be understood - thereby enacting a process of 'personalization' or 'individualization'. This serves to demonstrate to the patient 'evidence' that the doctor is orienting closely to the patient's particular health problem.

### Conclusions:

Tailoring advice may present one 'strategy' for clinicians to make their interactions more patient-centered. It allows them to demonstrate (lexically) a strong orientation to the particulars of the patient's needs by shaping the advice being given.

15:00 - 15:15

## “If you’ve never been through it, you can’t understand” An IPA exploration of prosthetist-patient communication

C. Uytman<sup>1</sup>, C. McVittie<sup>1</sup>, K. Goodall<sup>2</sup>

<sup>1</sup>Queen Margaret University, United Kingdom

<sup>2</sup>University of Edinburgh, United Kingdom

**Background:** To explore the understanding of the experience of limb loss and prosthesis use from the patient and practitioner perspective.

**Method:** 15 individuals post amputation and 13 prosthetists were interviewed on their experience of limb loss and prosthesis use. Interpretative Phenomenological Analysis (IPA) was used to gain a subjective understanding of their experience and comparisons made between each group.

**Findings:** Four key themes were identified. The current paper focuses on Communication. The importance of communication in the adjustment to amputation and prosthesis use is discussed. Negative impact of ineffective communication within this partnership is highlighted. The discrepancies in understanding found in this research highlights areas which would benefit from further application of psychological expertise in both clinical practice and education.

**Discussion:** Communication is a key issue in adjustment to amputation. Each party in this research expressed a specific expectation of the rehabilitation, clinical process and relationship. Prosthetists express a tendency to play multiple support roles within this relationship often with little appropriate clinical training which may have an impact on rehabilitative outcome. Patients’ understanding of these roles as well as their expectations has the potential to play a large part in the subsequent rehabilitation of individuals following amputation. A greater understanding of this influence and of the lived experience of these participants will shed light on this area and allow suggestions for clinical practice to be made.

# Health Apps

15:30 - 17:00

Martin Hagger



15:30 - 15:35

## An evidence-based alcohol-reduction smartphone app: development and evaluation

S. Michie<sup>1</sup>, C. Garnett<sup>1</sup>, D. Crane<sup>1</sup>, J. Brown<sup>1</sup>, R. West<sup>1</sup>

<sup>1</sup>University College London, United Kingdom

**Background:** Excessive alcohol consumption is a prevalent social and health problem, with most drinkers not receiving help. Smartphone apps offer potential support that is accessible 24/7 and not dependent on face-to-face contact; however, there is little evidence of their effectiveness. This presentation reports the development and evaluation of an evidence-based alcohol reduction smartphone app Drink Less.

**Methods:** Drink Less was developed using theory and evidence from published studies, expert consensus and an analysis of current apps. Beta-versions were tested with users using think-aloud and interview methods. Five modules were selected: normative feedback, feedback and self-monitoring, identity change, action planning and cognitive bias re-training. The app was evaluated in an intention-to-treat factorial design with 32 conditions and 672 participants. Outcome was measured by change at 1 month in mean past week consumption of alcohol, AUDIT scores, ratings of usability and usage.

**Findings:** Participants were heavy drinkers, with mean past week alcohol consumption 39.9 units and AUDIT score 19.1. The 27% responding at one month reduced drinking by 3.8 units per week and 0.74 AUDIT points ( $p < 0.001$ ). There were two-way interactions between self-monitoring and action planning on AUDIT score ( $F = 5.8$ ,  $p = 0.016$ ) and between normative feedback and cognitive bias re-training on past week alcohol consumption ( $F = 4.7$ ,  $p = 0.031$ ).

**Discussion:** An app with normative feedback, cognitive bias re-training, self-monitoring and action planning components may reduce drinking and merits further development with A/B testing of the modules and evaluation in a full-scale RCT with long-term outcomes.

15:35 - 15:40

## ‘Precious’, N-of-1 smartphone trial for physical activity with biofeedback and digitalised elements from motivational interviewing

J. Nurmi<sup>1,2</sup>, K. Knittle<sup>1</sup>, T. Ginchev<sup>3</sup>, F. Khattak<sup>3</sup>, F. Naughton<sup>2,4</sup>, C. Castellano Tejedor<sup>5</sup>, P. Lusilla Palacios<sup>5</sup>, A. Haukkala<sup>1</sup>

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<sup>4</sup>University of East Anglia, United Kingdom

<sup>5</sup>University Hospital Vall d’Hebron, Spain

**Background:** Daily variability in physical activity (PA) and its psychological determinants should be examined within individuals to produce accurate evidence. Precious project developed an app that offers randomised intervention elements and studies the following fluctuation in activity, motivation, and engagement.

**Method:** Fifteen participants used the Precious app and activity bracelet for six weeks during which they received repeated, randomised interventions of digitalised motivational interviewing features, prompts to conduct 24h measurements with Firstbeat heart-rate variability sensors, prompts to download the biofeedback, and daily questions on motivation, self-efficacy and perceived barriers.

**Exit interviews** focused on feasibility and user perceptions of their motivation, self-regulation, PA, and the role of Precious app in these. Interview data was analysed with thematic analysis. The N-of-1 intervention effects on PA and goal setting were analysed with multilevel modelling and time-series analysis.

**Findings:** All participants completed the intervention and most reported sustained motivation to track their well-being and progress. Participants found step tracking features most useful and motivational features least useful, potentially due to the high level of motivation to increase PA reported at baseline. Some participants wished the app offered more detailed PA prescriptions. Challenges relating to feasibility included smartphone notifications as a delivery method, as push notifications sometimes passed unnoticed.

**Discussion:** Precious helped participants to understand their PA and self-regulation, and ways to improve these. Most insights were related to self-monitoring of steps and the activity logging. Testing the app among people with low baseline motivation for PA would allow better examining the motivational interviewing features.

15:40 - 15:45

## All in the game? Gamification and behaviour change in the self-management of chronic illness

K. Perry<sup>1</sup>, L. Moore<sup>1,2</sup><sup>1</sup>Atlantis Healthcare, United States<sup>2</sup>Blythedale Children's Hospital, United States

**Background:** The notion of gamification is gaining traction in healthcare, and we are seeing a proliferation of gamification applications purporting to improve health and wellbeing. The majority of these applications are commercial in orientation, do not explicitly cite behaviour theory in their development, and are marketed to general consumer populations. This review seeks to identify the characteristics and effectiveness of gamification applications designed for patients living with chronic illness.

**Methods:** A PubMed electronic database review conducted in February 2017 sought to identify gamification applications designed to support patients living with a chronic illness. A total of 131 papers were identified, of which 10 reported on the design and/or effectiveness of gamification applications in adults living with chronic illness.

**Findings:** The gamification applications considered in the resultant papers were developed for specific patient populations (e.g., hypertension, stroke, thalassemia) and included a range of gamification formats (e.g., web-based, smartphone app, serious video games, motion controlled games) and features (e.g., tracking, personalized avatars, making pledges, completing quests). While feasibility and development studies indicate promise, studies definitively demonstrating positive behavioral and health outcomes are limited.

**Discussion:** Research demonstrating the efficacy of gamification applications in chronic illness is in its infancy. Use of behavior change theory in the design of gamification applications in chronic illness may support more coherent game design and user experience, as well as improve the efficacy of applications. Health psychology thus has a clear role in supporting the design and evaluation of gamification applications.

15:45 - 15:50

## Improving medication adherence of patients with familial hypercholesterolemia through an eHealth application

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**Background:** Statins are the cornerstone in the treatment of patients with familial hypercholesterolemia (FH; a genetic disorder which results in high cholesterol levels). However, a considerable number of patients show non-adherence. Our aim was to design an eHealth application ('MIK'), based on the concept of patient engagement and discussion of patients' beliefs, and to evaluate this application among physicians.

**Methods:** A web-based prototype of 'MIK' was designed. After user tests with patients, we performed semi-structured interviews and user tests with 12 physicians from six different hospitals. We focused on how the eHealth application could assist physicians in their consultation with the patient and how it can be integrated in daily clinical practice. Qualitative thematic analysis was used to identify themes that covered physicians' evaluations.

**Findings:** The following themes were identified: (1) information about experienced side effects and quality of life can prompt a discussion about treatment options; (2) information about patients' treatment preferences, beliefs and expectations can stimulate patient-physician collaboration (i.e. Shared Decision Making); (3) physicians acknowledged the advantage of making connections between patient data (e.g., cholesterol) over time thereby stimulating self-management; (4) Physicians were ambivalent with respect to how the application would impact the efficiency of their consultations.

**Discussion:** The eHealth application 'MIK', based on patient engagement and discussion of patients' beliefs, seem to have the potential to improve the consultation with the physician. The impact of eHealth applications on improving medication taking behavior and clinical outcomes is yet to be evaluated.

15:50 - 15:55

## CAATCH: the development and evaluation of a suicide-prevention mobile app

J. Bogue<sup>1</sup>, G.M. Brown<sup>1</sup>, J. Duggan<sup>2</sup>, R. Melia<sup>1,3</sup>, J. Walton<sup>1</sup>

<sup>1</sup>National University of Ireland, Galway, Ireland

<sup>2</sup>NUI Galway, Ireland

<sup>3</sup>Health Service Executive, Ireland

**Background:** Many people at risk of suicide do not seek help before an attempt. mHealth interventions are proposed as an effective means of addressing the two main obstacles to help seeking in suicidal individuals: stigma and geographical isolation. This study describes a collaborative project between CAATCH, a community-based suicide prevention initiative and the National University of Ireland, Galway, in the design, development and evaluation of a suicide-prevention app. The CAATCH app is freely available to download on both the Android and iOS platforms.

**Methods:** The process of app development was informed by key standards in content development and software design. Steps involved included: a review of research and theory relevant to the area; involvement from community services and subject matter experts, user engagement in designing and developing the app followed by extensive ongoing evaluation to inform further development. A cross-sectional design was used with over 200 university students recruited to evaluate features of the CAATCH mobile app and provide feedback to inform development of the next version of the app.

**Results:** Over two thirds of participants would recommend the app and over three quarters rated the app as being easy to use. Further information is presented relating to specific features of the app and suggestions for future development.

**Conclusions:** A comprehensive evaluation of the CAATCH app has so far yielded valuable information about the app including ease of use and relevance of content provided. Detailed feedback was collected which will be used to inform the development of CAATCH v.2.

15:55 - 16:00

## mHealth technologies to improve hearing aid use and benefit in first-time hearing aid users

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**Background:** Despite hearing loss affecting 1 in 6 of the UK population, approximately 20% of patients do not use their hearing aid. Our previous work developed a home-delivered interactive multimedia education programme (C2Hear) using reusable learning objects (RLOs). However, this intervention is a 'one size fits all' and has limited tailoring capabilities. The present research will repurpose the C2Hear RLOs into short 'bite-sized' m-RLOs that are tailored to individuals' needs, and incorporate greater user interactivity and self-evaluation.

**Methods:** We will identify the individualised components of the m-RLOs using (i) the COM-B model to classify each m-RLO to a set of domains (e.g. knowledge, physical skills, social influences) necessary to facilitate hearing aid use, and (ii) an ecological approach using a Think Aloud analysis involving existing hearing aid users (n=15), using thematic analysis to identify key themes/words for assigning 'tags' to each m-RLO. Combining both the theoretical and ecological approaches will inform the development of a self-evaluation filter aid, which will act as an interface to enable individualised tailoring.

**Expected results:** This work will lead to a theoretically and ecologically grounded suite of RLOs which will be delivered via mobile phone app.

**Current stage of work:** Mapping of the existing C2Hear content against the COM-B is underway.

**Discussion:** Whilst the C2Hear RLOs yielded improvement in hearing aid use in our earlier trial, the repurposing of these using the COM-B model is likely to yield additional patient benefit due to the more personalised and tailored delivery by mobile phone app.

16:00 - 16:05

## TiredofCancer app: an evidence based mHealth solution for cancer related fatigue

S.P. Lingens<sup>1</sup>, M. Goedendorp<sup>1</sup>, M. Hagedoorn<sup>1</sup>, R. Sanderman<sup>1</sup>, D. Vonk<sup>2</sup>, B. Kuipers<sup>2</sup>

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**Background:** Cancer related fatigue (CRF) is a common symptom among cancer survivors (30-75%) affecting their daily functioning and quality of life. A web-based face-to-face therapy called TiredofCancer (ToC) was found to be successful in reducing CRF. In order to increase the impact of that interventions on a large scale, the aim of this project is to develop, optimize and validate a mHealth version of ToC.

**Methods:** A multidisciplinary team of researchers, designer, marketing communicators, business advisors and programmers, supported by the European Grant Horizon 2020, works conjointly towards a financially sustained evidence-based mHealth intervention to establish enduring optimizations. We will present the following design process: Web-based App: version 1.0 Feasibility study App: version 2.0 Testing (RCT). The content of the ToC app focuses on four themes: fatigue, boundaries, anxiety and worry. Patients can customize the content, track their progress, their physical and sleep activity and communicate with their caregivers. The effectiveness of the app will be tested with a RCT in 1200 cancer survivors.

**Expected results:** The well-functioning design and evidence-based content of the app will significantly decrease CRF.

**Stage of work:** Version 2.0 of the ToC app is currently designed and will be finalized this summer followed by the experimental phase.

**Discussion:** The detailed evidence-based planning and designing of the content and appearance of the app may serve as a role model for future mHealth interventions. Once proven effective the ToC app will be implemented in four different European countries (UK, Netherlands, Spain and Germany).

16:05 - 16:10

## Clinicians' usages patterns and criteria for recommending health apps

M. Sucala<sup>1,2</sup>, R. Soflau<sup>2</sup>, R. Cardos<sup>2</sup>, S. Stefan<sup>2</sup><sup>1</sup>Icahn School of Medicine at Mount Sinai, United States<sup>2</sup>Babes-Bolyai University, Romania

Recent studies show that apps can support a variety of health-related tasks including patient education, symptom monitoring, behavioral modification, or psychosocial support. However, the extent of health-related apps use is highly dependent on its adoption by healthcare providers, so knowing which criteria clinicians use when using or recommending a health app intervention is crucial. Therefore, given the lack of data on clinicians' usages patterns and criteria for using and recommending health apps, the goal of this study was to survey health app use from the clinicians' perspective using a sample of behavioral health providers. Clinicians (N = 275) responded to an online survey. Results indicate that although most clinicians own mobile devices and personally use smartphone and internet for health-related purposes, less than 50% ever used and recommended health apps themselves. When they previously recommended health apps, most clinicians chose to rely on personal experience, followed by scientific criteria. Recommending a health app was predicted only by the previous use of such apps,  $p < .05$ . This study further supports the idea that familiarity with mobile technology (health apps in particular), and efforts to provide evidence for apps' efficacy are relevant factors in encouraging clinicians' to use and recommend them in practice.



# mHealth education and support

15:30 - 17:00

Anna-Carlotta Zarski

15:30 - 15:35

## Going tender: developing location-based communication technology to improve healthy food decisions

J. Spook<sup>1</sup>, E. de Vet<sup>1</sup><sup>1</sup>Wageningen University and Research, Netherlands

**Background:** The present paper describes the design rationale and development of a mobile location-based communication (LBC) tool. LBC allows for indoor monitoring of individual's navigation and food choices in tempting food environments. As the development of LBC technology is complex, we aim to provide transparency on the developmental process.

**Methods:** The LBC tool provides the basis of our needs assessment to understand how individuals navigate through tempting food environments. An interdisciplinary team of researchers, developers, designers and users collaborate during the developmental process of indoor tracking technology combined with momentary assessments.

**Expected results:** Technical requirements, functional requirements, and business rules are formulated to comply with the Dutch tender law, and performance objectives will be translated into design objectives. These objectives will then be converted to the LBC tool.

**Current stage of work:** We are at the stage of organizing and fine-tuning all requirements and objectives in order to put to tender.

**Discussion:** To increase transparency of intervention development, clarity is needed on the underlying process. This paper is an attempt to gain and share further understanding of the possibilities and challenges related to LBC in health research.

15:35 - 15:40

## Does a personalised mHealth intervention improve health-behaviour in cancer survivors? A pilot RCT

J. Groarke<sup>1</sup>, J. Walsh<sup>1</sup>, J. Richmond<sup>2</sup>, M.G. Kelly<sup>2</sup>, S. Patton<sup>2</sup>, L. Glynn<sup>1</sup>, T. Kerr<sup>2</sup>, K. Duffy<sup>2</sup>, A. Groarke<sup>3</sup>, J. McSharry<sup>1</sup>

<sup>1</sup>National University of Ireland, Galway, Ireland

<sup>2</sup>Letterkenny University Hospital, Ireland

<sup>3</sup>Natioanl University of Ireland, Galway, Ireland

### Background:

The aim of this study is to examine the effect of a personalised mHealth lifestyle self-management intervention on physical and psychological outcomes for a sub-group of cancer survivors with increased health risks related to lifestyle behaviours.

### Methods:

120 cancer survivors with a BMI over 25 will be randomly assigned to the control (n=60) or intervention (n=60). The intervention group will receive a self-management programme to facilitate personalised goal-setting for dietary and physical behaviour. Objective measures of health will be collected via FitBit on physical activity, calorific usage and sleep quality. Data on anthropometric, physiological, and psychological measures will also be collected at baseline, 3 months and 6 months follow-up. Data will be analysed using a 2x3 mixed ANOVA.

### Expected results:

It is predicted that, relative to standard medical care, an mHealth intervention will significantly increase physical activity, and that participants in the intervention group will have significantly better physical and psychological health than the control group at 3 and 6 month follow up.

### Current stage:

Participant recruitment is underway and the intervention is scheduled for May 2017.

### Discussion:

A significant proportion of a growing number of cancer survivors are overweight, having implications for long-term health outcomes, including increased risk of subsequent and secondary cancers. There is a need to identify interventions which can improve physical and psychological outcomes that are practical in modern oncology care. The findings of this research will contribute to the limited research on the efficacy of mHealth technologies to improve health outcomes in cancer survivors.

15:40 - 15:45

## Necessity is the mother of invention: web-based patient education in orthopaedics

T. Dekkers<sup>1</sup>, M. Melles<sup>1</sup>, B. Groeneveld<sup>1</sup>, H. de Ridder<sup>1</sup><sup>1</sup>Delft University of Technology, Netherlands

Patient education is a valuable part of care that enables patients to be informed, active participants in their own treatment. While traditionally conveyed by healthcare professionals during consultations, time limitations during these meetings mean that patients can no longer solely rely on healthcare professionals to learn about health and illness. Online distribution of patient education materials may form an easy-accessible, time-, and cost-effective alternative. The objective of this systematic review was to examine the effects of web-based patient education programs for orthopaedic patients and to compare its effectiveness to verbal and written patient education.

Nine databases (including PUBMED and PsycINFO) were searched covering the period 1995-2016. English and Dutch studies were included if they delivered patient education via the Internet to the orthopaedic patient population of adult age, and assessed its effects in a controlled trial.

A total of 10 trials reported in 14 studies involving 4172 patients were identified. Eight trials provided evidence for increased patients' knowledge after web-based patient education. Seven trials reported increased satisfaction and user-friendliness. When the objective is to improve these outcomes web-based patient education may be offered as a time and cost efficient alternative to current educational interventions. No compelling evidence exists for an effect of web-based patient education on health attitudes and behaviour, pain and function, or anxiety.

Web-based patient education appears an effective intervention to increase orthopaedic patients' knowledge and satisfaction. These findings may however not be representative for older or lower educated patients, who have rarely been included in research trials.

15:45 - 15:50

## Can web-based interventions help improve well-being in type 2 diabetes? A systematic review and meta-analysis

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<sup>6</sup>Diabetes Research Centre, College of Medicine, Biological Sciences and Psychology, University of Leicester, United Kingdom

**Background:** Web-based interventions are commonly used as an additional platform to conventional interventions to provide emotional support in chronic conditions. Despite their use, evidence of their impact on psychological well-being remains unclear. This systematic review sought to review the impact of web-based interventions on improving well-being outcomes in type 2 diabetes.

**Methods:** The electronic databases: MEDLINE, EMBASE, CINAHL, PsycINFO, and Cochrane Library, were searched and reference lists hand-searched. A meta-analysis was conducted for two emotional constructs: depression and distress. Sixteen randomised controlled studies met the inclusion criteria for the systematic review and 9 for the meta-analyses.

**Findings:** The most common behaviour change techniques comprised “General information” and “Tracking/monitoring.” Most interventions were theory-based, however no common theory was evident. Professional-led interventions, with asynchronous and synchronous communication, and with a duration of 2-6 months were linked to significant well-being outcomes. Pooled mean (95% confidence interval) differences between the intervention and control arms at follow-up were -0.31 (-0.73 to 0.11) for depression and -0.11 (-0.38 to 0.16) for distress. The meta-analyses showed no significant improvements in depression ( $P=.15$ ) or distress ( $P=.43$ ).

**Discussion:** Despite the meta-analyses demonstrating non-significant results for depression and distress scores, there is growing potential for the use of web-based interventions to improve well-being outcomes in type 2 diabetes. Further research is required to assess well-being outcomes as primary outcomes in order to identify the impact of web-based interventions on well-being in type 2 diabetes.

15:50 - 15:55

## Internet-based guided self-help for genito-pelvic pain/penetration disorder: preliminary results of a randomised controlled trial

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<sup>3</sup>Friedrich-Alexander University Erlangen-Nürnberg, Germany

**Background:** Difficulties or the impossibility of sexual intercourse in GPPPD despite the woman's wish to do so can cause huge personal and relational burden. One of the primary characteristics is the fear of penetration or of the pain associated with penetration. Between 6% and 54% of women with genital pain symptoms seek treatment. Treatment opportunities, however, are scarce. To the best of our knowledge, no intervention for GPPPD so far has been evaluated in an RCT. The aim of this study is to evaluate the efficacy of an internet-based guided self-help intervention for GPPPD.

**Method:** A total of 200 women with GPPPD will be randomly allocated to the intervention or the waiting control group. The intervention comprises eight modules consisting of psychoeducation, relaxation exercises, sensate focus and systematic desensitisation via dilator insertion exercises. Participants have the opportunity to request automatic text messages on their mobile phone along with the intervention and receive written feedback on every completed session from an e-coach. The primary outcome is sexual intercourse (PEQ). Secondary outcomes are e.g. fear of coitus, penetration cognitions, sexual functioning and general well-being. Web-based self-report assessments for both groups are scheduled at baseline, 10 weeks, and 6 months. So far, n=82 women have been randomised.

**Findings:** in progress

15:55 - 16:00

## Stress, health, well-being and demand for innovative, mobile internet-based health promotion in distance-learning students

J. Apolinário-Hagen<sup>1</sup>, J. Kemper<sup>2</sup>, C. Salewski<sup>2</sup>, S.D. Groenewold<sup>2</sup>

<sup>1</sup>FernUniversität in Hagen, Germany

<sup>2</sup>University of Hagen, Germany

**BACKGROUND:** Given the rise of stress-related health problems in students, universities need to provide theory-led, evidence-based health promotion programs. This applies also to distance-learning universities with high proportions of non-traditional students facing multiple stressors. To meet the demand for health promotion of this group, innovative strategies should be considered and be based on reliable health data.

**OBJECTIVES:** The aim of this study was to identify health determinants, stressors, resources, needs and preferences toward health promotion services in distance-learning students.

**METHODS:** We conducted a cross-sectional online app-delivered health survey at the distance-learning University of Hagen using validated scales and self-developed items. Constructs included subjective health, life satisfaction, self-efficacy, social support, eHealth literacy, study-work-life-related stressors, health behaviour and utilization of self-help. Also, willingness, preferences and barriers to use health promotion services were assessed.

**RESULTS:** Of the 5.721 respondents, most were aged between 25 and 39 years and more than two-third were employed and part-time students. Although self-rated health was moderate to poor, self-efficacy, social support and eHealth literacy were overall assessed as positive. Study-related stressors included shortage of time and pressure to perform. Most participants indicated a preference for apps for stress management, relaxation, mindfulness, and for the prevention of procrastination. Barriers to using digital interventions involved concerns about their helpfulness and data security.

**CONCLUSIONS:** The findings confirm the need for digital mental health interventions for distance-learning students. In a next step of the study project, group-tailored e-Health stress management programs will be implemented and evaluated.

# Individual differences and health: the gender perspective

15:30 - 17:00

Urte Scholz



15:30 - 15:35

## Gender differences in skin picking behaviour and relations to health in a German community sample

J. Vöhringer<sup>1</sup>, J. Schmidt<sup>1</sup>, A. Martin<sup>1</sup>

<sup>1</sup>Bergische Universität Wuppertal, Germany

**Background:** Skin picking (SP) is a widespread behaviour that may cause significant skin damage. Its pathological variation is termed skin picking disorder (SPD). Women are more prone to show SPD than men. There is substantial evidence concerning relations of SPD and state of health. However, less is known about the relations of non-clinical SP and health and respective gender differences.

**Method:** Based on a German community sample (n=629, age: 18-76 years, M=28.9), we investigated the presence of SP and its prevalence in women and men. We analysed gender effects in SP severity and consequences. Further, we computed correlations between SP severity and impulsivity, compulsions, body-focused security behaviours (BFSB), and pain.

**Findings:** Nearly 50% of the participants reported SP behaviour. It was unequally prevalent in women and men ( $p=.03$ ) and differed regarding the degree of severity and consequences ( $ps<.01$ ). Compulsions, BFSB, and pain - but not impulsivity - showed small to medium correlations with SP severity ( $.45 < r_s < .24$ ;  $ps<.01$ ). However, additional analyses showed that correlations of SP and compulsions were specific for women. Further, relations between SP and BFSB were stronger in women than in men ( $p=.02$ ).

**Discussion:** SP was highly prevalent in a German community sample, with substantial gender differences in extent, severity, and associations of SP behaviour. While SP may constitute a usual grooming routine in men, it is more likely to be part of a pathological cluster in women. This matches the findings for SPD and emphasises possible consequences of SP on health.

15:35 - 15:40

## Food conveying masculinities: how conformity to hegemonic masculinity norms' conformity influences food consumption

L. Campos<sup>1</sup>, S. Bernardes<sup>1</sup>, C. Godinho<sup>1</sup><sup>1</sup>Instituto Universitário de Lisboa (ISCTE-IUL), CIS-IUL, Lisboa, Portugal

Unhealthy eating habits have a great impact on people's health. Sex-related differences in their adoption exist; however, sex is not the only explaining factor, with gender playing a vital role in this relation. Drawing upon the Gender in Context Model and the Focus Theory of Normative Conduct, we aimed to investigate how conformity to hegemonic masculinity norms influenced men's and women's meat, vegetables and fruit consumption, and how gender-salient contexts moderated this relation. We also aimed to test if sex-related differences in these foods' consumption were mediated by the conformity to hegemonic masculinity norms. In a quasi-experimental, between-subjects, 2 (high vs. low gender salience) by 2 (man vs. woman) design, 519 participants (65% women; M = 44 years old) completed, in an online questionnaire, the Portuguese version of the Conformity to Masculinity Norms Inventory, and answered questions about their past week's meat, fruit and vegetable consumption; additionally, half of the participants received a message designed to manipulate gender salience while the other half did not. In order to test our hypotheses, regression analyses were performed. Our hypotheses were partially confirmed; the relationship between the conformity to masculinity norms and food consumption was moderated by gender salience, and sex-related differences in food consumption were partially mediated by the conformity to masculinity norms. Therefore, this study showed that gender is an explaining factor of food consumption patterns, both through conformity to gender norms, and through contexts where gender is salient, and, thus, an important variable to be considered.

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15:40 - 15:45

## Gender differences in reasons alcoholics drink - through AA member interviews

J. Ono<sup>1</sup>, R. Ishikawa<sup>2</sup><sup>1</sup>Nihon Institute of Medical Science, Japan<sup>2</sup>J. F. Oberlin University, Japan

[Introduction] In recent years, the number of alcoholics and the amount of liquor consumed have been decreasing in Japan; however, the numbers of female alcoholics and female chronic drinkers have been increasing. The purpose of this study was to find possible ways to prevent female alcoholism by means of analyzing the differences between men and women

[Method ] Semi-structured interviews were conducted with six female and male alcoholics who maintained abstinence through the Alcoholics Anonymous (AA) program.

[Results ] The female alcoholics drank alcohol for the first time in their late teens. The male alcoholics drank alcohol for the first time in childhood or their mid-teens; the men's parents tolerated or even encouraged the drinking of alcohol. Although no clear differences were noted in the reasons for drinking between men and women, feelings of loneliness influenced the women to drink, and the men's drinking was affected by situations in the workplace, and men tended to drink to excess. Both men and women exhibited the same responses when they started drinking—falls and loss of control of drinking.

[Conclusion] The reasons for drinking and responses to drinking to excess are important when examining possible methods of preventing female alcoholism.

15:45 - 15:50

## The relationship between personality traits and alcohol consumption in the general population of Latvia

J. Kolesnikova<sup>1</sup>, V. Perepjolkina<sup>2</sup>, K. Martinsone<sup>2</sup>, A. Stepens<sup>2</sup>

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<sup>2</sup>Riga Stradiņš University, Latvia

**Background:** Personality is associated with various health behaviors as it contributes in some way to decisions about lifestyle behaviors, e. g. personality traits (PT) are related to alcohol consumption (AC). Our aim was to evaluate the association between PT and AC. This study is a part of a large-scale validation study of Latvian Clinical Personality Inventory (LCPI-v3).

**Methods:** In total 389 adults (M = 31.80, SD = 13.72 years; 48 % males) filled in demographic questionnaire, indicated information about their alcohol consumption and completed LCPI. Stepwise regression analysis was employed six times (namely, using as predictors (1) domain-level traits (2) facet-level traits first for entire sample, and then for males and females separately).

**Findings:** Stepwise regression analysis revealed that in total 23% of the variance in AC for the entire sample was accounted for two domain-level traits such as Disinhibition and Compulsivity, and 34 % of the variance was accounted for three facet-level traits such as Aggression, Perseveration and Manipulativeness. Dissimilar results were obtained for males and females. None of domain-level traits were predictive for AC in female sample, but 84 % of variance in AC were accounted for Compulsivity and Dependence for males. On facet-level, Irresponsibility and Manipulativeness were found to account 55 % in AC for females, and Irresponsibility and Perseveration accounted in total for 79 % of the variance in AC for males.

**Discussion:** Obtained results add deeper insight in the understanding of relationship between PT and AC, and approve criterion validity of personality scales of LCPI-v3.

15:50 - 15:55

## Relationships between quality of life and emotional personality traits: roles of gender and aging

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It is known that health status and emotional reactions and their regulation are closely associated. Emotional intelligence (EI) is defined as the abilities to perceive and understand emotional information and use it to adapt. By considering that women use more emotion regulation strategies in adaptation than men, present investigation aimed to explore the role of gender and aging in the relationships between self-reported different aspects of EI including self-rating of reaction on emotional stimuli and quality of life (QL).

The groups of healthy older women (63.7 years, n=78) (OW) and young (18.1 years) women (n=76) (YW) and men (n=57) (YM) were involved in the study. The Russian versions of EI (IPIP) and SF-36 were used. The computer-based emotion measuring was designed to analyze individual self-rating stimulus set of the IAPS.

The varied patterns of correlations between the components of EI and QL were obtained in the groups differenced by gender and age. YW had higher scores of EI than YM, and “negative expressivity” negatively correlated with integral mental health in women but positively in men. Emotional reactivity according IAPS was positively related to EI in YM but differently associated with components of EI in women. Integral level of physical health was lower in OW whereas psychic health did not differ significantly in OW and YW. Indices of “mental health” and “viability” were higher in OW than YW. A ratio of “positive expressivity” to “negative expressivity” was universal predictor of high QL.

This work was supported by the RFHR grant 15-06-10052.

# Health perceptions in younger people and health professionals

15:30 - 17:00

Jonathan Egan

15:30 - 15:35

## The effect of impulsivity and anger expression on health risk and protective behavior of adolescents

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The presence and the amount of health and risk behavior influence the occurrence of healthy habits and emergence of the disease, especially in the adolescence. Personality theories sustain that in the development of health behavior various individual components, such as cohesion, aspirations, impulsivity or anger expression manifest as key determinants.

Participants were 385 Romanian high school students, 182 boys (47.3 %) and 203 girls (52.7%), aged between 16-18 years, with a mean age of 16.8 years. The measures were the Anger Expression Scale and the Barratt Impulsiveness Scale adapted for adolescents, beside the reported adoption of health protective and risk behavioral components. Statistical procedure include the cluster analysis of the examined behavioral risk (such as smoking frequency, consumption of carbonated drinks, alcohol or drug, school stress and fighting, and perceived level of quality of life) and protective factors (such as the frequency and the amount of physical activity, the reported decision making skills and the health status).

The results show significant differences in high and low level of health protective behavior components regarding the nonplanning factor and its factors (self-control and cognitive complexity). Furthermore, the high level of health risk behaviors significantly influenced all the factors of impulsiveness scale and anger expression components (anger in, anger out and general anger expression). Variables, such as attentional and motor impulsiveness, and anger out had a relevant role in predicting health risk behaviors ( $R^2 = .31$ ). The study underlies the relevant effect of impulsivity and anger expression on health risk behavior in adolescence.

15:35 - 15:40

## Illness representation of dementia in professionals of nursing homes

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<sup>1</sup>Miguel Hernández University, Spain

<sup>2</sup>Miguel Hernández, Spain

**Background:** Professionals' illness representations of dementia could influence the quality of care they provide to people in nursing homes. Our research questions are: which is the mental representation of dementia in nursing homes staff? Is it different depending on professional group? Is the illness representation related to job satisfaction in people working with patients with dementia? Is this relation mediated by perceived competence? And, which are the explicit necessities of training in this context?

**Methods:** About 250 professionals, nurses and other (physiotherapists, psychologists, social workers, physicians, occupational therapists, social educators and managers) working in 25 nursing homes will participate in this exploratory study. We will administrate a Spanish adaptation of the revised Illness Perception Questionnaire, the Frequency and the Perceived Competence of dementia-related work activities, a global and specific job satisfaction questionnaire, and a question about necessities of training for dementia care.

**Expected results:** We expect illness representation to be related to perceived competence and job satisfaction. Professionals working daily close to dementia people are expected to present a different profile in dimensions of dementia mental illness from people with other work activities less close to patients.

**Current stage of work:** A pilot study to test cultural adaptation of questionnaires and the procedure of participation has been developed.

**Discussion:** Specific training programs for dementia care staff should include characteristics of mental representation dimensions of dementia, especially those related to low sense of competence and job satisfaction.



15:40 - 15:45

## Perceptions of dementia amongst adolescents

S. Parveen<sup>1</sup>, A. Griffiths<sup>2</sup>, S. Shaffiq<sup>1</sup>, J. Oyeboode<sup>1</sup>

<sup>1</sup>University of Bradford, United Kingdom

<sup>2</sup>Leeds Beckett University, United Kingdom

### Background:

Current policy highlights the need to develop dementia friendly communities. In order to sustain dementia friendly communities, the involvement of young people is imperative. The aim of this study was to utilise Leventhal's illness perceptions model to explore perceptions of dementia amongst adolescents.

### Method:

326 students aged 14-17 years completed the Brief Illness Perceptions Questionnaire, and 30 adolescents participated in six focus groups. Framework analysis of qualitative data was conducted using Leventhal's model.

### Findings:

The findings suggest that the signs and symptoms associated with dementia were perceived as cognitive, such as memory loss and poor facial recognition. The experience of living with dementia was perceived to be negative as was the emotional impact on the person with dementia. Participants perceived the frustration associated with memory loss and lack of independence to lead to aggressive behaviours. Dementia was thought to be caused by brain damage, old age and traumatic life events. Students were aware there was currently no cure for dementia and of the limitations of medicines. They suggested a number of psychosocial activities that could help support the person such as social interaction and reminiscence. Students highlighted their desire to know more about risk factors for developing dementia.

### Discussion:

The findings of the study suggest there is a need for dementia awareness initiatives that promote the possibility of living well with dementia and health promotion for young people. The findings will be used to further develop a dementia friendly initiative for young people in secondary schools (Dementia Detectives).

15:45 - 15:50

## Psychological need satisfaction, gaming motives, and Internet gaming disorder

A.M. Wu<sup>1</sup>, M.H. Lai<sup>2</sup>, S. Yu<sup>1</sup><sup>1</sup>University of Macau, Macau<sup>2</sup>University of Cincinnati, United States

**Background:** According to the Self-determination Theory, psychological need satisfaction and gaming motives are potentially salient factors of behavioural addictions such as Internet gaming disorder (IGD). This study examined the mediating role of gaming motives on in-game psychological need satisfaction (i.e., Autonomy, Competence, and Relatedness) and IGD tendency.

**Methods:** Chinese adult online gamers (N=383) were recruited and completed an online anonymous questionnaire survey. The questionnaire was composed of Player Experience of Need Satisfaction (for assessing In-game competence, autonomy, and relatedness), Motive for Online Gaming Questionnaire (for assessing General, Escape, Coping, Fantasy, Skill Development, Recreation, Competition, and Social motives), DSM-5 diagnostic criteria for IGD, and demographic items. With demographic items included as controlled variables, the path analysis using Mplus 7.4 was conducted to predict Rasch-scaled IGD tendency score from the DSM-5 criteria.

**Findings:** In our path model, in-game need satisfaction was significantly related to gaming motives. For example, In-game relatedness was positively associated with Social ( $\beta=.43$ ) and negatively related to Recreation and Competition ( $\beta = -.20$  and  $-.17$ ). All three types of need satisfaction were positively associated with General Motivation ( $\beta$  range=  $.23$ -. $30$ ). The significant, direct risk factors for IGD included male gender, In-game autonomy, General Motivation, and Escape motive ( $\beta$  range=  $.17$ -. $26$ ), while Skill Development and Recreation motives ( $\beta = -.16$  and  $-.10$ ) were protective factors.

**Discussion:** Our findings suggested gaming motives mediating the effect of psychological need satisfaction on IGD tendency. Future intervention programs should also take specific psychological risk factors such as perceived autonomy and Escape motive into account.

15:50 - 15:55

## Stressful events perception and coping strategies among internal medicine and surgical nurses

Z. Pukljak Iričanin<sup>1</sup>, D. Kundarta<sup>2</sup><sup>1</sup>University of Applied Health Sciences, Croatia<sup>2</sup>General Hospital "Dr. Ivo Pedišić", Croatia

**Background:** Nurses have confirmed high levels of occupational stress. This study investigates ways of coping and perception of stressful events among nurses from internal medicine and departments of surgery.

**Methods:** 163 nurses (81 internal medicine and 82 surgical nurses) in two Croatian hospitals completed questionnaire about nurses' perception of stressful situations, demographics and Lazarus Ways of Coping Questionnaire.

**Findings:** When assessing the last working week, nurses remember stressful situations that were very disturbing (0-3, M=2,07), mostly perceived as threat (42,8%) and with low control (0-3, M=0,77). Other persons involved in stressful situations were mostly nurses of the same hierarchy (25,6%) and patients (19,2%). Internal medicine nurses perceived their stressful situations as more disturbing. Problem solving, seeking social support and self-controlling were mostly used coping strategies, while accepting responsibility was the least used. Nurses who used more problem solving perceive themselves as more successful in coping. Perception of more control over situation was associated with more accepting responsibility and less confrontation. In situations perceived as threat nurses tend to use more problem solving and less accepting responsibility than in situations perceived as loss.

Perception of control decreases with age and coping with confrontation increases.

**Discussion:** The results confirm that coping with occupational stress is a multifaceted process dependent on nurses' perception of situation, perception of control and some other individual factors, such as age. Ways of coping did not differ among various hospital wards but there was a difference in assessing disturbance during stressful events.

# Psychological processes and outcomes

15:30 - 17:00

Heidi Preis

15:30 - 15:35

## Psychological resources in adjustment to disability among mobility impaired people: a systematic literature review

L. Alčiauskaitė<sup>1</sup>, L. Šinkariova<sup>1</sup><sup>1</sup>Vytautas Magnus University, Lithuania

**Introduction:** Mobility impairment involves physical, social and psychological consequences which might negatively affect person's adjustment to disability. Activating inherent psychological resources may protect them from negative consequences and improve their adjustment to mobility disability.

**Methods:** The purpose of this study was to gain a systematic overview of the role of psychological resources in the adjustment to mobility disability. The literature search was conducted in the databases MEDLINE, PsychArticles, HealthSource, Academic Search Complete, ScienceDirect, Springerlink and dissertation databases. The search of available studies was performed in September 2016 – January 2017. The assessed variables, results and the methodological quality of the studies were extracted, summarised and evaluated.

**Results:** A total of 45 studies which have met the inclusion criteria were identified. Psychological resources were categorised into three groups by how they are related to medical, psychological and social aspects of adjustment to disability. General self-efficacy, perceived social support, coping strategies and self-esteem are the most analysed psychological resources associated to all aspects of adjustment to disability. The results also revealed that associations of psychological resources with physical or mental health are studied way more often than associations with psychosocial adjustment or social aspects of disability.

**Conclusions and implication:** Research on psychological resources in adjustment to mobility disability is broad, but also fragmented. Associations of psychological resources with physical and mental health and well-being were frequently shown, while associations with psychosocial aspects of adjustment to disability are rarely studied. Further development of such studies is indicated.

15:35 - 15:40

## Social support and self-esteem in multiple sclerosis. Can mastery mediate the association between them?

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### Background

The aim of this study is to explore whether association between social support and self-esteem is mediated by mastery in people with multiple sclerosis (MS). Social support as a variable of external social resources and self-esteem as indicator of internal psychological resources are traditionally associated in the literature, but the role of mastery as enabler of these variables was not studied before.

### Methods

For this cross-sectional study we collected information from 155 consecutive MS patients (response rate: 84.2%, 75.4% women), who completed the Multidimensional Scale of Perceived Social Support, the Rosenberg Self-Esteem Scale and the Perceived Mastery Scale. Multiple linear regressions, correlations and mediation analysis (Sobel z test) were used to analyze the data.

### Findings

Association between social support and self-esteem was partially mediated by mastery (Sobel  $z=2.502$ ;  $p=0.01$ ). The indirect effect via mastery in this model was 36.9%, which complemented the direct effect between social support and self-esteem (63.1%).

### Discussion

Mastery seems to be an important factor in association between social support and self-esteem. As a general enabler of internal resources it may help MS patients in utilizing their skills and resources to improve their quality of life. Mastery thus may be one of the interesting topics in educational intervention programs for people with MS and can be used by caregivers, physicians or in MS clubs. [Grant support: APVV-15-0719; VEGA 1/0594/17]

15:40 - 15:45

## Should caffeine be considered in addiction prevention? - Caffeine as a threat to (psychological) health

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Caffeine is the most frequently consumed psychoactive substance worldwide. Almost 80-90% of adults consume caffeine daily. It is the only addictive substance that can be sold almost everywhere and with almost no legal restrictions. The consumption of Energy Drinks with a high caffeine content not only lead to a higher intake of alcohol, they also mask the neurotoxic effects of alcohol. Still, there are very few studies on the psychological processes behind this consumption. Nor does caffeine consumption play any significant role in prevention, although withdrawal symptoms and tolerance as well as the anxiogenic effect are undisputed.

Two studies are presented, that tried to validate the concept of expectations placed in caffeine – a concept that is uncontested in the prevention and treatment of other addictions – using a German-language version of the Caffeine Expectancy Questionnaire and a random sample of n=332 subjects from Austria, Switzerland and Germany and compared them with a random sample of n=92 alcoholics. In a second survey the caffeine consumption of health professionals (n=127) has been investigated in relation to burn-out symptoms.

Alcoholics not only consume significantly more caffeine, they also have different expectations of caffeine. The second study demonstrated that health professionals (n=127) have a higher risk to develop a caffeine addiction than general population and showed weak but significant correlations between caffeine consumption and burn-out symptoms. This results support, the notion to include the caffeine, or caffeine expectations respectively, into prevention programs.

15:45 - 15:50

## Changes in cognitive functions and self-rated health of patients with stroke during hospital rehabilitation

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Background: Approval of integration of health psychologists within rehabilitation team still needs continuing investigation.

The aim: to assess changes in cognitive functions and self – rated health assessment during the period of inpatient rehabilitation of patients who had a stroke.

Method: A total of 65 patients after stroke in Klaipėda Seamen's Hospital, Neurology and Physical Medicine and Rehabilitation Unit participated in the study and 17 of them were admitted to the second stage of rehabilitation. The average age is 70.3 years, and the standard deviation is 12.3. There were 30 men and 35 women among those who participated in the study. The data was collected using two methods: (1) structured interview (subjective health assessment questionnaire, demographic data and MMSE), (2) analysis of medical documents. The study was performed in 3 stages: First was performed at the beginning of inpatient rehabilitation stage (I assessment), at the end of first rehabilitation (II assessment) and at the end of II inpatient rehabilitation stage (III assessment).

Findings: The study confirmed that the age of patients have influence on their cognitive functions indicators and subjective assessment of their health. Depressed patients who are in a bad mood typically assess their health as worse. During the rehabilitation, the memory, special orientation, reading skills, are restored the best. Cognitive functions of women are restored better than the ones of men.

Discussion: As Health changes are significant in whole rehabilitation process, the health psychologist may facilitate physician's work related to patients' psychological problems.



15:50 - 15:55

## A healthy mind in a healthy body: the Association between suicide and chronic illness

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**Background:** The relationship between psychiatric disorders and suicide has been well documented, however the relationship between chronic illness and suicide has been given less attention in the literature.

**Methods:** We utilized the third wave of the National Comorbidity Survey of Alcohol and Related Conditions (NESARC). It was a nationally representative survey of the civilian non-institutionalized population of the United States aged 18 years and older. The final sample size was 36,309. Physical disorders examined included HIV and other Sexually Transmitted Infections (STI), Liver Disease, Cancer, Heart Disease, Lung Disease, Gastrointestinal Disease, Arthritis, Fibromyalgia, Osteoporosis, Epilepsy, Stroke, Traumatic Brain Injury, Anemia, Multiple logistic regressions were conducted to examine associations between physical disorders and suicide, first while controlling for sociodemographic characteristics for comorbid psychiatric disorders.

**Results:** Physical disorders that emerged as significantly associated with elevated suicide risk include STIs [AOR= 4.26, 95% CI (Confidence Interval): 1.67-10.88], Heart Disease [AOR= 2.157, 95% CI: 1.05- 4.427], Lung disease and Tuberculosis [AOR = 2.007, 95% CI: 1.255 - 3.43], Epilepsy [AOR = 8.26, 95% CI: 2.92-23.33], and sleep problems [AOR = 2.91, 95% CI: 1.84 - 4.61].

**Conclusions:** The demonstrated associations between physical disorders and suicidal behaviour suggest a need for increased attention to be paid to the mental health needs of individuals facing chronic physical illnesses, in order to ameliorate stress and potentially improve long term outcomes.

15:55 - 16:00

## Self-efficacy is associated with experienced fatigue after myocardial infarction

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**Background:** Post-myocardial infarction fatigue is a bothersome symptom experienced to different degrees by nearly half of the group of discharged patients. Earlier research has shown that symptoms of fatigue contribute to experiences of uncertainty and withdrawal in daily life. Moreover, symptoms of stress and breathlessness have been found to predict fatigue in the early recovery period, two months after the acute heart attack. The aim of the present study was, therefore, to explore associations between stress, breathlessness and fatigue one year after myocardial infarction (MI), as well as to study the effects of self-efficacy on fatigue.

**Method:** The sample included 125 persons (mean age 63.8 years, SD  $\pm$  7,0 range 44-75) who had been treated for myocardial infarction and responded to questionnaires measuring fatigue, stress, breathlessness and cardiac self-efficacy one year after MI. Correlation and regression analyses were used to study associations between variables and to assess the predictive value of self-efficacy in relation to fatigue.

**Findings:** The results showed that self-efficacy was a predictor associated with fatigue ( $R^2$  adj 0.368), and in the regression model controlling for breathlessness and stress, the explained variance increased ( $R^2$  adj 0.716) one year after MI.

**Discussion:** Cardiac self-efficacy was found to be associated with fatigue, meaning that we can assume that health-care support aimed at strengthening self-efficacy will promote fatigue relief, which may prevent progression into a state of higher levels of fatigue.

16:00 - 16:05

## Bidirectional relationships between stress communication and psychological distress in couples during the transition to parenthood

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**Background:** A significant association between a more effective dyadic communication and lower perinatal psychological distress among women has been observed. However, longitudinal research examining the causal relations between these variables, in both women and their partners, is lacking. The aim of this study was to examine the bidirectional actor and partner effects between stress communication and depressive and anxiety symptoms during the transition to parenthood.

**Methods:** 105 couples completed the Edinburgh Postnatal Depression Scale, the Hospital Anxiety and Depression Scale, and the Dyadic Coping Inventory, during the second trimester of pregnancy (T0) and at 6 weeks postpartum (T1). Repeated-measures MANOVAs and multiple linear regressions were performed.

**Findings:** Findings revealed that: (1) women's depressive symptoms at T1 were negatively predicted by men's own stress communication at T0 ( $p < .05$ ), and positively predicted by men's perception of women's stress communication ( $p < .05$ ); and (2) men's anxiety symptoms at T0 negatively predicted women's own stress communication at T1 ( $p < .05$ ) as well as men's perception of women's stress communication ( $p < .05$ ).

**Discussion:** Men's adequate expression of needs may act as a resource against women's postpartum psychological distress, but better women's stress communication (as perceived by men) may also be related to higher depressive symptoms, possibly due to men's inability in responding adequately to their needs. Moreover, men's previous psychological distress compromised subsequent stress communication in women. Considering the reciprocal influences within the dyad, improving stress communication in both members (and effective subsequent coping responses) should be considered.

# Interventions for patients with cancer or irritable bowel syndrome

15:30 - 17:00

Laura Porter

15:30 - 15:35

## A meta-analytic approach of mechanisms of change in CBT interventions for Irritable Bowel Syndrome

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**Background:** Empirical data has shown that cognitive behavioral therapy (CBT) has small to medium effects in alleviating emotional distress and psychosomatic symptoms in Irritable Bowel Syndrome (IBS). However, the mechanism through which CBT employs its effects is less studied. Mediation analysis examines the extent to which an intermediate variable explains the effect of an intervention on different outcomes. Having said that, the current meta-analysis aims at identifying and assessing the impact of CBT mediators on IBS, identified in previous research.

**Methods:** An extensive search of studies investigating the effects of CBT for IBS published before January 2017 was conducted. Studies selected had to clearly define CBT intervention, include IBS patients, report sufficient data to allow calculation of effect sizes and provide a clear mediation analysis of one or several variables on the outcome.

**Results:** Several mediators that influence the effects of CBT on IBS symptomatology or quality of life were identified (e.g. illness perception, visceral sensitivity, catastrophizing, gastrointestinal symptom-specific anxiety). The statistical analysis also revealed CBT interventions have a greater effect on alleviating IBS symptoms severity rather than on reducing psychological distress.

**Limitation:** Study differences between intervention, control groups, methodology and quantitative data presented in the articles, allowed us to conduct the meta-analytic analysis only on 6 studies from the initial 10 included.

**Discussion:** Identifying mediators can have a significant role in improving our understanding of the psychosomatic mechanisms involved in IBS as well as the mechanisms of change we need to target when designing and implementing psychological interventions.

15:35 - 15:40

## Efficacy of MBCT in improving the cognitive emotion regulation strategies of women with lung cancer

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<sup>3</sup>Sharif University of Technology, Iran

<sup>4</sup>AJA University of Medical Sciences, Iran

**Background:** The objective of the present study has been evaluating the effectiveness of mindfulness based cognitive therapy in improving cognitive emotion regulation strategies of the women with lung cancer.

**Methods:** In this study, pretest-posttest designs were done with the control group. The statistical sample included 30 women with lung cancer treating under chemotherapy in Tehran city, and was selected by an objective-based sampling method. These participants were randomly put in 2 groups of 15 individuals including the experimental group and the control group. The experimental group was trained in 8 sessions of 2 hours and 30 minutes using mindfulness based cognitive therapy (MBCT) protocol. The measurement tool was cognitive emotion regulation questionnaire (CERQ). The results were analyzed using analysis of covariance (ANCOVA) method.

**Findings:** The results showed that the eight training sessions were effective in changing the experimental group's Cognitive Emotion Regulation Strategies ( $P < 0.01$ ).

**Discussion:** The obtained results suggest that the therapeutic sessions based on mindfulness strategies were effective in changing cognitive emotion regulation strategies of the women with lung cancer. In other words, these strategies increased the use of positive cognitive emotion regulation strategies (positive refocus and programming, positive evaluation, acceptance) and decreased negative cognitive emotion regulation strategies (self-blame, blaming others, rumination, catastrophizing).

15:40 - 15:45

## Effectiveness of an Emotional Competences intervention program for cancer patient in remission

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**Background.** Emotional Competences (EC) refer to the capacity to adequately handle one's own emotions and those of others. Research has documented a positive impact of EC on patient outcomes (e.g. physical and mental health, work performance). However, few studies have examined the possibility of increasing the EC within a clinical population using a short group-session intervention. The purpose of the study is to investigate whether the intervention will heighten patients' EC and quality of life.

**Method.** Population: oesogastric and pulmonary cancer patients in remission (i.e. at 6 months after the end of treatments). Design: Randomized controlled trial. A 6-hour EC intervention over 3 weeks (3 sessions of 2 hours), targeting the EC will be administered to the experimental group while the control group will be practicing relaxation training. Both group will complete SF-36 and the Profile of Emotional Competences (PEC) questionnaires at 3 times: before the intervention (T0), 15 days later (T1) and 2.5 months after the intervention (T3).

**Expected results.** We expect a larger increase of both the EC and the quality of life in the experimental group compared to the control group at the three assessment points.

**Current stage of work.** The intervention has been manualized. Legal authorizations have been obtained (Regional Teaching Hospital of Lille and French National Ethics Committed). The research is about to start.

**Discussion.** This intervention could be a new feasible approach to improve the quality of life of cancer patients at the end of treatments, which is a difficult time for them.

15:45 - 15:50

## Caregiver-guided pain management for patients with advanced cancer

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<sup>2</sup>University of Pittsburgh, United States

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<sup>4</sup>University of North Carolina School of Medicine, United States

<sup>5</sup>University of Colorado Denver, United States

**Background:** Pain is a major concern of patients with advanced cancer and their family caregivers. Pain coping skills training (PCST) has been found efficacious with other populations but has rarely been tested in patients with advanced cancer. This study aims to examine the efficacy of a caregiver-guided PCST intervention to improve caregiver and patient outcomes.

**Methods:** In this multisite RCT, 236 patient-caregiver dyads are randomized to receive (a) caregiver-guided PCST, or (b) standard pain education. Assessments are conducted with patients and caregivers before randomization and post-treatment. Caregiver assessments also occur 3 and 6 months after the patient's death. Measures include self-efficacy for pain management, pain severity and interference, psychological distress, and caregiver strain and satisfaction.

**Expected results:** We hypothesize that the intervention will lead to significant improvements in caregiver self-efficacy. **Secondary hypotheses:** the intervention will lead to improvements in caregiver adjustment (short-term and post-death), and patient outcomes (self-efficacy, pain, psychological distress).

**Current stage of work:** 81 dyads are enrolled, 73 randomized, and 52 have completed post-treatment assessments. Challenges to enrollment have included identifying patients with advanced cancer and pain. The original inclusion criterion of

**Discussion:** A PCST intervention has promise for alleviating suffering of patients with advanced cancer and their caregivers. Conducting a behavioral intervention in this population poses specific challenges. Lessons learned from this study can be applied to future trials evaluating behavioral interventions for patient-caregiver dyads in the palliative care setting.



15:50 - 15:55

## A mixed methods evaluation of the HOPE Programme© for cancer survivors

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**Background:** The incidence of cancer throughout the world is rapidly increasing . 25 million people will have cancer by 2030. Cancer survivors face a number of challenges that could be either avoided or managed such as fear of cancer returning and depression. The HOPE Programme is a theoretically informed 6 week group-based, positive psychology self-management programme which provides cancer survivors with the knowledge, skills and confidence to manage their health and wellbeing The aim of this study was to examine whether cancer survivors report improved quality of life (QoL) and self-management skills after attending the HOPE Programme.

**Methods:** 84 cancer survivors, (mean age 58 (SD 11) years, 75% women, 44% breast cancer) completed pre and post-course outcomes: Quality of Life in Adult Cancer Survivors Scale, Adult State Hope Scale, the Gratitude Questionnaire and the Health Education and Impact Questionnaire. Data were analysed using related sample t-tests. 31 participants took part in post-course focus groups describing their experiences of attending HOPE. Data were analysed using thematic analysis

**Findings:** There were statistically significant improvements in generic ( $p < 0.001$ ) and cancer specific QoL ( $p < 0.001$ ), hope ( $p < 0.001$ ) and self-management skills ( $p < 0.01$ ). Participants reported that goal setting and feedback in a supportive peer environment were important in improving quality of life and confidence to self-manage

**Discussion:** Findings shows that the HOPE Programme for cancer survivors has an immediate positive impact on quality of life, positive outlook and self-management skills. Larger, controlled and longer trials are required to confirm this early promise.

**Funding:** Macmillan Cancer Support

# Health behaviours in later life

15:30 - 17:00

Olga Strizhitskaya

15:30 - 15:35

## Predictive value of childhood and adulthood socioeconomic position on physical activity

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**Background:** Physical inactivity has been identified as one of the major risk factors for mortality causing an estimated 3.2 million deaths in the world per year. To reduce mortality risk, daily physical activity (PA) is recommended by public health, in particular at older age. Previous research has shown that life course socioeconomic position is related to PA. Here we assessed the predictive value of childhood socioeconomic position (CSP) on the likelihood to reach the PA guidelines and examined whether adulthood socioeconomic position explains this association.

**Methods:** Data were retrieved from 18,467 (40,228 observations) adults aged 50 years and older across 12 European countries of the longitudinal and cross-national Survey of Health Ageing and Retirement in Europe. The associations between CSP (assessed using retrospective information on living condition at age 10) and self-reported PA recommendations attainment were estimated using mixed effects logistic regressions. Models were adjusted for potential confounders and for mediating effects of educational achievement and main occupation class.

**Findings:** Participants born in the most disadvantaged (Odds Ratio=1.18), disadvantaged (OR=1.29), and neutral (OR=1.16) CSP had greater odds of not reaching the PA recommendations, compared with participants born in the most advantaged socioeconomic position. The deleterious effect of the most disadvantaged CSP strengthened with ageing (OR=1.02). Educational attainment and main occupation class, mediated 76% of this association.

**Discussion:** Education and main occupation class largely explained the deleterious effect of CSP on the odds of reaching the PA recommendations at older age. Potential implications for public health policy will be outlined.

15:35 - 15:40

## Objectively-measured sedentary behavior and physical activity with depression in older adults: an isothermal substitution analysis

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The aim of this study was to use the Isothermal Substitution (IS) model to examine the cross-sectional associations of accelerometer measurements of sedentary behavior (SB), low- intensity activity (LPA) and moderate- to vigorous- intensity physical activity (MVPA) with depression when replacing one activity for another in sample of older Japanese adults. The IS model was created to study the time-substitution effects of one activity replacing another.

The participants were 305 older people (190 men and 115 women) aged from 65 to 85 years (mean 74.6±5.2 years). We used accelerometers (Active style Pro HJA-350IT, Omron Healthcare, Kyoto, Japan) to assess participant' SB and PA, and calculated the daily average time spent on SB (≤1.5 METs), low- intensity PA (>1.5 to <3.0 METs) and moderate- to vigorous- intensity PA (≥3.0 METs) per day. Depression was assessed using the Japanese-language version of the 15 item Geriatric Depression Scale (GDS-15).

The mean time of participant' SB, LPA, MVPA were 521±119 min/day, 327±103 min/day and 50±34 min/day, respectively. The IS model showed that replacing 10-minute of SB with LPA was significantly associated with lower GDS-15 score after controlling for age, sex and body mass index.

Our findings indicated that replacing SB with LPA leads to improvements depression in older Japanese adults. Those favorable effects were obtained with replacing of only 10 minutes per day.

15:40 - 15:45

## Healthy lifestyle habits and quality of life in aging: comparing bigger and smaller cities

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Positive trends in aging were found in different domains, including emotional regulation, social relationships etc. Healthy lifestyle has been shown to affect a variety of characteristics of an aging person. In our study we concentrated on associations between different lifestyle habits (HLH) and characteristics of quality of life. We supposed that HLH can vary depending on the type of city, we also hypothesized that the associations between HLH and quality of life in bigger and smaller cities would be different.

In the present we recruited participants (N=70) from two comparatively big cities in Russia - Saint-Petersburg (N=40; population 5.1 mln. people) and Nizhni Novgorod (N=30; population 1.2 mln. people). Participants, aged 50-81, had no major physical or mental problems. Methods used were: 1. Survey on HLH (subscales: physical activity, balance, bad habits, diet, chronic conditions, sleep, social engagement, and adaptability); 2. SF-36 Health Status survey.

Results showed that older adults from smaller city had better balance, they more often kept up to diet, they were less engaged in social interaction and have lower scores in adaptability than people from bigger city. In both groups we found correlations between social engagement, adaptability and characteristics of quality of life. In bigger city quality of life was negatively associated with diet, while in smaller - with absence of bad habits. Our results confirmed that HLH have positive associations with quality of life regardless of the city specifics, but the mechanisms of this effect differ.

Study is supported by RFH grant 16-06-00315

15:45 - 15:50

## Adherence to treatment recommendations and emotional status: older adults with and without diabetic foot complications

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**Background:** Age is a risk factor for diabetes. Diabetic foot (DF) is a serious complication of diabetes. Ongoing worldwide efforts to prevent this complication include a global evidence-based guidance on its prevention that emphasizes patients' education on appropriate self-care practices. This study aimed to evaluate differences between individuals with DF and individuals with diabetes without complications (NoDF) regarding adherence to medical recommendations and emotional well-being. **Method:** This case control study included 99 individuals with DF [58y±6.9, diabetes duration 15.1 years, 76% males]; and 95 controls [(61y±7, DD 13.4, 76% males]. Groups were matched for duration and gender. They completed: The Summary of Diabetes Self-Care Activity; The Patient Health Questionnaire (PHQ-9) for depression assessment; WHO-5 well-being index; Single General Self Rated Health Question. Additionally Hemoglobin A1c levels and BMI that may be considered as indicators of adherence were also collected. **Results:** DF had lower adherence to exercise, and higher adherence to blood tests. Adherence to nutrition was similar. Compared with NoDF, DF had higher hemoglobin A1c (8.81\*\*\* vs 7.56) and BMI (30.13\*\* vs 28.17). DF had a higher risk for developing major depression compared to NoDF, with Odds Ratio>6. Perceived health and quality of life were significantly lower among DF. Adherence to nutritional and physical activity recommendations were positively associated with lower depression and higher quality of life and perceived health. **Conclusions:** Adherence to medical recommendations among DF was rather poor. Additionally, the DF complication seems to negatively affect the patients' emotional status beyond that known in the general diabetic population.

15:50 - 15:55

## Older patients' satisfaction and length of visit in primary care – what influences this?

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**Background:** Patients' satisfaction (PS) is frequently used to assess the effectiveness of medical care; this is in contrast to primary care (PC) capacity measures imposing strict limits of time spent per visit. Setting out to challenge stereotypes on elderly patients' visits in PC, the aim of the present study is to identify relationships between PS, length of visit (LOV) and basic factors characterising patients, doctors and facilities. **Method:** Score on PRACTA – Patient Satisfaction with the Visit Scale (PRACTA-PSVS) and the LOV were the outcomes from a larger PRACTA-promoting active aging study database (patients n=8862, age 50-98 and PC doctors n=503). Independent variables included the patient's social and health status, the doctor's work satisfaction or the fluctuation of staff within a given facility. **Findings:** Preliminary analysis, using the General Linear Model (GENLIN), showed that the factors from all three mentioned categories contributed to PRACTA-PSVS and the LOV, e.g. the doctor's satisfaction with work (Wald  $\chi^2=15,85$ ,  $p<0,001$  and Wald  $\chi^2=15,68$ ,  $p<0,001$  respectively) and the fluctuation of staff (Wald  $\chi^2=25,17$ ,  $p<0,001$  and Wald  $\chi^2=12,99$ ,  $p=0,005$ ). Interestingly, age of the patient had no effect on both outcomes, and the LOV was only marginally and negatively related to PS (Wald  $\chi^2=5,63$ ,  $p=0,018$ ,  $B=-0,008$ ). **Discussion:** PS and LOV are determined by a number of factors originating from doctor's and facility's characteristics which is higher than those describing the patients. Nevertheless, when aiming at improving PC efficacy for older adults, specific PS and LOV related factors concerning patients, doctors and facilities should be carefully considered.

15:55 - 16:00

## The relationship between aerobic load and personality traits in seniors with different physical activity experience

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**Background:** Personality traits are stable and create an individuals' behaviour as well as allows to predict what kind of exercise type, intensity and frequency they might choose (Allen, Greenlees, & Jones, 2011). Involvement in physical exercises with aerobic elements can improve aerobic capacity, stabilize blood pressure and improve the overall physical and emotional state (Aoiike, et al., 2015).

**Methods:** Healthy participants were 31 adults, aged from 65 to 80 years (M = 72,74, SD = 5,1). The participants were divided into three groups - in the first group we included seniors with regular long-term aerobic physical activity experience, in the second group we included seniors with short-term regular aerobic physical activity experience and in the third group we included seniors that do not engage in aerobic physical activity. The data were obtained with four questionnaires – „Latvian Personality questionnaire” (LPA-v3, Perepjolkina, Reņģe, 2013), a modified version of „Social Determinants of Health Behaviours” (FINBALT, 2014) questionnaire, „The International Physical Activity Questionnaire – modification for elderly „ (Hurting-Wennolof, Hagstromer, & Olsson, 2010) and Demographic Data questionnaire (age, sex, language). Participation in the study was voluntary and all patients signed Informed Consent Form before participating in the study.

**Expected results:** Preliminary results indicate significant differences between the three groups in neuroticism ( $p = .021$ ).

**Current stage of work:** Data acquisition and analysis is in process.

**Discussion:** The research results indicate a relationship between neuroticism as a personality trait and aerobic physical activity load; the character of these relationships is still to be studied.



# Social support and caregiving in the illness context

15:30 - 17:00

Noa Vilchinsky

15:30 - 15:35

## The mediating role of coping in relationship between social support and quality of life

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<sup>4</sup>Qom University of Medical Sciences, Iran

**Background:** Although social support is correlated with quality of life of cancer patients, but few studies investigated related mechanism by which quality of life is affected by social support. Regarding stress situation of cancer, this study aimed to develop a SEM model regarding mediating role of coping strategies to predict the patients' quality of life based on social support.

**Methods:** 156 breast cancer patients were recruited. Data were collected by FACT-B, MOSS, and coping style questionnaire (Brief COPE). Analysis was performed by Pearson's correlation, regression and Structural Equation Modeling.

**Findings:** Results showed that in subjects (Mean age=47.14), mean of total social support was 73.47 (SD=20.12). There were significant correlation between social support and quality of life ( $r=0.445$ ) and problem-focused coping and quality of life ( $r=0.481$ ). Confirmed Model suggested that problem-focused coping had a positive direct influence on quality of life ( $t=2.854$ ), whereas the influence of emotional-focused coping was similarly direct but negative ( $t=-2.866$ ). The influence of social support on quality of life was mediated by both types of copings. Our model could explain 38.9% of quality of life's variance.

**Discussion:** Social support can change quality of life via changing in coping styles. The study suggested that interventions to enhance the problem-focused coping strategies and social support based on our psychosocial model may be helpful to improve patients' quality of life. As well, to the extent that interventions can prevent emotional-focused coping in the patients, their quality of life may be improved.

15:35 - 15:40

## Critical illness and care in the intensive care unit: the experiences of next-of-kin

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<sup>1</sup>University of Regensburg, Germany

<sup>2</sup>University Hospital Regensburg, Germany

### Background:

Critical illness and care in intensive care units (ICU) have a serious impact not only on patients, but also on their families. This study aimed at better understanding the immediate experiences of next-of-kin when visiting patients with a life threatening condition in the ICU.

### Methods:

Semi-standardized qualitative interviews were conducted with caregivers of patients with ARDS (acute respiratory distress syndrome). 35 families were approached during ICU visits; 17 next-of-kin (26-71 years; 9 women) participated in the study. Interview transcripts were analyzed by computer-assisted thematic analysis drawing on the stress-strain-concept.

### Findings:

Stressors were found to occur when organizing ICU visits, during these visits and at home. Many next-of-kin made enormous efforts to realize regular visits. The experience of the patient's critical state, his/her dependence on medical devices and his/her inability to communicate evoked stress during ICU visits. Next-of-kin had to make decisions in lieu of patients while being exposed to a highly unfamiliar situation over which they had little control. Several stressors occurring at home were also described, including the state of continuous alertness and the need to report on the patient's health. Interviewees' accounts of stressors were remarkably consistent. However, they expressed varying levels and manifestations of strains.

### Discussion:

This study comprehensively explored how next-of-kin experienced the ICU stay of family members. Manifold stressors were identified: Some of them are inherent to the situation of witnessing a life-threatening condition of close relatives, while others are nested within the context of the health care system and are thus potentially modifiable.

15:40 - 15:45

## Suicidal ideation and its relationship with obstructive sleep apnea severity, sleep-related problems and social support

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**Background:** Recently, an increased level of Suicidal Ideation (SI) has been observed in Obstructive Sleep Apnea (OSA) patients. Social support has been shown of relevance in many chronic diseases, and is supposed to decrease Suicidal Ideation (SI). However, evidence lacks on the association between sleep-related problems and social support with SI in OSA patients. Therefore, we aimed to assess the prevalence of SI in OSA patients and to examine the relationships between OSA severity, sleep-related problems, social support and SI.

**Methods:** We included 149 patients (68% male; mean age 48.99±9.57 years) with the diagnosis of OSA (Apnea-Hypopnea Index–AHI≥5) based on a full-night polysomnography. All patients completed the General Health Questionnaire-28 SI subscale, the Pittsburgh Sleep Quality Index, the Epworth Sleepiness Scale, the Multidimensional Fatigue Inventory, and the Multidimensional Scale of Perceived Social Support. Structural equation modeling (SEM) was used to analyze the data.

**Findings:** The prevalence of SI among OSA patients was 20%. Patients reporting SI scored poorer on sleep quality and fatigue, compared to the non-SI patients. SEM showed fatigue to be most strongly related to SI ( $\beta=0.49$ ;  $p<0.001$ ). No relationship between social support and SI in OSA patients was found.

**Discussion:** SI in OSA is strongly related to poor sleep quality and high fatigue levels. Understanding the pathways among these symptoms and SI in OSA patients is important as it may contribute to better disease management. [Grant support: APVV-15-0719].

15:45 - 15:50

## Emotional, social and behavioral problems of children aged 10-17 living in out-of-home care in Russia

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### Background:

Well-being of children living in residential care institutions (RCI) is a continuing subject of concern in Russia. Despite the importance of this issue for both child welfare policy and developmental theory, studies of the effects of out-of-home placement on older children's well-being are still limited. This research focuses on influences of caregiving contexts on institutionalized children.

### Methods:

Data were gathered on 494 children aged 10-17 living in 21 RCI in Russia. Self-rated Strengths and Difficulties Questionnaire (SDQ) was used as a measure of emotional, social and behavioral problems in children. Caregiving contexts were measured with the help of specially designed questionnaire. We interviewed children individually and in small groups. Binary logistic regression controlled for age, gender, nationality and city was used to predict SDQ.

### Findings:

Every 5th child (18.8%) has abnormal SDQ score (20-40), and every 5th (19.6%) has borderline SDQ score (16-19). In logistic regression combined abnormal and borderline SDQ score was associated with experience of violence in RCI (AOR = 4.17, 95%CI=1.85 - 9.40), isolation (AOR = 4.30, 95%CI=1.80 - 10.26), low satisfaction with relationship with other children in RCI (AOR = 2.33, 95%CI=1.18 - 4.60) and limited participation in decision-making process (AOR = 2.05, 95%CI=1.08 - 3.86).

### Discussion:

Emotional, social and behavioral problems of children living in RCI were associated with caregiving contexts such as violence, participation and isolation. There is a need for better rights protection and psychosocial support for children in RCI. This research was supported by the Russian Science Foundation (project № 16-18-10372).

15:50 - 15:55

## Partner support: a key component for coping with anxiety and postpartum posttraumatic stress symptoms

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<sup>2</sup>Université de Toulouse, CERPPS, France

**Background:** While premature birth is a particularly stressful delivery, anxiety and trauma related disorders following such birth are less studied compared to mood disorders. The aim of the current study is to identify a typology of women who delivered prematurely based on perception of partner support and quality of marital relationship and examine whether these profile differ on posttraumatic stress disorder (PTSD) and anxiety symptoms. **Methods:** Within 4 weeks of the infant's hospital discharge, 110 French women who delivered prematurely completed questionnaires measuring perception of partner support and quality of marital relationship as well as anxiety and PTSD symptoms. Cluster analysis was used to identify groups of participants based on partner support and quality of marital relationship scores and groups were compared by their mean scores on anxiety and PTSD using ANOVAs. **Findings:** 3 clusters were identified: the first one was characterized by a perception of strong social support and quality of marital relationship, the second one was characterized by a perception of moderate partner support and the last one was characterized by a low level of partner support and a low quality of marital relationship. Our findings also highlight an impact of these profiles on anxiety and posttraumatic stress symptoms. **Discussion:** while preterm birth does not necessarily lead women to develop psychopathological symptoms, this study underlines that premature delivery might have a negative impact on women's well-being and suggest that partner support and good quality of marital relationship might be a key component for coping with stressful delivery.

15:55 - 16:00

## Psychological and psychophysiological characteristics of a mother as prognosticating factors of the child's health

V. Merenkova<sup>1</sup>, E. Nikolaeva<sup>2</sup><sup>1</sup>Bunin Yelets State University, Russia<sup>2</sup>Herzen State Pedagogical University, Russia

The reason for health differences in adults should be searched for in their childhood (Ben-Shlomo, Kuh, 2002). The health of a child at the early stages of ontogenesis and the social and economic environment in which the child lives influence his/her behavior in an adult life (Lynch et al., 1997). We made an attempt to understand which of the mother's characteristics enable us to forecast her child's health.

Subjects: 100 mother-child dyads, among them 95% children of the second year of life and 99% children of the first year of life were given particular diagnoses at birth. There were no children with genetic pathologies. Typical diagnoses were "encephalopathy" and "motor disturbance syndrome".

The set of the methods included: a test-inventory assessing relationship of a mother to a child of the first years of life (N.V. Vereshchagina, E.I. Nikolaeva); an inventory for emotional intelligence assessment (D.V. Lucien), a questionnaire for the social assessment of mother (her age, education, the number of children in family, anamnesis' data), analysis of medical records of children.

The regressive analysis showed that the probability of a diagnosis removal is linked to several variables, i.e. the younger and the better-educated a mother is, the more it is probable that her child's diagnosis will be cancelled. The more children a family has and the higher the child acceptance level shown by the mother are, the more likely it is that the child will fully recover during the first two years of life. Supported by RGNF by17-36-01056.

# Serious illness and chronic conditions in childhood and adolescence

15:30 - 17:00

Olivier Luminet



15:30 - 15:35

## Life engagement: a predictive variable of quality of life in adolescents survivors of cancer?

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<sup>2</sup>Université de Lorraine, France

**Background:** Quality of life (QoL) of adolescents survivors of cancer is likely to be affected by consequences of the disease (Reinfjell & al., 2009). Life engagement and behavior are particularly important dimensions in an individual's life (Carver, Scheier & Wrosch, 2005), which could affect QoL. In this context, this study aims to examine the impact of pediatric cancers on the current QoL and life engagement of adolescent survivors.

**Methods:** The questionnaires used were Life Engagement Test (LET) (Scheier, Wrosch & al., 2005) and the Pediatric Quality of Life Inventory (Varni, 1998). The objectives were: 1) To identify if LET is a predictive variable of a higher QoL among adolescents survivors of cancer; 2) To compare these results with those obtained by a control group; 3) To study the influence of mothers' perceptions of their children's QoL on adolescents' self-reported QoL.

**Findings:** Fifty-one adolescents with a past of cancer, and one hundred adolescents without a past of cancer answered the questionnaires. Compared to adolescents from the general population, adolescent survivors of cancer reach an equivalent level of QoL and get higher score on LET. Furthermore, the relationship between life engagement and adolescents survivors' self-reported QoL is partly mediated by the mothers' perceptions of their children's QoL.

**Discussion:** These findings show the importance of life engagement and mother's perceptions among adolescents survivors. Future research should allow us to understand better why some dyads experiencing after cancer appear to be more resilient than others.

15:40 - 15:45

## Postural orthostatic tachycardia syndrome (POTS) and disordered eating in adolescents

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<sup>1</sup>Mayo Clinic, United States

**Background:** Adolescents with POTS often experience disruptions in eating patterns associated with abdominal pain/nausea. These adolescents share several symptoms with adolescents with disordered eating/eating disorders (e.g., orthostatic intolerance, generalized weakness, dizziness/lightheadedness, headaches, fatigue). While the etiologies differ, these similarities may lead clinicians to misattribute starvation-induced orthostatic symptoms to POTS in patients who actually struggle with disordered eating. The purpose of this exploratory study was to examine whether differences exist between disordered eating symptomatology in adolescents with POTS/chronic pain compared to adolescents with chronic pain only.

**Methods:** Participants included 199 adolescents (M age=15.49 years, SD=1.69) consecutively admitted into an intensive pain rehabilitation program. Seventy-three adolescents were diagnosed with POTS/chronic pain, and 126 adolescents were diagnosed with chronic pain only.

**Results:** 17.8% of patients with POTS scored above the cut-off ( $\geq 20$ ) for disordered eating compared to 17.5% of patients with chronic pain. There was no difference between the two groups,  $t(197)=-.062$ ,  $p=.902$ . However, patients with POTS (M=0.85, SD=1.57) had significantly lower EAT-26 scores compared to the subset of patients with chronic abdominal pain (M=2.09, SD=2.83,  $p<.05$ ).

**Discussion:** Approximately 1/5 of patients with POTS evidence disordered eating and would benefit from eating disorder referral as disordered eating may interfere with recovery from POTS. Additionally, as patients with POTS reported less severe symptoms of disordered eating compared to patients with chronic abdominal pain, this study suggests that the overlapping symptoms between POTS and eating disorders may not obscure the identification of either disorder. Further research is needed to determine causality and best treatment options.

15:45 - 15:50

## Psychologists' perception of adolescents with serious illnesses and their transition to the adult healthcare system

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<sup>2</sup>Université de Montréal, Canada

**Background:** Psychologists play a key role in the organization of care and the trajectory of patients in pediatrics, especially in how well young patients with chronic or degenerative illnesses fare through the transition to the adult sector. Their perception of the transition period and current practice have never been systematically researched yet. The aim of this study is to describe pediatric psychologists' perceived facilitators and barriers to the transition period and review their professional practices.

**Methods:** We led a qualitative research inquiry with 10 pediatric psychologists working at Sainte-Justine UHC (Montréal, Qc, Canada). Participants took part in an one-hour individual semi-structured interview. Inductive thematic analysis of verbal transcripts was used to describe participants perceptions of the transition process, and identify facilitators and barriers of an adequate transition within their practice.

**Findings** Psychologists conceptualized transitioning according to three general themes: the concept itself, specific characteristics, and temporal markers. Perceived facilitators included long-term follow-up, professional autonomy and therapeutic alliance. Perceived barriers included hasty transition, adult services' accessibility and patients' resistance to change. Professionals recommended having a specific support transition unit and, most importantly, a consultant role in their own team in order to improve the transition process within their own practice and the organization of care.

**Discussion:** The results bear important practical implications for optimizing the transition process, including assessing transition readiness early, dedicating more time to teamwork and case discussions within the team, and fostering relationships with the future adult health care facility.

15:50 - 15:55

## Assessment and support for children with dual diagnosis of Down Syndrome and Autism Spectrum Disorder

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**Background:** Autism Spectrum Disorder (ASD) is still rarely identified in children with Down's syndrome (DS). However, specific autism diagnostic assessment have shown good sensitivity for detecting ASD in this population. DS is associated with mental retardation and with social, communicative and behavioural impairment making the dual diagnosis (DS-ASD) difficult. The lack of diagnosis deprives young children of an early and appropriate behavioural and developmental support. This study aimed to identify the specificities in the cognitive and socio-emotional development of young children with a dual diagnosis.

**Methods:** The cognitive and socio-emotional development of participants was assessed using the Socio-emotional and Cognitive Evaluation Battery. A Principal Component Analysis was performed on the scores of eighteen children with a dual diagnosis, twenty-five children with DS and twenty-one children with ASD.

**Findings:** On the one hand, the results highlight the existence of specific developmental profile in children with dual diagnosis DS-ASD compared to children with DS. On the other hand, the developmental characteristics of children with DS-ASD do not differ from children with ASD.

**Discussion:** This study offers a better knowledge of the developmental characteristics of children with dual diagnosis DS-ASD. Thus, it allows to propose personalized support for these children. Moreover, the results appeal to professional caregivers for increasing their awareness regarding the importance of early recognition of this dual diagnosis. It appears justified to evaluate ASD in young children with DS and to consider it as a primary disorder so as to offer them a more adapted evaluation, intervention and support.

15:55 - 16:00

## Neurocognitive functioning of paediatric patients with postural orthostatic tachycardia syndrome (POTS)

M. Tsai Owens<sup>1</sup>, K. Homan<sup>1</sup>, P. Fischer<sup>1</sup>, S. Hancock-Hall<sup>1</sup>, N. Sawchuk<sup>1</sup>, C. Harbeck-Weber<sup>1</sup>

<sup>1</sup>Mayo Clinic, United States

**Background:** Self-reported cognitive difficulties are common among adolescents with POTS. The few studies including objective measurement of neurocognitive functioning suggest orthostatic challenge negatively affects patients' attention and working memory. However, findings don't differentially support an explanatory mechanism (inadequate cerebral perfusion, perceived threat of POTS symptoms interrupting attention, or co-occurring depression/anxiety). This study will determine the prevalence of objectively measured neurocognitive weaknesses among adolescents with POTS and evaluate the effects of physiological/psychological contributors to neurocognitive functioning.

**Methods:** We are conducting a retrospective medical record review of 100 adolescents (ages 12-18) with POTS. Eligibility criteria include tilt table test confirmation of POTS, and completion of neurocognitive assessment (WASI/WASI-II, WRAML-2, CAVLT-2) and self-report measures of POTS symptom severity (COMPASS-31), depression (CES-DC), and anxiety (SCAS). Percentages of patients demonstrating objective weaknesses in working memory, visual-spatial memory, and/or verbal memory will be reported. Multiple regression analyses will determine the unique abilities of tilt table results, COMPASS-31, CES-DC, and SCAS to predict performance on neurocognitive tasks.

**Expected results:** The majority of patients will demonstrate objectively measured neurocognitive weaknesses. Comparing the relative contributions of tilt table results, COMPASS-31, CES-DC, and SCAS to the prediction of neurocognitive performance will provide an empirical basis for evaluating the three mechanisms proposed to explain patients' worsened neurocognitive performance.

**Current stage of work:** Conducting medical record reviews.

**Discussion:** Characterising the prevalence and domains of neurocognitive weaknesses experienced by adolescents with POTS can inform health/paediatric psychologists' recommendations regarding home and school accommodations. Understanding physiological/psychological factors contributing to neurocognitive weaknesses can inform interdisciplinary interventions.

16:00 - 16:05

## The impact of socioeconomic and income inequalities on adolescent gambling behaviors

M. Monaci<sup>1</sup>, L. Scacchi<sup>1</sup>, A. Vieno<sup>2</sup>, N. Canale<sup>2</sup>, M. Lenzi<sup>2</sup>

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<sup>2</sup>University of Padova, Italy

Problems associated with gambling have a social and geographical gradient, with those living in areas of greater deprivation, economically inactive and with lower income being more likely to experience harm. Economic inequality has been verified to be a health determinant, independent of poverty and household income. Little is known about the impact of socioeconomic inequalities on adolescent problem gambling. The purpose of the study is to investigate the contextual influences of income inequality on adolescent gambling severity in a large-scale nationally representative sample of Italian adolescents.

**Methods:** The data from the 2013-2014 Health Behaviour in School-aged Children Survey (HBSC) Study was used for cross-sectional analyses. A total of 20,791 15-year-old students completed self-administered questionnaires. Region-level data on income inequality (GINI index) and overall wealth (GDP per capita) were retrieved from the National Institute of Statistics (Istat).

Results underscored a North–South gradient for the prevalence of at-risk or problem gambling, with higher prevalence of problem gambling in the Southern/Islands/Central Regions (than in Northern Italy). Multi-level logistic regression, with students at the first level and regions at the second level, revealed that 15-year-olds in countries of high-income inequality were significantly more likely than their counterparts in countries of low-income inequality to be at-risk or problem gamblers.

**Conclusions:** Income inequality may have a contextual influence on adolescent problem gambling severity. Findings suggest that economic policies that affect the distribution of wealth within societies may indirectly influence adolescent gambling behaviors. Macroeconomic factors may have significant psychological costs that go beyond economic welfare.

16:05 - 16:10

## Perception of spousal support among parents of children with Autism Spectrum Disorder

H. Berel<sup>1</sup>, M. Gay<sup>1</sup>, S. Boukobza<sup>1</sup><sup>1</sup>Paris Nanterre, France

### Background :

Brobst et al (2009) show no difference on spousal support between parents of children with ASD and couples whose children do not have neurodevelopmental disorder. . However, findings are conflicting about the influence of children behaviour problems on couple's relationship : perceived spousal support and some children's behaviour problems are negatively related in Brobst research (Brobst al., 2009), perceived spousal support and some children behaviour problems are positively related : parents are more supportive with each other but they are less satisfied with their marital life (Bérel et Gay, 2016)

Aim : Better understand the influence of child's behaviour problems on parents marital life.

Hypothesis : Some behaviour problems will be positively related to perceived spousal support.

### Method :

N= 40 couples : 20 couples of parents whose children have ASD and 20 couples of parents with healthy children

### Materials :

Semi-structured interview and questionnaires : Spousal support (QSC, Brassard et Lussier,2011).

Marital Satisfaction : (RDAS, Dean et al, 1995), Social support (SSQ-6, Sarason, et al., 1983) ;

Child Behaviour (GECEN, Tassé, Girouard et Morin, 1999).

### Expected Results :

A negative relationship between Perceived spousal support and marital satisfaction in parents with ASD children, mediated by the children 's behaviour problems

### Discussion :

This study may show the mechanism of Autism Spectrum Disorder on marital dissatisfaction and lead to develop early help to improve their well-being and the well-being of their children.

# Health-related behaviours across the lifespan

15:30 - 17:00

Adriana Baban



15:30 - 15:35

## Frequency of alcohol use by youth: is perceived parental control an important predictor?

N. Dernovšček Hafner<sup>1</sup>, V. Bucik<sup>2</sup><sup>1</sup>University Medical Centre Ljubljana, Slovenia<sup>2</sup>University of Ljubljana, Faculty of Arts, Department of Psychology, Slovenia

**Background:** Among family factors, parental control is frequently mentioned as an important protective factor against alcohol use by youth. This study examines the influence of perceived parental control on the frequency of alcohol consumption by Slovenian youth.

**Methods:** A correlation study was used to analyze data gathered as part of the ESPAD international study, which was carried out on a representative sample of Slovenian secondary school students enrolled in the first year of secondary school in the 1998/99 (2,375 valid questionnaires) and 2002/03 (2,785 valid questionnaires) school years. The analysis of influence was established using linear regression analysis.

**Findings:** The regression coefficients showed a statistically significant negative influence of the component of perceived parental control; that is, knowledge of nights out and frequency of alcohol use by Slovenian youth in both periods studied. For 1999, the regression model explains 11.3% of the variance, and for 2003 18.6% of the variance in the frequency of alcohol use by youth. Regarding the component of perceived parental control (in 2003), which refers to determining precise rules for youth behavior at home and outside the home, it was established that this does not significantly influence the frequency of alcohol use by youth.

**Discussion:** The results show that the component of perceived parental control that refers to parents' knowledge of nights out reliably negatively predicts alcohol use by youth. It is advisable to take into account the findings when designing more effective health education programs for drug prevention aimed at the family.

15:35 - 15:40

## Drinking behavior of pregnant women and mothers of infant in Japan

K. Eto<sup>1</sup>, M. Asada<sup>2</sup>, M. Hayakawa<sup>3</sup>, N. Minagawa<sup>4</sup>, H. Takei<sup>5</sup>, T. Yamaga<sup>6</sup>, K. Sawada<sup>7</sup>

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<sup>6</sup>Yashima Gakuen University, Japan

<sup>7</sup>Faculty of Nursing, Shoin University, Japan

### Background:

Family environment has known as one of the main reason of alcohol misuse of children. However many research has shown the high correlation of father's alcohol use and child alcohol use, few research only targeted on drinking behavior of mothers in Japan. In this research, we investigated drinking behavior of mothers, particularly in expected mothers and mothers of infants for basic data for the alcohol prevention of children.

### Methods:

200 questionnaires were distributed for women who are expected mother or mothers of infant. The questionnaire was included new Kurihama Alcoholism Screening Test (new KAST), which can evaluated participants for "normal", "caution needed to alcoholism", "suspicious alcoholism" depended on the score.

### Findings:

Valid response was 100 (valid collection rate: 50.0%). 80(80.0%) of mothers were classified as "normal". On the other hand, 11(11%), 9(9.0%) were classified as "caution needed to alcoholism", "suspicious alcoholism" respectively.

### Discussion:

Apart from the fact that alcohol use during the period of pregnancy and lactation is directly affected their children's health, 20% of mothers has alcohol related problem. This results suggested that education about alcohol should be effective not only for today's health of children but also for the prevention of alcohol misuse of children.

15:40 - 15:45

## Energy drinks consumers—who they are? The profile of adolescents reporting regular energy drinks consumption

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<sup>3</sup>Olomouc University Society and Health Institute, Palacky University, Olomouc, Czech Republic

### Background

Energy drinks consumption has become a major public health issue during the last decade. Previous evidence showed that adolescents reporting regular consumption of energy drinks are at higher risk of several health and behavioural problems. However, literature dealing with demographic characteristics of regular energy drinks consumers is limited. Therefore, the aim of present study was to examine the association between several socio-demographic characteristics and regular energy drinks consumption in adolescents.

### Methods

Data from the Health Behaviour in School-aged Children study conducted in 2014 in Slovakia were analysed. Self-reports from the representative sample of 8,653 adolescents aged 11 to 15 years (mean age 13.28; 50.3% boys) were assessed. The association between energy drinks consumption and several socio-demographic characteristics was analysed using logistic regression modelling.

### Findings

Almost 20% of adolescents in our sample reported regular energy drinks consumption. Regular energy drinks consumers were more likely to come from incomplete families (Odds Ratio/95% Confidence Intervals: 1.5/1.17-1.98), to report lower education of mother and father (Odds Ratio/95% Confidence Intervals: 1.4/1.21-1.66; 1.2/1.10-1.48 respectively) and unemployment of mother and father (Odds Ratio/95% Confidence Intervals: 1.3/1.08-1.50; 1.5/1.22-1.99 respectively). Perceived socio-economic status of family nor urban-rural context was not associated with regular consumption of energy drinks in adolescents.

### Discussion

Regular energy drinks consumption in adolescents was associated with several family related characteristics such as lower education or unemployment of parents. Wider demographic factor such as socio-economic status or urban-rural context did not affect consumption of energy drinks. Preventive strategies should be aimed at vulnerable adolescents with specific family environment.

15:45 - 15:50

## Excessive internet use in youth subcultures: effect of family factors

D. Bobakova<sup>1</sup>, J. Holubcikova<sup>2</sup>, Z. Dankulincova Veselska<sup>1</sup>, A. Madarasova Geckova<sup>1</sup>

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**Background:** Youth subcultures are known for specific lifestyles, music preferences, shared values and behaviours of their members. Subculture affiliation seems to be associated with problem behaviours. In last decade internet became integral part of adolescents' lives and everyday internet use can easily become problematic. Excessive internet use seem to fit into the framework of clustering of problematic behaviours. However, this phenomenon was not studied in youth subcultures yet. Our aim was to assess the association of youth subcultures and excessive internet use and explore the role of family protective factors in this association.

**Methods:** We collected data on 15-year-old elementary school pupils (N=532; 49.6% boys; mean age=15.4) who participated in the Health Behaviour in School aged Children study in 2014. The association of subculture affiliation with excessive internet use was assessed by linear regression models and adjusted for gender, family well off, computer use, and parental monitoring, parental rules and family support.

**Findings:** Subculture affiliation was associated with excessive internet use ( $p < 0.01$ ). All examined protective factors (except of monitoring by father) significantly decrease the probability of excessive internet use. Adjustment for lack of protective factors explained part of association between subculture affiliation and excessive internet use, however, this association remained statistically significant.

**Discussion:** Our findings imply that protective factors play important role in prevention of excessive internet use but does not fully explain its association with subculture affiliation. However, preventive strategies targeting youth subcultures should take protective factors into account.

15:50 - 15:55

## Factors linked to tobacco smoking and alcohol drinking of juveniles

A. Janovska<sup>1</sup>, M. Bacikova-Sleskova<sup>2</sup>, B. Gajdosova<sup>1</sup>

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**Background:** Tobacco cigarettes and alcohol are the drugs of first choice of the youth. Many young people experience the consequences of smoking and drinking at an early age. This study aimed to explore the potential of self-control, parental monitoring, “prosocial” friends and certain ways of spending free time (playing computer games, reading and artistic activities) in explaining tobacco smoking and alcohol drinking of elementary school students.

**Methods:** A representative sample of 872 (56.8% female) elementary school students (age  $M = 13$  years) was collected within the project aimed at school-based universal prevention. The respondents completed the Self-Control Scale and they were also asked to answer questions concerning parental control, friends and ways of spending their free time. Binary logistic regression was used to analyze the data using experience with tobacco smoking and alcohol drinking as the dependent variables.

**Design:** A cross-sectional design was used.

**Findings:** Parental monitoring ( $p < 0.001$ ), self-control ( $p = 0.001$ ), having “prosocial” friends ( $p = 0.16$ ), spending free time by doing sports ( $p = 0.048$ ) or playing computer games ( $p = 0.019$ ) were all negatively associated to alcohol drinking of elementary school students. Smoking tobacco cigarettes seems only to be negatively associated to parental monitoring ( $p < 0.001$ ) and doing sports ( $p = 0.019$ ).

**Discussion:** The study contributes to the discussion about the role of a selection of protective and risk factors of tobacco smoking and alcohol drinking among juveniles by highlighting the importance of close relationships and spending free time meaningful way as a significant protective factors. The results are useful for creating and implementing prevention programmes.

15:55 - 16:00

## Body image and health complaints among adolescents: does the form of weight reduction behaviour matter?

Z. Dankulincova Veselska<sup>1</sup>, A. Madarasova Geckova<sup>1</sup>

<sup>1</sup>Department of Health Psychology, Faculty of Medicine, PJ Safarik University in Kosice, Slovakia

**Background:** Body image dissatisfaction was found to be associated with engagement in different forms of weight reduction behaviour among adolescents. Question remains, whether all forms of weight reduction behaviour (healthy and unhealthy) influence psychosomatic health in the similar way and whether this association goes through their life satisfaction. Aim of this study was therefore to explore association between body image dissatisfaction and psychosomatic health complaints among adolescents with the specific role of different forms of weight reduction behaviour and life satisfaction on this association.

**Methods:** We obtained data from 5th to 9th grade students in 2014 via the Health Behaviour in School-aged Children cross-sectional study in Slovakia (n=5,152, 13-16 years old, mean age=14.5, 50.1% boys). Hierarchical binary logistic regression models adjusted for age, gender and BMI were used to explore proposed associations of body image with unhealthy and healthy forms of weight reduction behaviour, life satisfaction and psychosomatic health complaints.

**Findings:** Body image dissatisfaction was associated with more frequent psychosomatic health complaints ( $p<0.001$ ). This association was mediated by low life satisfaction ( $p<0.001$ ) and engagement in unhealthy forms of weight reduction behaviour ( $p<0.001$ ).

**Discussion:** As is indicated by our results, focus on weight reduction behaviour is crucial when approaching adolescents with body image dissatisfaction and low life satisfaction, as especially unhealthy forms of weight reduction behaviour seems to have negative impact on their health.

16:00 - 16:05

## Exploring active ingredients in early-life health professional-delivered interventions to prevent childhood obesity: a systematic review

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**Background:** This review aims to synthesise the evidence for the effectiveness of health professional-delivered interventions which aim to reduce the risk of overweight and obesity in children under the age of two. Our objectives are to: (1) conduct a systematic review to evaluate the evidence for such interventions, and (2) explore what behaviour change theories and/or techniques are associated with intervention outcomes.

**Methods:** Eligible randomised or quasi-randomised controlled trials will be identified through systematic searches of electronic databases (including CINAHL, Embase, MEDLINE, PsycINFO, PubMed, Open Grey, Scopus, and Web of Science) and cross-checking reference lists of full-texts retrieved. Intervention details will be extracted according to the description of interventions outlined in the TIDieR reporting guidelines. Primary and secondary outcomes will be recorded in detail, including definitions and measures used by authors. Intervention procedures will be coded using the BCT taxonomy, version 1, while intervention functions will be coded using the Behaviour Change Wheel. The extent to which interventions use theory will be assessed using the Theory Coding Scheme. Methodological quality of studies will be assessed using the Cochrane Collaboration tool for assessing the risk of bias. If possible, a meta-analysis will be conducted using Review Manager. If data are not sufficiently homogenous, a narrative synthesis will be employed.

**Expected results:** The effectiveness of interventions, and their active ingredients, will be established.

**Current stage of work:** Abstract screening is underway.

**Discussion:** By better understanding the most effective and transferable components, early life obesity prevention interventions can be optimised/re-developed accordingly.

# Positive psychology interventions to improve well-being

15:30 - 17:00

Lena Fleig



15:35 - 15:40

## How positive psychology can invest health psychology by "méthode target"?

M. Regourd Laizeau<sup>1</sup><sup>1</sup>A2et plus, France

Positive psychology is the study of the conditions and processes that contribute to the flourishing or optimal functioning of people, groups, and institutions (Gable & Haidt, 2005). Salama-Younes (2011) defined sport and exercise psychology as the study of psychological influences on performance and participation in sports, exercise and other forms of athletic activity.

Coming from high level sport, Target (2012,2016) has built over 30 years of experience in developing several tools. Last year, his work was published under the title of "Mental coaching Bible". If it works for athletes, it can also be used by employees. We will present the model of mental performance and the challenge skill profile and see how these two tools can be related to scientific contents, and which parts of it could be integrated into health psychology. The support is composed of the management of emotions related to the individual's ability to get into the right emotion and cope with anxiety or stress, Energy that is related to the ability to manage relaxation, and develop this ability to better recover and Self-esteem that allows to develop a positive vision of self. The 2nd and 3rd level are related to motivation and confidence. Concentration is the stage of effective action, with its three stages: exploring the past, succeeding in action in the present, and planning the future. Next comes the communication that depends on individual mental performance. These 9 elements will be explored in the light of existing theoretical knowledge.

15:40 - 15:45

## Gratitude induction and death anxiety reconsidered

A. Honda<sup>1</sup>, Y. Hirose<sup>1</sup><sup>1</sup>Yamanashi-Eiwa College, Japan

Lau and Cheng (2011) reported that brief gratitude induction can reduce death anxiety but not positive and negative affect. They observed this phenomenon by using the between-subjects design and Chinese younger adults in Hong Kong. In this study, we tried to confirm their findings by using the within-subjects design and Japanese younger adults. Thirty college students completed three experimental conditions (gratitude, neutral, and hassle) in counterbalanced order. In each condition, participants were instructed to spend 15 minutes to reflect on past events and to write up to five events of designated category. Subsequently, they responded to the short version of the Profile of Mood States, and the WHO Subjective Well-Being Inventory, and the Death Attitude Profile-Revised. Results showed that the gratitude condition and the neural condition reported higher positive affect and lower negative affect than those in the hassle condition. And the results also showed that gratitude condition had no effects on the death attitude scale including the index of death anxiety. Lau and Cheng (2011) pointed out that the effect of gratitude induction may be specific to death anxiety, but not a general effect on emotional well-being. Because our findings did not correspond to those of Lau and Cheng (2011), further study is need to clarify whether brief gratitude induction can reduce death anxiety and promote emotional well-being.

15:45 - 15:50

## Sens et motif© An art-therapy device for a best quality of life

M. Lelievre<sup>1,2</sup>, J. Sudres<sup>1,3</sup><sup>1</sup>Psychology Department, CERPPS laboratory, France<sup>2</sup>University Toulouse2 Jean Jaurès, France<sup>3</sup>Université Toulouse 2 Jean Jaurès, France

Cancer treatment can have serious consequences for patients on a physical, psychological and social level. The french state is now focusing on improving quality of life (QoL) for people with cancer. From past research, art-therapy has proved its worth in oncology out-patient services. Improvement has been seen in respect of QoL (Monti et al., 2006), fatigue (Nainis et al., 2006) and the level of anxiety (Vella & Budd, 2011) following participation in art-therapy sessions.

This study compare 3 groups of 15 volunteer patients with cancer. One group practice an unstructured art-therapy, one practice "Sens et Motif"© (SEM) device and one control group.

SEM© device it's a 2-hour session by sense and one for a synthesis. Each session contain a relaxing time, a creation time and a debriefing time.

A standard assessment protocol submitted to participants in test and re-test, exploring their creative, emotional and physical spheres.

We expect to show :

- a general improvement for every participant,
- a significant difference between groups practicing art-therapy and control group in all dimensions,
- better results after practice of the SEM© device (objectives focusing on sensations and emotions) compared to the others
- a correlation between emotional expression, creativity development and QoL improvement.

SEM© program ending in the hospital, and the data collection is in progress.

We will demonstrate the validity of an art-therapy tool, acting on creativity and emotional expression for a best QoL. Adapted for patients with cancer, it can be presented to people suffering chronic diseases.

15:50 - 15:55

## Effects of mindfulness therapy on the perception and descriptions of daily experiences among depressed individuals

N. Rohnka<sup>1</sup>, P. Holas<sup>2</sup>, I. Krejtz<sup>1</sup>, J. Nezelek<sup>1</sup>, M. Rusanowska<sup>3</sup>

<sup>1</sup>University of Social Sciences and Humanities, Poland

<sup>2</sup>University of Warsaw, Poland

<sup>3</sup>Jagiellonian University, Poland

The main goal of the study was to examine changes in daily functioning of depressed individuals undergoing Mindfulness Based Cognitive Therapy (MBCT). Participants who met criteria for clinical depression were randomly assigned to either a training group (N=26) or a control group (N=30, a delayed treatment control). They completed an online diary for 7 days before and after the 8-weeks during which the training group received MBCT. At the end of each day, using 7-point scales, participants described the important events that happened to them that day and rated each event in terms of stressfulness, positivity, and how mindful they were during the event. Descriptions of events were analysed with Linguistic Inquiry Word Count (LIWC), a program that provided frequency counts of words in different categories. Multi-level analyses found that after mindfulness training, participants felt more mindful than they did at the pre-test, they perceived events as significantly more positive and less stressful, and they used significantly fewer negation and discrepancy words. There were no significant changes in the control condition for these measures. The results are discussed in terms of two conceptualizations of the treatment of depression – the decrease in cognitive distortions provided by Beck and the decrease in actual-ideal self-discrepancy proposed by Higgins.

15:55 - 16:00

## Effects of mentally subtracting positive events on emotions in Japanese college students

K. Hatori<sup>1</sup>, I. Ishimura<sup>2</sup>, M. Kodama<sup>1</sup><sup>1</sup>Saitama Gakuen University, Japan<sup>2</sup>Tokyo Seitoku University, Japan

### Background

This study examined the effects of mentally subtracting positive events on positive and negative emotion.

### Methods:

#### Participants

Twenty Japanese college students (10 male, 10 female) were randomly assigned to one of the two experimental conditions: 1) 12 (7 male, 5 female) were assigned the task of mentally subtracting (MS) present positive situations and 2) 8 (3 male, 5 female) were assigned the task of counting gratitude (CG) that had occurred during the previous week.

Measures: We used a Japanese version of the Mood-Emotion Rating Scale-20 developed by Fukushima and Takahashi (2003) which measures general positive and negative emotions.

Design: The experimental design used two independent variables—condition (MS and CG) and time (pre-session and post-session) and two dependent variables—positive emotion and negative emotion at pre-test and post-test.

Analysis: We conducted two-way ANOVA.

Findings: Mixed analysis of variance revealed that the MS group's negative emotion was significantly lower post-intervention compared to pre-intervention. Moreover, after the intervention, results of the MS group showed a significant increase in positive emotion compared to pre-intervention. We could not find any significant effect on negative and positive emotion for the CG group.

Discussion: Overall, the effects of MS intervention seemed to be superior to CG in this study. The results of this study were interpreted that people who imagined present good situations may not have occurred in their life improved more emotional status than people who simply counted present good situations. These results were same as previous study (Koo et al., 2008).

16:00 - 16:05

## Testing the effectiveness of a brief mindfulness intervention for intensive internet users

C. Quinones<sup>1</sup><sup>1</sup>Open University, United Kingdom

**Background:** While highly effective, Mindfulness Based Interventions are often time-consuming, hence not suitable for long hour workers who engage intensively with the internet as a leisure activity. Although some brief and online alternatives have emerged, they either have methodological limitations, or are targeted specifically at stress and relapse in addictions. The aim of this study was to test the effectiveness of a brief mindfulness intervention (10 minutes/day during 10 days) aimed at reducing initial signs of Compulsive Internet Use (CIU) in individuals who work long hours.

**Design:** A Randomized Controlled Trial (RCT) was conducted following CONSORT guidelines. A total of 178 participants were randomly allocated to either the mindfulness intervention, the muscular relaxation group and the control group. ANCOVA analysis were carried, pre-intervention variables were entered as control and the intervention group as a factor. The key dependent variables were post-intervention CIU scores (Meerkerk et al., 2010) and the 5 facet mindfulness questionnaire scores (Bohlmeijer, et al. 2011).

**Findings:** The mindfulness group experienced a significant decrease on internet addiction scores and increased on two mindfulness sub-scales (observation and non-reaction). Hence, the brief mindfulness intervention seemed to have been effective to reduce the early signs of CIU.

**Discussion:** Current mindfulness interventions are often costly and rather time demanding, hence only those who are highly motivated can benefit from it. These findings suggest that a very small investment of time can really make a difference in relation to our wellbeing.

# Quality of life and well-being after disease

15:30 - 17:00

Teresa Gavaruzzi

15:30 - 15:35

## Quality of life in patients with malignant diseases

M. Rukavina<sup>1</sup>, I. Crnković<sup>1</sup><sup>1</sup>University of Applied Health Sciences, Croatia

**Background:** Some patients with malignant diseases have difficulties in their physical functioning, social and emotional relationships and show symptoms of fatigue, pain and nausea, which can alter their quality of life. The aim of this research was to investigate the quality of life in patients with malignant diseases and assess differences between different diagnostic groups.

**Methods:** Subjects were 129 patients: 29 patients with colon tumour, 39 women with breast cancer, 35 patients after laryngectomy and 25 patients with lymphomas. We used the Personal Welfare Index (PWI) as well as the EORTC QLQ-C30 version 3.0 questionnaire for the quality of life self-evaluation.

**Findings:** The study shows that quality of life in patients with malignant disease are similar to those found in healthy population. There are no significant differences in quality of life in different diagnostic groups if measured with PWI. If we consider results obtained by EORTC QLQ, patients show some difficulties in different areas of functioning. They report symptoms of fatigue, nausea and financial difficulties, as the most present.

**Discussion:** The results confirm that patients with malignant disease show some difficulties in various area of functioning, with emotional functioning being the lowest. Women with breast cancer show lowest results in all aspects of functioning and have highest rates of symptoms.

**Conclusion:** Improving quality of life in patients with malignant disease requires multidisciplinary approach. Measures that assess difficulties related with specific disease can offer more information on problems those patients face, which can be useful in treatment and rehabilitation.



15:35 - 15:40

## Women with family cancer history are at risk for poorer physical quality of life

I. Pawlowska<sup>1</sup>, A. Banik<sup>2</sup>, R. Schwarzer<sup>3</sup>, K. Zarychta<sup>1</sup>, A. Luszczynska<sup>1</sup>, R. Cieslak<sup>1,4</sup>

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<sup>3</sup>Freie University Berlin, Germany

<sup>4</sup>University of Colorado at Colorado Springs, United States

**Background:** We investigated the determinants of trajectories of self-efficacy and physical symptoms related to lung cancer (a quality of life aspect) among patients with non-small cell lung cancer (NSCLC). It was hypothesized that gender and immediate family cancer history would have synergistic effects on symptoms reported by patients with NSCLC. Women with family cancer history were expected to be at risk of poorer physical functioning.

**Methods:** One hundred and two men (n = 52, 51%) and women (n = 50, 49%) with NSCLC who underwent surgery aimed at removing lung tumor provided their responses at 3-4 days after surgery, 1-month follow up and 4-month follow up. Physical quality of life (QLQ-LC13) and self-efficacy for managing illness served as dependent variables.

**Findings:** Mixed-models analysis indicated that trajectories of physical quality of life (symptoms of lung cancer) as well as self-efficacy were unfavorable among women with family cancer history.

**Discussion:** Among NSCLC patients, gender and family cancer history may be considered basic screening criteria for identifying groups of patients at risk for poorer physical (higher level of physical symptoms related to lung cancer) and lower incline of self-efficacy after cancer surgery.

15:40 - 15:45

## Development of a comprehensive psychosocial model to predict quality of life of Breast cancer patients

H. Zamanian<sup>1</sup>, M. Daryaafzoon<sup>2</sup>, S. Foroozanfar<sup>3</sup>, M. Amini<sup>4</sup>, R. Andikolaei<sup>5</sup>

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<sup>4</sup>Department of Psychology, University of Tehran, Tehran, Iran

<sup>5</sup>Health Psychology & Behavior Medicine Research Group, Tehran University of Medical Sciences, Tehran, Iran

### Background:

There is few comprehensive models to predict quality of life of breast cancer patients based on psychosocial factors. The aim of this mixed method study was to develop a new psychosocial model to predict quality of life of these patients.

### Methods:

This study had three phases: first in a grounded theory qualitative study on 29 participants, themes/subthemes of predicting factors and the provisional model were developed. Then revised by a systematic review of 122 included papers (from 1569 screened papers). Then the confirmed predictors (18 variables) were assessed in a multi-center cross-sectional study along with quality of life (FACT-B) on 224 breast cancer patients to develop the final model by structural equation modeling (SEM).

### Findings:

The main themes after grounded theory and systematic review were "cognitive-emotional" factors such as "coping, body image, Depression/anxiety and concerns", "existential-social" factors such as "spiritual well-being, social support and sense of coherence" and innate factors of "personality and stress".

The mean age in third phase was 47.08(SD=9.08). After SEM, in final confirmed model, "spiritual well-being and problem-focused coping" were mediators of effect of "body image, cancer concern, stress and social support" on quality of life and "emotional stability as a personality factor", influenced some of these factors. 78% of quality of life variance was predicted by our SEM model and its psychosocial factors.

### Discussion:

Therapeutic interventions targeted our psychosocial model could be an appropriate strategy to improve quality of life of these patients. Cross-cultural larger studies are suggested to better develop this new model.

15:45 - 15:50

## The mental health of patients with Hereditary Angioedema (HAE)

P. Adams<sup>1</sup>, A. van Wersch<sup>1</sup>, S. Kilinc<sup>1</sup>

<sup>1</sup>Teesside University, United Kingdom

**Background:** Hereditary Angioedema (HAE) is caused by a deficiency in the C1 inhibitor triggering episodes of edema. These attacks are life threatening due to inflammation of the larynx. HAE affects up to 1 in 100,000 so little is known about the psychological impact. The study was designed to investigate how living with HAE impacts on the patient's mental health.

**Methods:** Patients will be over 18 with a diagnosis of HAE and living in the UK, they will be recruited through HAE UK by an online survey. A mixed measures design will be used, incorporating the generalised anxiety disorder assessment (GAD-7) and the Depression Scale (CES-D10). Participants will be invited to share an account of any information they perceive as relevant; a thematic analysis will analyse the accounts. Thirty participants are anticipated; of these 5 with the poorest mental and 5 who have coped the best will be invited for interview, which will be analysed through descriptive phenomenology.

**Expected results:** The questionnaire results are expected to reveal that 40% of the participants are experiencing depression and high levels of anxiety due to attacks, especially of the larynx. Those HAE patients who are able to control attacks may report low levels. The interviews might reveal that patients who experience numerous and severe attacks will report poorer mental health than those who can control their attacks.

**Current stage of work:** awaiting ethics approval

**Discussion:** There might be a link between patients with HAE and mental health which needs further examination.

15:50 - 15:55

## Factors influencing the well-being of adult Atopic Dermatitis patients

N. Kamba<sup>1</sup>, R. Ishikawa<sup>2</sup><sup>1</sup>Kyoto Koka Women's University, Japan<sup>2</sup>J. F. Oberlin University, Japan

**Background:** Poor well-being is one of the serious problems that adult patients of Atopic Dermatitis (AD) face. To provide care for patients with AD, factors influencing their psychological aspects need to be investigated. This study examined the effects of social support and illness-related cognition on the well-being of such patients.

**Methods:** In total, 153 patients (70 males, 83 females, aged 16–65 years;  $M = 32.77$ ,  $SD = 9.82$ ) were requested to complete the questionnaire regarding the symptoms of AD, Family Support Scale for Adult Atopic Dermatitis Patient (FaSS-AD), Friend Support Scale for Adult Atopic Dermatitis Patient (FrSS-AD), Negative Cognition Scale for Atopic Dermatitis (NCS-AD), Positive Cognition Scale for Atopic Dermatitis (PCS-AD), Dermatology Life Quality Index (DLQI) and Self-Positiveness Scale (SPS).

**Findings:** Structural Equation Modelling was applied to investigate the significant relations among variables, which revealed the following results: (1) the symptoms of AD had a negative influence on SPS through NCS-AD and DLQI; (2) social support was directly and positively associated with SPS; and (3) social support had a positive influence on SPS through PCS-AD.

**Discussion:** This study suggests that intervention aimed to reduce negative cognition, encourage positive cognition towards AD and increase perceived social support could be useful in promoting such patients' well-being.

15:55 - 16:00

## A cognitive Predicting model of quality of life among adolescent survivors of childhood cancer

H. Majidi Tehrani<sup>1</sup>, H. Zamanian<sup>2</sup><sup>1</sup>Tehran university of medical sciences, Iran<sup>2</sup>Qom University of Medical Sciences, Iran

**Background:** Cancer is a chronic and threatening condition for quality of life. Present study aimed to examine some cognitive factors that affect survivor's quality of life, and explain the mediating role of cognitive control strategies and the impact of cancer in relation to experiences of the disease and quality of life in survivors.

**Methods:** In this cross-sectional study 142 adolescent survivors of cancer by using a convenient sampling method included. Data collection measures were Perceived Illness Experience Scale (R-PIE), the Impact of Cancer scale (IOC-CS), the Cognitive Control Strategies Scale CCSS) and, the quality of life questionnaire in survivors of cancer (QOL-CSV).

**Findings:**Structural equation modeling showed a negative significant correlation between experience of cancer and quality of life ( $p < 0.01$ ). And the indexes of the model (the role of mediator of coping strategy and impact of cancer between experience of cancer and quality of life) are acceptable, but are not good fitness and enough.

**Discussion:**The majority of Iranian adolescent survivors of cancer in childhood need more attention, understanding the factors affecting their quality of life can improve prevention and treatment strategies and may guide the support required by this population.

16:00 - 16:05

## Patients with mild polyposis coli: long term quality of life after surgery vs. endoscopy

T. Gavaruzzi<sup>1</sup>, F. Giandomenico<sup>2</sup>, A. Maritan<sup>2</sup>, F. Celotto<sup>2</sup>, E.D. Urso<sup>2</sup>, I. Mammi<sup>3</sup>, A. Perin<sup>2</sup>, A. Barina<sup>2</sup>, M. Zuin<sup>2</sup>, L. Lotto<sup>4,5</sup>

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**Background:** Patients with multiple colorectal adenomas (10 to 100 polyps) have a high risk of colorectal cancer. Treatments include: endoscopic management (EM, conservative treatment) and surgical treatment (SU): segmental colectomy or hemi-colectomy (SC, less invasive treatment) or total or subtotal colectomy (TC, more invasive treatment). The aim of this study is to assess the long-term quality of life (QoL) of these patients, comparing patients who underwent different treatments, and comparing them to the general population.

**Methods:** Design: single-centre observational study. Participants: 34 patients with  $\geq 10$  years from diagnosis (endoscopy:  $n=10$ ; segmental colectomy:  $n = 10$ ; total colectomy:  $n=14$ ). Measures: EORTC-QLQ C30, EORTC-QLQ CR29, MSKCC questionnaire for bowel functioning. Analyses: Non-parametric tests (Mann-Whitney U test, Kruskal-Wallis test, Chi squared) and clinical differences ( $\geq 10$  points) for comparison with the general population on EORTC-QLQ C30 scores.

**Findings:** EORTC-QLQ C30: Patients have more constipation (particularly EM and SC patients) and more diarrhoea (particularly TC patients) than the general population. TC patients have significantly more diarrhoea ( $p=.002$ ) and less constipation ( $p=.051$ ) than the both EM and SC patients. EORTC-QLQ CR29: TC patients have significantly higher stool frequency than other patients ( $p<.001$ ). MSKCC: SU patients have worse total bowel function score than EM patients ( $p<.001$ ), with TC patients exhibiting worse scores than SC patients ( $p<.001$ ). The same pattern was found for the frequency, dietary and urgency/soilage scales.

**Discussion:** The differences emerged in this study pertain mainly to patients' bowel function and symptoms related to defecation issues, with scores correlated to the invasiveness of the treatment.

# Predictors of healthy and (un)healthy behaviors

15:30 - 17:00

Irina Todorova

15:30 - 15:35

## The influence of trait-anxiety and outcome expectancies on tobacco consumption

A.M. Annoni<sup>1</sup>, G. Andrea<sup>1</sup>, L. Pancani<sup>1</sup>, M. D'addario<sup>1</sup>, P. Steca<sup>1</sup>

<sup>1</sup>University of Milano - Bicocca, Italy

**Background:** Tobacco addiction is complex phenomenon and it is the result of the interaction between personality and cognitive factors. Trait anxiety and outcome expectancies (i.e., positive and negative consequences that could occur after quitting smoking) could be both effective in predicting tobacco addiction. The main aim of this longitudinal study was to investigate the influence of trait anxiety and quitting-smoking expectancies on tobacco consumption in a group of young smokers.

**Methods:** A sample of 185 smokers (131 women; mean age=24.44, ds=4.18) completed a self-reported questionnaire at three time points, a baseline assessment and two follow-ups at 3 and 9 months. The questionnaire included measures of trait anxiety, positive and negative outcome expectancies and daily cigarettes consumption. Path-analysis models were employed to explore relationships among constructs.

**Findings:** The results showed that positive expectancies associated to quitting smoking did not reduce the daily tobacco consumption at any time point. On the contrary, negative expectancies associated to quitting smoking played a significant role in increasing smoking behavior, and a nonlinear relationship between trait anxiety and tobacco addiction was found. Furthermore, higher levels in trait anxiety were related with the perception of more negative consequences and with more cigarettes smoked per day. The final model fit the data adequately:  $\chi^2(20) = 40.542$ ,  $p = .004$ ; CFI = .967; TLI = .945; RMSEA = .075.

**Discussion:** The nonlinear relationships between trait anxiety and tobacco addiction, as well as the negative expectancies' role, could improve the understanding of the decisional processes involved in quitting smoking.



15:35 - 15:40

## Binge drinking and associated risk behaviors amongst youth in three ethnic groups in Malaysia

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<sup>3</sup>Mona, Malaysia

**Objectives:** To investigate alcohol consumption patterns and associated risk amongst youth.

**Methods:**

CDC Youth Risk Behavior Survey was adapted and translated into Bahasa Malaysia. The self-administered questionnaire collated information on socio-demographics characteristics and risk behaviors associated with alcohol consumption. Stratified and convenience sampling was used to recruit youth across 6 sites, in Klang Valley, Malaysia. Study findings consisted of 326 respondents: 103 Malays, 111 Chinese and 112 Indians; with 171 (52%) male and 155 (48%) female.

**Results:**

Mean age of the respondents was 21 years. Current consumers, were 6 times more likely to ride in an alcohol influenced driver's vehicle, and 10 times more likely to drive a vehicle themselves after consuming alcohol. Twenty percent of the youths surveyed are binge consumers: 79% of these binge drinkers were male. More than half (54%) of the binge drinkers were Indians followed by Chinese at 39% and Malays at 8%. Up to 44% of the youths were sexually active, highest proportion in binge drinkers (73%). Those who binge drink were nearly 3 times more likely to be forced into sexual intercourse (OR=2.79: 95%CI=1.02-7.65) and 3.5 times more likely forced to do sexual acts than non drinkers (OR=3.54: 95%CI=1.55-8.06). Binge consumers were also 17.5 times more likely to smoke compared to current consumers (OR=4.40 9% CI=1.48-1313).

**Conclusion:**

Binge consumption among youth is associated with a myriad of behavioral risk factors and alcohol-related negative consequences. Multiple strategic approaches that address respective ethnic groups, cultural norms and gender-based differences could improve the efficacy of preventive interventions.

15:40 - 15:45

## Understanding oral health behaviour – psychological predictors of systematic toothbrushing behaviour

S. Ebel<sup>1</sup>, H. Blaettermann<sup>1</sup>, D. Harnacke<sup>1</sup>, U. Weik<sup>1</sup>, J. Margraf-Stiksrud<sup>2</sup>, R. Deinzer<sup>1</sup>

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<sup>2</sup>Philipps University Marburg, Germany

**Background:** Toothbrushing is an important health behaviour which is necessary to prevent not only caries but also gum diseases such as gingivitis and periodontitis. Although most people brush their teeth regularly, there is a high prevalence of gum diseases in western countries. Previous research revealed that systematic toothbrushing best predicts oral cleanliness. In this study, psychological variables are investigated as potential predictors of systematic toothbrushing behaviour. This approach might help to generate hypotheses how to target interventions more successful and to identify groups with special treatment needs.

**Methods:** N=96 18-year olds filled out questionnaires regarding toothbrushing self-efficacy, decisional balance (pros and cons), dental anxiety and knowledge regarding periodontal diseases. The criterion variable was systematic toothbrushing behaviour operationalized by the degree of evenness of brushing time across the different brushing locations. This variable has been derived from the same study group and shown to be a significant predictor of oral cleanliness. Backward regression analysis was performed to assess the predictive values of the psychological variables.

**Findings:** The final regression model explained 17% of the variance of systematic toothbrushing behaviour ( $F=6.291$ ;  $p=.001$ ). In particular, dental anxiety ( $\beta = -0.301$ ), self-efficacy ( $\beta = 0.184$ ) and knowledge of risk factors for developing a periodontitis ( $\beta = 0.169$ ) were included as predictors.

**Discussion:** Results indicate that future oral hygiene interventions should focus especially on anxious individuals and those with lacking self-efficacy. Additionally, educating patients regarding gum diseases such as periodontitis should be included in future interventions.

15:45 - 15:50

## Using video observation to understand oral hygiene behaviour – how do 18-year-olds brush their teeth?

U. Weik<sup>1</sup>, H. Blaettermann<sup>1</sup>, S. Ebel<sup>1</sup>, D. Harnacke<sup>1</sup>, J. Margraf-Stiksrud<sup>2</sup>, R. Deinzer<sup>1</sup>

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<sup>2</sup>Philipps University Marburg, Germany

**Background:** Due to German prophylaxis programmes provided from kindergarten until the age of 18 years they are suspected to be able to brush their teeth sufficiently at the age of 18. However, earlier research indicates that they apparently don't. In order to better understand potential reasons, a video analysis of tooth brushing behaviour was performed.

**Methods:** N=96 18 year-olds were instructed to brush their teeth as good as possible while being videotaped. Afterwards, a dentist assessed oral cleanliness (percentage of sites without plaque). The videos were analyzed by two calibrated observers with respect to brushing duration, brushing locations (in total 12) and brushing movements (horizontal, circular, vertical).

**Findings:** Participants brushed their teeth on average for 207±9 seconds. However, oral cleanliness was achieved at only 30±12% of sites. When splitting the whole mouth into 12 regions of interest, only 10 participants managed to brush all these regions by more than 5 seconds while 50% reached no more than 7 out of 12 by that time. Even though horizontal movements are not those predominately recommended ones, a considerable percentage (40±29%) of brushing time was spent by such movements.

**Discussion:** Data analyses indicate problems in teaching children a systematic brushing behaviour. Even though they learn to spend a considerable time with brushing this brushing time is not evenly distributed across all regions of interest. This apparently results in persistent plaque. The present research demonstrates that a thorough analysis of behaviour performance might be a necessary step in behaviour education and health psychology interventions.

15:50 - 15:55

## Benefits of social non-drinking identified by British university students: a mixed methods study

D. Conroy<sup>1</sup>, R. de Visser<sup>2</sup><sup>1</sup>Birkbeck University of London, United Kingdom<sup>2</sup>University of Sussex, United Kingdom

**Background:** Promoting the benefits of not drinking alcohol during social occasions where peers may be drinking ('social non-drinking') may support more moderate drinking among young people. This mixed methods paper addresses two research questions: (1) "what benefits of social non-drinking are identified among young people?" and (2) "is endorsing a particular category of benefit of social non-drinking associated with drinking behaviour or drinking beliefs?". **Methods:** Analyses were conducted on an existing dataset drawn from an intervention study intended to encourage moderate drinking among students. Free text responses were acquired from 534 young people aged 18-25 years old who routinely drink concerning benefits of social non-drinking alongside measures of recent drinking behaviour and psychological predictors of harmful drinking. Data were subjected to template analysis to identify potential benefits of social non-drinking. Links between endorsed overarching categories of benefit of social non-drinking and psychological predictors of harmful drinking were assessed quantitatively. **Findings:** Template analysis revealed four overarching thematic categories of endorsed benefits of social non-drinking: (a) gaining improved physical and psychological health; (b) feeling more positive about who you are; (c) having stronger friendships and peer relationships; and (d) having enhanced ability to invest in future goals. Quantitative analysis suggested that, among men only, endorsing having stronger friendships as a benefit of social non-drinking was associated with increased intention to heed government drinking recommendations in the next month ( $\beta = 0.21$ ,  $p = .006$ ). **Conclusions:** Study implications are considered in relation to promoting moderate alcohol use among young people on university campuses.

# Underlying cognitions for behaviors in the illness context

15:30 - 17:00

Konstadina Griva

15:30 - 15:35

## Determinants of antibiotic prescribing for URTIs among emergency department physicians: a qualitative analysis

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Upper Respiratory Tract Infections (URTIs) account for a substantial proportion of attendances at emergency departments. Although the majority are due to viruses, about one-quarter of URTI patients were inappropriately prescribed antibiotics at emergency departments. It is therefore imperative to understand factors influencing prescribing decisions, in order to develop effective interventions to reduce inappropriate antibiotic use.

In-depth interviews were conducted using a semi-structured interview guide on purposively sampled junior physicians working at the emergency department in a 1600-bed adult acute-care general hospital in Singapore. In addition to questions regarding the clinical management of URTI cases, physicians were asked about the antibiotic prescribing practices at the emergency department. Responses were transcribed in verbatim and analysed using thematic analysis.

Data saturation was reached with nine physicians. Using the Social Ecological Model, the physician's decision on antibiotic prescribing for URTIs were found to be influenced by individual, interpersonal, organizational, and community level factors. Physicians were cognizant of departmental norms of not prescribing antibiotics for URTIs. However, they still prescribed antibiotics when uncertain of patients' diagnoses, treating older patients with comorbidities, and for demanding patients especially when they were time-strapped. Physicians highlighted the need for more public education and awareness on the management of URTIs.

When faced with time and patient pressures, physicians were likely to prescribe antibiotics in spite of departmental norms. To reduce inappropriate antibiotic prescribing, it is important to educate patients on the viral cause of URTI and to dispel misconceptions on the use of antibiotics in the treatment of uncomplicated URTIs.

15:35 - 15:40

## What are the obstacles and aids to participation in colorectal cancer screening? A qualitative study

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**Background:** Early detected, colorectal cancer can be cured in nine cases out of ten, but it remains the second leading cause of cancer mortality in France (HAS, 2013). In this context, participation in organized screening must be improved. Following the recent change of screening test (change from Hemocult II to immunological test) it seems important to focus on the changes in the practices of users. Based on the Theory of Social Representations (Jodelet, 1984), this study aims to identify the main obstacles and facilitators to participation of screening.

**Methods:** Six focus groups were conducted with individuals from the general population (29 volunteer participants, recruited thanks to a French screening structure). A thematic content analysis (Bardin, 1993) and a discourse analysis (IRaMuTeQ software) were performed.

**Findings:** The main obstacles to screening that emerge from the analysis are: the procrastination and the lack of time (necessity to visit the general practitioner), but also the fact that colorectal cancer refers to a part of the body linked to a taboo, and considered dirty. Conversely, the main aids to participation are: the ease of the new test, having an entourage encouraging screening (relatives and general practitioner) and nudging (free test and appointment reminder by mail every two years). During the focus groups, exchanges were fed by the narration of experiences of cancer lived by the participants themselves or by their relatives.

**Discussion:** This study allows a better understanding of adherence to screening and issues about test change through the analysis of social representations.

15:40 - 15:45

## Does stress management behaviour model based on HAPA predict Japanese high school students' stress response?

Y. Shimizu<sup>1</sup><sup>1</sup>International Christian University, Japan

The aims of this study were to examine a stress management behavior model and to investigate the relationship between stress management behaviour and stress response of Japanese high school students.

The subjects of 314 Japanese high school students were asked to answer a questionnaire composed of socio-demographic questions and stress management behaviour and stress response questions based on Health Action Process Approach (HAPA). Confirmatory factor analyses and reliability analyses were conducted in order to confirm the fit indices of 8 scales: Self-efficacy, Outcome Expectancy(Pros & Cons), Risk Perception, Intention, Planning, Stress Management Behaviour and Stress Response. Covariance structure analyses were performed to confirm the acceptability of the stress management behaviour model.

The results of the analyses showed that each of the eight scales had a one- to five-factor structure with acceptable structural validities and reliabilities and that the stress management behaviour model yielded acceptable fit indices. It is also found that Risk Perception and Outcome Expectancy(Pros) were positively associated with Stress Management Behaviour via Intention and Planning while Self-efficacy had direct positive association with Planning and Stress Management Behaviour. Outcome Expectancy, both Pros and Cons, and Risk Perception were found to have negative association with Stress Response via Intention, Planning, Stress Management Behavior.

The results above indicate that the stress management behaviour model can be useful in predicting the stress response of Japanese high school students and imply that understanding effect from stress, good or bad, can prepare their mind and alter their behaviour to better cope with stress.



15:45 - 15:50

## What do fibromyalgia women believe about walking behaviour? Evidence based tools for intervention

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<sup>1</sup>Miguel Hernández University, Spain

<sup>2</sup>Rey Juan Carlos University, Spain

<sup>3</sup>Miguel Hernández, Spain

**Background:** Beliefs constitute accessible information that is relevant to the behaviour on which we will be targeted to produce behavioural change. Walking is a moderate-intensity exercise with demonstrated positive health outcomes in patients with fibromyalgia. Our aim is to identify the behavioural and control beliefs relevant comparing intentions and walking behaviour.

**Methods:** Self-reported measures of beliefs, intention developed using Theory of Planned Behaviour were completed by 219 women with fibromyalgia (T1) and seven weeks later they reported their walking behaviour (T2). Difference analyses were conducted.

**Findings:** Comparing to low intention in T1, high intention group showed higher scores in behavioural beliefs about walking: “my health will improve”, “my mood will be better”, “I will feel more active and agile”, “I will feel more positive”, “I will be good to distract me”, “my circulation will improve”, “I will lose weight”, “it will strengthen my muscles” (U = [3956, 4402];  $p \leq .01$ ). Comparing to low behaviour, women reporting walking in T2 have showed lower scores in inhibitor control beliefs: “tiredness”, “being in pain” and “my mood: sadness, stress, worries” (t = [2.0, 2.6];  $p = .05$ ).

**Discussion:** Motivational interventions could benefit of eliciting those positive consequences of walking, and implementing strategies to manage specific inhibitors.

This study has been supported by MINECO (PSI2011-25152)

15:50 - 15:55

## An integrated approach towards behavior-change: the influence of implicit and explicit cognitions on red-meat consumption

C. Muschalik<sup>1</sup>, I. Elfeddali<sup>1</sup>, H. de Vries<sup>1</sup>

<sup>1</sup>Maastricht University, Netherlands

**Background:** Social-cognitive models which focus on explicit cognitions are mostly used to explain and change health-related behaviors. However, many aspects of behavior are controlled by less conscious and automatic cognitions. Although confirmed by research, there have been hardly any attempts to integrate implicit attitudes in theories that are used for health promotion. The aim of this study is to investigate the relationship between implicit attitudes and explicit cognitions, and to integrate both explicit and implicit cognitions in a unified model that predicts red meat consumption.

**Method:** A quantitative longitudinal study, consisting of a baseline measure and two follow-ups will be conducted among 1000 persons. The baseline and follow-ups are composed of a reaction-time task to assess implicit attitudes and a questionnaire to assess explicit cognitions and red meat consumption. Multiple hierarchical regressions will be used to assess moderations between implicit and explicit factors such as attitudes, norms and self-efficacy.

**Expected results:** Based on a former study concerning physical activity, we expect implicit attitudes to moderate the relations between explicit cognitions and intention.

**Current stage of work:** The questionnaire and the reaction-time task are currently prepared. The first data collection will be in March 2017.

**Discussion:** Social-cognitive theories explain around 40% of variance in behavior. More research is needed to assess factors which may explain additional variance, and automatic cognitions such as implicit attitudes are strong candidates. If these could be integrated in social-cognitive theories, this would aid in the development of even better and more successful interventions for behavior change.

# Prevention and interventions in health psychology

15:30 - 17:00

Evangelos Karademas

15:30 - 15:35

## The role of behavioural science in combatting antimicrobial resistance

A. Schneider<sup>1,2</sup>, S. Michie<sup>1</sup><sup>1</sup>University College London, United Kingdom<sup>2</sup>NIHR HPRU in Evaluation of Interventions, United Kingdom

**Background** - Antimicrobial resistance (AMR) is a serious and increasing problem worldwide, which is driven to a major extent by behaviours such as inappropriate use and prescribing of antibiotics.

**Method** - A research programme carried out within the interdisciplinary Health Protection Research Unit in Evaluation of Interventions uses the Behaviour Change Wheel and the Medical Research Council guidance for complex interventions as frameworks to change AMR relevant behaviours at different levels of the health care setting. As a starting point, a behavioural analysis identifies key behaviours and associated facilitators and barriers. This forms the basis for selecting intervention strategies and proposing hypotheses about their mechanisms of action.

**Findings** - The following projects will be used to illustrate the different steps of applying behavioural science to designing and evaluating AMR interventions: (1) Identifying key influences on antibiotic consumption and prescribing in community and clinical settings in rural China; (2) Developing and evaluating a parent-targeted online intervention to reduce unnecessary primary care visits and antibiotic prescribing for paediatric respiratory tract infections; (3) Investigating barriers to and facilitators of implementing a toolkit for the early detection, management and control of Carbapenemase-producing Enterobacteriaceae in an acute hospital setting.

**Discussion** - Changing the behaviour of patients, health care professionals and organisations is a key component of combatting AMR and can be promoted through interdisciplinary collaborations drawing on behavioural science evidence and theory.

15:35 - 15:40

## Mechanisms of action in group interventions study: framework for designing and delivering group-based health interventions

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<sup>4</sup>University of the West of England, United Kingdom

**Background:** Groups are commonly used to support and promote health-related behaviour change. Considerable research has been devoted to exploring intra-personal processes underpinning behaviour change but group-specific, inter-personal change mechanisms remain poorly understood. This study aimed to develop a framework of change processes in group-based health interventions, and identify examples of these processes, and practical strategies used to facilitate them, in group-based weight-loss programmes.

**Methods:** A conceptual framework was developed through: (1) review of literature, including theories of group processes, taxonomies of behaviour change techniques, qualitative studies, and assessment tools relevant to group interventions; (2) consultations with, and feedback from, researchers, group participants and facilitators; and (3) coding of intervention manuals and 38 transcripts of group sessions (sampled for diversity) from 3 studies of group-based weight-loss interventions. Examples of change processes and facilitation strategies were identified through qualitative analysis of the 38 transcripts.

**Findings:** Key concepts and processes in group-based health interventions were synthesised into a conceptual framework, and categorised into (1) group dynamic and development processes, (2) inter-personal change processes, and (3) intra-personal change processes. Practical strategies relevant to (1) group design, (2) group set-up, (3) group facilitation, and (4) group closure were identified.

**Discussion:** The framework integrates a large and diverse literature on change processes in groups, and provides a practical tool for researchers and practitioners working with group-based health interventions. The framework, and identified practical strategies, can be used to design and deliver better group-based health interventions, support training of group facilitators and guide evaluations of group-based interventions.

15:40 - 15:45

## Developing an evidence-based pilot infant feeding behaviours intervention for childhood obesity in primary care

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**Background:** Childhood obesity is a serious public health concern. Early infant feeding practices are modifiable factors that can influence childhood overweight and obesity. The aim of this research is to develop, implement and evaluate an infant feeding intervention for childhood obesity.

**Methods:** This research is structured in 3 work packages. In Work-Package 1, quantitative and qualitative infant feeding literature is synthesised to form an evidence base. Work-Package 2 explores health service and stakeholder needs and experiences to inform selection of intervention components, methods, outcomes and objectives. This work package will also inform development of an intervention programme plan. Work package 3 involves implementing and evaluating the pilot intervention.

**Expected results:** The first expected output is a comprehensive evidence base of intervention effects, parental experiences infant feeding, and parental and healthcare professionals experiences of intervention participation. The outputs of Work-Package 2 will be development of an infant feeding intervention for childhood obesity for use in primary care. The output of Work-Package 3 will be evidence on the effects of the intervention in a pilot trial, with concurrent economic and process evaluations.

**Current stage of work:** The quantitative evidence synthesis of intervention effects is complete. Two qualitative evidence syntheses are on-going.

**Discussion:** This research approach will ensure the rigorous development of an appropriate, feasible and acceptable early infant feeding intervention for childhood obesity.

15:45 - 15:50

## Intervention mapping as an approach to program selection and cultural adaptation: stress in child rearing

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A significant body of research exists reporting the efficacy of interventions. Therefore, rather than developing a new intervention, the aim of this study was to identify the best available evidence-based intervention to promote parenting skills and adapt it for a multi-ethnic population.

A three stage design was used, comprising of (i) a needs assessment to understand the needs of families living in multi-ethnic deprived neighborhoods, resulting in a checklist of desired outcomes and change objectives for assessing the suitability of interventions, (ii) systematically reviewing and comparing existing interventions against this checklist to select the best available intervention, and (3) adapting the selected intervention for the target population. Throughout the stages, the Intervention Mapping approach was used to facilitate a strategic framework to program selection and adaptation.

Based on the needs assessment, twelve criteria were formulated regarding intervention content and appropriateness. These criteria were, among others, a focus on disciplinary strategies, sources of parental stress and negative emotions, and beliefs about parental competence. Thirty-three interventions were screened for inclusion, and the Positive Parenting Program (Triple P) was selected as suitable for the target population. The program was adapted by including a module on how to cope with stress and emotions, to minimize the effect of these emotions on child and parental behavior.

Intervention Mapping provides an approach for the systematic selection and adaptation of an existing intervention, while facilitating a transparent working process. Future research will involve the evaluation of the intervention module that is developed.

15:50 - 15:55

## Effectiveness of goal framing and individual versus collective appeals in promoting flu vaccination acceptability

M. Penta<sup>1</sup>, A. Baban<sup>1</sup><sup>1</sup>Babes-Bolyai University, Romania

**Background:** The study aimed to determine the effects of goal framing and reference points on young adults' intentions of receiving the seasonal flu vaccine.

**Methods:** We employed a 2 x 3 between-subjects factorial design plus a no-frame control, involving framing (gain or loss) and type of appeals/reference points (outcomes-to self, collective close others or collective unknown others) as factors. We also accounted for participants' pre-existent attitudes toward vaccines, splitting participants into predominantly positive and predominantly negative attitude groups. The final sample included 512 adults. The main outcome was intention to get vaccinated. Secondary outcomes included perceptions of susceptibility to flu, infection severity, vaccine efficacy, safety, side effects, message evaluation and anticipated regret. We also recorded demographics, affective traits and motivational orientation as control variables.

**Findings:** An ANCOVA revealed a significant three-way interaction between framing, individual vs. collective appeals and pre-existent attitudes on behavioural intentions. For participants with negative attitudes, none of the interventions was significantly superior compared to control, but messages that presented losses for unknown others were more persuasive than messages that presented gains for unknown others. For participants with positive attitudes, a loss-framed, self-oriented message was more persuasive than a control message. Notably, irrespective of framing and pre-existent attitudes, close-others appeals did not appear to be highly persuasive, particularly for participants low in avoidance motivation. We also discussed potential mediators of the observed effects.

**Discussion:** Results have practical implications for future communication efforts and indicate that messages should be tested before being included in public campaigns.



15:55 - 16:00

## Growth mindset intervention among French students, and its articulation with proactive coping strategies

S. Parada<sup>1</sup>, J. Verliac<sup>1</sup><sup>1</sup>Université Paris Nanterre, France

Growth mindset interventions, by teaching a lay theory (malleable instead of fixed self-conceptions, Yeager & Dweck, 2012), allow students to thrive in the face of hardship and improve themselves (for a review see Wilson & Buttrick, 2016). While previous research focused on academic achievement, we propose to examine the articulation of the growth mindset and proactive coping strategies (Greenglass, 2002), and their impact on well-being during this critical transition period (from high-school to college, Parada, Mazé & Verliac, 2016).

A pilot study examined this question with 76 freshmen in psychology. Participants were assigned to an Original intervention condition (Blackwell et al., 2007) vs. Revised (based on Yeager et al., 2016) vs. control. We expected a larger endorsement of growth mindset and learning goals (AGQ-R) in the original condition than in the control condition, and even more in the revised condition (intra-subject measures before-after the intervention). Preliminary results show a higher endorsement of growth mindset after the intervention for the original and revised condition compared to the control ( $F(2,67) = 3.27, p = .04, R^2 = .11$ )

In our second study (N = 220 1st year student), we plan to implement the intervention and measure (before-after) mindset, goals, proactive coping (Brief-Cope R) and stress (PSS-4). We expect a better endorsement of growth mindset, learning goals and proactive coping strategies and a lower stress for the revised condition (vs. control).

These studies aim to demonstrate the beneficial impact of a short and widely administrable mindset intervention on student health and success.

# Screening, prevention and donation

15:30 - 17:00

Yael Benyamini

15:30 - 15:35

## Psychosocial and sociodemographic factors influencing colorectal cancer screening uptake: a qualitative analysis

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**Background:** Colorectal cancer (CRC) is a leading cause of mortality and morbidity. Regular screening is linked to significant reductions in CRC incidence and mortality, however uptake remains low. We explored factors influencing decision-making in relation to CRC screening by variation in ethnicity, socioeconomic status (SES), gender and screening history.

**Methods:** Semi-structured interviews were undertaken with 27 people aged 60-74 years. Men (n=12) and women (n=15), who had previously been screened (n=15) or not (n=12), took part. Participants were from White British (n=13) and ethnic minority backgrounds (n=14), and had either low (n=11) or high SES (n=16). SES was assessed based on postcodes using the Index of Multiple Deprivation. Interviews were analysed using Thematic Analysis.

**Findings:** Main themes were Perceived Barriers, Perceived Benefits and Improving Uptake. Non-screener were more negative towards screening, more likely to perceive cancer as a 'taboo' and expressed less positive views towards treatment options. Men were less positive towards the screening process and experienced more aversive emotions (e.g. embarrassment, disgust) than women. Cancer fear was a barrier for all ethnic groups of varying SES. Valuing early diagnosis and a sense of obligation towards the health system facilitated screening for female, White British participants. Difficulty to understand health information was a barrier for low SES and ethnic minority participants.

**Discussion:** Structural barriers, such as the difficulty to process health-related information, as well as emotional barriers, such as fear and disgust, may contribute to explaining low CRC screening uptake. Consideration of particular groups could be useful for intervention development.

15:35 - 15:40

## Which social representations about cancer related to HPV infection and HPV vaccine from teenagers?

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In the French context of low respected guidelines on HPV immunization, this study aims to investigate youths' representations about this vaccine. Theory of social representations (Moscovici, 2013) constitutes a relevant approach, allowing researchers to explore both processes of passing on knowledge and the content of this knowledge (Jodelet, 2015).

It is through a mixed methods approach (Belaid et al., 2016) that several tools were created. Thus, interventions based on a participatory action have been set up with middle school students. Groups of 3-4 students were asked to create posters illustrating the theme of cancer related to HPV infection and the associate vaccine. Focus groups and a questionnaire survey were conducted, both exploring cancer and HPV prevention. Four schools have been chosen because of their location, based on the idea that they would provide informations related to the impact of socio-economic factors on the anchoring of representations about HPV vaccine.

A triangulated analysis of the data (Flick, 2004) was carried. Our study highlights that, despite a lot of therapeutic advances, cancer is still perceived as extremely serious, causing much suffering and often having a fatal outcome. The link with sexuality (contraception, STIs, HIV/AIDS...) appears almost systematically when cervical cancer is mentioned, although HPV infection is rarely known by students.

Based on these results, we believe that times dedicated to sexual health education at school, based on the lay knowledge of adolescents about the HPV vaccine and the cancers related to infection, are relevant to address the topic of cervical cancer prevention.

15:40 - 15:45

## Barriers and facilitators to HPV vaccination in greek youth population

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**Background:** HPV virus is one of the most commonly transmitted infections and is the cause of half a million cases of cancer per year in developed countries, especially in women. The vaccine is recommended for the prevention of cervical cancer and other types of tumor. The purpose of this study was to assess the level of knowledge of young Greeks about the virus, as well as, to identify barriers, but also factors that contribute to a positive attitude towards vaccination.

**Methods:** This was a cross-sectional study and the sample consisted of 825 subjects aged 15-38 years, who completed a self-administered questionnaire.

**Findings:** The data analysis showed that the attitude of women towards vaccination is associated with the general attitude towards vaccines, educational level and the attitude of the mother on the matter, the doctor's attitude, the level of knowledge about the HPV virus and the source of information. Vaccination in women was associated with the educational level, the marital status, mother's and father's educational level and family income. Furthermore, important factors influencing the decision to vaccinate are the general attitude towards vaccines, the level of knowledge about the virus, the sources of information and the mother's and doctor's attitude towards vaccination

**Conclusion:** The intervention strategies to protect young people against HPV infection should focus on adequate and reliable information to the various specialties health professionals, parents and the media.

15:45 - 15:50

## The brakes and levers to HPV vaccination

A. Gauchet<sup>1</sup>, E. Shemelova<sup>1</sup>, C. Blatier<sup>1</sup><sup>1</sup>university grenoble alpes, France

**Study aims :** The immunization coverage against HPV remains low in France (less than 20%). The attitude of French girls was studied to understand the motivations and breaks to HPV.

**Methods :** This study was conducted in 2014 on a population of 170 young women aged 15 to 25 years. Predictors of intention to vaccinate against the HPV were assessed using a self-administered questionnaire with items taken from previous research and based on TPB (Theory of Planned Behavior, Aizen et al, 1986). Statistical analyzes were performed using the software R. Different types of treatment were carried out on the data: Analyze of comparisons; Analyze of associations between variables and Linear Regression; Principal Component Analysis (PCA).

**Results :** Our results mostly confirm previous studies and provide new insights about the process of decision on vaccine acceptance. The proposed model elucidates the articulation between the different factors. It appears that certain factors such as the favorable attitude to vaccination, vaccine safety, the perceived control, and the anticipated regret play a decisive role in this decision process. The doctor's advice and family also play an important role.

**Conclusion :** HPV knowledge was found to be low. However, this does not constitute a barrier to the acceptance of vaccination. From the performed classification treatment we are able to find a category of people "neutral", who need to be better informed on HPV in order to decide if they should be vaccinated. A targeted intervention would be helpful to this category to elucidate their questions.

15:50 - 15:55

## Factors influencing the consent towards biobank donation

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The consent towards biobank donation is interesting for health psychology since psychological context of biobank donation is not entirely clear. The successful functioning of biobanks directly depends on people's willingness to donate their biological materials. The goal of this study was to evaluate the extent to which different groups among the general population are ready to make such a donation as well as the key potential factors people consider when deciding to become a donor (This study was supported by a grant from the Russian Science Foundation, project no. 14-50-00069, St. Petersburg State University). Data from 254 scientific teaching staff of St. Petersburg State University was collected using Internet survey in September 2016. Only 37% of the interviewed people knew about the existence of biobanks. The study results indicated a relatively average level of consent to become biobank donor among respondents (52%). The most important factors of potential decision to donate were procedures risks and the study goals, the least significant factor was availability of payment. Our study did not reveal any influence of age on one's willingness to become a donor. This study demonstrated that today the attitudes of scientific professionals do not pose a problem for further development of biobanking in Russia.

# Physical and mental health promotion

15:30 - 17:00

Jenny McSharry



15:30 - 15:35

## Difficulties in emotion regulation of novice male traffic offenders

K. Žardeckaitė-Matulaitienė<sup>1</sup>, J. Slavinskienė<sup>1</sup>, A. Endriulaitienė<sup>1</sup>, L. Šeibokaitė<sup>1</sup>, R. Markšaitytė<sup>1</sup>

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Novice drivers are the most risky group of drivers due to inexperience and propensity to take risks. However there is a lack of research on importance of emotion regulation problems for the novice drivers' involvement in different road traffic rules violations. This research was aimed to assess differences in difficulties in emotion regulation among different groups of novice driving offenders.

59 novice male drivers (mean age 21.53) who have driving license suspension due to different violations participated in this pilot study. Difficulties in emotion regulation were assessed using the Difficulties in Emotion Regulation Scale (Gratz & Roemer, 2004). Information about participants' type of road traffic rules violation and their driving experience until the driving license suspension was also obtained.

The results have shown that drunk drivers have lowest driving experience compared to over speeders and those who did other road traffic rules violations. Difficulties engaging in goal-directed behaviour, non-acceptance of emotional responses and lack of emotional awareness were mostly expressed difficulties in emotion regulation in all groups of novice driving offenders. However no significant differences were found in emotion regulation difficulties among those three groups. Less driving experience was related to more expressed difficulties engaging in goal-directed behaviour and non-acceptance of emotional responses in the group of over speeders.

The results imply that combination of specific difficulties in emotion regulation with the lack of driving experience is important predictor for overspeeding. More research with larger sample is needed for more substantiated conclusions about the other groups of novice offenders.

15:35 - 15:40

## Chemsex : definition and healthcare access matter

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During 2016, French health professionals have seen the increase of the healthcare request from chemsex-users. This is why it has become a matter of interest for health professionals, in terms of what accompaniment and help should be offered to these individuals. The aim of this communication is to offer a review of literature on the phenomenon.

Chemsex is a sexual intercourse under drugs, usually between men-who-have-sex-with-men (MSM). The main substances are synthetic drugs, such as GHB/GLB, cathinones and crystal meth used through injection, suppositories or insufflation. Because of the drugs used and their ways of consumption may cause physical complications such as erectile dysfunction and overdose. More, it may lead to infections, such as HIV, HCV and STI. However, some chemsex-users may present emotional and cognitive comorbidities, exacerbated by drug use. It includes increased irritability, memory loss, disturbed perception of time, severe hallucinations, depression following a drugs' binge. Chemsex-users also present dependency symptoms, to either drugs, sex or both. Finally, it may also result in employment loss, financial difficulties and social isolation, which usually lead them to seek professional help.

This is why healthcare professionals should be more informed and trained to better receive and help chemsex-users that seek advice and support. Therefore, this paper should open the path to examine the current situation of chemsex and chemsex-users in France, the epidemiology and health risks, and to determine what could be recommended in terms of healthcare.

15:40 - 15:45

## The relationship between technology use, anxiety and depression: findings from a Romanian sample

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The development of ICT has propelled ground-breaking research topics such as: (1) pathological use of internet and mobile phone along with the psychological difficulties that any addiction could bring; (2) digital traces of real life behaviours, thoughts and feelings.

The current study is placed in the first category and aims to investigate the connection between excessive use of internet and mobile phone, depression and anxiety, in emerging adulthood. This period of transition is generally characterized by strivings to find own meaning in life and independence, which could explain why anxiety, substance and mood disorders tend to be the most common conditions at this age.

Our sample comprised 366 Romanian youths (Mage = 20.52; SD = 3.54) who completed three self-report instruments, including BDI and STAI. Excessive use of internet and mobile phone were defined by four markers: loss of control, tolerance, abstinence problems and negative effects on daily functioning.

Data analysis revealed that all components of internet and mobile overuse correlated positively with depression and anxiety. Further investigations consisted of two regression analyses showed that the overall excessive internet use was a stronger predictor for both types of symptoms, compared to mobile overuse, and that the abstinence factor was better than loss of control, tolerance and negative effects of internet on daily functioning.

Knowing what observable behaviours to follow in order to grasp clues to depression and anxiety, might be particularly valuable especially if the connection is not intuitive. This might help reducing the problem of under-recognition of such disorders.

15:45 - 15:50

## Understanding the suicidal trajectories in Luxembourg: implementation of a study using psychological autopsies

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In its National Plan for Suicide Prevention 2015-2019, Luxembourg foresees to implement a study aiming at understanding the trajectories leading to suicide - psychopathological history, health and healthcare trajectories, risk, protection and trigger factors... Psychological autopsy - retrospective reconstruction, by all possible means, of a person's history - is appropriate for this objective.

Our protocol combines qualitative and quantitative methods.  $\pm 6$  months after each case of suicide occurring within a 12-month period (expected  $n \approx 80$ ):

- Two next-of-kin will be identified. For each separately, two semi-structured interviews will be conducted;
- Self-administered questionnaires will be completed;
- Medical or administrative records will be collected and analysed;
- Profiles will be summarised in vignettes;
- Vignettes will be analysed by an expert panel.

This challenging project will bring a deep and exhaustive understanding of the suicide phenomenon in Luxembourg, and help determining the groups that are the most at risk. Thereby, further decisions and efforts will be based on evidences.

The project is being developed with national partners – epidemiology and statistics service of the Ministry of Health, Prosecutors, national institutions of health, social security, and information technologies; and international experts. The methodology and authorisation requests to the National Ethics Committee and the National Commission for Data Protection shall be ready in summer 2017, and data collection will begin in January 2018.

Suicide prevention is a public health priority and a major issue for health psychology. Adapted mental health promotion strategies at every identified stage of life will help decrease suicidal behaviours.

15:50 - 15:55

## Do students and professionals of psychology differ in stigmatizing attitudes towards mentally ill?

A. Endriulaitienė<sup>1</sup>, K. Žardeckaitė-Matulaitienė<sup>1</sup>, R. Markšaitytė<sup>1</sup>, A. Pranckevičienė<sup>1,2</sup>, D.R. Tillman<sup>3</sup>, D.D. Hof<sup>3</sup>

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University curriculum usually intend not only to develop knowledge and skills of future professionals, but also to prevent some risk that they may face when fulfilling their work roles and obligations. Psychologists working in mental health settings are under risk of early occupational burnout stigmatization of their clients, etc. Still the research on how stigmatizing attitudes towards mentally ill change during the development of professional identity and career of psychologist are rare. The purpose of this study was to explore if students of psychology program have different attitudes towards mentally ill when compared to working psychology professionals.

542 respondents (369 psychology students, 50 students working as psychologists, and 123 working psychologists) participated the study. The stigmatizing attitudes were measured with Community Attitudes towards Mentally Ill Scale, Social Distance Scale, and Self-Stigma of Seeking Help Scale.

The results revealed that Master level students, working students and psychologists do not differ in stigmatizing attitudes. Bachelor level students hold more negative stigmatizing attitudes of all measures types towards mentally ill than Master level students and working psychologists.

This confirms the efficiency of psychological education in prevention of stigmatization risk.

15:55 - 16:00

## Ten year trends in suicidality, bullying, and gun carrying among U.S. Latino youth

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**Background:** The purpose of this study was to investigate trends in bullying, gun carrying, and suicidality over 10 years in a nationally representative sample of Latina/o youth. Our study was guided by the Interpersonal Theory of Suicide to understand how thwarted belongingness, perceived burdensomeness and acquired capacity for self-harm contribute to suicide attempts. **Methods:** The Youth Risk Behavior Survey subsample of Latina/o youth (N=13,378) from 2005-2015 is examined for suicide attempts, bullying, and gun carrying.

**Findings:** Overall, suicide attempts for females declined slightly; there was no significant change over time for males. Females, compared to males, reported significantly higher rates of suicide attempts, victimization by bullying, and victimization by cyberbullying, and lower rates of gun carrying. Gun carrying was significantly associated with greater likelihood of suicide attempts for both boys and girls.

**Discussion:** Latino/a adolescents report the highest rates of suicide attempts and depressive symptoms compared to White and African American youth for over 40 years. Our results demonstrate that suicidality varies by gender; Latina girls report higher rates of suicide attempts, depressive symptoms, and bullying. Latino young men who reported being cyberbullied were also more likely to carry a gun. Implications for gun carrying as a risk factor for suicidality are discussed for Latino males, and in relation to cyberbullying. There is a continued need for innovative methods to address bullying through widespread and effective campaigns that consider the intersectionality of ethnicity and gender of youth.

# Interventions in health services research

15:30 - 17:00

Marijn De Bruin

15:35 - 15:40

## An epistemic tool for facilitation of person-centered relationships in cardiovascular care

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**Objectives.** Person-centered physician-patient relationships are more effective than common paternalistic, however demand more time and specific communication skills. They are of great importance in working with behaviour change in setting of cardiovascular pathology, especially post-myocardial infarction. A tool might be useful, for clinical data gathering and precision actions provision, based on the in-depth view on patient's experiences.

**Methods.** Male patients (n=21), economically active age, with first myocardial infarction (hospitalized, day 2-7 from onset, and 2-3 months post-discharge) were interviewed in-depth using Rogerian PCA skills. Recordings transcribed verbatim. Analysis included descriptive phenomenology with non-verbal semiotics analysis.

**Current stage of work.** A list of units has been formulated that includes 1) specific experiences that follow the situation of the disease and are not expressed unless addressed (e.g. sense of vulnerability, loss of independence, loss of future perspectives); 2) changes in self-image and worldview; 3) specifics of social stress in patients' routines; 4) view on behaviour change that is expected, and on former behaviour.

**Expected results.** Next step is formulation of a questionnaire addressing precise points to facilitate clinician's care provision making it more patient/person-centered. Last step is testing the questionnaire in real practice.

**Discussion.** The units that have been found, can be classified under nosogenic reaction or PTSD or personality types as A or D. However, in routine practice clinicians need exact data, not the abstract formulations. Current work might be of help creating better understanding and more confident relations in post-myocardial infarction outpatient setting.



15:40 - 15:45

## Adaptation of a questionnaire assessing factors related to type 2 diabetes advice by healthcare professionals

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**Background:** Healthcare professionals play a key role in Type 2 diabetes management, by providing adequate advice on changing and maintaining health behaviors, and self-care. There are few studies examining behavior change factors in healthcare professionals, and currently there isn't a Portuguese measure available to assess these factors. The aim of this study is to contribute to the validation of the Clinician Self-Reported Behavior Questionnaire (CSRQB), developed by Eccles et al. (2011), which evaluates the psychosocial factors associated with the provision of nutritional advice, physical activity advice, and on-going education (e.g., self-efficacy).

**Methods:** A mixed methods approach was used, using survey-based data collection and interviews with healthcare professionals. First, we analyzed the sensitivity and reliability of the measure in a sample of 74 healthcare professionals directly involved in type 2 diabetes consultations (medical doctors and nurses); afterwards, we examined the face validity of the instrument through the content analysis of 17 individual interviews.

**Findings:** The Portuguese version of the CSRQB shows acceptable psychometric properties on almost all scales, and it was generally accepted and well-received by the health care professionals. Findings from the interviews, suggested the need for adjustments in the questionnaire.

**Discussion:** The CSRQB can offer valuable information about the barriers and enablers of the provision of advice in type 2 diabetes by health care professionals. Future studies should test the questionnaire in a larger sample to test its validity.

15:45 - 15:50

## Motivation and decision-making in referrals to lifestyle interventions by primary care general practitioners

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<sup>6</sup>University of Groningen, Netherlands

**Background:** There still is little empirical evidence on factors that influence GPs' referral behavior to lifestyle interventions. The aim was to explore 1) GPs' motivation to refer to lifestyle interventions and to investigate the association between GPs' own lifestyle-behaviors and their referral behavior, and 2) patient indicators in the decision-making process of the GPs' referral to lifestyle interventions.

**Method:** A cross-sectional study was conducted among 99 Dutch primary care GPs. Their motivation to refer was assessed by beliefs regarding lifestyle interventions. GPs' referral behaviors were assessed, considering referral and self-reported actual referral, and their own self-reported lifestyle behaviors: physical activity, dieting, being overweight. Decision-making regarding referring patients to lifestyle interventions was assessed by imposed patient indicators, spontaneously suggested decisive patient indicators, and by case-based referring (vignettes). Descriptives, a multiple linear regression analysis, a Pearson correlation and open coding indexing technique were conducted to analyze outcomes.

**Results:** A substantial group of GPs was not motivated for referral to lifestyle interventions. GPs' refer behavior was significantly ( $p < .01$ ) associated with their perceived subjective norm, behavioral control, and their own physical activity and diet. Most important patient indicators in referral to lifestyle interventions were somatic indicators, and patients' motivation for lifestyle interventions.

**Conclusions:** GPs motivation and referral behavior might be improved by providing them with tailored resources about evidence based lifestyle interventions, with support from allied health professionals, and with official guidelines for a more objective and systematic screening of patients.

15:50 - 15:55

## Facilitating and inhibiting thematic constructions of Hospital at Home care (HaH) for COPD patients

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<sup>2</sup>Teesside University, United Kingdom

**Background:** In a RCT patients admitted with an acute exacerbation of their COPD were randomised to receive Hospital at Home (HAH) or usual care (UC) identified at low risk of death by the DECAF score. DECAF allows for the inclusion of more patients than previous trials (of importance, 45-53% of hospitalised patients). In this trial we sought to identify positive drivers and potential barriers of HAH care pathway.

**Methods:** 89 semi-structured interviews with: patients, those who declined participation, carers, clinicians, nurses and managers who were purposely selected to ensure diversity. Thematic-Construct Analysis was employed.

**Findings:** 'Positive drivers' were divided into two sub-constructs 'Availability of home comforts and maintaining independence' and 'Confidence in the continuity of care'. 'Potential Barriers' were grouped into two sub-constructs 'Personal preferences' and 'Resistance to change'. Nurses cited increased workload and responsibility (with experience, viewed positively); whilst operational concerns included; keeping medical records in a patient's home and inability to capture activity within the current payment systems. Clinicians hold preconceptions that patients prefer hospital for safety and respite for carers and raised concerns that patients may not be low risk. Despite efforts to ensure UC was not affected by trial participation patients were sent home earlier than expected.

**Discussion:** During the trial few barriers were identified and were effectively overcome. HAH selected by DECAF allows for the inclusion of more patients than previous models, and is preferred to inpatient care by most patients and their families.

15:55 - 16:00

## Theory-based interventions in the healthcare-associated infections field: an integrative review

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<sup>2</sup>Glasgow School of Art, United Kingdom

**Background:** Healthcare-associated infections' (HAIs) prevention and control is typically targeted at training staff within a 'health and safety' climate. A growing body of research focusses on changing health-related behaviours by applying pertinent theories in dedicated interventions. However, the type of theories and the extent to which they have been applied remains unknown. This review aims to synthesise the best available evidence on theory type, how its implementation aids the prevention and control of HAIs and the effectiveness of these interventions. **Methods:** Six electronic databases (Web of Knowledge, CINAHL, AMED, MEDLINE, PsycARTICLES, ERIC) were searched. Eligible studies' references were scrutinised to identify additional studies. Sixteen studies met the inclusion criteria: these employed experimental/non-experimental designs with healthcare populations and explicitly referred to psychological, social and human relations type theories. The CASP and QATSDD tools were used to appraise studies' quality and findings were synthesised narratively. **Findings:** A diversity of implemented interventions was detected with only 5 adopting a pure health promotion theory (e.g. PRECEDE model). Also, the diversity of the studies' structure and quality was reflected in the different strengths of their designs. Finally, theories informed the development of multicomponent interventions, however sustainability was often questioned. **Discussion:** No single theory-based intervention was evidently better than another, confirming the absence of a 'gold-standard' in intervention development in the HAIs field. We propose that the non-immediate consequences of HAIs and their invisibility should be considered in-depth by future research. The heterogeneity of findings and future directions are discussed in the light of existing literature.

16:00 - 16:05

## Personalized medicine in radiotherapy: practitioners' perception

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This exploratory study was designed to investigate the representations of radiotherapists in relation to personalized medicine. On the basis of currently available radiotherapy predictive tests, we tried to understand how these tests could be used in routine radiotherapy practice and in what way this possible change of practices could affect the role of radiotherapists in treatment protocols. In the absence of any available data allowing the construction of a quantitative tool, qualitative data were recorded by individual interviews with radiotherapists. Based on textual data analysis, a second national quantitative phase was conducted using a self-administered questionnaire. Crossover analysis of the two datasets highlighted the interest of radiotherapists in personalized medicine and the use of predictive tests, while indicating certain limitations and concerns in relation to ethical issues related to personalized medicine in oncology and the physician's position.

16:05 - 16:10

## Investigating a community intervention to promote quality of life and help-seeking for potential cancer symptoms

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**Background:** Detecting bodily change is an important step towards diagnosing cancer and the Pathways to Treatment Model acknowledges this. Delays in help-seeking can affect survival. As quality of life (QoL) is affected by the presence of cancer, we investigated whether feeding-back personal QoL results at this early stage benefits wellbeing in those with suspected cancer, and enhances help-seeking.

**Methods:** Adults were recruited at a CRUK roadshow during its visits to socio-economically deprived communities. Specialist nurses sign-posted visitors to primary care. A 2x2 design was used in this pilot study. Participants were randomly allocated to an Intervention group (QoL feedback, self-management and resources), or a Control group (QoL assessment or none). They were naturalistically assigned to a Symptoms group, if cancer was suspected, or a Lifestyle group, if seeking cancer risk reduction advice. Participants completed the WHOQOL-BREF; WHOQOL Importance measure; Changes to QoL; Depressive symptoms (PHQ-2), and help-seeking questionnaires.

**Results:** From a total of 107 (50% male), 57% had not received higher education; 66% did not work, and 45% were ill. Follow-up 1 (FU1) was conducted 2 (n=68), and 10 weeks (FU2) (n=54) after baseline; 54% of the Symptoms group sought help at FU1, and a further 55% at FU2. No QoL improvements were recorded for the Symptoms group after the Intervention, but the Lifestyle group reported improved psychological QoL; depression was a covariate (MANCOVA).

**Conclusion:** In deprived communities the Intervention is not suited to those with suspected cancer symptom, but those seeking lifestyle advice confirm substantial benefits to wellbeing.

16:10 - 16:15

## Exploring experiences of people using khat and the health care professionals supporting them to quit

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**Background and aims:** very little is known about khat use in the UK. The aim was to explore experiences of quitting khat from the perspective of those using it and the healthcare professionals supporting them.

**Methods:** this qualitative study employed semi structured interviews with 10 khat users and five healthcare professionals. Purposive sampling was used. Thematic deductive analysis based on The Theoretical Domains Framework was used.

**Results:** the beliefs held by khat users regarding the consequences of continued khat use facilitated their decision to quit. The social influences from those around them was a key barrier. For healthcare professionals, reinforcement and the successes of other clients was key in enabling them to support clients. It motivated them to support new clients. The environmental context and resources that were available within their organisation was a barrier to the support they could offer; continual funding cuts meant they were restricted in what they could offer clients to facilitate the quitting process.

**Conclusions:** Addressing beliefs about consequences of khat use and taking into account contextual influences can enhance future interventions to support khat users to quit. Structures that will highlight healthcare professionals' past successes can help them support future clients.

# Gender, Sexuality and Health

15:30 - 17:00

Iain Williamson



15:30 - 15:35

## How the gender-related personalities relate their attitude and knowledge about LGBT and their gender identity

M. Kasai<sup>1</sup>, A. Kawakami<sup>1</sup><sup>1</sup>Naruto University of Education, Japan

The LGBT issues have received wider social recognition in Japan these several years. However, the knowledge and attitude towards LGBT varies depending on many different psychological traits. In this study, we presumed that they varied depending on their gender-related personalities, since many researches showed that there were relationships between gender-related personality and psychological health. Empirical studies showed that the Androgynous gender personality (A) type was more flexible and has better adaptability than the undifferentiated gender personality (U) type. Therefore, we hypothesized that the A type is more flexible and positive to LGBT and has more knowledge and attitude than other types. Furthermore, the androgynous type has more gender consistency than other types.

Bem sex role inventory (BSRI), Lesbian, Gay, and bisexual knowledge and attitude scale for heterosexual (LGB-KASH), and Gender identity scale (GI) were administrated to 208 university students in Japan. We classified the participants into four gender-related personality groups based on BSRI: Androgynous gender personality type (A), sex-congruent gender personality type (SC), sex-incongruent gender personality type (SI), and undifferentiated gender personality type (U).

The results indicated that A type scored higher than SI type in positive and affirmative attitude and in socially accepting beliefs towards LGBT. The results also showed that A type had higher gender identity stability and consistency than other three types. We concluded that since A type had more stable gender identity than other types and also had affirmative and positive attitude toward LGBT, it is important to foster both masculinity and femininity for psychological health.

15:35 - 15:40

## A mixed-methods evaluation of a health intervention for British black and ethnic minority gay men

I. Williamson<sup>1</sup>, P. Papaloukas<sup>1</sup>, R. Jaspal<sup>1</sup>, J. Fish<sup>1</sup>

<sup>1</sup>De Montfort University, United Kingdom

**Background:** Gay and bisexual men from British BME communities are at elevated risk of psychological distress and sexual transmitted infections including HIV. This study reports on the results of a series of extended workshop based intervention programmes, 'The Quest', designed to improve health and well-being outcomes for men from these communities. Using coaching principles, the workshops focused on a range of concepts including shame, resilience and authenticity.

**Methods:** The evaluation incorporated both qualitative and quantitative methods including validated questionnaires which assessed several constructs and behaviours relating to intended and actual sexual risk, drugs and alcohol use, as well as various aspects of psychological well-being. Pre and post programme quantitative data were collected from 26 men who completed the intervention. Fourteen men participated in focus groups.

**Findings:** Statistically significant improvements were found on measures of internalised homophobia, self-esteem and self-efficacy. Few changes were found in reported or intended health behaviours relating to safer sex or substance use, although intention to engage in 'chemsex' and reported use of alcohol was significantly reduced post-programme. The qualitative data revealed a number of specific challenges for men from these communities including widespread persecution and abuse within their families and ethnocultural communities; racism, exclusion, and fetishisation on the gay scene, and associated challenges in maintaining positive and coherent self-identities. Qualitative participant feedback was generally positive.

**Discussion:** Theoretically-informed, culturally competent interventions appear to show significant potential in enhancing the well-being of BME gay and bisexual men but fuller follow-up data are needed to show longer-term benefits

15:40 - 15:45

## Exploring narratives of erectile dysfunction

R. Masaryk<sup>1</sup><sup>1</sup>Comenius University, Slovakia

The question of how lay people perceive medical terms, diagnoses and interventions are important to understand decision-making processes in patients. The overall objective is to improve how physicians communicate with their patients. This is especially important when it comes to sensitive issues such as conditions related to male erection. The presentation follows up on data collected in 29 focus groups between 2000 and 2012 to study lay understanding of erectile dysfunction. The approach to analysis draws upon the theory of social representations and critical health psychology. New analyses of these data focus on how men understand erectile dysfunction, how this understanding shaped their coping strategies, and how related narratives changed over the years. Arrival of this diagnosis could be construed as the primal act of medicalising male bodies. The oral treatment for erectile dysfunction was first rejected by men, and only gradually accepted. The paper reflects the historical and cultural context of this process.

15:45 - 15:50

## Shifting masculinities amongst men diagnosed with breast cancer: a multi-method phenomenological inquiry

K. Quincey<sup>1</sup>, I. Williamson<sup>1</sup>, D. Wildbur<sup>1</sup>

<sup>1</sup>De Montfort University, United Kingdom

**Background:** Underacknowledged clinically and socially as a threat to men's health, breast cancer in men persists as a critical health issue, with complex ramifications for those affected. Research exploring men's breast cancer experiences and life beyond the illness event remains limited. Therefore, this research asks 'How do we understand the experiences of men diagnosed with breast cancer?' and aims to advance knowledge regarding men's meaning-making of breast cancer and masculinity, and to give voice to what is currently an under-researched minority group.

**Methods:** Thirty-One British men recruited via clinical records, a UK breast cancer charity and social media, recounted their breast cancer experiences using self-authored/selected photographs which they later discussed as part of extended semi-structured interviews. All data were analysed thematically following principles and conventions of Interpretative Phenomenological Analysis.

**Findings:** Findings revealed three superordinate masculinities: 'threatened/exposed', 'protected/asserted' and a 'renewed/revitalised' masculinity, which collectively demonstrate how the men implement and transition between masculinities across the illness trajectory, as they manage, make sense of and live through breast cancer. Using a model, we show how these masculinities are processed by the men from illness onset right through to being in-recovery. We discuss and evidence the identified masculinities, and their interrelationships, using quotes and images taken from the participants' interview transcripts.

**Discussion:** We consider how adopting these different masculinities at different points in time across the breast cancer episode aids men's adjustment to illness, and re-adjustment to life post diagnosis and treatment. We conclude with recommendations for improving male patients' experiences and outcomes.

15:50 - 15:55

## Representations of infertility as reflected in on-line discussion forums in Romania

I. Ghise<sup>1</sup>, A. Băban<sup>2</sup><sup>1</sup>Department of Psychology, Babes-Bolyay University, Romania<sup>2</sup>Department of Psychology, Babes-Bolyai University, Romania

**Background:** Parenthood is undeniably one of the most universally desired goals in adulthood. However, approximately 20% of couples of reproductive age experience difficulty in conceiving or in maintaining an established pregnancy. Despite the fact that both males and females can be infertile, women endure the majority of fertility testing and treatments, which are expensive procedures, time consuming and with no guarantee of success. The aim of this paper is to understand how infertility is represented by Romanian woman in on-line discussion forums.

**Methods:** We follow woman's discussions in order to understand how woman with infertility perceive and reflect on this given situation. We conducted a thematic analysis, and texts from four discussion forums were analyzed (01.2010 – 01.2017).

**Findings:** We identified the following themes regarding representations of infertility: Infertility as a personal battle ; infertility as an unfair destiny ; infertility as a threat to the feminine identity; divinity as a last resort to infertility.

**Discussion:** Not being able to conceive in a society where children are emotionally valued means deviating from the norms of womanhood. There is an invisible stigma to the infertile woman, which led to feelings of shame, guilt, or being punished. When the battle against infertility is lost or does not end in the wished pregnancy, women often refer to divinity for help. Infertility is a complex problem, and not only does it interfere with the desired goal of having children, but also with the personal identity of women.

15:55 - 16:00

## Gender and family income role in coping with academic difficulties. Romanian adolescent's perspective

D. Muntele Hendres<sup>1</sup>, G. Diac<sup>1</sup>, V. Curelaru<sup>1</sup>

<sup>1</sup>Alexandru Ioan Cuza University, Iasi, Romania

**Background.** The coping styles are often studied in relation with health. In our research we compare the avoidant coping with the active one in adolescents under academic stress. The coping styles are analyzed together with few mental health variables, with gender and family income.

**Methods:** Participants were 900 adolescents with age between 14 and 17 years old (M=15.59), 342 boys and 558 girls. Regarding the monthly income of each adolescent's family, 269 had below average salary of 1.500 lei and the others 631, above this level. Correlations and regressions were used to evaluate different correlates and predictors of coping methods in this group.

**Findings:** The association between types of coping and dispositional optimism, neuroticism and depressive symptoms are of a different strength in girls and in boys. The active coping is positive correlated with dispositional optimism only in the high income group not in the low income and the behavioral passivity correlate negative with optimism also in the high income group. Income is also a moderator for the association between behavioral passivity and neuroticism, which is stronger for the high income group.

**Discussions:** Economic inequalities can help explain differences concerning cognitive and behavioral related factors of health and disease. The correlation between behavioral passivity and depressive symptoms is more pronounced in boys and in the higher income adolescents group.

16:00 - 16:05

## Women's cancer screening: individual differences, norms, and mechanisms in two cultures

C.N. Sen<sup>1</sup>, G.T. Kumkale<sup>2</sup>, L. Baruh<sup>3</sup><sup>1</sup>Isik University, Turkey<sup>2</sup>Kadir Has University, Turkey<sup>3</sup>Koc University, Turkey

Which women engage in cancer screenings, and which women avoid such tests? Blending social psychology and public health, this talk attempts to answer these questions and to untangle the complex web of factors involved in health behaviors. We examine cancer screening in the United States, a country where screening is the norm, and Turkey, a nation where few women engage in these health protective behaviors. Going beyond demographics, we investigate individual differences, norms, and other mechanisms important in women's screening behaviors. Specifically, for American women, we focus on how personality may emerge as a new tool in nations with higher screening rates. In Turkey, we focus more on the norms and individual health beliefs associated with screening.

# Job stress and burnout

15:30 - 17:00

Margot van der Doef



15:30 - 15:35

## Association between workaholism and perceived health

N. Berat<sup>1</sup>, T. Radulovic<sup>1</sup>, V. Kalaj<sup>1</sup>, D. Cerven<sup>1</sup>, R. Mimic<sup>1</sup>

<sup>1</sup>University of Novi Sad, Faculty of Philosophy, Serbia

Workaholic employees face a greater amount of difficulties due to an inner compulsion to work excessively hard. As a result, they are prone to several physical and psychological problems, and at the same time, they are less productive and efficient at work. Based on these findings, we hypothesized that workaholism would be related to ill-health.

A total number of 345 Serbian employees (116 male), age between 20 and 64 years ( $M=41.81$ ,  $SD=10.44$ ), filled out following questionnaires: The Dutch Work Addiction Scale, Work Burnout Scale, and Scale of mental and physical health.

The Regression analyses indicated that people with higher level of workaholism report higher level of physical complaints ( $r = .316$ ,  $p < .001$ ), anxiety ( $r = .174$ ,  $p < .001$ ), depressive reactions ( $r = .243$ ,  $p < .001$ ), disruption of social functioning ( $r = .185$ ,  $p < .001$ ), exhaustion ( $r = .267$ ,  $p < .001$ ), work burnout ( $r = .398$ ,  $p < .001$ ), and lower level of perceived professional efficacy ( $r = -.257$ ,  $p < .001$ ).

Our study showed that workaholism and well-being are related, confirming our hypothesis and supporting earlier findings that workaholics are less healthy than others.

15:35 - 15:40

## Job burnout and empathy in physicians and nurses

E. Wilczek-Ruzyczka<sup>1</sup><sup>1</sup>Cracow University A.F.Modrzewski, Poland

**Background:** The main objective of the presented research is to define dimensions of professional burnout, level of empathy components based on chosen independent variables of group of physicians and nurses, representing three various specialties – operational, non-operational and primary health care. Its aim is to try to demonstrate that empathy components are intervening and moderating variables in relation to professional burnout dimensions treated as dependent variables.

**Methods:** The study, including group of 666 physicians and nurses, was based on the methods: Maslach's MBI questionnaire, Mahrabian-Epstein Empathy Scale, four chosen tables from Murray's TAT Test and self-prepared survey as well as widely used statistic procedures have been incorporated into the research.

**Findings:** Significant differences ( $p \leq 0,01$ ) in the levels of emotional and behavioral components of the non operational group, the most empathic and the least burnt out in two dimensions (emotional exhaustion and depersonalization), in comparison to the other two groups, were the most meaningful. Additionally, significant relations between the levels of empathy components, professional burnout and some chosen independent variables have been defined. This may suggest treating empathy or its components as protective factors against professional burnout due to their moderating features.

**Discussion:** Among the independent variables satisfaction should be considered particularly carefully. It correlates significantly with each of empathy components and is often significantly inversely related to professional burnout dimensions, especially in case of people with higher empathy level. This remains in some accordance with international researches which affirm the protective influence of satisfaction on professional burnout.

15:40 - 15:45

## Burnout in mental health care professionals: does culture, profession and self-stigma of seeking help matter?

A. Endriulaitiene<sup>1</sup>, K. Žardeckaitė-Matulaitienė<sup>1</sup>, R. Markšaitytė<sup>1</sup>, A. Pranckeviciene<sup>2</sup>, D.R. Tillmann<sup>3</sup>, D. Hoff<sup>3</sup>

<sup>1</sup>Vytautas Magnus University, Lithuania

<sup>2</sup>Lithuanian University of Health Sciences, Lithuania

<sup>3</sup>University of Nebraska at Kearney, United States

**Background:** Although it is acknowledged that burnout antecedents might be culture specific, cross-cultural studies in the field of mental health care are quite rare. The main purpose of this study was to compare how gender, age, profession, and self-stigma of seeking help is related to burnout of mental health care professionals in Lithuania and USA.

**Research methods:** 327 counsellors, psychologists and social workers (93 from US, and 234 from Lithuania) completed self-reported Maslach Burnout Inventory and Self-Stigma of Seeking Help scale. Demographic information related to the work tenure, profession, age and gender was also obtained.

**Findings:** Repeated measures ANOVA revealed that emotional exhaustion was the most expressed component of burnout in both countries for all groups of professionals, while lack of professional efficacy was the lowest. Linear regressions showed that higher levels of general burnout as though as higher cynicism, higher emotional exhaustion and lower professional efficacy, were expressed for the professionals working in US and those who possessed higher self-stigma of seeking help. Gender, age, profession and work tenure were not important predictors of burnout taking into account the aforementioned variables. Self-stigma of seeking help was positively related to all burnout components in Lithuanian sample, whereas it was positively related only to cynicism in USA sample.

**Conclusions:** Self-stigma of seeking stigma was the most important predictor of burnout among mental health care professionals in both countries. Still culture should also be taken into account when planing the burnout prevention efforts in the field of mental health care.

15:50 - 15:55

## Mediation role of teacher burnout for depression. Relationships with efficacy beliefs, job satisfaction, school climate

V. Capone<sup>1</sup>, M. Joshanloo<sup>2</sup>, G. Petrillo<sup>3</sup>

<sup>1</sup>University of Naples, Italy

<sup>2</sup>Keimyung University, South Korea

<sup>3</sup>University of Naples "Federico II", Italy

**Background:** Teacher burnout is a chronic issue that afflicts the teaching profession. It is often caused by an excessive workload, poor relationships with colleagues, lack of suitable resources, constant changes within the profession. In the context of spillover model, several researchers have argued that burnout and depression may be seen as influencing each other. The aim of this study was to explore the associations between teachers' burnout, depression and job satisfaction, teacher self and collective efficacy, school climate and organizational justice, also taking into account the age and gender of participants. A further aim was to examine whether burnout moderated the relationship between work variables included in the study and depression.

**Methods:** A non-random sample of 609 Italian school teachers participated. We administered a self-report questionnaire, including: Maslach Burnout Inventory-General Scale, Center for Epidemiologic Studies Depression Scale, Job Satisfaction Index, School Collective Efficacy Scale, Teacher Self-efficacy Scale, Organizational Justice Index, School Situation Index. A structural equation model was calculated.

**Findings:** Results showed that job satisfaction, efficacy beliefs, and school climate were associated with burnout. We highlighted that the relationship between these psychosocial variables and depression were moderated by burnout. Gender was a significant predictor of depression (model fit index: )

**Discussion:** Planning development programs to reduce teachers malaise and improve their evaluation methods in a more targeted and effective way means to take into account the buffering effect of these variables for both job burnout and depression.

15:55 - 16:00

## A comprehensive assessment of the Person-environment fit dimensions and their relationships with work-related outcomes

M. Andela<sup>1</sup>, M. van der Doef<sup>2</sup>

<sup>1</sup>Université de Franche-Comté, France

<sup>2</sup>Leiden University, Netherlands

A comprehensive assessment of the Person-environment fit dimensions and their relationships with work-related outcomes

Marie Andela, Université de Franche-Comté, France

**Background:** Recent theorizations agree to define the PE fit as a multidimensional concept including four types of fit: Person-Job (PJ)-fit, Person-Organization (PO)-fit, Person-Group (PG)-fit, and Person-Supervisor (PS)-fit. However, to our knowledge, no study has used a comprehensive PE fit assessment including simultaneously the four sub dimensions of fit in order to investigate their respective relationship with work-related outcomes. Thus, our aim was to better understand the relationship between the four dimensions of the PE- fit, burnout, job satisfaction and turnover intention.

### Methods:

**Participants:** the study was conducted with a sample of 571 employees from the service sector in France.

**Measures:** PE-fit was measured with the PPEFS (Chuang et al., 2016). Burnout was measured with the MBI-GS (Schaufeli, Leiter, Maslach, & Jackson, 1996). Job satisfaction was evaluated with Fouquereau and Rioux's scale (2002) and turnover intention was evaluated with three items created by O'Reilly, Chatman, and Caldwell, (1991).

**Data analysis:** correlation, regression and mediation analyses were performed.

### Findings:

First the four dimensions of PE-fit were positively related to job satisfaction and negatively associated with burnout and turnover intention. Secondly, mediation analysis revealed that job satisfaction fully mediated the relationship between person-job-fit, person-organization, person-supervisor fit and turnover intention, while burnout partially mediated these relationships.

**Discussion:** Our results point out the relevance of using a comprehensive assessment of the PE fit dimensions to understand job satisfaction, burnout and turnover intention

# Innovative assessment tools in health psychology

15:30 - 17:00

John Reidy

15:30 - 15:35

## Measuring health behaviours with electronic healthcare data: the case of medication adherence

A. Dima<sup>1,2</sup>, D. Dediu<sup>3,4</sup><sup>1</sup>University of Amsterdam, Netherlands<sup>2</sup>Health Services and Performance Research (HESPER), University Claude Bernard Lyon 1, France<sup>3</sup>Max Planck Institute for Psycholinguistics, Netherlands<sup>4</sup>Donders Institute for Brain, Cognition and Behavior, Radboud University, Netherlands

**Background:** Electronic healthcare data (EHD) are a rich and accessible source of information on routine clinical care and can provide valuable insights into patient and clinician behaviours. Yet, although EHD are increasingly used in medical research, they are less considered in health psychology due to lower awareness of their potential to measure behaviour, and lack of accessible software and algorithms to facilitate such analyses.

**Methods:** We developed AdhereR, a package for the statistical environment R, to facilitate computing EHD-based estimates of medication adherence. Several functions for calculating medication persistence (treatment episodes) and implementation (Continuous Medication Availability; CMA) and visualising medication histories were implemented based on a review of current adherence guidelines, definitions and operationalisations. We illustrate the use of AdhereR with an example dataset of 2-year records of 100 patients and describe the various analysis choices possible and how they can be adapted to different health conditions and types of medications.

**Results:** Nine CMA variations can be computed for single intervals, multiple treatment episodes, and sliding observation windows. Different parameter choices result in different estimates (e.g. median 1-year implementation range 56%-83% in one simulation comparing single-interval CMAs). Separating persistence from implementation resulted in higher CMA estimates (e.g. median increased from 57% to 85% when comparing single with per-episode CMA).

**Discussion:** AdhereR facilitates transparent and replicable calculations of EHD-based medication adherence. Analysis choices impact calculations and need careful consideration. As recruiting and maintaining participation in research becomes increasingly difficult, health psychologists need to consider exploiting the potential of routinely-collected healthcare data.

15:35 - 15:40

## Health-related quality of life evaluation through formal psychological assessment

F. Serra<sup>1</sup>, I. giuntoli<sup>2</sup>, U. Granzio<sup>1</sup>, A. Spoto<sup>3</sup>, G. Vidotto<sup>1</sup>

<sup>1</sup>University of Padova, Italy

<sup>2</sup>Università degli Studi di Padova, Italy

<sup>3</sup>University of Padova, Italy, Italy

**Background:** General Quality of life (QOL) instruments are not suited to deeply investigate the specific features of QOL in different diseases. On the other hand, focusing on specific illness generates a multitude of separated health-related QOL (HRQOL) instruments. The aim of this project is to create a unique new tool to assist the human operator in the evaluation of the QOL in an efficient and effective way. Formal Psychological Assessment (FPA) provides a formal framework to build adaptive assessment tools. This innovative methodology has been successfully applied in different psychological clinical context (e.g., depression).

**Methods:** We derived from the literature three main dimensions (physical functioning, psychological well-being, and social well-being) with their respective sub-dimensions. In line with FPA a mapping from items (retrieved from existing QOL and HRQOL instruments) to QOL sub-dimensions was defined (formally a Boolean matrix) in order to analyze the relations among them.

**Results:** While none of the considered questionnaires could alone cover all the selected QOL sub-dimensions, we also observed that some items were repeated or not needed to describe the construct. We provided the formal structure of a self-report tool which cover all the chosen QOL sub-dimensions and which is simultaneously adaptive (i.e., a process that mimics a semi-structured interview where the item proposed depends on the previous answer given by the subject)

**Discussion:** Through FPA we suggested that it is possible to build a general QOL tool that can act as a specific HRQOL measure. Furthermore, it allows for computerized-adaptive assessment.



15:40 - 15:45

## How to measure smoking cessation; is there consensus? A Delphi study

K.L. Cheung<sup>1</sup>, D. de Ruijter<sup>1</sup>, M. Hiligsmann<sup>1</sup>, I. Elfeddali<sup>1</sup>, C. Hoving<sup>1</sup>, S. Evers<sup>2</sup>, H. de Vries<sup>1</sup>

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<sup>2</sup>Maastricht University and Trimbos Institute, Netherlands Institute of Mental Health and Addiction, Utrecht, The Netherlands, Netherlands

**Background:** Different criteria regarding outcome measures in tobacco smoking research are used which can lead to confusion and misunderstanding. Consensus in outcome criteria may enhance comparison of future studies. This study aims (1) to provide an overview of researchers' preferences regarding outcome criteria to be considered in randomised controlled smoking cessation trials, and (2) to identify the extent to which researchers have consensus on the importance of these outcome criteria.

**Methods:** A three-round online Delphi study was conducted among smoking cessation experts. In the first round the most important smoking cessation outcome measures were collected by means of open-ended questions. Experts were asked to name the outcome measure, its duration of abstinence or assessment method, and the ideal follow-up period. In the second and third rounds, experts were presented with a list of the outcome measures identified in the first round and were asked to rate the importance of the listed measures on a seven-point scale.

**Results:** Experts reached consensus on several items, including six-month prolonged abstinence, and seven-day point prevalence. Preferred follow-ups included six and/or 12 months. The preferred biochemical validation methods were carbon monoxide (expired air), and cotinine (saliva); although validation is not always needed.

**Discussion:** Findings suggest only partial compliance with the Russel standard and that more outcome measures may be important (including seven-day point-prevalence, number of cigarettes smoked, and cotinine when using biochemical validation). This study showed where there is and where there is no consensus and reflects the need to adjust/create a more comprehensive standard.

15:45 - 15:50

## Usability and validity of visual research methodology to identify social cues related to eating

S. Raghoobar<sup>1</sup>, S. van Rongen<sup>1</sup>, R. Lie<sup>1</sup>, E. de Vet<sup>1</sup>

<sup>1</sup>Wageningen University and Research, Netherlands

**Background:** The 'obesogenic' environment is often held responsible for the current obesity epidemic. Most epidemiological research is focused on the effect of food availability and accessibility on food choice/intake. However, it remains poorly understood what exactly makes food environments impair healthy diets. Using visual research methodology, this study aims to explore in an innovative way how subtle cues are naturally/accidentally embedded in food environments which may spur unhealthy eating. More specifically, the focus is on subtle normative cues that are implicitly connected with available foods (e.g. food wrappers).

**Methods:** A mixed method design was used. Firstly, environmental normative cues were visually identified by employing an interpretative qualitative analysis using photo data. Photographs of eight different food environments were taken and analyzed on the basis of a shooting script, built on social norm theory. Terminology of semiotics was applied in the analyses. Inspired by grounded theory, the descriptive field notes were used to identify and categorize environmental normative cues. Secondly, in a photo ratings study, it was tested whether independent respondents (students, N=200) interpret environmental normative cues on the photos. Alternative explanations, including effort, salience and liking, were also measured.

**Findings:** Regarding the qualitative study, preliminary results showed that many different cues could be categorized into descriptive and injunctive social norms, encouraging or discouraging eating. Currently, we are completing the qualitative study and planning to perform the quantitative study in the beginning of April.

**Discussion:** The identified subtle normative cues could strategically be used to redesign food environments stimulating healthier choices.

15:50 - 15:55

## Exploring Multiple Sclerosis carers' experiences of participating in a 'Photovoice Study' using a framework approach

G. Topcu<sup>1</sup>, H. Buchanan<sup>1</sup>, A. Aubeeluck<sup>1</sup>

<sup>1</sup>University of Nottingham, United Kingdom

**Background:** Photovoice is a visual method which is increasingly being used in qualitative health research for its ability to provide rich and informative data in 'real-time'. However, there is a paucity of research on evaluating photovoice methodologically in terms of challenges and benefits. The aim of this research was to explore Multiple Sclerosis (MS) carers' experiences of participating in a photovoice study. Specifically, we wanted to understand the challenges and benefits of the photovoice process from participants' perspective.

**Methods:** We utilised an open-ended questionnaire with 12 participants who took part in a photovoice study where they took photographs to capture their MS caregiving experiences over a two-week period and wrote narratives explaining each photograph. Participants completed open-ended questions after the photovoice process to reflect on their experiences of undertaking the photovoice study. Data were analysed using framework analysis.

**Findings:** Four themes emerged; 'experiences of undertaking photovoice', 'perceived benefits of photovoice', 'challenges of photovoice' and 'practical issues'.

**Discussion:** Although there was generally a positive assessment of the photovoice experience, some participants found the process challenging and time-consuming as it involved number of complex steps to complete. Future studies should consider making the process less intrusive by exploring alternative techniques that may improve the speed and effectiveness of the photovoice process. Additionally, some participants reported that undertaking photovoice had a positive impact on their well-being. Further investigation is needed to assess the significance of its impact and long-term effects on individuals using rigorous methodologies.

15:55 - 16:00

## An illustration of meta-analytic structural equation modeling in health psychology

I.J. Pesigan<sup>1</sup>, S.F. Cheung<sup>1</sup>, I. Sun<sup>1</sup><sup>1</sup>University of Macau, Macau

Glass (1976) introduced Meta-Analysis (MA) as a way to combine results from previous studies to discover systematic patterns among the studies and to produce a more comprehensive summary of these studies. The goal in MA is to estimate the true effect by pooling effects from different studies. While conventional MA techniques provide a lot of information about mean differences and relationships, they have to be extended to be able to analyze more complex models. While structural equation modeling (SEM) has allowed researchers to test complex relationships among a multitude of variables, no single SEM study can provide complete evidence for the hypothesized relationships being examined. It is, therefore, important to produce multiple studies and to have the ability to synthesize these studies to be able to provide comprehensive answers to research questions. Meta-analytic structural equation modeling (MASEM) combines the techniques of MA and SEM in order to synthesize correlation or covariance matrices from primary studies and fit SEM models using the pooled matrix. The aim of the current presentation is to provide guidance on how to apply MASEM particularly in health psychology. In this study we employed the two-step MASEM approach proposed by Cheung and Chan (2005) to test the theory of planned behavior (TPB) framework proposed by Ajzen (1985) in the context of alcohol consumption. The results confirm the predictive validity of TPB in predicting health compromising behavior. By employing MASEM, the study provides more generalizable conclusion regarding the nature of the effects of TPB variables on alcohol consumption.

16:00 - 16:05

## What are the benefits of network analysis in health psychology? The example of post-stroke depression

C. Vansimaey<sup>1</sup>, M. Zuber<sup>2</sup>, C. Bungener<sup>1</sup>

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<sup>2</sup>Saint Joseph Hospital Group, France

### Background:

Network perspective is a recent conceptual approach in psychopathology which understands mental disorders as complex networks of interacting symptoms. Network analysis could have a great impact for the knowledge and treatment of depression after a minor stroke. Whereas non-specific depression symptoms (e.g. fatigue, concentration problems) could have a central influence in the emergence of more specific depression symptoms (e.g. sadness, anhedonia, negative thoughts), those symptoms are generally considered as potential side-effects belonging to the neurological impairments and thereby excluded from the post-stroke depression assessment.

The aim of this study is to present the evolution of the network organization of depression symptoms in two patients and its potential benefit in clinical care.

### Method:

We performed network and centrality analysis (with qgraph and bootnet R packages) of depression symptoms (sadness, anhedonia, fatigue, concentration problems, negative thoughts on oneself, pessimism, anxiety, retardation, physical tension, irritability) daily repeated reports from two minor stroke patients at home-return, at 2-month and at 4-month after stroke.

### Findings:

Network's central depression symptoms are different for the two participants and at the different times of the study. Non-specific depression symptoms (e.g. psychomotor agitation) are more central in their networks at home-return than later.

### Discussion:

It appears essential to reconsider non-specific symptoms in the assessment of depression after a minor stroke. More efficient interventions on post-stroke depression should be individually designed considering two points: estimating the network of depression symptoms for each patient and focusing on their central symptoms, whether or not those symptoms are specific of depression.

16:05 - 16:10

## A psychometric evaluation of the Life Essentials Assessment Framework (LEAF-7)

J. Reidy<sup>1</sup>, E. Kirkby-Geddes<sup>2</sup>, T. Barton<sup>2</sup>, P. Bee<sup>2</sup>

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<sup>2</sup>Age UK Wakefield District, United Kingdom

**Background:** The LEAF-7 was designed by reference to the capability perspective by Age UK to measure the quality of life of vulnerable older adults. It was designed to be utilised by trained Age UK assessors who work with service users in order to improve their life circumstances. The aim was to establish whether or not the LEAF-7 was unidimensional and to examine the psychometric characteristics of the individual items.

**Methods:** The LEAF-7 consists of seven domains assessing various aspects of quality of life (e.g. capacity for 'managing health' & 'enjoyment'), measured on a four-point Likert scale. Alongside these domains there is a supplementary life satisfaction item measured on a 7-point Likert scale. For this evaluation 193 Age UK service users completed the LEAF-7 supported by a trained assessor.

**Findings:** Factor and Rasch analysis confirmed that the LEAF-7 was a unidimensional measure with all items correlating significantly with the underlying dimension. Additionally there was high internal reliability as well as excellent stability over time (high test-retest reliability). There were though some issues with the reliability of the rating scale for the supplementary life satisfaction item.

**Discussion:** The analyses showed that the LEAF-7 has excellent psychometric properties and is suitable for use in the assessment of the quality of life of vulnerable older adults. It also demonstrated sensitivity to changes in quality of life over time. It is recommended that caution should be taken in the interpretation of the single life satisfaction item given the reliability issues with this item.

17:00 - 18:00

## Healthcare social media (#HCSM): A new approach to studying and promoting health behavior

Sherry Pagoto

Professor of Medicine, Department of Medicine, University of Massachusetts Medical School



Patients are increasingly using social media to discuss healthy and unhealthy behavior, to participate in online health communities, and to learn about their health conditions. This phenomenon is part of an emerging field referred to as healthcare social media. That patients are using social media to talk about and learn about their health provides unprecedented opportunities for both observational and intervention research in health psychology.

Observational studies using social media data can help us understand health-related attitudes and behaviors more efficiently and inexpensively than traditional survey-based methodologies. Intervention researchers can use social media platforms as a delivery modality for many behavioral interventions which could reduce patient burden and increase reach.

Dr. Pagoto will present some of her research using social media to understand and intervene upon health behaviors. Topics to be addressed include adaptation of intervention protocols for social media delivery, participant engagement, and ethical issues. Future directions in healthcare social media research will be discussed.

11:00 - 12:30

## Complex research designs in health psychology: chance or challenge?

Chairs: Urte Scholz, Aleksandra Luszczynska

**Purpose:** This roundtable discussion will focus on the challenges and benefits of complex research designs in health psychology.

**Objectives:** This roundtable will stimulate a constructive discussion on the necessities of complex research designs in health psychology aiming at answering urgent questions in our field. The discussion will aim at providing different perspectives on the benefits of complex research designs, but also at identifying potential barriers and challenges of designs that go beyond standard approaches. A final aim is to identify innovative and creative solutions to these barriers and challenges.

**Rationale:** Urgent questions in current health psychology cannot be answered with cross-sectional surveys anymore, but rather require complex designs. These, however, do not come without challenges. The five contributions of this roundtable will focus on several of these challenges and stimulate a discussion on how best to handle them.

**Summary:** The five contributions of this roundtable will provide different perspectives on complex designs. First, Stadler will focus on intensive longitudinal designs that contribute to more precise and valid assessments of frequently occurring experiences and behaviours. Stadler will outline the challenges intensive longitudinal designs pose for current theory, data collection methods, data analysis, and results reporting. Second, French will focus on issues surrounding reactivity of measurement, and how this can result in bias. Issues include the process of measurement altering the construct being measured, e.g. via “response shift”, and also by the process of measurement affecting other constructs, e.g. via the “question-behaviour effect”. Third, Scholz will highlight the benefits of research going beyond the individual in that for example romantic partners, best friends, or parents are included in the research designs. Dyadic approaches deepen our understanding of interpersonal processes in health, however, also come with challenges, such as lower consent and higher dropout rates. Fourth, Kok will highlight that in the process of researching and developing theory- and evidence-based health promotion interventions the types of research vary with every step. For example, epidemiological research, qualitative interviews and quantitative surveys, pilot testing, quasi-experimental (often multi-level) research, and observational research all have theory-based quality criteria. Finally, Knoll will emphasize that inter- and transdisciplinary work is called for more than ever. The challenges related to inter- and transdisciplinary collaboration may range from difficulties in communication via design issues in clinical studies to participant overload. After the inputs of all panel members, the discussion will be opened to all participating delegates.



# Symposium: The replication crisis in (health) psychology: reflections and solutions

9:00 - 10:30

Aula C

Rik Crutzen

9:00 - 9:15

## A pre-registered multi-lab replication of ego-depletion: implications for the replication “crisis” and health psychology

M.S. Hagger<sup>1,2</sup>, N. Chatzisarantis<sup>1</sup><sup>1</sup>Curtin University, Australia<sup>2</sup>University of Jyväskylä, Finland

**Background.** Self-control has been conceptualized as a limited resource with the acute state of self-control failure termed ego-depletion. A substantive body of research, including meta-analyses has supported the ego-depletion effect in multiple contexts, including health behaviour. However, subsequent analyses has raised questions over the strength of the effect, with some estimates suggesting it is no different from zero. In response, I coordinated a pre-registered replication of an ego-depletion experiment with collaborators in multiple labs (N= 23) and meta-analyzed the resulting data set (N=2,141). The analysis indicated an effect that was no different from zero for multiple outcome variables. **Methods.** I will present a narrative review and interpretation of the implications and impact of the replication project. I will summarize the process of the replication project from inception to dissemination. I will outline the impact of the project including responses from the media and scientific community, and its broader implications for the ‘replication crisis’. **Findings.** The replication has catalyzed subsequent reanalyses that have further extended its findings including the application of mediation analyses on the role of effort and statistical tests to detect bias. The replication has influenced theory development and further research. However, it also has limitations and the bounds of its contribution should be recognized. **Discussion.** I will provide recommendations to guide future replications including identification of an effect of interest, consultation with original study authors, pre-registration, coordinating labs, analysing results, and disseminating findings. I outline how replications may be conducted in health contexts and what kind are needed.

9:15 - 9:30

## How to achieve replicability: illustrations and guidelines at the hand of effect size sampling distributions

G.Y. Peters<sup>1,2</sup>, R. Crutzen<sup>2</sup>, S. Gruijters<sup>2</sup><sup>1</sup>Open University of the Netherlands, Netherlands<sup>2</sup>Maastricht University, Netherlands

Empirical research requires sampling data from the population under study. This means the outcomes of each scientific endeavour are to a degree uncertain, and therefore, replication is never guaranteed. Two determinants of replication likelihood will be discussed at the hand of the sampling distribution of Cohen's  $d$ . The first is the likelihood that randomization succeeds in generating equivalent groups in experimental designs. The second is the accuracy of effect size estimation in a study. It will be shown that even studies with acceptable power from a null hypothesis significance testing perspective yield very unreliable effect size estimates and often fail to produce equivalent groups. This will be illustrated at the hand of re-analysed data from the Reproducibility Project: Psychology. The implication is that traditional power analyses and sample size guidelines underestimate the sample sizes required to obtain findings that are likely to stand the test of replication, and so often cannot inform study planning. Therefore, functions to compute the sample sizes required to obtain replicable results have been implemented in R package `userfriendlyscience` and will be introduced, and guidelines will be presented based on these computations. These guidelines make clear that there is a need to considerably adjust the expectations regarding sufficient sample sizes. This is important for researchers, and maybe even more so for funders, who will have to get used to the considerably longer timeframes, slightly larger funds, and stricter requirements in terms of acceptable sample sizes that are necessary to build a replicable evidence base in psychology.

9:30 - 9:45

## Disentangling replicable mechanisms of complex interventions: what to expect and how to avoid fooling ourselves?

M. Heino<sup>1,2</sup>, W. Hardeman<sup>3</sup>, V. Araujo Soares<sup>4</sup>, F. Sniehotta<sup>4</sup>, T. Vasankari<sup>5</sup>, N. Hankonen<sup>1</sup>

<sup>1</sup>University of Tampere, Finland

<sup>2</sup>University of Helsinki, Finland

<sup>3</sup>University of Cambridge, United Kingdom

<sup>4</sup>Newcastle University, United Kingdom

<sup>5</sup>UKK Institute for Health Promotion Research, Finland

**Background:** Guidance on process evaluation recommends analysis of mechanisms of impact to understand how complex interventions change behaviour. This is challenging, as mediation analysis has serious pitfalls even in experimental setups. Additionally, logic models often contain constructs from many theories, making the full causal model too complex for statistical testing. This paves the way for analytical flexibility, which science commonly deters by replication. In the absence of replication (and hence falsification), it is easy to be misled by data. We demonstrate opportunities to mitigate these risks using trial data from Let's Move It, a complex theory-based intervention to promote physical activity (PA).

**Methods:** 1120 older adolescents participated in the trial. Hypothesised mediators included psychosocial variables (e.g. autonomous motivation, self-regulation). The primary outcome was objectively measured PA (7-day accelerometry). Statistical methods included structural equation modelling.

**Findings:** Converting the logic model to a statistical causal model was challenging due to the multitude of estimable parameters. Piecemeal evaluation solved this problem, but created new ones for causal interpretation of mediation (e.g. excluding correlated mediators). Overfitting due to model complexity or researcher degrees of freedom could be alleviated by splitting one's data into training and testing sets. This "cross-validation" may be the best available alternative for replication, but requires adequate samples.

**Discussion:** We need to consider reliable ways of evaluating logic models statistically. When replication is not an option, special care must be taken to separate signal from the noise. Complexity science can aid in deciding between misleading and useful goals of mechanism analysis.

9:45 - 10:00

## Targeting next generations to change the common practice of underpowered research

R. Crutzen<sup>1</sup>, G.Y. Peters<sup>2</sup><sup>1</sup>Maastricht University, Netherlands<sup>2</sup>Open University of the Netherlands, Netherlands

Underpowered studies persist in the scientific literature, which leads to biased conclusions. Moreover, participants are a scarce resource. Using up this scarce resource for an underpowered study means that other (adequately powered) studies will have a harder time recruiting participants. In the current paper, we argue that practices that are ubiquitous in our curricula have the unintended effect of promoting underpowered research, and we recommend easy-to-implement solutions. For example, evidence from underpowered studies is presented as sufficiently high-quality evidence to draw conclusions in textbooks and when students collect data (e.g., as part of a student project or to fulfil requirements for a Bachelor's or Master's degree), they are often permitted to collect datasets lacking the power to draw conclusions. These practices disseminate a norm of a typical study consisting of dozens, rather than hundreds or thousands, of participants. The first venue through which this dysfunctional norm of underpowered research can be remedied is by updating course materials. The second venue is to target the next generations by means of relatively small changes in the curricula of undergraduate and graduate degrees. This is a fairly simple, but achievable structural change – in comparison with, for example, changing funding policies – that has a large impact as the students of today are the researchers and policymakers of tomorrow. We believe that correcting what we teach students to reflect best practices can contribute to eliminating underpowered studies.

**Symposium: Colorectal cancer  
screening: innovation in understanding  
screening behaviour, developing  
interventions and disseminating  
research results**

9:00 - 10:30

Aula D

Katie Robb

9:00 - 9:15

## Improving colorectal screening uptake: lessons from higher uptake of breast and cervical screening using mixed-methods

K. Robb<sup>1</sup>, M. Kotzur<sup>2</sup>, S. Macdonald<sup>1</sup>, C. McCowan<sup>1</sup>, C. Campbell<sup>3</sup>, D. Weller<sup>3</sup>, R. Steele<sup>4</sup>, E. Crighton<sup>5</sup>

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<sup>4</sup>University of Dundee, United Kingdom

<sup>5</sup>NHS Greater Glasgow and Clyde Health Board, United Kingdom

**Background:** The aim of this research was to inform new approaches to increase uptake of colorectal cancer screening by comparing facilitators and barriers across the breast, cervical and colorectal screening programmes.

**Methods:** Phase 1 examined factors (age, socioeconomic status, comorbidities) associated with lower uptake of colorectal cancer screening relative to breast and cervical screening among women using linked data from NHS Greater Glasgow and Clyde. Data were analysed using logistic regression. Phase 2 investigated why women chose to participate in none, some or all screening programmes and examined unique barriers to colorectal screening using qualitative interviews with a purposive sample of women identified through the Phase 1 dataset. Data were analysed using framework analysis.

**Findings:** Phase 1—430,591 women were invited to at least one of the screening programmes during 2009-2013. Uptake was 62% for colorectal, 73% for breast and 81% for cervical screening. Those living in more deprived areas and those with more multi-morbid illness were less likely to participate in all screening programmes. Phase 2—women who avoided colorectal screening found this self-completed test posed more practical barriers, induced disgust, and was easier to postpone or forget about than breast or cervical screening.

**Discussion:** To identify targets to increase uptake of colorectal screening the results of Phases 1 and 2 were synthesised into the four categories described by Sheeran, Klein and Rothman (2016): i) cognitions about the health threat; ii) cognitions about the health behaviour; iii) implicit cognition; iv) volitional factors.

9:15 - 9:30

## Gender differences in acceptance for colorectal cancer screening: pain as the explanation

B. Kirkøyen<sup>1</sup>, P. Berstad<sup>1</sup>, E. Botteri<sup>1</sup>, G. Hoff<sup>1,2</sup>, T. de Lange<sup>1</sup>, T. Bernklev<sup>3</sup>

<sup>1</sup>Cancer Registry of Norway, Norway

<sup>2</sup>Telemark Hospital, Skien, Norway

<sup>3</sup>Vestfold Hospital trust, Norway

**Background:** Participants' experience with a screening test can influence adherence, and therefore the efficacy of a screening programme. We compared the satisfaction with decision and willingness to repeat colorectal cancer screening with flexible sigmoidoscopy(FS) and faecal immunochemical test(FIT).

**Methods:** In a prospective, randomised trial 3257 individuals (50–74 years) were invited to either FS or FIT(1:1) of whom 1650 (52.6%) attended. In total, 1497 screening participants completed at least one questionnaire measuring willingness to repeat screening, recommend screening and satisfaction with decision to attend, either before screening, and/or three times in the following year. There were 769 and 728 responders in the FS and FIT group respectively. Additionally, 611 (70%) FS participants completed a pain-questionnaire.

**Results:** One year after screening, 10% of the FS participants were not willing to repeat screening, compared to 5% of FIT participants. In the FS group, there was a higher percentage of women who would not repeat screening, compared to men, adjusted OR 2.52(95%CI: 1.48-4.28). Notably, 22% of women reported pain during the FS, compared to 5% of the men. When we added pain to the model, pain was significantly associated with the unwillingness to repeat FS OR 3.15 (95%CI: 1.68-5.87), while gender was no longer OR 1.53 (95%CI: 0.82-2.88).

**Conclusion:** Acceptance for FS and FIT were high among Norwegian screening participants, though FIT participants were more willing to repeat screening. Women were less willing to repeat screening with FS compared to men. This gender difference seemed partly due to pain, and therefore preventable.



9:30 - 9:45

## Using patients' narratives to promote colorectal cancer screening: a review and an experimental investigation

T. Gavaruzzi<sup>1</sup>, M. Sarlo<sup>2,3</sup>, F. Giandomenico<sup>4</sup>, R. Rumiati<sup>1,3</sup>, F. Polato<sup>5</sup>, F. De Lazzari<sup>5</sup>, L. Lotto<sup>1,3</sup>

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<sup>5</sup>Gastroenterology Unit, S. Antonio Hospital, Padova, Italy

**Background:** Patients' narratives have been suggested as a promising way to promote health, including colorectal cancer (CRC) screening, but evidence about their effectiveness is mixed. **Aims:** a) to provide a comprehensive review of the literature, and b) to investigate the effect of narratives conveying different emotions in promoting CRC screening.

**Methods:** a) Systematic review of studies investigating narratives in CRC screening; b) Between-participant design comparing: usual leaflet (no-narrative condition), usual leaflet and one of three narratives: the character is waiting for the result (control narrative), had a negative result (reassurance-based narrative) or had a positive result and was successfully treated for early-stage cancer (anticipated regret-based narrative). **Participants:** 145 participants aged 45-65, with no CRC personal history (approved by local Ethic Committee). **Measures:** intention to undergo CRC screening, knowledge, risk perception, and informed choice. **Analyses:** Logistic regressions and ANOVAs.

**Findings:** a) Thirteen studies were included; Most were quantitative, USA-based, recent (last 5 years). The content of the narratives varied widely. b) The reassurance-based narrative yielded to the highest intention to undergo screening (85.7% vs. no-narrative condition 51.4%, OR=5.684, p=.003; vs. regret-based condition 59.5%, OR=4.091, p=.017; vs. control narrative 66.7%, OR=3.000, p=.066). The four conditions did not differ in knowledge, risk perception, and proportion of informed choices (p>.578).

**Discussion:** Our findings suggest that not all narratives are alike in promoting CRC screening, and that FOBT may be better promoted by reassurance-based narratives. Moreover, adding narratives to currently used information material did not affect knowledge, risk perception and the proportion of informed choices.

9:45 - 10:00

## Using screening practitioners as navigators in the Bowel Scope Screening Programme: a feasibility study

L. McGregor<sup>1</sup>, H. Skrobanski<sup>1</sup>, C. Rees<sup>2</sup>, H. Miller<sup>3</sup>, S. Morris<sup>1</sup>, L. Berkman<sup>4</sup>, C. von Wagner<sup>1</sup>

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<sup>3</sup>Gateshead Health NHS Foundation Trust, United Kingdom

<sup>4</sup>Patient Representative, United Kingdom

**Background:** The Bowel Scope Screening (BSS) programme in England invites people aged 55 for a once only flexible sigmoidoscopy. Participation is generally low (43%) which limits its ability to reduce colorectal cancer incidence and mortality. Previous research has identified many barriers to receiving BSS. We aimed to assess the feasibility of using screening practitioner led patient navigation (PN) calls to provide BSS non-attenders with practical and emotional support to overcome barriers and facilitate attendance.

**Methods:** Individuals invited to attend BSS at South Tyneside District Hospital (STDH), UK, were sent a study invitation alongside their standard BSS invitation letter (n=1050). Consenting individuals were randomised to one of two groups: usual care or PN. Only those in the PN group who then failed to attend their BSS appointment were eligible to receive a PN call. Screening practitioners were asked to feedback on their role in the study.

**Findings:** Our study recruitment was substantially lower than expected (14.6% vs. 40%). Of the 153 people who consented to take part in the study, only 22 were eligible for PN. Due to various practical difficulties e.g. unanswered/declined calls (n=13), only 2 participants received PN: one rebooked and attended a BSS appointment and one was not eligible for BSS.

**Discussion:** The opt-in recruitment process was necessary to obtain the phone numbers of BSS non-attenders, but was not a feasible approach. Future research will investigate alternative routes to identifying and contacting BSS non-attenders (e.g. through primary care) so that the impact of PN itself be evaluated.

10:00 - 10:15

## Involving future users in developing colorectal cancer screening interventions: a case study

M. Kotzur<sup>1</sup>, S. Wyke<sup>1</sup>, S. Macdonald<sup>1</sup>, R. Steele<sup>2</sup>, D. Weller<sup>3</sup>, C. Campbell<sup>3</sup>, E. Crighton<sup>4</sup>, C. McCowan<sup>1</sup>, K. Robb<sup>1</sup>

<sup>1</sup>University of Glasgow, United Kingdom

<sup>2</sup>University of Dundee, United Kingdom

<sup>3</sup>University of Edinburgh, United Kingdom

<sup>4</sup>NHS Greater Glasgow & Clyde, United Kingdom

**Background:** Discussing research findings with future users of colorectal cancer screening provides an opportunity to prioritise ideas for further research and intervention development. This interactive session will present a case study of an effort to disseminate research results to future users of colorectal screening and explore possible strategies for intervention. The audience will be invited to engage in group work to reflect on the case study, their own experience, and generate ideas for future research and dissemination.

**Methods:** Women (n=12, 52-61 years) and men (n=16, 50-69 years) who had not previously completed colorectal cancer screening participated in four single-sex focus groups in Glasgow. Participants were briefly informed of recent research exploring barriers to colorectal cancer screening, and invited to discuss potential solutions. Transcripts of the audio-recordings were analysed using thematic analysis.

**Findings:** Participants valued learning about the study. They emphasised that making colorectal screening easier to complete or screening information more compelling could increase colorectal screening participation. Participants preferred text message reminders over telephone counselling to help them make screening decisions and suggested education campaigns using social media. However, participants found it challenging to describe their intervention ideas in detail.

**Discussion:** Future users of colorectal cancer screening provided helpful feedback and suggestions for interventions. It may be challenging for participants to generate detailed intervention strategies in the limited time of a focus group meeting. These findings and key questions for future work involving future users, intervention development and wider dissemination of research results will be discussed with the Symposium audience.

# Symposium: Dyadic regulation processes to promote health and well- being in romantic couples

9:00 - 10:30

Aula E

Corina Berli, Janina Lüscher

9:00 - 9:15

## Physical activity-specific support provision and self-efficacy in couples: inter-relations over time

D.H. Hohl<sup>1</sup>, J. Keller<sup>1</sup>, S. Burkert<sup>2</sup>, N. Knoll<sup>1</sup><sup>1</sup>Freie Universität Berlin, Germany<sup>2</sup>Charité - Universitätsmedizin Berlin, Germany

**Background:** In the course of life-style changes, such as increasing regular physical activity, partners often provide support to each other. Whether this then translates into more efficient behaviour change might depend on how being provided with support relates to receiving partners' self-efficacy. To shed light on the dynamics of this relationship we examined actor and partner effects among provided support and self-efficacy over time.

**Methods:** Data from 338 heterosexual couples (age range: 18-80 years) motivated to increase their physical activity were analysed. Both partners reported on their provided support to each other and their self-efficacy (both physical activity-specific) at 6 measurement points in time, spanning 1 year.

**Findings:** Comparisons of nested longitudinal structural equation models based on the actor-partner interdependence model yielded a well-fitting final solution, indicating stationarity of most lagged actor and partner effects. Whereas highly self-efficacious men subsequently provided more support to their female partners (lagged actor effect), women's self-efficacy was predicted by their own prior support provision to their male partners (lagged actor effect). A non-stationary partner effect indicated that men's later self-efficacy increased when their partners had provided them with support earlier. Findings also indicated reciprocal support provision among partners over time.

**Discussion:** Gender-/role differences in inter-relations among partners' provided support and self-efficacy over time suggested that women's support provision was more beneficial as it seemed to enable both their partners' and their own self-efficacy. The same was not true for men's support provision that was also co-dependent on their own prior self-efficacy.

9:15 - 9:30

## Companionship in dual-smoker couples' everyday life

J. Lüscher<sup>1</sup>, G.(. Stadler<sup>2</sup>, U. Scholz<sup>1</sup><sup>1</sup>University of Zurich, Switzerland<sup>2</sup>University of Aberdeen, United Kingdom

**Background:** One form of social interaction is companionship (pleasurable social contacts). So far, companionship was found to be related to higher relationship satisfaction and less negative affect in cross-sectional studies. However, companionship has not been investigated in daily life, in the context of health-behavior change and from a dyadic perspective. Therefore, this study aimed at examining associations between companionship, relationship satisfaction, affect and health-behavior change in dual-smoker couples applying a dyadic intensive longitudinal approach.

**Methods:** Overall, 83 heterosexual dual-smoker couples reported in daily smartphone diaries for 32 consecutive days their daily number of cigarettes smoked, relationship satisfaction, positive and negative affect, as well as companionship (having a good time together or laughing often together) around a joint quit attempt.

**Findings:** Dyadic multilevel analyses based on the Actor-Partner Interdependence Model revealed that daily fluctuations in one's own companionship (actor effect) and partner's companionship (partner effect) were related to higher relationship satisfaction, positive affect and smoking behaviour and to lower negative affect before and after a joint quit attempt.

**Discussion:** Findings emphasize the need for studying the associations between companionship, relationship satisfaction, positive and negative affect and health outcomes in couples' everyday life.

9:30 - 9:45

## Couples coping with the transition to retirement: interpersonal emotion regulation and wellbeing in daily life

A.B. Horn<sup>1</sup>, S. Holzgang<sup>1</sup>, V. Rosenberger<sup>1</sup><sup>1</sup>University of Zuerich, Switzerland

**Background:** Adjusting to retirement is one of the most important and often challenging transitions in late adulthood; it is often accompanied with mental health consequences. Even though most research focusses on the retired individual, a dyadic perspective on co-regulation also in life transitions seems plausible. The aim of the current study is to investigate the role of interpersonal emotion regulation and wellbeing in daily life in couples with at least one recently retired partner.

**Method:** In this ongoing online-couple study, so far N= 36 couples reported during 14 days sleep quality, wellbeing und relationship quality in the morning and evening. In the evening report, additionally interpersonal emotion regulation strategies were assessed. Multilevel Actor Partner Interdependence Analyses were conducted.

**Results:** Multilevel Analyses reveal significant variability of retirement related adjustment disorder symptoms within retirees over two weeks. Adjustment problems correlated significantly between partners. On days in which the retiree engaged in adaptive interpersonal emotion regulation with the partner, wellbeing increased and adjustment disorder symptoms decreased; the mirrored results could be observed with maladaptive interpersonal emotion regulation like co-brooding.

**Discussion:** Results indicate that the transition to retirement can be a risk situation for mental health not only for the retiree but also for the romantic partner. Furthermore, emotional co-regulation strategies are associated with changes in daily wellbeing and mental health. A dyadic perspective on health in life transitions seems promising, particularly when it comes to challenged emotion regulation during the adjustment to changes in everyday life.

9:45 - 10:00

## Goal disengagement in health behavior change: examining affective and behavioral consequences within romantic couples

C. Berli<sup>1</sup>, J. Lüscher<sup>2</sup>, U. Scholz<sup>2</sup><sup>1</sup>Columbia University, United States<sup>2</sup>University of Zurich, Switzerland

**Background:** Disengaging from goals has not yet received much attention as an adaptive function in regulating health behavior change. We aimed to investigate the effects of goal disengagement on well-being and behavioral goal achievement in everyday life within a dyadic context of couples aiming to adopt physical activity (Study 1) or to quit smoking (Study 2).

**Methods:** In two daily diary studies (Study 1: 61 overweight couples, Study 2: 83 dual-smoker couples), both partners independently reported on goal disengagement, and positive and negative affect. Additionally, couples wore accelerometer to objectively assess behavioral goal achievement (Study 1), and reported on their smoking behavior (Study 2).

**Results:** Multilevel dyadic analyses based on the Actor-Partner-Interdependence-Model (APIM) revealed that across both studies, one's own goal disengagement was related to lower daily well-being and a lower likelihood for goal achievement (actor effects). Only in study 1, partner effects emerged in that one's partner's goal disengagement predicted higher negative affect and lower goal achievement.

**Conclusions:** In daily life, goal disengagement may not serve as an adaptive form of regulation when pursuing health behavior change. The findings suggest that goal disengagement may be relevant at the dyadic level when adopting physical activity, but more research is needed to establish such effects across different health-related contexts.



10:00 - 10:15

## Long-term findings from a dyadic planning intervention with couples motivated to increase physical activity

N. Knoll<sup>1</sup>, J. Keller<sup>1</sup>, D.H. Hohl<sup>1</sup>, G. Hosoya<sup>1</sup>, U. Scholz<sup>2</sup>, S. Burkert<sup>3</sup>

<sup>1</sup>Freie Universität Berlin, Germany

<sup>2</sup>University of Zurich, Switzerland

<sup>3</sup>Charité -- Universitätsmedizin Berlin, Germany

**Background:** Individual action planning was shown to help increase physical activity. Dyadic planning involves a source of support in the planning process and refers to a target person creating plans together with a partner for when, where, and how the target person will act. We report 1-year follow-up findings of an RCT with couples investigating effects of a dyadic-planning intervention on physical activity and -fitness in target persons and partners. Relationship quality was explored as a moderator.

**Methods:** Couples (N=338, target persons randomised) were randomly assigned to one of 3 conditions: a) dyadic-planning (DPC), b) individual-planning, where target persons planned and partners worked on a distractor task (IPC), and c) a no-planning dyadic-control condition (CC). Physical activity was objectively measured in 4 one-week assessments up to 1-year post-intervention. Cardio-respiratory fitness and relationship quality were assessed at baseline and 1-year follow-up. Multi-level models were fit.

**Findings:** Compared to IPC- and CC-target persons, whose moderate activity increased up to 1-year post-intervention, DPC-target persons remained stable. Follow-up analyses indicated that only within the DPC, target persons with higher, as opposed to lower, a-priori relationship quality increased moderate activity ( $p < .10$ ). DPC-partners showed steeper increases in cardio-respiratory fitness when compared to partners of the IPC, but not the CC.

**Discussion:** A dyadic planning intervention appeared to have more beneficial long-term effects on planning partners than on target persons. Although a-priori relationship quality further qualified this pattern, findings resemble social support evidence indicating more beneficial effects for support providers than for recipients.

# Symposium: Applications of health psychology for investigating fatigue: clinical and non- clinical perspectives

9:00 - 10:30

Aula F

Daniel Powell

9:00 - 9:15

## Fatigue in health professionals: does hard work wear you out?

D. Johnston<sup>1</sup>, J. Allan<sup>2</sup>, B. Farquharson<sup>3</sup>, M. Jones<sup>4</sup>, C. Bell<sup>2</sup>, D. Powell<sup>2</sup>, M. Johnston<sup>2</sup>

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<sup>4</sup>University of Dundee, United Kingdom

**Background.** A popular view of fatigue suggests that a limited resource is depleted by prolonged demanding activity and as a result one experiences fatigue. In health professionals such fatigue can be associated with errors that put the patients and the health professional at risk. The role of demand and energy expenditure in determining fatigue was examined in real time studies of nurses caring for patients.

**Method.** In study 1, 100 nurses completed electronic diaries assessing fatigue and work demands, approximately every 90 minutes, over two 12 hour work periods. Energy expenditure was assessed continuously using the Actiheart system. In study 2, 254 nurses completed similar diary measures, over 3 work periods of 9.5 hours.

**Results.** In both studies nurses clearly became fatigued over the work period. In study 1 neither demand nor energy expenditure predicted fatigue and within person analyses showed that while some nurses did show greater fatigue when under heavy demand others showed the opposite effect. Work breaks were not associated with a reduction in fatigue. In Study 2 fatigue was reliably associated with reduced demand.

**Conclusion.** These studies do not support a resource depletion model of fatigue. Working hard can be energising rather than fatiguing. It is therefore unlikely that the solution to fatigue at work is to reduce work demand.

9:15 - 9:30

## Stress differentially affects fatigue in women with depression or somatic symptom disorder

J.M. Doerr<sup>1</sup>, R. Mewes<sup>1</sup>, N. Skoluda<sup>1,2</sup>, U.M. Nater<sup>1</sup><sup>1</sup>University of Marburg, Germany<sup>2</sup>University of Tübingen, Germany

**Background:** Fatigue is one of the most debilitating complaints in both depression and somatic symptom disorder. We examined whether subjective and physiological stress differentially affects fatigue in these two groups.

**Methods:** 30 women with depression (DEPR) and 30 women with somatic symptom disorder (SSD) completed the Multidimensional Fatigue Inventory (MFI) and the Trier Inventory for Chronic Stress Screener (SSCS). Moreover, DEPR reported their momentary stress and fatigue during a period of 14 consecutive days at 5 time points each day. All participants also provided hair samples to determine cortisol levels (indicating long-term HPA axis activity). Data was analyzed using t-tests, regression analyses, and hierarchical linear models.

**Findings:** DEPR had higher general and mental fatigue (MFI) as well as chronic stress levels (SSCS) than SSD ( $p < .001$ ). Groups did not differ in their physical fatigue (MFI) or in hair cortisol levels ( $p \geq .114$ ). Chronic stress predicted general and mental fatigue in SSD ( $p \leq .005$ ), whereas it was associated with physical fatigue in DEPR ( $p = .018$ ). Hair cortisol was not associated with chronic stress or fatigue in either sample ( $p \geq .170$ ), nor with momentary fatigue or stress in DEPR ( $p \geq .654$ ). In DEPR, momentary fatigue was positively associated with concurrent momentary stress ( $p < .001$ ).

**Conclusion:** Fatigue was associated with subjective, but not physiological chronic stress in both DEPR and SSD. Chronic stress predicted mental fatigue in SSD and physical fatigue in DEPR. Stress differentially affects fatigue in DEPR and SSD patients. Future research should elucidate the underlying mechanisms. Interventions should target stress and its effects on different fatigue dimensions.

9:30 - 9:45

## Cancer-related fatigue and functional impairment – towards an understanding of cognitive and behavioural factors

T. Chalder<sup>1</sup>, K. Rimes<sup>2</sup>, S. Suleman<sup>3</sup><sup>1</sup>Kings College London, United Kingdom<sup>2</sup>King's College London, United Kingdom<sup>3</sup>St George's Hospital, United Kingdom

**Background:** Fatigue is a highly prevalent and debilitating problem in women with breast cancer undergoing chemotherapy. This study investigated the cognitive, behavioural, interpersonal and affective responses associated with and predictive of cancer-related fatigue and related functional impairment.

**Method:** 151 women diagnosed with breast cancer and undergoing or about to undergo a course of chemotherapy completed a range of measures. Correlational and multiple regression analyses were used to explore associations between fatigue severity, social adjustment and a range of psychological, behavioural, demographic and clinical variables. Fifty-two patients completed measures prior to chemotherapy and were followed up prospectively to examine the relationship between psychosocial variables and fatigue and functional impairment as measured after three cycles of chemotherapy.

**Findings:** A range of cognitive, behavioural and affective variables were associated with increased fatigue severity and poorer social adjustment. Key cognitive and behavioural correlates included increased symptom focusing, all-or-nothing behaviour, avoidance behaviour and health anxiety. Furthermore, prospective analyses suggested that an increased presence of unhelpful behaviours and beliefs prior to chemotherapy predicted the presence of fatigue and functional impairment after three cycles of chemotherapy. Key prospective predictors included embarrassment about having cancer, avoidance behaviour and expectations of future fatigue.

**Discussion:** Psychological and behavioural factors may make important contributions to cancer-related fatigue and associated impairments. Such factors are potentially amenable to change within the context of cognitive behavioural therapy.

9:45 - 10:00

## Feasibility and pilot testing of an online intervention for post-treatment cancer survivors

A. Groarke<sup>1</sup>, T. Corbett<sup>1</sup>, J. Walsh<sup>2</sup>, B. McGuire<sup>3</sup><sup>1</sup>National University of Ireland, Galway, Ireland<sup>2</sup>National University of Ireland, Galway, Ireland<sup>3</sup>National university of Ireland, Galway, ireland, Ireland

**Background:** Many post-treatment cancer survivors experience persistent fatigue that can disrupt attempts to resume normal everyday activities after treatment. Interventions to address these symptoms are therefore, of value. A theory-based intervention aimed to facilitate self-management and enhance coping with fatigue following cancer treatment was developed. The trial has been registered (ISRCTN55763085) and the protocol has been published.

**Methods:** An 8-week cognitive-behavioural therapy intervention was designed based on a review of existing literature and qualitative research. Inductive qualitative research assessed the usability of the website. A 2-armed randomised controlled pilot trial assessed the feasibility of the online intervention. Forty participants were included for analysis at baseline (intervention N = 21, control N = 19), and 24 filled out the follow-up questionnaire.

A pilot trial is ongoing to assess the potential effectiveness of the online intervention. Participants are allocated to either the online intervention (REFRESH (Recovery from Cancer-Related Fatigue)), or a leaflet comparator.

**Findings:** The intervention was considered acceptable to users, who described the intervention as “fruitful”, and “helpful”. The researchers created a protocol for a feasibility study. The feasibility of trial procedures will be discussed, as well as the effect of the intervention on the outcomes.

**Discussion:** This is the first intervention based on Self Regulation Model, with the primary aim of targeting the representations of fatigue and enhancing self-management of CrF specifically. This study may lead to the development of a supportive resource to target representations and coping strategies of cancer survivors with CrF post-treatment.

10:00 - 10:15

## "Finding your feet": the development of a self-management treatment for fatigue in paediatric multiple sclerosis

S. Carroll<sup>1</sup>, T. Chalder<sup>2</sup>, C. Hemingway<sup>3</sup>, I. Heyman<sup>3</sup>, R. Moss-Morris<sup>1</sup>

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<sup>2</sup>Kings College London, United Kingdom

<sup>3</sup>Great Ormond Street Hospital for Children, United Kingdom

**Background:** Two-thirds of children and adolescents with multiple sclerosis (caMS) experience mentally and physically disabling fatigue. While effective treatments for paediatric MS fatigue are currently lacking, cognitive behavioural therapy (CBT) offers promising results in reducing fatigue severity and impact in adult MS and adolescent Chronic Fatigue Syndrome (CFS). We aimed to identify factors associated with fatigue in caMS and develop a tailored self-management treatment for caMS with fatigue.

**Methods:** A systematic review was conducted to explore associations between fatigue and clinical and psychosocial factors in paediatric MS. Subsequently, a qualitative study was carried out to gain insight into experiences of fatigue in paediatric MS and understand how caMS and parents perceive and manage fatigue. Finally, a cross-sectional study was conducted to compare caMS, adolescents with CFS and healthy controls on measures of fatigue, cognitive functioning and psychosocial factors. Findings from these studies were collated and used to guide intervention development.

**Findings:** The perpetuating and potentially modifiable fatigue-related factors identified in these studies included "all-or-nothing" behaviour, poor sleep-related behaviours, symptom catastrophizing, perceiving fatigue as uncontrollable, and difficulty disclosing fatigue. Thus, an eight-module CBT based self-management intervention was developed and included: (1) Understanding MS Fatigue (2) Goal Setting (3) Balancing Activities (4) Sleeping Soundly (5) Surviving School (6) Thoughts and Feelings about Fatigue (7) Disclosure (8) Information for Parents.

**Discussion:** Self-management treatments have the potential to offer a cost-effective and accessible treatment option for caMS with fatigue. This intervention is currently being feasibility tested before being refined and implemented in clinical practice.

# Symposium: New directions in individual difference research in dermatological care: putting the patient's needs first

11:00 - 12:30

Aula D

Andrew Thompson, Kerry Montgomery



11:00 - 11:15

## A mixed methods survey of social anxiety, anxiety, depression, and wig use in alopecia

A. Thompson<sup>1</sup>, K. Montgomery<sup>1</sup>, C. White<sup>2</sup>

<sup>1</sup>University of Sheffield, United Kingdom

<sup>2</sup>University of Manchester, United Kingdom

**Background:** Hair, for many, is a central aspect of appearance, and hair loss can have a negative impact on self-esteem and body image. The current study aimed to examine levels of psychosocial distress reported by people with alopecia, and associations with wig use. The study also sought to report on experiences of wearing wigs in social situations.

**Method:** A cross sectional survey comprised of standardised measures of social anxiety, anxiety and depression and survey questions to measure the use of wigs was completed by participants living with alopecia (N = 338). Correlations and t-tests were used to examine the relationship between wearing wigs and psychosocial distress. Open ended questions enabled participants to comment on their experiences of wearing wigs and were analysed using qualitative content analysis.

**Findings:** Clinically significant levels of social anxiety (47.5%), anxiety (35.5%) and depression (27.5%) were reported with 66.3% reporting they would not feel confident leaving the house without a wig. Participants who reported worries about not wearing a wig reported significantly higher levels of depression,  $t(103) = 3.40$ ,  $p < .001$ , anxiety,  $t(109) = 4.80$ ,  $p < .001$ , and social anxiety,  $t(294) = 3.89$ ,  $p < .001$ . Wearing wigs appeared to increase social confidence; however, for some participants fears of wigs being noticed was reported which led to increased anxiety in social situations.

**Discussion:** The relationship between wearing a wig and social confidence is complex. The psychosocial impact of hair loss needs to be considered when making decisions regarding funding for wig provision.

11:15 - 11:30

## The role of skin picking and dysmorphic concerns for impaired mental health accompanying skin conditions

J. Schmidt<sup>1</sup>, J. Vöhringer<sup>1</sup>, M. Opwis<sup>2</sup>, A. Martin<sup>1</sup>

<sup>1</sup>Bergische Universität Wuppertal, Germany

<sup>2</sup>FernUniversität in Hagen, Germany

**Background:** Individuals with skin conditions are prone to experience impaired mental health. Such effects may manifest in symptoms of depression and anxiety. Dermatological patients also report dysmorphic concerns and are vulnerable to skin picking behaviours that can further aggravate the state of the skin. The current study aimed at testing the mediating role of these two factors in explaining impaired mental health among patients with skin conditions.

**Method:** Based on a large survey in the German population (n=1028), we examined group differences in mental health among individuals with three skin conditions (acne, atopic dermatitis, and psoriasis: n=178) and controls without skin conditions (n=850). We analysed indirect effects of dysmorphic concerns (DCQ) and skin picking behaviours (SPS) on group differences in depression, anxiety, and well-being, using mediation modelling in PROCESS. Additional control analyses accounted for influences of age, gender, impulsivity, and obsessive-compulsive symptoms.

**Findings:** Participants with skin conditions reported lower well-being and higher degrees of depression, anxiety, dysmorphic concern, and skin picking compared to controls (ps <.01). Mediation analyses showed that both, dysmorphic concerns and skin picking behaviours, fully mediated the effects of skin conditions on all assessed mental health variables (all delta R<sup>2</sup> >.15). These effects remained stable in control analyses.

**Discussion:** Dysmorphic concerns and skin picking are important factors that contribute substantially to affected mental health associated with skin conditions. The results imply the importance of addressing these cognitive-affective and behavioural components in psychological interventions. This could, in turn, alleviate distress and improve the well-being of dermatological patients.

11:30 - 11:45

## Identifying medication belief groups in psoriasis: a latent profile analysis

R. Thorneloe<sup>1,2</sup>, C. Griffiths<sup>2,3</sup>, R. Emsley<sup>4</sup>, D. Ashcroft<sup>5</sup>, L. Cordingley<sup>6</sup>

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<sup>6</sup>Division of Musculoskeletal and Dermatological Sciences, Manchester Academic Health Sciences Centre, University of Manchester, United Kingdom

### Background

Patients' beliefs about illness and treatments are key drivers of medication adherence. We investigated how beliefs are linked, whether we could identify meaningful groups of patients with similar medication beliefs, and examined relationships between group membership and adherence.

### Methods

Cross-sectional survey of 816 patients with moderate-severe psoriasis prescribed a biologic (injection) or conventional (tablet) systemic therapy recruited from 35 UK dermatology centres. Beliefs and medication adherence data were collected and theory-led group identification was made using latent profile analysis (LPA).

### Findings

22% of patients using a self-administered systemic therapy were classified as 'non-adherent'; just over half of those classified as intentionally rather than unintentionally non-adherent. A higher proportion of patients using a conventional systemic were classified as non-adherent (28.7%) compared with those using a biologic (16.1%);  $\chi^2 = 13.7$ ,  $p \leq .001$ .

LPA supported a 3-group model. Each group expressed strong and positive beliefs in treatment necessity and controllability, but differed in their level of medication concerns. Group 1 (26% of the sample) reported the strongest concerns, followed by Group 2 (61%), with Group 3 (13%) reporting the weakest concerns. A higher proportion of patients in Group 1 were classified as intentionally non-adherent (19.7%) compared with Groups 2 and 3 (9.4%),  $\chi^2 = 11.7$ ,  $p = .001$ . There was no relationship between belief groups and unintentional non-adherence ( $p = .83$ ).

### Discussion

Many patients express unresolved medication concerns, even if they believe their medication is necessary and effective. LPA offers a novel approach for identifying those most likely to experience adherence difficulties.

11:45 - 12:00

## Mindfulness based cognitive therapy: effectiveness and mechanisms of action in people with visible skin conditions

K. Montgomery<sup>1</sup>, A. Thompson<sup>1</sup>, P. Norman<sup>1</sup>, A. Messenger<sup>2</sup>, K. Smith<sup>3</sup>

<sup>1</sup>University of Sheffield, United Kingdom

<sup>2</sup>Sheffield Teaching Hospitals, United Kingdom

<sup>3</sup>Sheffield Health and Social Care NHS Foundation Trust, United Kingdom

**Background:** Social anxiety is commonly reported by people living with visible skin conditions. Mindfulness based cognitive therapy aims to cultivate a non-judgmental attitude towards experiences so that individuals can recognise and dis-engage from negative patterns of thinking which maintain social distress. This study examined the effectiveness of group MBCT in reducing social anxiety in people with visible skin conditions.

**Method:** Using a multiple baseline single case design, participants (N=11) were randomly allocated to a 2,3 or 4-week baseline. Following baseline, participants completed an 8-week group MBCT intervention, and four-week follow-up. Idiographic measures of social anxiety were administered daily; mindfulness and social anxiety were measured weekly; and anxiety, depression, and skin-specific quality of life, were measured pre-intervention, post-intervention and follow-up. Visual analysis and TAU U were used to examine change in daily social anxiety. The Reliable Change Index was used to examine pre-post changes in distress. Follow-up interviews, analysed using thematic analysis, examined experiences of MBCT.

**Findings:** Seven participants completed the intervention and demonstrated clinically significant reductions in social anxiety (TAU = - 0.54, p = <. 001) and reliable and/or clinically significant change in at least one other measure of distress. Increased 'Non-judgement' and 'non-reactivity' to inner experiences were associated with reductions in social anxiety, particularly the ability to reduce habitual processing of negative self-appraisals.

**Discussion.** Findings suggest that learning flexible ways of attending to negative self-beliefs through MBCT can be beneficial. Further research of MBCT in people living with a range of health conditions is warranted.

# Symposium: Innovative ideas in online computer-tailoring

11:00 - 12:30

Aula E

Eline Smit

11:15 - 11:30

## Is an online computer-tailoring program for practice nurses effective in improving their smoking cessation counseling?

D. de Ruijter<sup>1</sup>, E. Smit<sup>2</sup>, H. de Vries<sup>1</sup>, C. Hoving<sup>1</sup>

<sup>1</sup>Maastricht University, department of Health Promotion, Netherlands

<sup>2</sup>University of Amsterdam/ASCoR, Netherlands

### Background

Practice nurses make sub-optimal use of evidence-based smoking cessation counseling protocols in Dutch general practice. We developed an online computer-tailored program to improve practice nurses' protocol adherence. Aim of this study was to evaluate the program's effectiveness in a randomized trial.

### Methods

Practice nurses were randomized to either have full access to the online computer-tailored program (intervention group, N=147), or mere access to general project information (control group, N=122) for six months. Practice nurse demographics, socio-cognitive determinants and protocol adherence were assessed at baseline and after six months. Practice nurses also completed counseling checklists after every smoking cessation consultation during the study period. Counseled smokers reported on smoking status and the cessation care content they received at baseline and after six months. Data from counseling checklists and smoker questionnaires were combined to calculate practice nurses' protocol adherence.

### Findings

Data from 216 practice nurses and 396 smokers was available. After six months, the computer-tailored program showed a small effect on overall protocol adherence and assessing and improving smoker motivation (ES 0.18-0.22), indicating improved smoking cessation counseling among practice nurses exposed to the program. Furthermore, a trend towards higher protocol adherence among more frequent program users was found.

### Discussion

The online computer-tailored program showed positive but small effects on smoking counseling protocol adherence. As program use was limited during the trial period and more frequent use was associated with improved adherence, we now need to focus on both improving the program content and stimulating more frequent program application by its users.

11:30 - 11:45

## Smokers' engagement with a context-tailored cessation smartphone app: real-time engagement, context effects and disengagement profile

F. Naughton<sup>1</sup>, S. Hopewell<sup>2</sup>, N. Lathia<sup>2</sup>, C. Brown<sup>2</sup>, C. Mascolo<sup>2</sup>, A. McEwen<sup>3</sup>, S. Sutton<sup>2</sup>

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**Background:** Sensors on smartphones enable real-time behavioural support to be triggered and tailored to changes in a user's situational context, representing a new type of online computer-tailoring. However, we do not know if users engage with such support in a suitably rapid timeframe or how this might be influenced by situational context.

**Methods:** A single arm study of a smoking cessation app that delivers context tailored lapse and relapse prevention support (Q Sense). Smokers were invited to use the app before and 4-weeks after a quit attempt (N=42). Data from all app-generated notifications (notification type, location, context features, speed of viewing), including context-triggered support messages, were analysed using multi-level modelling (n=3,090). The disengagement profile was generated using the last formal engagement episode.

**Findings:** Three participants withdrew. Of 3,090 notifications, 1,483 (48%) were engaged with (mean 38 per participant). For those context-triggered support message notifications engaged with (56%), the median speed of viewing was 4.5 minutes. The equivalent speed of viewing for schedule-triggered support messages was 24.2 minutes ( $p<0.001$ ). Controlling for time and serial correlation, context features (home vs. work, situation entry vs. exit, low vs. high situational craving, time of day) were not associated with speed of viewing notifications. Median time to disengagement of using app was 25 days (IQR 7-41).

**Discussion:** While not all context-triggered support messages were engaged with, most that are engaged with are viewed within 5 minutes. Context features do not appear to influence the speed to engagement, supporting the feasibility of this type of tailoring.

11:45 - 12:00

## I must not! Identifying the most autonomy-supportive message frame for online computer-tailored health communication

M. Altendorf<sup>1</sup>, E. Smit<sup>1</sup>, J. van Weert<sup>1</sup>, C. Hoving<sup>2</sup>

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<sup>2</sup>Maastricht University/CAPHRI, Netherlands

Online tailored health communication can be a (cost-)effective strategy to induce behaviour change. To date, this type of health communication has been mainly focused on content-tailoring, but effects remain small. Tailoring message frames, in addition to tailoring message content, is an innovative approach to be tested. Message frame tailoring based on the need for autonomy, a theoretical construct derived from Self-Determination Theory, may be especially promising to maximise impacts of online health communication. This study aims to identify the most autonomy-supportive message frame in the context of an online alcohol reduction intervention by offering content-tailored feedback in autonomy-supportive (i.e. offering choice and non-controlling language) versus controlling (i.e. offering no choice and controlling language) message frames.

A 2(non-controlling language vs. controlling language) x 2(choice vs. no choice) online experiment will be conducted. To significantly detect small effects (effect size  $f=.15$ ), while considering 20% attrition over the intervention period, at least 615 participants will be recruited via an online panel. Primary outcome measure is perceived autonomy-support, which will be measured with the Virtual Climate Care Questionnaire. Analysis will be conducted using ANOVA with Turkey's post-hoc comparisons. Data collection takes place in April 2017 and results will be presented at the conference.

We expect main effects for the use of non-controlling language and offering choice on perceived autonomy-support. Further, we hypothesise that there are interaction effects with individuals' need for autonomy.

This project is one of the first to test the idea of message frame tailoring within the context of online health communication.



12:00 - 12:15

## Can one size fit all? Tailoring the mode of information presentation of health information online

H. Nguyen<sup>1</sup>, J. van Weert<sup>1</sup>, N. Bol<sup>1</sup>, E. Loos<sup>1</sup>, E. Smets<sup>2</sup>

<sup>1</sup>ASCoR, University of Amsterdam, Netherlands

<sup>2</sup>Medical Psychology, Academic Medical Center, University of Amsterdam, Netherlands

**Background:** Previous scholars have mainly focused on adjusting message content to match individual characteristics and preferences. Additional strategies, such as tailoring to individual preferences for the mode of information delivery, have been proposed to increase message effectiveness. This project investigates whether mode tailoring, allowing users to self-tailor the mode of delivery, positively influences younger (25-45) and older (65+) adults' information recall and satisfaction with health websites.

**Methods:** First, a 5 (tailored vs. text, text with illustrations, text with video, combination) × 2 (younger vs. older adults) experiment (N ≈ 563) tested the effects on recall and satisfaction. Second, a 2 (tailored vs. non-tailored) × 2 (younger vs. older adults) experimental study (N ≈ 515) aimed to explore possible mechanisms of mode tailoring effects. Recall was measured with seven open questions. Satisfaction with the attractiveness, comprehensibility and emotional support of the website was assessed. Potential mediators included (amongst others) attention, cognitive load, and perceived active control.

**Findings:** Mode tailoring positively influenced attention, and consequently recall in older adults. Younger adults recalled more from text-only and text with illustrations. Both younger and older adults were more satisfied with the attractiveness and comprehensibility of the mode-tailored website. Perceived active control mediates this effect.

**Discussion:** Mode tailoring could be a promising strategy that can be used in health interventions. Next to investigating 'why' mode tailoring might be effective, it is also important to investigate 'when' (which audience and outcome measures) mode tailoring is effective. Nevertheless, this study provides relevant insights for researchers and practitioners.

# Symposium: Developing and evaluating interventions to promote physical activity: issues in special settings and populations

14:00 - 15:30

Aula C

Lisa Marie Warner

14:00 - 14:15

## Modifiable psychosocial constructs associated with physical activity participation in people with Multiple Sclerosis: a meta-analysis

B. Casey<sup>1</sup>, S. Coote<sup>1</sup>, C. Shirazipour<sup>2</sup>, A. Hannigan<sup>3</sup>, R. Motl<sup>4</sup>, K. Martin-Ginis<sup>5</sup>, A. Latimer-Cheung<sup>2</sup>

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<sup>4</sup>Department of Physical Therapy, University of Alabama at Birmingham, United States

<sup>5</sup>Department of Kinesiology, McMaster University, Canada

**Background:** This review aims to synthesis current knowledge of the modifiable psychosocial constructs associated with physical activity (PA) participation in people with Multiple Sclerosis (pwMS).

**Methods:** A systematic search was conducted on 8 databases using keywords associated with MS, PA and behavioural theory. Cohort and intervention studies were included if they 1) included an objective or subjective measure of PA, 2) measured at least one modifiable psychosocial construct and 3) reported bivariate correlations (or these could be extracted) between the PA and psychosocial construct measures. Meta-analyses of correlations was conducted using the Hedges-Olkin method. Where a meta-analysis was not possible, results were reported descriptively.

**Findings:** Meta-analyses indicated a pooled correlation coefficient between 1) objective PA and self-efficacy (n=7) of  $r=0.30$  ( $p < 0.0001$ ) indicating a moderate, positive association, 2) subjective PA and self-efficacy (n=7) of  $r=0.34$  ( $p < 0.0001$ ) indicating a moderate, positive association, 3) subjective PA and goal-setting (n=5) of  $r=0.44$  ( $p < 0.0001$ ) indicating a moderate to large, positive association and 4) subjective PA and outcome expectancies (n=4) (physical:  $r=0.13$ ,  $p=0.11$ ; social:  $0.19$ ,  $p < 0.0001$ ; self-evaluative:  $r=0.27$ ,  $p < 0.0001$ ) indicating small-moderate positive associations. Non-meta-analysed constructs, such as measures of health beliefs, enjoyment, social support and perceived benefits and barriers were reported to be significantly correlated with PA.

**Discussion:** Future PA interventions should continue to focus on the psychosocial constructs of self-efficacy, goal-setting, and outcome expectancies. However, there is a need to explore the associations between other constructs outside of those reported in this review.

14:15 - 14:30

## Enablers and barriers to physical activity in pregnancy: drawing on the TDF and COM-B model

C. Flannery<sup>1</sup>, S. McHugh<sup>2</sup>, A.E. Anaba<sup>2</sup>, E. Clifford<sup>3</sup>, M. O'Riordan<sup>2</sup>, L. Kenny<sup>2,4</sup>, F. McAuliffe<sup>5,6</sup>, P. Kearney<sup>2</sup>, M. Byrne<sup>7</sup>

<sup>1</sup>National University of Ireland Galway, Ireland

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<sup>5</sup>University College Dublin, Ireland

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<sup>7</sup>NUI Galway, Ireland

**Background:** Obesity during pregnancy is associated with increased risk of gestational diabetes and other complications. Although physical activity (PA) is a modifiable lifestyle factor that may help prevent these complications, many women become less active in pregnancy. Antenatal interventions are on-going but few identify the behaviour change mechanisms by which the intervention is expected to work. To enhance the effectiveness of interventions tools in behavioural science; the Theoretical Domains Framework (TDF) and COM-B model have been employed to help understand behaviours. Using these methods, this study aimed to identify the enablers and barriers to PA in overweight and obese pregnant women.

**Methods:** Semi-structured interviews were conducted with a purposive sample of overweight and obese pregnant women attending a public antenatal clinic in a maternity hospital in Cork, Ireland. Interviews were recorded and transcribed. The framework approach was employed, drawing on the TDF and COM-B model.

**Results:** Social opportunity to engage in PA was identified as an enabler; pregnant women suggested being active was easier when supported by their partners. Knowledge was a commonly reported barrier with women lacking information on safe activities and describing the information received as 'limited'. Physical capability and physical opportunity to carry out PA were also identified as barriers; experiencing pain, lack of time, other children, and working prevented women from being active.

**Conclusion:** This study is a theoretical starting point in making a 'behavioural diagnoses' and the results will be used to inform the development of a PA intervention for overweight and obese pregnant women.

14:30 - 14:45

## The acceptability of reducing sedentary behaviour to older adults: a qualitative study

L. McGowan<sup>1</sup>, R. Powell<sup>1</sup>, D. French<sup>1</sup>

<sup>1</sup>University of Manchester, United Kingdom

**Background:** Sedentariness is a risk factor for multiple diseases and premature death, and is most common in older adults. To develop and implement effective interventions to reduce sedentariness in this population, it is important to discern what methods and techniques would be acceptable. The present research aimed to investigate factors influencing acceptability in relation to sedentary behaviour reduction in older adults.

**Methods:** Semi-structured interviews were conducted with 22 older adults aged 65-99 years with varying levels of activity, living independently in both higher and lower SES areas in Manchester. Framework Analysis was used, and findings were related to the Theoretical Domains Framework in the latter stages of analysis.

**Findings:** Older adults struggled to conceptualise what is meant by 'sedentariness', finding it easier to think in terms of being physically active or inactive. Perhaps as a result of this, participants also had difficulty imagining specific ways sedentary behaviour could be reduced, instead focusing on approaches that would increase physical activity rather than reduce sedentary behaviour. However, socialisation was clearly important to participants, both in terms of having existing social support (e.g. someone with whom to attend events) and as a motivation to engage in activities (e.g. as an opportunity to meet people).

**Discussion:** If older adults are to be encouraged to reduce sedentariness, clear communication strategies need to be developed to better convey exactly what constitutes sedentary behaviour. Interventions to reduce sedentary behaviour should include the opportunity for socialisation, as well as providing concrete examples of how sedentariness could be reduced.

14:45 - 15:00

## Self-regulation in physical activity interventions for older adults: what makes action planning (in)effective?

L.M. Warner<sup>1</sup>, J.K. Wolff<sup>2</sup>, R. Schwarzer<sup>3</sup>, S. Wurm<sup>4</sup><sup>1</sup>Freie Universität Berlin, Germany<sup>2</sup>German Centre of Gerontology, Germany<sup>3</sup>SWPS University of Social Sciences and Humanities, Poland<sup>4</sup>Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany

**Background:** For most populations, self-regulatory behaviour changes techniques (BCTs) such as action planning and self-monitoring facilitate physical activity (PA). Only for older adults, these BCTs have recently been found to be non-effective or even detrimental. To find explanations for why self-regulatory BCTs might fail among older adults the content of planning worksheets (with 0-6 plans) and 10-day self-monitoring diaries from a social-cognitive PA intervention group were analysed.

**Methods:** Multilevel models were computed with plans nested in participants. Plan enactment (reported in diaries,  $n = 126$ ) was predicted by plan characteristics as rated from content in planning worksheets (e.g., plan rank order, specificity of cues and activities including persons, locations or objects as cues, indoors vs. outdoors, MET minutes, number of planned opportunities).

**Findings:** After controlling for age and sex, only plan rank order ( $B = -0.402$ ,  $p < .001$ ) and planned outdoor activities ( $B = 1.005$ ,  $p = .004$ ) predicted plan enactment.

**Discussion:** As opposed to previous research that found the specificity and the intensity of the planned PA to be predictive of plan enactment among middle-aged adults, older adults enacted their plans only if they were listed among the first plans on the worksheet and if outdoor activities were planned. PA planning among older adults may fail because internal emotional cues become more relevant over environmental cues with age, as suggested by socio-emotional selectivity theory. Future studies might want to test mood-based cues (e.g., feeling like exercising, trying to overcome negative mood) in PA planning interventions for older adults.

15:00 - 15:15

## The EuroFIT project: promoting physical activity and reduced sedentary time in elite football clubs

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**Background:** The European Fans in Training (EuroFIT) program was delivered in elite professional football clubs in four European countries and aimed to engage overweight and obese men in initiating and maintaining improvements in physical activity, sedentary, and dietary behaviours. .

**Methods:** EuroFIT tests the utility of a and gender-sensitized 12-week lifestyle program in 1200 middle-aged (30-65y) men in Portugal, Norway, the Netherlands, and the UK. The program was led by club coaches, and affiliation to clubs leveraged to extend reach to 'hard-to-reach' men, and increase group relatedness, interest in the program, and adaptive motivation for behaviour change. Real-time, self-relevant feedback on step count and sedentary time was provided via an accelerometer (SitFit) and connection to other participants promoted with a proprietary app (MatchFit).

**Findings:** The EuroFIT RCT involved 15 participating clubs. Alongside perspectives from sociology and gender studies, Self-Determination Theory and Achievement Goal Theory were integral components of the intervention and measurement protocol. Specifically, the program was designed to help men develop autonomous goals, build competencies through optimally challenging physical activity and dietary changes, and strengthen relatedness through meaningful connections to group members and the club.

**Discussion:** We will describe the elements of EuroFIT that highlight theoretical constructs and how they were linked to intervention strategies, and discuss both form and function in relation to the specific characteristics of this population and setting. Results will allow us to test the efficacy of the intervention as partially mediated by theoretical constructs, resulting in sustained healthy lifestyles, improved health and well-being

# Symposium: In control of pain: a cognitive-affective analysis

14:00 - 15:30

Aula E

Dimitri Van Ryckeghem, Geert Crombez



14:00 - 14:15

## Attention and pain: a narrative review

G. Crombez<sup>1,2</sup><sup>1</sup>Ghent University, Belgium<sup>2</sup>Bath University, United Kingdom

**Background:** Attention is a key process in the transformation from nociception until the experience of pain, and in an attempt to function in the presence of pain. Several models have been formulated to account for the reciprocal relationship between pain and attention. A review of current models and their assumption is currently lacking.

**Methods:** We searched and identified a number of theoretical models on the relationship between pain and attention, and interpreted these taking into account the various meanings of attention as proposed by Allport (2012): as a relationship between a subject and an object, as a limitation (resource/capacity; bottleneck), as a control system, and as a bias mechanism.

**Findings:** We identified several models of attention and pain, amongst which a resource/capacity model, a cognitive-affective model, a neuropsychological model and a motivational model. Many models use terms related to attention as a limitation Few models use a motivational perspective, in which attention is best considered as a control system and as a bias mechanism. .

**Discussion:** We discuss the consequences of these models for future research, and consider their implications for interventions in patients with chronic pain. We argue that pain should be re-defined in a motivational perspective: pain energizes and directs behaviour, and may be best reconceptualised as an urge to escape from bodily threat.

14:15 - 14:30

## Incremental dual-task paradigm to investigate pain attenuation by task: the role of difficulty and light

V. Araujo Soares<sup>1</sup>, A. Owen<sup>1</sup>, A. Hurlbert<sup>1</sup>, K. Akin-Akinyosoye<sup>2</sup>, Q. Vuong<sup>1</sup>

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<sup>2</sup>University of Nottingham, United Kingdom

**Introduction:** There is evidence that performing a task can attenuate perceived pain intensity because task and pain processing compete for shared attentional resources. Here we tested whether increasing attention to the task could modulate the task attenuation of pain intensity by manipulating either task difficulty or ambient light to increase alertness.

**Methods:** We used a novel incremental dual-task paradigm which required participants to continuously monitor the task and the pain intensity on their fingertip. Force was incrementally applied to the participants' fingertip while they concurrently engaged in a task until they reported a moderate pain intensity. In Experiment 1, 22 participants performed an "easy" or "difficult" working-memory task with coloured shapes. In Experiment 2, 20 participants performed an "easy" working-memory task with letters while immersed in ambient light which had high or low melanopic content. Participants stopped the task when the pain intensity on their fingertip reached Level 5 or 6 on a 10-point numeric rating scale. We recorded the force (measured in Newton) at this pain intensity during the task, as well as before and after the task.

**Results:** In Experiments 1 and 2, we found that force was significantly greater during the task compared to no-task blocks, but that varying task difficulty or ambient light did not affect force measurements.

**Conclusion:** Task engagement can reduce perceived pain intensity and may provide a strategy for pain management.

14:30 - 14:45

## Daily affect regulation in patients with fibromyalgia

S. Rost<sup>1</sup>, D. Van Ryckeghem<sup>1,2</sup>, P. Koval<sup>3,4</sup>, S. Sütterlin<sup>5,6</sup>, G. Crombez<sup>2,7</sup>, C. Vögele<sup>1,4</sup>

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<sup>5</sup>Lillehammer University College, Norway

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<sup>7</sup>University of Bath, United Kingdom

**Background:** Fibromyalgia is characterized by widespread musculoskeletal pain accompanied by other physiological, cognitive and emotional challenges. It has been suggested that successful adaptation to fibromyalgia depends on emotion regulation capacity. Maladaptive emotion regulation can result in affective instability, which has been shown to moderate the association between daily pain and daily disability.

**Methods:** In this study, we examined two indices of emotion regulation capacity: (1) affective instability, involving frequent large fluctuations in self-reported affect, and (2) resting heart rate variability (HRV), in a sample of 46 fibromyalgia patients (Mage = 45.4 years; 39 females) and 46 healthy controls (Mage = 44.9 years; 37 females). During a baseline phase, patients completed standard questionnaires while heart rate was monitored under resting conditions to derive HRV. Over the next 14 consecutive days participants completed an electronic end-of-day diary assessing daily levels of pain severity, disability, distractibility, negative (NA) and positive affect (PA). Affective instability was operationalized as the mean square of successive differences in daily mood (separately for NA and PA).

**Findings:** Consistent with previous research, HRV and NA instability were inversely related. Furthermore, relative to controls, fibromyalgia patients displayed increased NA instability and showed stronger associations between mean daily NA and NA instability.

**Discussion:** These findings suggest that HRV predicts dysfunctional regulation of NA, and that NA instability plays a role in the adaptation to fibromyalgia. These findings may have clinical implications relating to the treatment of fibromyalgia such as targeting NA instability in therapeutic settings.

14:45 - 15:00

## Effects of inhibitory control training on pain sensitivity

J. Veldhuijzen<sup>1,2</sup><sup>1</sup>Leiden University, Netherlands<sup>2</sup>Leiden Institute for Brain and Cognition, Netherlands

**Background:** Poor cognitive inhibitory control has been related to increased pain sensitivity and a reduction in endogenous pain modulation. A few studies have also shown that inhibitory control (IC) can also be improved with cognitive IC training. The potential of IC training on improving pain sensitivity levels has never been studied before. This study evaluated the effects of IC training on pain sensitivity.

**Methods:** In total 60 participants were random divided into two conditions: the Stop-signal task training group (N=30), which served as an IC training, and a control reaction time training group (N=30). Pain sensitivity and pain tolerance were measured with the Cold Pressure Task before and after the training. Mixed repeated measures ANOVA was used to determine the effect of the training on pain sensitivity scores.

**Results:** Both the training group and the control group improved in inhibitory control proficiency, as indicated by decreased stop signal reaction times (SSRT;  $F(1,53)=7.376$ ,  $p<.05$ ). This was however not significantly dependent on the type of training. Furthermore, no effects were found of training on pain sensitivity.

**Discussion:** No evidence was found to support the hypothesis that inhibitory control can be trained specifically. Also, training effects did not affect pain sensitivity scores. Further research is required to study the relation between IC and pain.

15:00 - 15:15

## Attention bias modification and its impact on experimental pain and task performance

D. Van Ryckeghem<sup>1,2</sup>, T. Vervoort<sup>2</sup>, G. Crombez<sup>2,3</sup>

<sup>1</sup>University of Luxembourg, Luxembourg

<sup>2</sup>Ghent University, Belgium

<sup>3</sup>University of Bath, United Kingdom

**Background:** Attention is a core component in contemporary cognitive-affective models for pain. Particularly the idea that selectively attending to pain-related information worsens pain outcomes has been influential. Accordingly, it was suggested that modifying attention biases may reduce pain and disability. Here, we investigated whether (1) attention biases for pain can be modified and (2) modification of attention away from pain reduces pain and task interference due to pain.

**Methods:** Healthy people (N= 62) were randomly allocated to a training or a control group. Attention training was performed with a dot-probe paradigm using idiosyncratic information. Importantly the attention bias modification (ABM) group received a training away from pain words, whereas the direction of attention was not manipulated in the control group. After the training participants completed a 1-minute cold pressor test while simultaneously performing a tone-detection task.

**Findings:** Results revealed no difference in attention bias between the ABM group and the control group before and after the training phase ( $F < 1$ , ns). Furthermore, no difference was found between the ABM group and the control group upon cold-pressor pain experience (All  $F$ 's  $< 1$ , ns) or the extent to which pain interfered with task performance of the tone detection task (All  $F$ 's  $< 1$ , ns).

**Discussion:** Despite optimizing the relevance of information used in ABM by using ideosyncrathic pain information, we found no evidence to support the efficacy of a dot-probe ABM paradigm to reduce pain or task interference due to pain. Alternative approaches to modify attention biases will be addressed.

# Symposium: Automatic and voluntary processes influencing eating behaviour

14:00 - 15:30

Aula F

Giorgia Zamariola

14:00 - 14:15

## Social exclusion and visual memory bias towards high-calorie food: the role of interoceptive accuracy

G. Zamariola<sup>1</sup>, O. Luminet<sup>2</sup>, O. Corneille<sup>1</sup>

<sup>1</sup>Université Catholique de Louvain, Belgium

<sup>2</sup>Université catholique de Louvain, Belgium

**Background:** Negative emotions arising from the experience of ostracism may lead individuals to implement dysfunctional emotion regulation strategies, such as seeking for comfort food. A recent study revealed a less negative impact of social exclusion on mood measures among participants scoring higher in Interoceptive Accuracy (IAcc). No prior study examined whether social exclusion also influences visual memory for food and whether IAcc may play a role in the latter relation.

**Methods:** Participants (N = 99) performed the heartbeat perception task to measure IAcc. Afterwards, they completed the Cyberball paradigm where they were assigned to a social inclusion or exclusion condition. Then, they performed a visual memory task in which they were asked to recall pictures of briefly presented high- and low-calorie food and neutral objects.

**Findings:** A main effect of condition was not revealed, while IAcc was found as a significant moderator of social exclusion: participants with high IAcc reported less negative mood after being excluded. Participants showed a general memory bias for high-calorie food, but the bias was decreased among individuals with high IAcc, who displayed a lower memory bias towards high-fat food.

**Discussion:** The role of interoception in emotion regulation was confirmed, providing additional evidence supporting the view that higher IAcc is related to better self-regulation and protects against negative experiences, such as ostracism. These findings revealed that IAcc might also serve as a successful coping strategy, able to decrease the accessibility in memory of potentially 'harmful' stimuli, e.g., high-calorie food. Replication studies are currently ongoing.

14:15 - 14:30

## Comparing determinants of vegetable consumption rich in Inulin-type fructans of a student and representative sample

V. Broers<sup>1</sup>, S. van den Broucke<sup>1</sup>, O. Luminet<sup>2</sup>

<sup>1</sup>Université Catholique de Louvain, Belgium

<sup>2</sup>Université catholique de Louvain, Belgium

The Food4Gut project focuses on the impact of vegetables that are rich in Inulin-type fructans to prevent and battle obesity. A questionnaire was administered that measures the prevalence of this vegetable consumption and its determinants drawing on theoretical models of health behaviour change (e.g. Theory of Planned Behaviour, Compensatory Health Beliefs, Transtheoretical model of Change) in both a student sample and a representative sample of the Walloon region of Belgium.

A correlational, pilot study was conducted on a sample of 472 students. After performing correlational and factor analyses, the questionnaire was adapted and administered to a representative sample of the Walloon region using a mixed approach (1070 online questionnaires; 200 face-to-face interviews). Representativeness of Wallonia was obtained in terms of age, sex, level of education, province, density-level of residence and (un)employment.

For vegetables in general, attitudes and subjective norms predict intention for both samples. Consumption is mainly predicted by habits, perceived control and intention in both samples. For salsify and Jerusalem artichoke, attitudes and subjective norms predict intention for both samples, compensatory health beliefs are additional predictors only in the representative sample. Consumption is predicted by intention, habits, past behaviour and external decision in the student sample, whereas for the representative sample intention is the sole predictor of consumption.

The results for the student and representative sample are similar for most predictors, especially for vegetables in general. However for unknown vegetables there are bigger differences between student samples and representative samples that should be taken into account when implementing interventions.



14:30 - 14:45

## Promoting the consumption of fresh products: can nutrition claims help?

M. Mulders<sup>1</sup>, O. Klein<sup>1</sup>, O. Corneille<sup>2</sup>

<sup>1</sup>Université Libre de Bruxelles, Belgium

<sup>2</sup>Université Catholique de Louvain-la-Neuve, Belgium

**Background:** Nutrition Claims are used to highlight beneficial effects that a product has in relation to health and nutrition (i.e., “rich in fiber”). Two studies were run in order to investigate how consumers perceive such claims on fresh products and their (ultra-)processed derivatives (e.g. fresh tomato – canned peeled tomatoes – pasta sauce), and their influence on product choice. Additionally, the influence of known (fiber) vs. unknown (inulin & fructan) claims was assessed.

**Methods:** In study 1, participants (n=200) were asked to rate and indicate their preferred product amongst three tomatoes (fresh) and three tomato sauces (ultra-processed). Each product was presented in 3 conditions: no claim vs. extra rich flavour claim vs. nutrition claim (fiber/inulin/fructan). In the follow-up (n=200), additional vegetables (carrots and parsnips) and levels of processing were added to the design. Participants were recruited online and chi-square and regression analyses were performed to analyse choice and liking scores.

**Findings:** Results showed that nutrition claims had a big impact on the choice for fresh produce and their derivatives. For example: nutrition claims positively influenced the choice for tomatoes ( $X^2(1, N=200)=13.03$ ,  $p<0.01$ ) but negatively for tomato sauces ( $X^2(1, N=200)=32.92$ ,  $p<0.01$ ). Additionally, the mean liking for products with nutrition claims decreased as processing level increased for the tomatoes.

**Discussion:** Nutrition claims influence consumers’ perception and choice for food products. Additionally, the influence of known vs. unknown claims is different. These results give insight into what could be done to aid the choices for healthier food options, with the use of nutrition claims.

14:45 - 15:00

## Promoting healthy food choices among (aware) customers

D. Marchiori<sup>1</sup>, T. Cheung<sup>1</sup>, M. Adriaanse<sup>1</sup>, F. Kroese<sup>1</sup>, B. Fennis<sup>2</sup>, M. Gillebaart<sup>1</sup>, D. de Ridder<sup>1</sup>

<sup>1</sup>Utrecht University, Netherlands

<sup>2</sup>University of Groningen, Netherlands

**Background:** Nudging is a method of changing people's behavior by modifying the physical and/or social context in which they act. Two studies examined the effectiveness of nudging (i.e., social norm, salience, accessibility) to promote healthy food choices in field settings. In addition, we examined whether awareness of being nudged moderates their effectiveness.

**Methods:** In Study 1, placemats that communicated a social norm of healthy eating either explicitly (Week 2) or implicitly (Week 4) were placed on cafeteria trays. In Study 2, different healthy products at a take-away food vendor were nudged, either by making them more easily accessible or more salient. This study ran for seven weeks. Week 2 served as the experimental phase, followed by four washout weeks, and an additional experimental week, where the nudges were disclosed to customers with an explicit sign. Both studies compared sales data of healthy foods to a baseline week (Week 1).

**Findings:** In Study 1, the explicit social norm increased healthy food sales by 4% and the implicit social norm by 24%. In Study 2, the accessibility nudge increased sales of fruit by 73% in the nudge week, and by 82% in the nudge + disclosure week. The salience nudge increased sales of healthy bread rolls by 9 and 12%, for the nudge and the nudge + disclosure week, respectively.

**Discussion:** Both field studies show that it is possible to nudge people into buying more healthy foods while at the same time being upfront about the interventions.

# mHealth for understanding and changing behaviour

9:00 - 10:30

Aula A

Falko Sniehotta

9:00 - 9:15

## Positive and negative emotions' effects on food preferences: evidence from an online experimental study

S. Pinte<sup>1</sup>, O. Petre<sup>2</sup>, D. Taut<sup>3</sup><sup>1</sup>Babes-Bolyai university, Romania<sup>2</sup>Babes -Boyai University, Romania<sup>3</sup>Babes-Bolyai University, Romania

**Background:** Increased responsiveness to food cues in response to (social) stress is a widely studied although with conflicting evidence. Less is known about the effect of positive social emotions on behaviors related to eating. This study's aim was to investigate the role of these positive and negative emotions on food choices from a virtual store and preferences for adverts on healthy/unhealthy foods.

**Method:** 142 participants were recruited for an online study in which they were randomly assigned to a bogus positive feedback (53%) or to a negative one comparing their performance in building an argument on a controversial topic with that of their confederates. Secondly, they were asked to rate a healthy versus unhealthy food commercial (salad versus pizza) and then to select from a virtual predefined list of products those they would like eating at that moment.

**Results:** There was a main effect of emotion on the total number of picked food items ( $d = 0.34$ ), with those experiencing negative emotions choosing a smaller number of food items compared with the other ones ( $M = 4.48$ ,  $SD = 2.64$ ), although participants experiencing positive emotions chose a larger number of healthy foods ( $d = 1.47$ ). There were no effects of either positive or negative emotions on the ratings for healthy/unhealthy food adverts.

**Discussion:** The results point to a complex picture in which people experiencing positive emotions do choose more food items but their choices are generally healthy, while stressed participants prefer comfort foods rather than healthier ones.

9:15 - 9:30

## A visual analysis of the behavioural signature of eating: the case of breakfast

K. Villinger<sup>1</sup>, D.R. Wahl<sup>1</sup>, G. Sproesser<sup>1</sup>, H.T. Schupp<sup>1</sup>, B. Renner<sup>1</sup>

<sup>1</sup>University of Konstanz, Germany

**Background:** Previous research examining the relationship between breakfast consumption and health-related outcomes revealed ambiguous findings. It is possible that the inconsistent findings are in part due to the assessment of breakfast consumption, which was measured in previous research at the aggregate level. Here, breakfast consumption was measured in more detail focusing on the individual episode considering dimensions of frequency, point in time, duration and individual variation in these dimensions. Accordingly, the present study examined the behavioural signature of breakfast consumption in detail and determined the relation with health-related outcomes, i.e., blood parameters or BMI.

**Methods:** An Ecological Momentary Assessment was used to collect data of individual eating episodes of 99 adults (20- 86 years old) over the course of eight consecutive days. To analyse data, visual analysis as well as correlations and a hierarchical multilevel regression were used.

**Findings:** In total, 727 breakfast meals were reported. A distinct peak of breakfast consumption was displayed between 7am and 10am, with a similar pattern between days across individuals. Analysis on an individual level revealed pronounced inter- and intraindividual differences on the different dimensions of breakfast behaviour. No significant association between breakfast consumption and health-related outcomes was found.

**Discussion:** Capturing breakfast consumption in its natural context reveals large variations within and between individuals. This complexity may complicate the relationship between breakfast consumption and health-related outcomes.

9:30 - 9:45

## ImpulsePal: a smartphone app-based intervention to help people manage impulsive in-the-moment eating

S. van Beurden<sup>1</sup>, C. Greaves<sup>1</sup>, J. Smith<sup>2</sup>, C. Abraham<sup>1</sup>, N. Lawrence<sup>3</sup>

<sup>1</sup>University of Exeter Medical School, United Kingdom

<sup>2</sup>University of Exeter Medical School, United Kingdom

<sup>3</sup>Psychology, University of Exeter, United Kingdom

**Background:** Impulsive processes can often undermine peoples' attempts to lose and maintain weight. The ImpulsePal app' was developed using the Intervention Mapping protocol and provides impulse management strategies using smartphone technology. This study aimed to assess the feasibility and acceptability of the intervention and of conducting a randomised controlled trial to assess its clinical effectiveness.

**Methods:** A mixed-methods feasibility study using action research was conducted to refine the intervention in close collaboration with its intended users. Ninety individuals (BMI > 25kg/m<sup>2</sup>) with access to an Android-based device were recruited into a 2-arm study incorporating two cycles of action research. Participants were randomised (2:1) to either the intervention or a wait-list control group with measures including observed weight and self-reported food consumption taken at baseline, 1-month, and 3-month follow-up. Qualitative interviews were conducted at 1-month with intervention participants only.

**Results:** Qualitative findings from the first round of action research suggest strong engagement for many people with the content and features of the app. Participants considered ImpulsePal a useful tool for in-the-moment support and felt more able to resist temptation knowing that support is accessible at any time if really needed. Reasons for disengagement, such as a lack of reminding to engage with particular intervention components, were also identified and further addressed in round 2.

**Conclusion:** Addressing impulsive processes which drive behaviour on a moment-to-moment basis may be a promising direction for weight management. Feasibility and acceptability of the techniques used are reasonably good, with ideas for further improvement under feasibility testing.

9:45 - 10:00

## Pulling smartphones. An app-based approach-avoidance task

H.G. Zech<sup>1</sup>, L.F. van Dillen<sup>1</sup>, W.W. van Dijk<sup>1</sup>, M. Rotteveel<sup>2</sup><sup>1</sup>Leiden University, Netherlands<sup>2</sup>University of Amsterdam, Netherlands

We developed and successfully tested a mobile version of the approach-avoidance task (AAT). Approach-avoidance motivations play an important role in a variety of health-related behaviours, ranging from addictions to eating behaviours. The classical AAT has long been a useful tool to measure as well as train these motivations. However, the hardware required to set up the AAT has so far restricted research to the laboratory. To overcome this limitation we developed a mobile version of the AAT which runs entirely on a regular smartphone.

Here, we tested 64 participants with both the classical AAT and the mobile AAT. Participants approached and avoided pictures of happy and angry faces by pulling or pushing a joystick (classical AAT) or a smartphone (mobile AAT) towards or away from themselves. Reaction times and reaction forces were measured.

The mobile AAT successfully detected a known approach-avoidance effect, in which participants pulled happy faces faster than angry faces, but pushed happy faces slower than angry faces ( $p < 0.001$ ,  $\eta^2_{\text{partial}} = 0.266$ ). Additionally, with the mobile AAT, we were the first to detect an approach-avoidance effect on movement force. Participants used more force to pull happy faces than angry faces but less force to push happy faces ( $p = 0.006$ ,  $\eta^2_{\text{partial}} = 0.131$ ).

Given these exciting results, we believe that the mobile AAT will provide a powerful tool for health professionals to research and to train approach-avoidance motivations in the field. One of these field studies, in which we measure approach-motivations towards healthy and unhealthy foods, is currently under way.

10:00 - 10:15

## Effectiveness of a digital intervention for weight loss maintenance in obese adults: the NULevel RCT

F. Sniehotta<sup>1,2</sup>, E. Evans<sup>1</sup>, K. Sainsbury<sup>1</sup>, A. Adamson<sup>1,3</sup>, A. Batterham<sup>4</sup>, H. Brown<sup>1</sup>, E. McColl<sup>1</sup>, P. Olivier<sup>1</sup>, A. Rothman<sup>5</sup>, R. Vieira<sup>1</sup>, D. Howel<sup>1</sup>, L. Vale<sup>1</sup>, M. White<sup>6</sup>, P. Wright<sup>1</sup>, V. Araujo-Soares<sup>1</sup>

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<sup>5</sup>University of Minnesota, United States

<sup>6</sup>University of Cambridge, United Kingdom

**Background:** Scalable weight loss maintenance (WLM) interventions for obese adults are lacking but vital for the health and economic benefits of weight loss to be fully realised. We examined the effectiveness of a technology-mediated behavioural intervention to support WLM in obese adults after clinically-significant weight loss, compared to standard lifestyle advice.

**Methods:** In open-label superiority RCT, we recruited 288 initially obese adults after recent weight loss of  $\geq 5\%$ . We randomly allocated participants 1:1 to either standard lifestyle advice via newsletter (control) or a technology-assisted behavioural WLM programme (intervention). The intervention included a single face-to-face meeting, self-monitoring and feedback on weight, diet and physical activity via links embedded in SMS messages. All participants received wirelessly-connected weighing scales and participants in the intervention arm were instructed to weigh themselves daily. After 12 months we measured change in weight from baseline, and also self-weighing, anthropometric variables, physical activity (accelerometry) and process variables. The study was powered to detect a between-group difference of  $\pm 2.5\text{kg}$  at 12 months.

**Findings:** 253 participants (88%) were retained at 12 months. There were no intervention effects on weight at 12 months. Intervention participants weighed themselves more frequently than control participants (4 vs 2 times/week), showed higher levels of physical activity but did not differ on anthropometric characteristics or physical activity. Intervention participants reported greater satisfaction with weight outcomes, greater dietary self-efficacy and greater WLM confidence.

**Discussion:** While the intervention was not effective in reducing weight regain, it increased physical activity, self-weighing and some, but not all other process measures.



10:15 - 10:30

## Better ask than tell: addressees' response to mHealth interrogative reminders

E. Neter<sup>1</sup>, L. Hagoel<sup>2</sup>, N. Stein<sup>3</sup>, G. Rennert<sup>2,3</sup><sup>1</sup>Ruppin Academic Center, Israel<sup>2</sup>Technion, Israel<sup>3</sup>Department of Community Medicine and Epidemiology, Carmel Medical Center, Israel

**Background:** Population screening for the early detection of colorectal cancer (CRC) was adopted, worldwide, mainly by older adults and women. Text-message interrogative reminders are effective in enhancing screening uptake. This analysis examined text-message response rate by message type (interrogative/declarative); analyzed responses content; associate responses with senders' characteristics and subsequent screening.

**Methods:** Text message reminders (interrogative/declarative) to undergo screening were sent to 40,000 women and men, aged 50 to 74 years, at average-risk for CRC who were non-adherent in the previous two years. The invitations and reminders were part of a routine mailed-invitation wave to undergo annual Fecal Occult Blood Test (FOBT) under an Early Detection Program. Responses were analyzed for content; associated longitudinally with subsequent screening uptake.

**Results:** Interrogative text-message reminders elicited 1475 responses while declarative ones elicited 146 responses. Most responses were positive towards screening and expressed an intention to screen. In a multivariable logistic regression among responders, FOBT at 6 months was significantly predicted by older age, past sporadic screening and intentions; gender was non-predictive. Text-message responders screened more than non-responders six months following the reminders (25.8% vs. 8.8%,  $\chi^2=420.7$ ,  $P<0.0001$ ); a year later (21.7% vs. 12.4%,  $\chi^2=98.6$ ,  $P<0.0001$ ); two years later (14.2% vs. 10.5%,  $\chi^2=19.2$ ,  $P<0.0001$ ).

**Conclusions:** Interrogative text-message reminders reached uninvolved sectors in the CRC target population: men, 'sporadic-screenees' and the 'never-tested' before. Interrogative text-message reminders filtered the target population, thus contributing to a population-level, significant, incremental enhanced screening participation. The reported intervention is an added a tool to the ones at the disposal of screening program administrators.

# Obesity and weight management in children

9:00 - 10:30

Aula B

David Hevey

9:00 - 9:15

## Protective factors, not only risk factors for child obesity among low socio-economic populations

V. Soskolne<sup>1</sup>, M. Cohen-Dar<sup>2</sup>, S. Ubeid<sup>2</sup>, N. Cohen<sup>2</sup>, M. Rudolf<sup>1</sup>

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<sup>2</sup>Ministry of Health, Israel

**Background:** Scientific evidence about protective factors that contribute to a healthy weight is limited. This study aimed to examine protective and risk factors for obesity among children of low socio-economic status in the Jewish and Arab sectors in Israel.

**Methods:** Children aged five years were randomly selected from 20 Mother and Child clinics in towns of low socioeconomic ranking in Israel. Children and mothers were invited for special "One Stop Shop - Preparation for School" physical examinations, including weight and height. Mothers were interviewed using a questionnaire on psychosocial, behavioral and environmental factors. 371 Jewish and 575 Arab children participated. Multivariate analyses using logistic regression models predicting obesity were conducted in each population group.

**Findings:** Obesity rates (BMI $\geq$ 85%) were higher in Jewish than Arab children (25% vs 19%). In both sectors, after controlling for maternal BMI and child birth-weight as risk factors for obesity, Jewish and Arab mothers' reported self-efficacy regarding the child's health behaviors was significantly protective (OR=0.52 and 0.60, respectively). Additional protective and risk factors were identified but differed for each sector. In the Jewish sector only, the association between maternal BMI and child BMI was moderated by maternal education.

**Discussion:** Protective factors contribute to healthy child weight alongside risk factors for obesity but differ across the sectors. Maternal education is a significant moderator among Jewish children. Early childhood programs to reduce childhood obesity in disadvantaged populations would be strengthened through a focus on protective factors but needs to be culturally adapted.

9:15 - 9:30

## Parental perceptions of their obese child's weight status and health-related quality of life

L. Cutler<sup>1</sup>, K. Parkinson<sup>1</sup>, A. Jones<sup>1</sup>, B. Arnott<sup>1</sup>, A. Adamson<sup>1</sup>

<sup>1</sup>Newcastle University, United Kingdom

**Background** Child weight status is inversely related to their health-related quality of life (HRQOL). Parents typically do not recognise obesity in their children and may, therefore, not realise the impact obesity could have on their child. Associations between parental reports of their child's weight status and HRQOL in obese children were examined.

**Methods** Parents of 4-5 and 10-11 year olds rated their child's weight status and reported their HRQOL using a parent-proxy, obesity-specific questionnaire (Sizing Them Up). Children's weight status was based on UK 1990 growth reference criteria from measured height and weight. Differences in HRQOL reports between parents who rated their child as healthy weight and those who rated their child as overweight or very overweight (i.e. recognised a weight problem) were examined.

**Findings** 93 children were obese. 29.0%, 64.5% and 6.5% of parents rated their child as healthy weight, overweight and very overweight (i.e. obese), respectively. Parents who rated their child as healthy weight reported their child's HRQOL significantly higher on the total score (Mann-Whitney  $U=365.5$ ,  $p<0.001$ ), and 3 of its sub-domains compared to parents who rated their child as overweight/very overweight.

**Conclusions** Results suggest that parents who do not recognise their child is overweight/obese may not appreciate the impact obesity is having on their child's HRQOL.

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9:30 - 9:45

## Capturing complexity: a network approach to understanding child and parent causal attributions in childhood obesity

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Illness attributions affect psychological adjustment, while parental attributions are associated with treatment initiation, acceptability, engagement and outcome. Current knowledge of child and parent causal attributions in paediatric obesity is in its infancy. The purpose of this study was to investigate child and parental casual attributions in paediatric obesity using network analysis.

A cross-sectional design was used employing the diagram network analytic method. 56 participants (30 children, 26 parents) generated individual causal attribution maps. Network theory was used in the analysis of causal effects and results visualised using open source network visualisation software.

Separate aggregated maps were produced for children and parents. Child maps were analysed by eating style (emotional, external and restraint eating). Parent maps were analysed by reported child psychopathology (externalising and internalising). An individual map was reproduced to illustrate the value of network analysis as a clinical tool. Analysis by eating style and child psychopathology captured meaningful differences in causal understanding, illustrating the heterogeneous nature of this population.

A 'one-size-fits-all' approach to the treatment of pediatric obesity is likely to be suboptimal given the diversity of this patient group. Child and parent attributional processes show potential as a treatment target and a mechanism to individually-tailor obesity treatment for children and parents. Further research is required to demonstrate a relationship between the treatment of attributions and client outcome in pediatric obesity.

9:45 - 10:00

## Interaction between parenting and childcare practices: mesosystem influences on children's energy balance-related behaviour and overweight

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**Background:** The ecological perspective holds that human behaviour is influenced by multiple interacting environmental factors in various settings. The current study examines the mesosystem interaction between parenting practices in the home environment and childcare practices in the childcare environment, in influencing preschool children's energy balance-related behaviour (EBRB) and weight status.

**Methods:** The current observational study included 482 Dutch preschool children (age 1-4) who made use of childcare facilities. Parenting practices were assessed using the Comprehensive Feeding Practices Questionnaire (CFPQ) and the Preschooler Physical Activity Parenting Practices (PPAPP) questionnaire for parents. Childcare practices were assessed using the Childcare Food and Activity Practices Questionnaire (CFAPQ) for childcare workers. Children's physical activity was assessed using Actigraph GT3X+ accelerometers, children's diet (i.e. snack, fruit, vegetable, sugar-sweetened beverage and water intake) was assessed via a parental questionnaire. Children's weight status was measured by trained research assistants. Multilevel regression analyses were deployed, controlling for the multi-level structure of the data, as well as for potential confounders.

**Findings:** The findings show various significant interactions between parenting practices and childcare practices in influencing children's EBRB and weight status. The influence of the childcare environment thus depends on what happens at home, and vice versa

**Discussion:** The current findings are in line with ecological systems theory. The interactions between home and childcare demonstrate the importance of considering mesosystem influences on behaviour. As such, effects of existing overweight prevention interventions focusing on single environments may be limited by the moderating influences of other settings not taken into account.

10:00 - 10:15

## Preadolescent eating disorder risk longitudinally predicts later psychological symptoms, weight-gain and lower activity in girls

E. Evans<sup>1</sup>, A. Adamson<sup>1</sup>, L. Basterfield<sup>1</sup>, A. le Couteur<sup>1</sup>, J. Reilly<sup>1</sup>, J. Reilly<sup>2</sup>, X. Janssen<sup>2</sup>, K. Parkinson<sup>1</sup>

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**BACKGROUND:** The downstream developmental consequences of elevated eating disorder symptoms in preadolescents are unclear. We examined whether children at 'high-risk' of an eating disorder at 9 years differed from 'low-risk' children on later weight, behavioural and psychological outcomes.

**METHODS:** Participants from the Gateshead Millennium Study birth cohort (N=526, 51% girls) completed self-report measures of eating disorder symptoms and body dissatisfaction aged 9, 12 and 15 years and depressive symptoms aged 12 and 15. Height, weight, and physical activity (via accelerometer) were measured at each age.

**RESULTS:** 116 (22%) participants (61 girls) had eating disorder symptoms above a high-risk threshold at 9 years old. High-risk girls had greater body dissatisfaction and higher depressive and eating disorder symptoms aged 12 and 15 (all  $p < .001$ ). High-risk girls also gained more age-adjusted BMI centiles between 9-15 (change in BMI z-score 0.5 vs 0.1,  $p=0.01$ , corrected for 9-year-old BMI z-score). High-risk girls were less active at 15 years than low-risk girls (21 vs 27 minutes MVPA/day,  $p=0.03$ ). High-risk boys had higher disordered eating and depressive symptoms aged 12 (both  $p < 0.01$ ) but did not otherwise differ from low-risk boys.

**CONCLUSIONS:** In this cohort, girls at high-risk of eating disorders aged 9 had more negative psychological outcomes at 12 and 15 years, were less active, and gained more weight by age 15. The impact of earlier eating disorder risk was evident, but more limited, in boys. Preventative efforts for eating disorders, body dissatisfaction, depression, and weight gain, particularly in girls, might beneficially focus on high-risk preadolescents.

10:15 - 10:30

## Preadolescent boys' investment in masculine gender norms and their use of body change strategies

M. McCabe<sup>1</sup>, G. Tatangelo<sup>1</sup>, C. Connaughton<sup>1</sup>

<sup>1</sup>Australian Catholic University, Australia

**Background:** It appears that young boys' body ideals may be similar to the gendered body ideals found among adolescent boys and men. A developmental psychology framework was used to understand the factors related to masculine gender norms. It was predicted that gender norms would be associated with the use of body change strategies, body esteem and muscle esteem. Further, it was predicted that gender norms would moderate the association between sociocultural influences and body image outcomes. **Methods:** Participants were 321 boys aged 7 to 11 years in Melbourne, Australia. The boys completed questionnaire measures of investment in masculine physical ideals, body change strategies to lose weight and/or gain muscles, body esteem, muscular esteem and sociocultural influences (peers, parents, media). Hierarchical multiple analysis was used to analyse the results. **Findings:** The results indicated that boys are invested in masculine physical ideals of strength and athleticism. Investment in these masculine ideals predicted boys' use of body change strategies to lose weight and gain muscles. In addition, investment in masculine gender norms moderated the relationship between pressure from peers and boys' use of body change strategies. This was particularly apparent for boys with a high level of investment in gender norm. **Discussion:** The findings highlight the importance of gender norms in shaping boys' body change strategies at a young age. They also identify several avenues for further research, including the ways in which boys may feel pressure to display gender congruent characteristics and how this is related to their development.



# Lifestyle and self-management intervention in chronic disease

9:00 - 10:30

Aula G

Silke Schmidt

9:00 - 9:15

## The effects of a multidisciplinary lifestyle-enhancing treatment for severe mentally ill inpatients (MULTI-study)

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<sup>4</sup>TNO-VU Medical Center, Netherlands

### Background

The mortality gap of 13-30 years between severe mentally ill (SMI) patients and the general population is mainly caused by cardiovascular disease. Especially long-term inpatients are characterized by an unhealthy lifestyle, whereby they are sedentary (sitting/lying) for 84% of the time. However, in this severely ill population, changing lifestyle-behaviour is challenging. Therefore, we started a multidisciplinary lifestyle-enhancing treatment, based on a 'change-from-within-principle', and evaluated improvements in both physical and mental health and functioning after 18 months.

### Methods

Quasi-experimental design in long-term SMI inpatients whose baseline data (2013) was available and if they participated in no other lifestyle-related intervention (N=123). We collected:

- Physical activity (PA); accelerometer-measured during 5 days [ActiGraph GT3X+]
- Metabolic risk factors [weight, abdominal girth (cm), blood-pressure and -levels]
- Psychotic symptoms [PANSS-r]
- Psychosocial functioning [HoNOS]
- Quality of life (QoL) [EQ-5D & WHOQoL-Bref]

Analysis: hierarchical multilevel regression using change-scores, correcting for baseline outcome-value, age, diagnosis, baseline illness-severity and treatment-ward.

### Findings

Sufficient data of intervention (N=65) and controls (N=49), who differed in age, diagnosis and baseline illness-severity ( $p < 0.01$ ). Results show significant improvements in PA ( $B=0.5$ ,  $p=0.02$ ), weight ( $B=-4.2$ ,  $p=0.04$ ), abdominal girth ( $B=-3.5$ ,  $p=0.03$ ), systolic blood pressure ( $B=-8.0$ ,  $p=0.02$ ), HDL-cholesterol ( $B=0.1$ ,  $p=0.03$ ) and psychosocial functioning ( $B=-3.6$ ,  $p=0.03$ ). QoL improved significantly in both groups.

### Discussion

- Results confirm that using existing resources and a multidisciplinary lifestyle-enhancing treatment, sustainable improvements in PA, metabolic risk, functioning and QoL can be achieved in long-term SMI inpatients.
- No lifestyle-enhancing treatment = non-significant improvement (or deterioration) in outcomes, except for QoL.

9:15 - 9:30

## Preliminary results from feasibility trial of a workbook intervention to support return-to-work for cancer survivors

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### Background:

Over 100,000 people of working age receive a diagnosis of cancer annually in the UK and returning to work is recognised as a key aspect of cancer survivorship and returning to normality post-treatment. However, returning to work can present a number of challenges and we developed a workbook based intervention to support cancer survivors returning to work. This study aimed to explore the engagement and experiences of cancer survivors participating in a workbook based intervention (WorkPlan) to support return to work.

### Methods:

Sixty-seven cancer survivors were recruited and randomised into either the intervention or the usual care arm of a feasibility RCT trial. Qualitative interviews were conducted with participants in the intervention arm at one month post-intervention and with all participants at 12 months; interviews at both times explored how participants managed their return-to-work and how engagement with the intervention provided support in that process (if applicable). Interviews were audio recorded, transcribed verbatim and analysed using a Framework approach.

### Findings:

23 participants were interviewed. Results indicate that the workbook supported participants to create a return to work plan and communicate with their employer; participants cited this as crucial to managing their return-to-work. In addition, the workbook format of the intervention was well received with participants and they suggested ways in which hard copy materials and the act of writing were preferable to online interventions.

### Discussion:

The present study demonstrates how a workbook based intervention can support cancer survivors to successfully cope with a return to work following cancer treatment.

9:30 - 9:45

## Systematic meta-review of self-management support for people with type 2 diabetes

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<sup>2</sup>Queen Mary University of London, United Kingdom

<sup>3</sup>University of Edinburgh, United Kingdom

**Background:** The aim was to provide a high-level overview of type 2 diabetes interventions that support self-management by carrying out a review of systematic reviews of Randomised Control Trials (RCTs) in 2012, plus an update in 2016.

**Methods:** Seven electronic databases were searched plus snowball and manual searches (initial review searches up to 2012; update 2012-2016). Primary outcomes of interest were glycaemic control (e.g., HbA1c) and quality of life. Composition, delivery and setting of interventions were examined to identify the optimal configuration of self-management support.

**Findings:** We included 17 systematic reviews in the initial review (published 2001 – 2012) incorporating 179 RCTs. The update found an additional 21 reviews. There is good evidence that self-management support improves glycaemic control in the short term and quality of life remains stable. Culturally tailored behaviour change support interventions delivered by health workers embedded within the community were similarly effective. Self-management support can be effectively delivered in a variety of ways across multiple countries with a range of professionals and lay people.

**Discussion:** That quality of life remains unaltered in these interventions may be considered a positive outcome considering the potential for chronic illness to negatively impact on quality of life. The large number of reviews highlight that there is a range of delivery modes suited to support people with type 2 diabetes, the challenge is in tailoring services and resources to the individual at the right time (e.g., potentially when they are receptive to engage rather than when first diagnosed).

9:45 - 10:00

## Comparing two approaches to outcome measurement of an online self-management programme for people with epilepsy

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<sup>1</sup>Coventry University, United Kingdom

<sup>2</sup>Epilepsy Action, United Kingdom

### Background:

There are a range of approaches to measuring the effectiveness of self-management support for people with long term conditions. Choice of approach may be influenced by perceptions of methodological rigour, the purpose of evaluation, and anticipated impact.

### Methods:

Two methods were employed to evaluate the impact of an online self-management programme for people with epilepsy; an online quantitative survey using standardised, validated, self-administered questionnaires administered before, immediately after and 3 months after completing the programme (n= 62, 37, and 31 respectively), and a standardised, structured, qualitative interview following Social Return on Investment (SROI) methodology (n=10). Quantitative data from the online survey was analysed using inferential statistics. Data from the qualitative interviews was analysed using a social returns approach to calculate the social value to participants expressed in pounds sterling.

### Findings:

Participants reported increased knowledge, skills and confidence (activation) to manage their epilepsy, using the Patient Activation Measures ( the primary outcome). The average activation score for participants moved from level 2 to level 3, 3 months after completing the programme (M= 54.52 and 60.48 respectively, 95% CI for mean difference = 1.07-10.84) .

Using SROI, the total impact value of the programme per person per year was £13145.48. For every £1 spent to develop and deliver the Epilepsy and You programme, £18.15 of social value was generated for programme participants.

### Discussion:

The relative value of the two approaches to measuring outcomes will be discussed, from the perspective of researchers, intervention providers, and commissioners of self-management programmes.

10:00 - 10:15

## Impact of a generic transition-oriented patient education program on adolescents' patient-reported outcomes

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<sup>2</sup>Department of Child and Adolescent Health, University of Lübeck, Germany

Aim of the study was to test the impact of a generic transition-oriented patient education program on adolescents' patient-reported outcomes.

We conducted a controlled trial comparing participants of a standardized transition workshops with treatment as usual in 274 adolescents (16.8 mean age, SD=1.76) diagnosed with type I diabetes (DM), cystic fibrosis (CF) or inflammatory bowel disease (IBD). A two-day transition workshop was carried out at 12 sites in Germany, focusing on adjustment to adult care settings, organization of future disease management, career choices and partnership. Study outcomes were health-related transition competence, self-efficacy, satisfaction with care, patient activation and QoL. Measures were assessed at baseline and six-month follow-up.

Repeated-measurement covariance analysis using age as a covariate showed that the transition workshop significantly affected transition competence, self-efficacy and satisfaction with school care six months post intervention. The intervention did not significantly affect patient activation and QoL. However, post-hoc analysis suggested different effects across conditions with a higher impact in patients with IBD in respect to quality of life.

The program has a positive effect on the competence of adolescents in the transition phase, in particular in patients with limited workshop experience.

The study demonstrates that an intervention can be effective in preparing adolescents with chronic conditions for transitions.

10:15 - 10:30

## HCP-led interventions targeting medication adherence following acute coronary syndrome: systematic review and meta-analysis

J. Crawshaw<sup>1</sup>, V. Auyeung<sup>1</sup>, S. Norton<sup>1</sup>, J. Weinman<sup>1</sup>

<sup>1</sup>King's College London, United Kingdom

### Background:

Suboptimal medication adherence following acute coronary syndrome (ACS) is associated with poor clinical outcomes and healthcare providers (HCP) play a key role in supporting patients with their medications. This study was undertaken to determine the effectiveness of HCP-led interventions to improve medication adherence in ACS patients.

### Methods:

A systematic search of Cochrane Library, Medline, EMBASE, PsycINFO, Web of Science, International Pharmaceutical Abstracts, CINAHL, ASSIA, OpenGrey, EthOS, WorldCat and PQDT was performed and studies were screened against our PICOS-based eligibility criteria. Data on study design, sample characteristics, intervention features and outcomes were abstracted and intervention content was coded using the Behaviour Change Technique (BCT) Taxonomy (v1).

### Findings:

Our search identified 7013 records, of which 21 met our eligibility criteria (18 independent studies). A meta-analysis revealed a small but significant effect for HCP-led interventions ( $n = 7752$ ) on medication adherence (SMD 0.25, 95% CI 0.13 – 0.37,  $I^2 = 57\%$ ). Subgroup analysis revealed that the type of interventionist, delivery method and having a theory-based design did not impact on effectiveness. A total of 28/93 BCTs were identified across interventions (range 1 – 10) with 'information about health consequences' (15/18) and 'goal setting (outcomes)' (6/18) the most common.

### Discussion:

HCP-led interventions for ACS patients appear to have a small positive impact on medication adherence. There was no evidence that the type of interventionist, delivery method or whether studies were based on theory had an impact on study effectiveness. Providing information about the health consequences of non-adherence was the most frequently used BCT.



# Novel approaches in self-regulation

9:00 - 10:30

Aula I

Simone Dohle

9:00 - 9:15

## How effective is a short CSM-based online intervention on intended flu prevention behaviour?

C. Salewski<sup>1</sup>, B. Trusch<sup>1</sup>, M. Vollmann<sup>1</sup><sup>1</sup>University of Hagen, Germany

**Background:** Influenza is a serious infectious disease that can be prevented by active behaviours (e.g., handwashing), avoidant behaviours (e.g., no handshaking), and getting a flu shot. Based on the assumptions of the Common Sense Model of self-regulation, an online intervention targeting illness representations about influenza (i.e., emotional representations, coherence, consequences, and prevention control) was designed to increase the intention to conduct preventive behaviours. It was hypothesized that positive effects of the intervention on preventive behaviours would result from changes in illness perceptions.

**Method:** This online study had a randomized pre- posttest control group design; 416 participants (72% female, mean age 37 years) took part. Before and after the intervention, illness perceptions about influenza and the intention to conduct preventive behaviours were measured. Data were analysed by 2x2 ANOVAs and mediation analyses.

**Findings:** The ANOVAs showed that the intervention increased the perception of negative consequences and prevention control (but not emotional representations and coherence) as well as the intention to conduct preventive behaviours. Mediation analyses revealed that the increase in perceived consequences and/or prevention control partially mediated the effect of the intervention on the increase of the intention for active (indirect effects: .03\*, .10\*) and avoidant preventive behaviour (indirect effects: .01ns, .05\*), but not for getting a flu shot (indirect effects: .02ns, .04ns).

**Discussion:** The intervention proved to be successful in changing illness perceptions and increasing the intention to conduct preventive behaviours. The findings provide evidence for the usefulness of the CSM in the context of disease prevention and health promotion.

9:15 - 9:30

## The impact of implicit theories on health attitudes

S. Dohle<sup>1</sup>, V. Job<sup>2</sup><sup>1</sup>University of Cologne, Germany<sup>2</sup>University of Zurich, Switzerland

**Background:** Implicit theories are basic beliefs people have about the extent to which human attributes are dynamic and malleable or static and fixed. According to this perspective, people may hold two types of health-related implicit theories: an incremental theory, i.e. that health is changeable and predominantly shaped by one's own behavior, or an entity theory, i.e. that health is largely predetermined. The purpose of this study is to test whether experimentally manipulated implicit theories of health influence health-related attitudes.

**Methods:** In an online experiment, participants (N=357) were asked to read a fictitious newspaper article that described scientific evidence supporting the view that health is either malleable ("incremental theory condition") or fixed ("entity theory condition"). To assess attitudes toward health-related behaviors, participants indicated how much different health-related activities were important to them. Participants' responses to these items were collapsed to calculate an overall health-attitude score, which served as the dependent variable. Furthermore, it was tested whether health locus of control mediates the relationship between health-related implicit theories and attitudes.

**Findings:** As predicted, participants in the "incremental theory condition" showed more positive health-related attitudes than participants in the "entity theory condition",  $p=.001$ . In addition, this effect was mediated by an internal health locus of control.

**Discussion:** The findings of the study suggest that people's decision to change their health-related lifestyle might be influenced by whether they believe that their own behavior affects their health. Results of this research may guide public health programs designed to encourage healthy lifestyles.

9:30 - 9:45

## Determinants of weight loss maintenance: a systematic literature review

R. Murti<sup>1,2</sup>, M. van Stralen<sup>1</sup>, I. Steenhuis<sup>1</sup>

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<sup>2</sup>Amsterdam Medical Center, Netherlands

**Background:** Weight loss attempts often result in regain and weight loss maintenance remains to be a challenge. To be able to effectively promote weight loss maintenance in overweight/ obese adults who recently lost weight, knowledge on underlying determinants is needed. We aimed to systematically synthesize the literature on determinants predictive of weight loss maintenance in overweight and obese individuals.

**Methods:** Using the PRISMA statement, prospective studies were identified from searches in Pubmed and PsycINFO from 2006. Included articles were scored on their methodological quality and a best-evidence synthesis was applied to summarize the results.

**Findings:** 8.222 articles were found and 50 articles were selected. Fat intake reduction, increase in fruit and vegetable consumption, improving portion control, decreasing energy density, using caloric restriction, increasing physical activity, increasing intrinsic motivation for exercise, improving physical self-worth, and improving self-efficacy for barriers to exercise, and self-weighing or monitoring body weight were found to be positively predictive of weight loss maintenance. Increase in the consumption of sugar-sweetened beverages, emotional eating, and a high score in perceived barriers to exercise negatively predicted weight loss maintenance.

**Discussion:** Behavioral and cognitive determinants that promote a reduction in energy intake, an increase in energy expenditure, and monitoring of this balance are predictive of weight loss maintenance. Our results supported existing literature, but also found conflicts. More high quality studies investigating- especially cognitive and social (environmental)-determinants of weight loss maintenance are needed to improve are knowledge on relevant determinants of weight loss maintenance.

9:45 - 10:00

## Self-regulation and the embodiment of hunger

M. Rosemeyer<sup>1</sup>, F. Eves<sup>1</sup><sup>1</sup>University of Birmingham, United Kingdom

**Background:** Self-regulation of health choices may result from activity in two interacting, processing systems. A 'hot', impulsive system can be contrasted with a more deliberative, 'cold' processing system. Lack of resources (e.g. being hungry) might make cold, deliberate decisions, and hence self-regulation, more difficult. We used the Ebbinghaus illusion that has been shown to influence conscious, deliberative estimates of size to test the effects of hunger on estimates of the calorie content of food. We predicted that only sated estimates would be influenced by the illusory figures.

**Methods:** 115 students (40 fasted overnight, 40 sated, 35 sated follow up) estimated the amount of calories verbally in fake Japanese food presented on 16cm and 12.5cm plates on table cloths that induced the Ebbinghaus illusion. Analyses employed repeated measures ANCOVA.

**Findings:** There was an interaction between the illusion contexts (small vs. big circles) and group, sated vs. fasted participants  $F(1, 74) = 5.47, p = .022$ . Only sated participants were influenced by the illusion such that calorie estimates were significantly higher when surrounded by small circles. Additionally, effects of plate size only occurred in the sated group.

**Discussion:** The findings support our predictions that fasted participants are less likely to use deliberative processing. Estimates of calorie content when hungry were neither influenced by the illusion nor by plate size. While hungry individuals appear more 'fool-proof' in their estimates, any bias towards impulsive processing may impede attempts at self-regulation of calorie intake that may be important in many contexts.

10:00 - 10:15

## Illness perceptions in adult congenital heart disease: a multi-center international study

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<sup>5</sup>The Sahlgrenska Academy, Institute of Medicine, University of Gothenburg, Gothenburg, Sweden

**Background.** Illness perceptions are cognitive frameworks that patients construct to make sense of their illness. Although the importance of these perceptions has been demonstrated in other chronic illness populations, few studies have focused on the illness perceptions of adults with congenital heart disease (CHD). This study explored how patient characteristics and the country in which patients reside, shape the way they think about their illness, and how patients' illness perceptions relate to their physical and emotional functioning.

**Methods.** Our sample, taken from APPROACH-IS, consisted of 3,352 adults with CHD from 15 different countries. Patients completed questionnaires on illness perceptions, physical functioning, quality of life, and symptoms of depression and anxiety. Linear mixed models were applied.

**Results.** Female sex, older age, lack of employment, no marriage history, greater CHD complexity, and poorer New York Heart Association functional class were associated with more negative illness perceptions. The inter-country variation in illness perceptions was generally small, yet patients from different countries differed in the extent to which they perceived their illness as chronic and worried about their illness. After controlling for patient characteristics, higher scores on consequences, identity, concern, and emotional representation, as well as lower scores on illness coherence and personal and treatment control, predicted poorer physical and emotional functioning.

**Conclusions.** This study emphasizes the importance of understanding the illness perceptions of adults with CHD, as these perceptions were related to important health outcomes. The use of psycho-educational interventions to identify and modify negative illness perceptions should be further explored.

10:15 - 10:30

## Goal adjustment capacities and health: a meta-analysis

M. Barlow<sup>1</sup>, C. Wrosch<sup>1</sup>, J. McGrath<sup>1</sup><sup>1</sup>Concordia University, Canada

**Background:** Individuals' capacities to disengage from unattainable goals and to reengage in alternative goals have been proposed to protect psychological and physical health (Wrosch et al., 2013). This meta-analysis investigated the magnitude of effects of goal adjustment capacities on health outcomes across the extant literature.

**Method:** Thirty-three independent samples ( $k = 38$ ; effect sizes = 222) were comprehensively reviewed following an electronic database search. Articles were coded for sample demographics (age, sex, clinical sample), study characteristics (sample size, quality, design), and goal adjustment (disengagement, reengagement). Fisher's  $Z'$  was calculated as the common effect size. Health outcomes included chronic illness, biomarkers, sleep, physical activity, depression, and affect.

**Findings:** Greater goal disengagement was linked to better psychological ( $Z' = .07$ ) and physical health ( $Z' = .03$ ), particularly negative psychological outcomes ( $Z' = .11$ ), and illness indicators ( $Z' = .06$ ). In contrast, while higher levels of goal reengagement were also associated with greater psychological ( $Z' = .17$ ) and physical health ( $Z' = .07$ ), effects were largest with positive psychological outcomes ( $Z' = .24$ ), illness indicators ( $Z' = .07$ ), and health-relevant processes ( $Z' = .08$ ). Among depression risk samples, goal disengagement was linked to higher depressive symptoms ( $Z' = -.04$ ); inversely, reengagement was linked to lower depressive symptoms ( $Z' = .21$ ).

**Discussion:** Meta-analytic findings support the proposed mechanisms of goal disengagement and reengagement by demonstrating their protective effects on psychological and physical health. Further, these findings are aligned with theories of evolutionary psychiatry such that depressive mood could plausibly trigger goal disengagement (Nesse, 1999).

# Interventions to change eating behavior

11:00 - 12:30

Aula A

Eva Kemps



11:00 - 11:15

## Can attentional bias modification inoculate people to withstand exposure to food advertising?

E. Kemps<sup>1</sup>, M. Tiggemann<sup>1</sup>, E. Stewart-Davis<sup>1</sup>

<sup>1</sup>Flinders University, Australia

**Background:** In line with predictions from dual-process models, accumulating evidence shows that attentional bias modification can reduce unhealthy food intake. An important practical consideration is whether such modification can inoculate people to withstand exposure to real-world food cues (e.g., advertising). To test this, we investigated whether the positive effect of attentional bias modification on unhealthy food intake is resistant to television food advertising.

**Methods:** In a 2 × 2 × 2 experimental design, we used a dot probe paradigm to train 339 women (Mage = 20.13 years; MBMI = 23.24 kg/m<sup>2</sup>) to direct attention toward ('attend') or away from ('avoid') chocolate pictures. Following one or five training sessions, participants viewed and rated television advertisements of either chocolate or control products. Attentional bias for chocolate was measured before and after training. Chocolate consumption was measured by a taste test and habitual chocolate craving by self-report.

**Findings:** Attentional bias increased in the 'attend' condition and decreased in the 'avoid' condition; however, the reduction in bias following exposure to chocolate advertisements was statistically significant only after five training sessions. Habitual chocolate craving moderated the effect of attentional bias modification on chocolate consumption, such that individuals with lower levels of chocolate craving ate less chocolate following the training, whereas those with higher levels of craving actually ate more.

**Discussion:** Attentional bias modification has promise as a technique for helping people to overcome the temptation from real-world appetitive cues. However, more extensive training may be required for individuals with high levels of food craving.

11:15 - 11:30

## Reducing sugar use in coffee with mindfulness: a painless way to cut calories

R. Lenne<sup>1</sup>, T. Chapdelaine<sup>2</sup>, T. Mann<sup>1</sup><sup>1</sup>University of Minnesota, United States<sup>2</sup>Trabocca North America, United States

**Background:** Making small changes to everyday eating habits may be a better route to long-term weight loss than strict dieting. One untapped area for change involves removing the sugar people add to their coffee, which could save significant calories.

**Methods:** A preregistered randomized controlled trial (n = 127) tested two interventions (and a control group) to help people consume their coffee sugar-free, without reducing their enjoyment of it. One involved a gradual reduction of sugar over time. The other involved teaching people to drink sugar-free coffee mindfully – to notice and appreciate its sensory properties.

**Findings:** The gradual reduction intervention led to less enjoyment of sugar-free coffee ( $t(81) = -3.326$ ,  $p = 0.001$ ). The mindfulness intervention led to an increase in enjoyment of sugar-free coffee ( $\beta = 0.071$ ,  $p < 0.0001$ ), which was no different from the mere exposure control condition ( $\beta = 0.007$ ,  $p = 0.738$ ). However, mindfulness led to greater adherence to sugar-free coffee drinking one-month ( $t(66) = 2.268$ ,  $p = .0134$ ) and six-months ( $t(72) = 1.422$ ,  $p = .080$ ) later ( $\beta = 0.213$ ,  $p = 0.009$ ). Mindful subjects saved an estimated 60 calories per day in the six-months after the intervention compared to the six-months before (compared to 40 for control and 25 for gradual reduction).

**Discussion:** Reducing sugar in coffee is feasible, and a brief mindfulness training holds promise for helping people sustain these reductions while still enjoying their coffee. Over time, these changes may help reduce risk for Type 2 diabetes and cardiovascular disease.

11:30 - 11:45

## Investigation of naturalistic food cravings: a two-week online diary study

S. Schumacher<sup>1</sup>, E. Kemps<sup>1</sup>, M. Tiggemann<sup>1</sup>

<sup>1</sup>Flinders University, Australia

**Background:** Using the Elaborated-Intrusion (EI) theory of desire framework, this study investigated whether two craving reduction strategies, cognitive defusion and guided imagery, could reduce naturally occurring food cravings and craving-related consumption in the field.

**Methods:** Forty-seven female participants recorded their cravings and craving-related consumption in a two-week online diary, completed on their smartphones. In the first week, participants recorded their meals and snacks, and cravings as they occurred. In the second week, participants were randomly assigned to use one of the two craving reduction techniques, or to continue as in week 1 (control condition). Participants in the active conditions listened to audio instructions and practised either cognitive defusion or guided imagery whenever they experienced a food craving. Outcome variables were craving intensity (measured pre- and post-technique) and craving-driven consumption.

**Findings:** Both the cognitive defusion ( $p < .001$ ) and guided imagery ( $p = .009$ ) techniques significantly reduced craving intensity from pre- to post-technique. Further, craving reduction resulted in less craving-related consumption following cognitive defusion, whereby participants practising cognitive defusion ate less frequently in response to their cravings (22%) compared with controls (51%,  $p = .039$ ).

**Discussion:** In support of EI theory, brief audio instructions for cognitive defusion and guided imagery reduced the intensity of naturalistic food cravings. Further, participants who used cognitive defusion were less likely to eat in response to their cravings. The online delivery of techniques such as cognitive defusion and guided imagery may provide useful additions to therapies for tackling unwanted cravings and consumption.

11:45 - 12:00

## To eat or not to eat: following the subtly communicated norm

S. Raghoobar<sup>1</sup>, E. van Kleef<sup>1</sup>, E. de Vet<sup>1</sup>

<sup>1</sup>Wageningen University and Research, Netherlands

**Background:** Understanding which elements of food environments make us more likely to eat, can help policymakers in developing interventions to improve eating habits. It is shown that decreasing accessibility (e.g. by greater distance) or salience of foods lowers consumption. We hypothesize that this effect also occurs with more subtle food serving cues that imply a consumption norm.

**Method:** In a between-subjects experiment, food intake of participants was unobtrusively examined during a bogus coffee taste task. Participants in the discouraging condition (N=50) were presented a bowl of peppernuts covered by plastic wrap, subtly communicating that you are not supposed to take. Participants in the encouraging condition (N=52) were presented the same bowl, but the experimenter removed the plastic wrap before leaving the room, subtly communicating that you are free to take. Participants in the control condition (N=49) were presented the bowl without plastic wrap. Post-test, participants indicated perceptions of norms, effort, salience and liking.

**Findings:** Results show a significantly lower likelihood of intake ( $P < .001$ ) and a marginally, significantly lower intake ( $P = .060$ ) in the discouraging condition compared to the other conditions. No effect of condition on liking was observed. Participants in the discouraging condition indicated that they felt less free and required more effort to take, and a lower salience of the peppernuts, compared to participants in other conditions (all  $P$ 's  $< .01$ ).

**Discussion:** Results indicate that even subtly communicated normative messages affect eating, by changing perceptions of effort and salience. These normative messages could strategically be used to stimulate healthy eating.

12:00 - 12:15

## SMS intervention for reducing processed meat consumption: anticipated regret and self-monitoring

V. Carfora<sup>1</sup>, D. Caso<sup>2</sup>, M. Conner<sup>3</sup>

<sup>1</sup>University of Naples, Italy

<sup>2</sup>Università degli studi di Napoli, Federico II, Italy

<sup>3</sup>University of Leeds, United Kingdom

**Background:** The World Health Organization has affirmed that an excessive intake of red meat and processed meat is a carcinogen, then a widespread attention has been focused on this topic. Several researchers explored the efficacy of text messaging for promoting different healthy eating behaviours in new generations. To date no study investigated if a messaging intervention could be a strategy for reducing processed meat consumption (PMC) of young adults. The chosen theoretical framework was the Theory of Planned Behaviour (TPB).

**Methods:** A randomized controlled trial was used to test the impact of daily SMS, focused on anticipated regret and reminding participants to self-monitor PMC, compared to no message for reducing PMC over a 2 weeks period. PMC and TPB variables were assessed both at Time 1 and Time 2 with daily food diary and questionnaires. Participants were Italian undergraduates (at Time 1 N = 124). Those who completed all measures at both time points were included in the analyses (N = 112).

**Findings:** Results found that a daily messaging intervention, controlling for participants' past behaviour, was effective in reducing PMC. Mediation analyses indicated partial serial mediation via anticipated regret and intentions.

**Discussion:** The present research supported the hypothesis that daily messaging intervention targeting anticipated regret and self-monitoring was effective in decreasing PMC. Outcomes showed the important mediation role of anticipated regret and intentions for reducing PMC.

12:15 - 12:30

## Increasing healthy eating behaviours among HP students and in their trainees: a self-regulation training

C. Violani<sup>1</sup>, M. Fernandes<sup>1</sup>, C. De Vincenzo<sup>1</sup>

<sup>1</sup>Sapienza University of Rome, Italy

**Background:** Competence in helping life styles change through brief interventions based on psychological models can meet important societal needs (Maes and Karoly 2005). **Methods:** Students attending an 11 weeks course in Health Psychology participated in a weekly laboratory in which they were trained to practice a self-management program, working on SMART healthy eating goals in couples and supervising each other following the CALO-RE model (Mitche et al 2011). Each student recruited 2 female volunteers interested in improving their own eating behaviours with the help of the students' counselling. At random one of the volunteers (trainee) received the treatment with a delay of 1 week, while the other served as a waiting list control. Before starting, students and volunteers completed a questionnaire that assessed emotional well-being, self-efficacy, self-determination style and eating habits in the previous week. After the 8 weeks training, both students and volunteers filled again a questionnaire.

**Findings:** Questionnaires completed pre and post the intervention by 28 students, 28 trainees and 27 controls were analysed. 2\*2 (time\*group) anovas showed that after 8 weeks the trainees reported to eat significantly more fruit and vegetables, to have regular breakfast and meals and a reduced consumption of unhealthy snacks. Only among students there were also a significant pre-post increase in self-efficacy for eating more fruit/vegetables and to reduce snacks.

**Discussion:** A brief intervention, focused on the pursuit of SMART healthy eating behavioural goals and the use of self-regulation skills, can be learned and redelivered by students in health psychology with positive outcomes.

# Well-being in the presence of adversity

11:00 - 12:30

Aula B

Suzanne Skevington

11:00 - 11:15

## Understanding cultural resilience to the threat of climate change through quality of life analysis

S. Skevington<sup>1,2</sup>, T. WHOQOL SRPB Group<sup>3</sup>

<sup>1</sup>University of Manchester, United Kingdom

<sup>2</sup>International Hub for Quality of Life Research, Manchester Centre for Health Psychology, United Kingdom

<sup>3</sup>Geneva, Switzerland

**Background:** Culture plays a role in whether communities are resilient to adversity, and multi-disciplinary evidence suggests that some cultures are more resilient than others, but cross-cultural evidence is scarce. We aimed to find out which aspects of quality of life (QoL) best predicted resilience. Also which QoL dimensions best distinguished subgroups with high and low resilience. A global model of cultural resilience and QoL was constructed.

**Methods:** An international quality of life measure that is state-of-the-art in cross-cultural research (The WHOQOL SRPB), was used to assess 33 important dimensions of QoL in 17 cultures. The total sample (N=3270) was structured for age band, health status and gender. Educational level, marital status, and spiritual affiliation were recorded. A resilience definition and strategies for improving resilience outlined by the American Psychological Association guided variable operationalization and selection, before modelling.

**Findings:** Globally, spiritual qualities of life were the best predictors of cultural resilience. These included: meaning and purpose in life, awe, wholeness, kindness and hope, also positive feelings. Highly resilient people reported better QoL than less resilient on all the above dimensions, and also relating to QoL linked to cognitions, self-esteem, relationships and social support.

**Discussion:** Culturally appropriate guidelines for policy-makers derived from these models could promote resilience-enhancing activities in communities living in environments at major risk from climate change. This psycho-spiritual-cultural approach assists in understanding planetary health.

**Acknowledgements:** The Rockefeller Foundation at Bellagio



11:15 - 11:30

## The positive health and wellbeing of low income British men

M. Jestic<sup>1,2</sup>, D.S. Hugh-Jones<sup>1</sup>, P.A. Madill<sup>1</sup>

<sup>1</sup>University of Leeds, United Kingdom

<sup>2</sup>Leeds Trinity University, United Kingdom

Poor health and premature death across Europe remain most strongly predicted by gender and socioeconomic status, and the comparative life expectancy of low income men has worsened over the last thirty years. As the re-framing of men's health as in 'crisis' does not appear to have effectively mobilised health behaviour change, it suggests that a gulf remains between policy and people's everyday lives in challenging contexts. This study proposes a radical attentional shift to capture what low income British men are doing for their health, from their perspective, and in their unique circumstances, so that more realistic and workable ways of 'doing health' can be supported in this population. The research question is, 'How do low income British men present their positive health practices'.

Unstructured interviews exploring positive health and wellbeing, facilitated with photo-elicitation were audio-recorded with 21 participants from the demographic of interest in Yorkshire, UK and analysed using Interpretative Phenomenological Analysis.

The main themes from the analysis are Creative life projects for self-improvement, Determination to stay healthy in the face of adversity and Positive Relationships to increase wellbeing.

The men all had positive relationships with friends, family or romantic others. This was supplemented by self-improvement or life projects which aimed to benefit their environment, education, health or mental health. The positive health and wellbeing experiences from this data can inform interventions across Europe to help reduce loneliness and suicide for this neglected group and, by so doing, increase life expectancy.

11:30 - 11:45

## Physical activity, subjective health, and emotions: patterns in rehabilitation patients up to 8 years

S.L. Tan<sup>1</sup>, S. Lippke<sup>1</sup>, Y. Duan<sup>2</sup>

<sup>1</sup>Department of Health Psychology and Behavioral Medicine, Jacobs University Bremen, Germany

<sup>2</sup>Department of Physical Education, Faculty of Social Sciences, Hong Kong Baptist University, Hong Kong, China

**Background:** To improve workability in employees, it is more than just physical health but also the presence of mental health and well-being. Subjective health, positive affect, and physical activity have been examined before, yet, there is a lack of research in how these elements interrelate over a longer period, in clinical samples from medical rehabilitation.

**Methods:** A longitudinal design was implemented within 8 years. A total of 640 medical rehabilitation patients participated paper-pencil questionnaires at baseline, after being discharged from a rehabilitation in which physical activity was recommended. Follow-up measurements were carried out after 6 months, after 3 years, and after 8 years.

**Findings:** Linear Mixed Models was used to examine the changes of human behaviours over time. Over time, participants who were physically active, and who showed more positive affect and less negative affect, were more likely to develop better subjective health. Although subjective health decreased after a peak up to 8 years after discharged ( $M=2.80$ ,  $SE=0.05$ ,  $p<.05$ ), it remained better compared to baseline ( $M=2.64$ ,  $SE=0.04$ ,  $p<.05$ ). Moreover, the analysis showed that for those who are feeling more calm and peaceful ( $\beta=0.14$ ,  $SE=0.02$ ,  $p<.01$ ), feeling less low and downhearted ( $\beta=-0.15$ ,  $SE=0.02$ ,  $p<.01$ ), and less physically inactive ( $\beta=-0.16$ ,  $SE=0.04$ ,  $p<.01$ ), predicted greater subjective health.

**Discussion:** In clarifying the paradigm of subjective well-being, it is not only regular positive affect (feeling more calm and peaceful) and irregular negative affect (feeling less low and downhearted), also with the involvement of health behaviour of physical activity, altogether enhanced one's subjective health over time.

11:45 - 12:00

## Predicting model of quality of life in breast cancer: spiritual well-being, body image and coping

B. Joudifar<sup>1</sup>, A. Ghotbi<sup>2</sup>, S.M. Araghi<sup>2</sup>, F. Barkhordari<sup>2</sup>, M. Amini<sup>3</sup>, F. Ardeshiri<sup>2</sup>, Z. Masoodian<sup>2</sup>, H. Zamanian<sup>4</sup>

<sup>1</sup>Azad University of Roudehen, Iran

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<sup>3</sup>Department of Psychology, University of Tehran, Tehran, Iran

<sup>4</sup>Qom University of Medical Sciences, Iran

**Background:** Stress and physical consequences of breast cancer (like mastectomy) can reduce patients' body image and quality of life. This study aimed to develop a SEM model for predicting the patients' quality of life based on body image regarding mediating role of coping and spiritual Well-being.

**Methods:** A total of 126 breast cancer patients were recruited by convenience sampling method who attained to Breast Cancer Research Center, Tehran, Iran. Data were collected by Socio-demographic questionnaire, FACT-B, Body Image (BIS), FACIT-Sp, and Coping style questionnaire (Brief COPE). Analysis were conducted using Pearson's correlation, multilinear regression and Structural Equation Modeling.

**Findings:** Results showed that the provisional model was fitted with some alterations by deleting emotion-focused coping. Final Modeling suggested that, mediated by spiritual Well-being ( $t=0.481$ ), problem-focused coping had only an indirect and positive influence on quality of life ( $T=0.231$ ). The influence of body image on quality of life was both direct ( $t=0.223$ ) and indirect ( $t=0.132$ ), mediated by problem-focused strategy and spiritual Well-being. Finally, body image, spiritual Well-being and problem-focused coping could explain 33.9% of quality of life's variance.

**Discussion:** The study suggested that interventions to enhance the problem-focused coping strategies and spiritual Well-being based on our psychosocial model may be helpful to improve patients' quality of life. As well, the effect of body image on quality of life could be decreased by improvement in problem-focused coping strategies and spiritual well-being.

12:00 - 12:15

## Effects of emotional competences on esogastric cancer patients' quality of life and distress after surgery

A. Baudry<sup>1,2</sup>, D. Grynberg<sup>1,2</sup>, S. Lelorain<sup>1,2</sup>, C. Mariette<sup>2,3</sup>, V. Christophe<sup>1,2</sup>

<sup>1</sup>University of Lille, UMR CNRS 9193 SCALab, France

<sup>2</sup>SIRIC ONCOLille, France

<sup>3</sup>CHRU Lille, Service de Chirurgie Générale et Digestive, France

**Background:** Previous studies showed that Emotional Competences (EC) are associated with less distress in cancer patients, suggesting that EC can be a protective factor of mental health. However, studies have been so far limited to cross sectional design. This study thus aimed to investigate the causal effects of EC (identification, understanding, expression, regulation and use of one's own and other's emotions) on esogastric cancer patients' levels of anxiety, depression and quality of life.

**Methods:** 132 patients with an esogastric cancer were tested after cancer diagnosis (T1) and after surgery (T2) and were asked to complete questionnaires about their EC (PEC), their levels of anxiety and depression (HADS) and about their quality of life (QLQ-C30). Multiple regressions were used to assess the effects of EC on quality of life, anxiety and depression symptoms at T1 and T2.

**Main findings:** Intrapersonal EC (T1) were associated with less anxiety ( $\beta=-.25$ ;  $p<.05$ ) and depression ( $\beta=-.18$ ;  $p<.09$ ) symptoms at T2. Regarding the effect of EC on patients' quality of life, intrapersonal EC (T1) were associated with a better emotional ( $\beta=-.37$ ;  $p<.01$ ), cognitive ( $\beta=-.24$ ;  $p<.05$ ) and social ( $\beta=-.21$ ;  $p<.06$ ) functioning at T1, but not at T2.

**Discussion:** EC play a more important role in anxiety and depression symptoms than in quality of life among esogastric cancer patients. The study indeed revealed that intrapersonal EC (i.e., processing one's own emotions) after diagnosis predict less affective distress after surgery. More investigations are necessary to better understand which intrapersonal EC have the most effect on patients' outcomes.

12:15 - 12:30

## The association between frequency of laughter and socioeconomic status after the Great East Japan Earthquake

M. Hirotsaki<sup>1</sup>, T. Ohira<sup>2</sup>, M. Harigane<sup>1</sup>, M. Murakami<sup>1</sup>, Y. Suzuki<sup>1</sup>, H. Takahashi<sup>1</sup>, S. Yasumura<sup>1</sup>, M. Abe<sup>1</sup>

<sup>1</sup>Fukushima Medical University, Japan

<sup>2</sup>Fukushima Medical University School of Medicine, Japan

**Background:** The purpose of this study was to investigate the associations between frequency of daily laughter and disaster-related, socioeconomic and lifestyle factors among residents in evacuation zone after the Great East Japan Earthquake of 2011.

**Methods:** In a cross-sectional study of 52320 participants (23115 men and 29205 women) aged 20 years and older who were included in the Fukushima Health Management Survey in 2012, information on disaster-related factors such as changed work situation, the number of family members and the number of address change, and other sociodemographic, psychological, and lifestyle factors, as well as frequency of daily laughter was obtained from the self-reported questionnaire. The main outcome was frequency of laughter (laughing almost every day). Association between the above mentioned factors and frequency of laughter were examined using logistic regression analysis.

**Findings:** Multivariable models adjusting for demographics, psychological, and lifestyle factors demonstrated that the increase of family members and fewer change of address were significantly associated with high frequency of laughter. Better self-rated economic and health status, lower degree of psychological distress and traumatic symptom, high frequency of exercise, and participation in recreational activity were also associated with high frequency of laughter.

**Discussion:** Disaster-related factors, as well as socioeconomic, psychological and lifestyle factors were associated with frequency of daily laughter. Enhancing social interaction in evacuation zones after a disaster by community-based intervention would be important to increase the frequency of laughter.

# Job demand and resources – theory and model testing

11:00 - 12:30

Aula C

Anne Kouvonen

11:00 - 11:15

## Applying the Job-Demand-Resources Model in a student population: testing the interaction between resources and demands

J. Frisch<sup>1</sup>, N. Pham<sup>1</sup>, R. Soellner<sup>1</sup>

<sup>1</sup>University of Hildesheim, Germany

**Background:** The Job-Demand-Resources Model (JDR) has lately been transferred to the study context. One central component is a health impairment process which describes the effect of context specific demands on the development of negative job-related outcomes and which operates via exhaustion and is influenced by specific resources. Main effects of demands and resources on exhaustion have already been found in student populations, but the core concept of the model, the interaction of demands and resources, has not been tested yet.

**Methods:** 2395 students (79.7% female) took part in a cross-sectional online survey on study conditions and health. Demands of the study program, resources (control, social support), exhaustion, satisfaction with study program and health symptoms (psychological, physiological) were assessed and subjected to a moderated mediation analysis.

**Findings:** The harmful effects of demands on symptoms and satisfaction were mediated by exhaustion. Moreover, these two mediations were moderated (satisfaction: Index of moderated mediation = .067 [0.003, 0.126], symptoms: -0.052 [-0.099, -0.004]) by control. Control led to less exhaustion and also buffered the negative effect of demands. For social support no moderated mediation was found, however, social support had a beneficial main effect on exhaustion.

**Discussion:** The JDR model can be adapted to a student population and may give useful hints for planning study organisation. Both resources and demands are very important when explaining study-related outcomes particularly their interaction has to be taken into account. Hence, demanding study conditions might be attenuated by enhancing students' opportunities to control their study life.

11:15 - 11:30

## Changes in psychosocial and physical working conditions and subsequent psychotropic medication

A. Kouvonen<sup>1,2</sup>, M. Mänty<sup>3</sup>, T. Lallukka<sup>3,4</sup>, E. Lahelma<sup>3</sup>, O. Rahkonen<sup>3</sup>

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<sup>3</sup>Department of Public Health, University of Helsinki, Finland

<sup>4</sup>Finnish Institute of Occupational Health, Finland

**Background:** We set out this study to examine the associations between changes in psychosocial and physical working conditions and subsequent psychotropic medication in ageing employees.

**Methods:** Data (N=3587; 80% women) were derived from the Helsinki Health Study, which is a cohort study of Finnish employees aged 40-60 years at Phase 1 (2000-2002). Changes in working conditions were assessed between Phase 1 and Phase 2 (2007). Survey data were linked to data on prescribed psychotropic medication (ATC) obtained from the register of the Social Insurance Institution of Finland between Phase 2 and the end of 2013. Outcomes were any psychotropic medication; antidepressants (N06A); anxiolytics (N05B); and sedatives and hypnotics (N05C). Cox regression analyses were performed adjusting for age and sex.

**Findings:** The results showed that repeated exposures to low job control, high job demands and high physical work load were associated with an increased risk of subsequent antidepressant and anxiolytic medication. Increased and repeated exposure to high physical work load, increased job control and repeated high job demands were associated with subsequent sedative and hypnotic medication. Hazard ratios varied from 1.18 to 1.66. Improvement in job control was associated with a lower risk of anxiolytic, but with a higher risk of sedative and hypnotic medication. Decreased physical work load was associated with a lower risk of antidepressant and anxiolytic medication.

**Discussion:** Improvement both in psychosocial and physical working conditions may decrease the risk of mental ill-health indicated by psychotropic medication.



11:30 - 11:45

## Relationships between the number- and impact of negative life events, burnout and perceived organizational support

A. Koolmees<sup>1</sup>, M. Pouwelse<sup>2</sup>, A. Brouwers<sup>2</sup>, N. Hoefsmit<sup>2</sup>

<sup>1</sup>Psychologist at a banking organization, Netherlands

<sup>2</sup>Open University of the Netherlands, Netherlands

**Background** Based on the Michigan Stress Model this survey examined the relationships between the number- and impact of experienced negative life events and burnout and the possible moderation by perceived organizational social support.

**Methods** Using online questionnaires, data were obtained from 275 employees (53.5% male, 46.5% female) who became redundant due to reorganization at a Dutch banking organization. The number- and impact of negative life events were measured with a custom selection of the Social Readjustment Rating Scale (SRRS). Burnout was measured with the Maslach Burnout Inventory (MBI-NL) and perceived organizational social support with the Survey of Perceived Organizational support (SPOS).

**Findings** As expected, hierarchical regression analysis showed a significant positive relationship between the perceived impact of negative life events and burnout. Contrary to our expectation, there was no significant relationship between the number of life events and burnout. Perceived organizational social support moderated the relationship between the number of negative life events and burnout significantly, but no significant moderation was found in case of the impact of negative life events. Instead there was a direct negative relation between the impact of negative life events and perceived social support.

**Discussion** The results are partly in line with the Michigan Stress Model. This particularly concerns the significant interaction of the relationship between the number of negative life events and burnout by organizational social support. The findings can contribute to the performance of the multi-annual path of the Dutch government to reduce work related absenteeism and increase sustainable employability.

11:45 - 12:00

## Psychosocial factors, psychological wellbeing, sleep quality and burnout levels in health and social professionals

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<sup>1</sup>Alma Mater Studiorum, University of Bologna, Italy

<sup>2</sup>Université catholique de Louvain - UCL, Belgium

### Background:

The aim of the present study was to examine the association between psychosocial factors at work, psychological wellbeing, sleep quality, and burnout subdimensions in a population of health and social professionals working in community-based service for people with severe disability.

### Methods:

One hundred-fifteen health and social professionals, aged between 23 and 63, filled a questionnaire including: self-evaluated job stress sources (working time, physical-mental workload, relation with the service corporation, with superiors, with patients, with patient family members), the Psychological Wellbeing 18-item short version (PWB), the Pittsburgh Sleep Quality Index (PSQI), the Maslach Burnout Inventory (MBI). A series of logistic regressions were run in order to test whether high vs. low psychological wellbeing, good vs. poor sleep quality, and job stress sources, were predictive of emotional exhaustion (EE), depersonalization (DP), and personal accomplishment (PA).

### Findings:

43.48% of our sample can be classified in a burnout condition. EE was predicted by sleep quality ( $p < .001$ ) and by physical-mental workload ( $p < .05$ ). DP was predicted by sleep quality ( $p < .05$ ), or psychological wellbeing ( $p < .05$ ). PA was predicted by psychological wellbeing ( $p < .005$ ).

### Discussion:

Health and social professionals working in community-based service for people with severe disability have to cope daily with stressful stimuli. Since critical states of emotional exhaustion and depersonalization are predicted by poor sleep quality and low psychological wellbeing, a greater attention should be paid to enhance sleep quality and promote psychological wellbeing in order to prevent burnout.

# Sex and smoking

11:00 - 12:30

Aula F

Karlijn Massar

11:00 - 11:15

## Harnessing salutogenesis to improve sexual health in men-who-have-sex-with-men: an empirical, assets based study

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**Background:**In high income countries, men-who-have –sex-with-men (MSM) are a high risk group for HIV and other sexually transmitted infections (STIs). Therefore, interventions are urgently needed to improve MSM's sexual health. Salutogenesis theory guides health promotion through identification of protective health factors. Sense of coherence (SOC) is the measurable construct underpinning the salutogenic approach. It assesses an individual's ability to understand the world they live in, and make use of internal and external resources towards making health promoting decisions. Here, we examine the role that salutogenesis plays in reducing MSM's sexual risk behaviours.

**Methods:**A cross-sectional online survey recruited 2043 MSM in Scotland, Wales and Ireland via sociosexual media websites and smartphone apps. Sociodemographic and sexual behavioural data were collected alongside the SOC measure. Uni- and multivariate analyses were performed to identify relationships between SOC, sociodemographics and sexual behaviours.

**Findings:**MSM who reported high risk sex in the last year reported significantly lower SOC than men who reported no high risk sex\*. Lower SOC was also significantly related to younger age\*\*, lower qualifications\*\*, being single\*\*, sex partying\*, reporting commercial sex work\*\* but not other variables including STI and HIV testing. Multivariate logistic regression suggested that SOC\*, relationship status\*\*, recent STI testing\*\* and HIV positive status\*\* were independently predictive of high risk sexual behaviours amongst MSM.

**Discussion:**Lower levels of SOC were related to higher risk sex over and above other predictive variables. We propose an assets-based approach to sexual health promotion, which through improving MSM's SOC, will reduce sexual risk-taking behaviours.

\*\*p<0.01, \*\*\*p<0.001

11:15 - 11:30

## Exploring emotional competency among men who have sex with men

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**Background:** Emotional dysregulation has been implicitly linked with risky sexual behaviour in some men who have sex with men (MSM). By adopting an assets-based approach to emotions, this study examines emotional competency (EC) in MSM and explores the relationship between EC and a range of sexual and socio-demographic variables.

**Methods:** A cross-sectional online survey design recruited 2364 MSM in the UK (average age  $M=39.09$ ,  $SD=13.5$ ) via sociosexual media websites and smartphone apps. Socio-demographic and sexual behavioural data were collected alongside the TEIQue-SF questionnaire which assessed their EC. Univariate analyses were performed to identify any relationships between EC and sociodemographic characteristics and sexual behaviours.

**Findings:** MSM overall reported significantly lower EC (TEIQue-SF  $M=3.26$ ,  $SD=0.88$ ) than the general population ( $M=4.95$ ,  $SD=0.61$ ) ( $t=49.3$ ,  $p< 0.001$ ). EC was higher for younger, single and lower educated participants, and men who never accessed the commercial gay scene. Men who reported condomless anal intercourse (CAI) in the last year, a key measure of high-risk sex, only scored significantly higher ( $t(2344)=-2.169$ ,  $p=0.03$ ) for the self-control facet of EC ( $M=21.6$ ,  $SD=6.18$ ) than men who reported no CAI ( $M=21$ ,  $SD=6.14$ ). However, EC was significantly lower for MSM who were more sexually active, participated in 'chemsex' parties, and were willing to stop using condoms in the heat of the moment.

**Discussion:** This is the first study to link EC with risky sexual behaviour in MSM. We present a sexual behaviour change model which includes EC, and outline a novel intervention that will help MSM avoid risky sexual behaviours by increasing their EC skills.

11:30 - 11:45

## Determinants of adolescent sexual harassment behavior: do adolescents intend to reject or stop sexual harassment?

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Sexual harassment behavior is a growing problem in society. This study aimed at establishing which TPB determinants contributed to adolescent sexual harassment. Also additional determinants, such as prototype favorability, risk perception, sexual self-esteem, knowledge and sexual harassment behavior in the past six months, were studied.

We conducted a cross sectional study within 25 schools for pre-vocational and senior general secondary education in urban areas in the Netherlands. The target group consisted of male and female adolescents aged 12-16 years from various ethnic backgrounds (N = 747). The students filled out a questionnaire in the classroom. The central outcomes were the intention to reject sexually explicit pictures/messages (i.e. sexting) and sexual remarks, and the intention to stop kissing someone against his/her will (i.e. dating violence). Hierarchical linear regression analysis was used to examine relationships between determinants and behavioral intention using data of 571 respondents.

Perceived behavioral control and gender were significant determinants associated with students' intentions to reject and to stop committing sexual harassment. Knowledge, sexual harassment behavior in the past six months and ethnicity were not directly related to students' intention to reject or to stop the behavior. Moreover, girls reported a higher intention to reject and to stop committing sexual harassment.

Our research provides insight into the determinants of adolescent sexual harassment behaviors that occur relatively frequent in the age category 12-14 years. Besides addressing TPB determinants in interventions, designers should also target additional determinants and use gender specific strategies within the intervention.

11:45 - 12:00

## Male body dissatisfaction and relationship quality: the mediating role of sexual self-consciousness

K. Massar<sup>1</sup>, L. Desinger<sup>1</sup><sup>1</sup>Maastricht University, Netherlands

**Background:** Given the increased attention for male 'sculpted' bodies on social media, more research is needed on the correlates and consequences of male body dissatisfaction. In particular, not much is known about the effect of muscularity or body fat dissatisfaction on (components of) relationship quality. In the current study we expect that body dissatisfaction negatively affects relationship quality, and that increased sexual self-consciousness mediates this relationship.

**Methods:** An online survey was completed by 208 male participants (age  $M = 29.7$ ,  $SD = 9.7$ ) currently in a romantic relationship. After providing informed consent and completing demographics, participants completed measures on body dissatisfaction, sexual self-consciousness, and relationship quality. Results were obtained using multiple regression and bootstrap mediation analyses.

**Results:** Although muscularity dissatisfaction significantly predicted overall relationship quality ( $\beta = -.19$ ,  $p = .01$ ), body fat dissatisfaction did not ( $\beta = -.12$ , ns). Subcomponents of relationship quality were differentially predicted by these two types of body dissatisfaction ( $\beta$ 's  $< .24$ ). The two types of body dissatisfaction predicted sexual self-consciousness ( $\beta = .39$  and  $\beta = .32$ ,  $p < .001$ ). Furthermore, the relationships between the two types of body dissatisfaction and (components of) relationship quality were fully mediated by sexual self-consciousness.

**Discussion and conclusion:** The current results show that men's body dissatisfaction, and muscularity dissatisfaction in particular, is negatively associated with various components of relationship quality, and that sexual self-consciousness mediates these relationships. Male body dissatisfaction is still understudied, which is a concern given the associations between body dissatisfaction and mental and physical health outcomes.

12:00 - 12:15

## Conflicts about smoking and its consequences for smokers with a non-smoking partner

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<sup>2</sup>University of Groningen, Netherlands

**Background:** In single-smoking couples, non-smokers are likely to try to influence smoking behaviour of their partners. This could cause conflicts that can be either negative (i.e., demand/withdraw or, criticize/defend) or positive (i.e., mutual discussion, mutual expression or mutual negotiation). This longitudinal study aimed to find whether conflicts are related to smoking behavior and relationship satisfaction.

**Method/Findings:** An online survey was conducted among 321 Dutch smokers with a non-smoking partner, 175 (55%) smokers participated 3 months later. Concurrently, smokers who reported more negative conflicts with their partner were more inclined to hide their smoking ( $\text{Exp } B=2.25$ ) and were less satisfied with their relationship ( $b=-0.45$ ,  $p<.001$ ), while they did not indicate a lower number of cigarettes smoked or a higher intention to quit. Positive conflict patterns were associated with higher relationship satisfaction ( $b=0.31$ ,  $p<.001$ ). A higher frequency of conflicts was related to a higher intention to quit ( $b=0.18$ ,  $p<.001$ ). After three months the smoking behaviour could only be explained by the smoking behaviour at baseline. The more conflicts at baseline the stronger the relationship between conflict patterns and relationship satisfaction at T2.

**Discussion:** Negative conflict patterns might be detrimental to the relationship satisfaction of the smoker and even stimulate hiding of smoking, while positive conflict patterns are associated with a higher relationship satisfaction. The effects of conflict pattern on relationship satisfaction over time are even more pronounced when more conflicts are reported.



12:15 - 12:30

## “A smoker among smokers”: the importance of social norms and group identification in smoking behavior

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**Background:** The present study has two main goals. First, we aim to access groups that are associated with smoking and non-smoking behavior. Second, we aim to examine whether identification with smokers moderates the relationship between social norms and smoking behavior, hypothesizing identifiers present a stronger relationship than nonsmokers.

**Methods:** A total of 112 participants completed the online questionnaire (72.7% women; MAge=33.03, SD=10.24 years). Participants were asked to name groups associated with smoking and non-smoking behavior and perceived descriptive norms, identification with smokers and smoking behavior were measured.

**Findings:** Groups most associated with smoking behavior were youth, students and people who go out at night. Groups most associated with non-smoking behavior were athletes and sports people. Higher perceived descriptive norms (i.e. the more participants perceive that others smoke) ( $b=.360$ ,  $SEb=.055$ ,  $\beta=.269$ ,  $p<.001$ ) and higher identification with smokers ( $b=.445$ ,  $SEb=.201$ ,  $\beta=1.202$ ,  $p<.001$ ) were associated with greater number of cigarettes smoked. The interaction between perceived descriptive norms and identification with smokers was also significant ( $b=.195$ ,  $SEb=.027$ ,  $\beta=.069$ ,  $p=.011$ ), showing that the more they perceive that others smoke the more they smoke themselves, and that relationship is even stronger the more they identify with smokers.

**Discussion:** Results show the importance of social relationships at group level on smoking. Specifically, the perceptions about the behavior of others and the level of identification with groups can have an impact on behaviors that influence health, such as smoking. Therefore, it is essential to take into account these relationships when designing interventions in order to improve their effectiveness.

# Behaviour change theory and interventions in implementation research

11:00 - 12:30

Aula I

Lucie Byrne-Davis

11:00 - 11:15

## Theory use in process evaluations alongside randomised trials targeting healthcare professional behaviour change: systematic review

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**Background:** Process evaluations (PEs) can help explain the effects of interventions aiming to change healthcare professional (HCP) behaviour by examining the mechanisms through which they operate. Though using theory has been encouraged to better understand these mechanisms, the extent to which theory has been used in this context is unknown. This review aimed to investigate if and how theory has been used in PEs conducted alongside randomized controlled trials (RCTs) of HCP behaviour change interventions.

**Methods:** Eligible studies were (1) primary research/protocol articles (2) describing PEs of (3) interventions evaluated in RCTs (4) targeting HCPs' behaviour. Searches were conducted on 15/6/2016 in MEDLINE, Embase, PsycINFO, CENTRAL, CINAHL. Study quality was appraised using the Mixed Methods Appraisal Tool. Data extraction included which theories were cited and the extent to which theories were used (i.e. informed by, applied, tested, or built/created) in PEs.

**Findings:** One-hundred-and-six studies were included. Thirty (28%) cited theory. Normalisation process theory (n=12), theory of planned behaviour (n=9), diffusion of innovations (n=6) were most frequently cited. Extent of theory use varied: seven (6.5%) were informed by theory, 16 (15%) applied theory, seven (6.5%) tested theory, and none built/created theory.

**Discussion:** Theory use has been infrequent and insubstantial in this context. Studies that tested theory demonstrate the potential to lend predictive, rather than just explanatory, value to PEs. Thus, there is scope for greater theory use in PEs to develop a cumulative science of behaviour change as they provide an applied setting in which to test and build theories. PROSPERO:CRD42016042789.

11:15 - 11:30

## Changing behaviour 'more or less': do interventions include different BCTs for increasing and decreasing behaviours?

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<sup>4</sup>University of Ottawa, Canada

**BACKGROUND:** Few psychological theories differentiate between processes involved in decreasing, versus increasing, behaviour. However, decreasing ineffective clinician behaviours, versus adopting new procedures, may require different approaches. It is not clear if interventions targeting de-implementation (decreasing) versus implementation (increasing) already use different approaches. We used the Behaviour Change Technique (BCT) Taxonomy (version1) to investigate whether these interventions contain different BCTs.

**METHODS:** Intervention descriptions in 181 articles from three systematic reviews in the Cochrane library were coded for increasing versus decreasing behaviour and BCTs using the BCT Taxonomy (v1). BCTs frequencies were calculated and compared using Pearson's Chi-squared ( $\chi^2$ ).

**FINDINGS:** In Audit and Feedback interventions Feedback on behaviour ( $\chi^2=9.800$ ,  $p<0.01$ ) and Instruction on how to perform the behaviour ( $\chi^2=10.667$ ,  $p<0.005$ ) were reported more frequently for de-implementation. Goal setting (behaviour) ( $\chi^2=8.067$ ,  $p<0.01$ ) was reported more frequently for implementation. In Antibiotic Prescribing interventions, Instruction on how to perform the behaviour ( $\chi^2=35.280$ ,  $p<0.001$ ), Behaviour substitution ( $\chi^2=9.800$ ,  $p<0.01$ ) and Restructuring physical environment ( $\chi^2 = 10.889$ ,  $p<0.01$ ) were more frequently reported for de-implementation whilst Feedback on behaviour ( $\chi^2 = 5.400$ ,  $p<0.05$ ) was more frequently reported for implementation. There were no differences in BCT frequency for implementation or de-implementation in the Imaging interventions. No intervention descriptions contained BCTs within the clusters: Regulation, Identity, Scheduled consequences, Self-belief and Covert learning.

**DISCUSSION:** Whilst different BCTs were reported in interventions for implementation versus de-implementation, these differences were not evident across all three reviews. Additional investigation is required to determine if different processes are involved in decreasing, versus increasing, behaviour.

11:30 - 11:45

## Implementing health psychology to strengthen health systems in low income countries: the change exchange

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**Background:** Training to increase knowledge and skills is the typical solution for changing health professional practice within health partnerships between high and low income countries (LIC). Health psychology can enhance training and its evaluation by refocusing efforts on behaviour change. The Change Exchange implemented health psychology in four health partnerships: Mozambique, Sierra Leone & two in Uganda.

**Methods:** Two to three health psychologists took an ethnographic approach in each of four partnerships, each including 20-60 health professionals. Data collected included observations, interviews, focus groups and questionnaires, conducted and analysed thematically (within and between the partnerships) by the health psychologists. Written reports to health partnerships included recommendations to enable practice change.

### Findings:

1. Embedding health psychologists in partnerships enabled challenging conversations with teams.
2. Reports were welcomed by the partnerships who implemented some but not all recommendations.
3. Partnerships adopted a variety of behaviour change techniques, with multiple examples of partial techniques.
4. Some evaluation methods (e.g., agreement ratings) were difficult to use in LIC.
5. Partnerships were committed to using their knowledge of behaviour change in their work.

**Discussion:** Partnerships saw the embedding of the health psychologists as crucial in ensuring that behavioural science was accepted by partners, including improving use of behaviour change techniques. Future work will focus on methods for investigating health professional practice change.

11:45 - 12:00

## Goal-setting in DAFNE: content and fidelity of the goal-setting component in a diabetes educational-programme

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<sup>2</sup>National University of Ireland, Galway, Ireland

### BACKGROUND

Self-management educational-programmes such as 'Dose Adjustment For Normal Eating (DAFNE)' have become part of routine diabetes-care. Unfortunately, the long-term effects of such programmes are often limited. To address long-term behaviour-change, a core component of DAFNE is goal-setting. However, little is known about how this component is delivered in practice. Face-to-face interventions are often not delivered as specified in the manual. Furthermore, without knowledge of fidelity (the extent to which interventions are implemented as intended), establishing intervention effects is challenging. Therefore, we aimed to explore the content and the fidelity of delivery of the goal-setting component of DAFNE.

### METHOD:

Two researchers coded the goal-setting sessions of the DAFNE manual independently, using the behaviour change technique (BCT) taxonomy-v1. Inter-rater reliability was calculated using Cohen's kappa. Fidelity was assessed by observing and audio-recording a set number of DAFNE goal-setting sessions. The number of BCTs identified in the manual was compared with those delivered in practice. Fidelity was assessed per session, educator and BCTs.

### FINDINGS:

Thirteen BCTs were identified within the manual ( $k=0.77$ ). 'Goals and Planning' BCTs were most frequently implemented. Results show that on average, only half of the BCTs specified in the manual were delivered per session, with fidelity varying significantly by educator.

### DISCUSSION:

This study shows that content of educational-programmes can be reliably coded in terms of BCTs. Overall; fidelity-levels were quite low, and varied greatly between educators. These findings highlight the importance of routine procedures for monitoring delivery of educational-programmes, and suggest that continuous support for educators is needed.

12:00 - 12:15

## Review, development and manualisation of a family weight management programme, using Behaviour Change Taxonomy V.1

L. Atkinson<sup>1</sup>, S. Williams<sup>1</sup>, K. Brown<sup>1</sup>, K. Kwah<sup>1</sup>

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### Background

Evaluations of community-based health behaviour change interventions such as family weight management services (FWMS) often show good acceptability and positive short-term outcomes but fail to produce sustained behaviour or weight change. This study aimed to review the content and delivery of an existing FWMS and systematically embed proven behaviour change strategies.

### Methods

Content and methods of delivery were identified through a review of programme materials, facilitators' verbal descriptions, and observations of delivery. Behaviour change techniques (BCTs) evident were coded using the Behaviour Change Technique Taxonomy V.1 (BCTTv.1). Available evidence was synthesised to identify appropriate BCTs for the programme.

### Findings

The existing programme contained 13 BCTs. Key BCTs such as Goal Setting, Action Planning and Self-monitoring were delivered infrequently and/or incompletely. Facilitators prioritised participant engagement and retention over behaviour change strategies and lacked confidence to deliver BCTs in a group format with diverse families. A revised programme was designed through a collaborative, iterative process with facilitators, to ensure acceptability to the local population and practicality of delivery. A detailed manual was produced outlining; specific activities, BCTs within each activity and guidance on how to deliver them successfully. Facilitators received training in effective delivery of target BCTs. The revised programme contains 27 BCTs, ten repeated every week, with 15-30 minutes dedicated to behaviour change activities. Facilitators reported high confidence after first revised programme delivery.

### Discussion

A novel review and re-design of a FWMS can significantly increase the proven behaviour change content of the programme, with no additional resources required for delivery.

12:15 - 12:30

## Assessing the implementation of a new Enhanced Recovery Pathway in three hospitals

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<sup>2</sup>University of Sheffield, United Kingdom

**Background:** Enhanced Recovery Pathways (ERPs) are an increasingly popular approach to streamline surgical procedures. However, their effectiveness is limited by suboptimal implementation. In order to improve ERP implementation, it is important to understand the process of implementation and how this varies in different contexts. This qualitative study provides a rich description of the implementation of a new ERP in three UK hospitals.

**Methods:** Individual, semi-structured interviews were conducted with three Service Improvement Leads (SILs) coordinating the implementation of an ERP at their hospitals. Each SIL was interviewed on three occasions over a 12-month period (totalling nine interviews). Interview topics included expectations of the process, problems encountered, perceived success of implementation, conceptualisation of role of SIL. Interviews were transcribed, and analysed thematically.

**Findings:** A key theme developed was how SILs conceptualised barriers to implementation. This had two sub-themes: managing barriers to implementation, and acceptance of insoluble problems. Other themes included expectations of the implementation process, multi-disciplinary working, and peer support as a tool for problem solving.

**Discussion:** Despite having different backgrounds, levels of experience, and working in different settings, there were areas of striking similarity between the SILs' experiences. All three SILs reported a lack of resources as a barrier to implementing necessary changes for the ERP (e.g. providing requisite rehabilitation). Although the SILs held mixed opinions as to the success of ERP implementation at their hospitals, they all agreed that it highlighted the importance of clear documentation and guidelines. All SILs raised concerns about the long-term sustainability of the ERP.



# Ethnicity, religion, stigma and health

14:00 - 15:30

Aula A

Sahdia Parveen

14:00 - 14:15

## Understanding alcohol consumption in student participants of the night time economy: a three-wave longitudinal study

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**Background:** The UK night time economy generates around £66 billion annually and, with many club venues offering dedicated “student nights”, is a focal point for university students’ alcohol consumption. We investigated patterns of students’ alcohol consumption across an academic year and considered how these are shaped by their wider beliefs about the night time economy.

**Methods:** A three-wave longitudinal survey was conducted involving student club-goers in the UK (total N=1,372; mean age=20.5 years). At each wave, participants reported their beliefs about club culture, including their identification with it and motivations for clubbing, and their alcohol consumption patterns using the Alcohol Use Disorders Identification Test (AUDIT).

**Findings:** 42% percent of participants (males=39%; females=44%) reported drinking alcohol at levels deemed to be lowest risk (AUDIT scores<8). Similar numbers (males=38%; females=42%) reported consumption levels that were hazardous, and 23% of males and 14% of females drank at levels considered high risk or indicative of possible alcohol dependence. Year-end alcohol consumption increased with increased consumption at the start of the academic year (estimated effect 0.61, 95% CI 0.54-0.69, p<0.001), as well as with increased social identification “as a clubber” scores (estimated effect 0.63, 95% CI 0.11-1.14, p=.017). Year-end consumption also increased with stronger motivations to participate in the night time economy for intoxication purposes (estimated effect 0.89, CI 0.22-1.55, p=.009).

**Discussion:** Interventions to tackle excessive alcohol consumption should address intra-individual factors that shape consumption, but also must consider wider socially-shared beliefs about the night time economy that serve to sustain this.

14:15 - 14:30

## Religious perceptions of alcohol consumption and drinking behaviours among religious and non-religious individuals

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**Background:** Religious involvement has been associated with lower levels of alcohol consumption in college students. However, mechanisms underlying the specific effects of religion on alcohol-related behaviours are still not entirely clear. The present study examined the association between religious perceptions of alcohol consumption (RePAC) and drinking behaviours of Christian, Buddhist, Muslim and non-religious individuals. Because the tenets of world religions take varying perspectives on the morality of alcohol use, we hypothesised that RePAC would be associated with alcohol intake and that non-religious participants would have the most positive RePAC followed by Christians, Buddhists, and then Muslims.

**Methods:** In this cross-sectional study, college students (N=495; 79% female) aged eighteen and above completed self-report measures of alcohol intake and religious perceptions of alcohol consumption. ANOVA and negative binomial regression analyses were used to test differences in RePAC and RePAC-drinking associations, respectively.

**Findings:** Significant associations were found between Buddhists' ( $\beta=-0.37$ ,  $p=0.03$ ) and Christians' ( $\beta=-0.27$ ,  $p=0.04$ ) RePAC and quantity of drinking relative to non-religious participants. Moreover, post hoc pairwise comparisons revealed that non-religious (M=2.59, SD=1.38) and Buddhist (M=1.47, SD=2.45) participants had the most positive RePAC, followed by Christians (M=-0.54, SD=2.31) and then Muslims (M=-3.34, SD=1.63).

**Discussion:** Having a better understanding of RePAC-drinking associations among college students may shed light on some of the mechanisms behind the effects of religious affiliation on alcohol use. Dealing with the challenges of alcohol use and abuse early on in younger and more vulnerable populations is an important step toward controlling future problematic drinking.

14:30 - 14:45

## Keeping HIV/Aids a secret: a coping strategy to deal with the burden of stigmatization

M. Gonçalves<sup>1</sup>, F. Teixeira<sup>1</sup>, A. Maia<sup>2</sup>

<sup>1</sup>University of Minho, Portugal

<sup>2</sup>Universidade do Minho, Portugal

**Background:** Living with HIV/Aids encompasses coping with the diagnosis, the disclosure of the disease, the stigmatization, the lack of social support. There is a risk group facing bigger challenges, namely women, without previous risk behaviors for HIV but infected, in most of the cases, by their partners. However, little is known about this group and how they are dealing with this disease.

**Method:** This study involved eleven HIV/Aids positive women, mostly infected by a partner in a stable relationship. We conducted semi-structural interviews in outpatient treatment for HIV/Aids in hospitals in the North of Portugal, with the purpose to explore the adaptation processes to the diagnosis. The interviews were analysed according to thematic analysis procedures.

**Findings:** Keeping HIV a secret emerges as one of the main themes. It works as a self-preservation strategy from women expectations of social rejection and stigmatization. Although, in a short term it seems to promote psychological adaptation, in a long term, it makes them living in constant panic, developing symptoms of anxiety and depression. Reactions to diagnose are associated to chock, sadness and rage. Most of women were infected by their partners, which leads to relationship damages and ambivalent feelings towards them. These women develop a negative self-image, describing themselves with repulse and disgust, transferring their negative beliefs about HIV.

**Discussion:** These findings enhances the need to develop strategies that help these women to empower themselves and to cope with the secret as way to prevent the development of psychopathological symptoms and preserve their well-being.

14:45 - 15:00

## Social Capital, infertility stigma and quality of life in infertile women: a SEM model

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**Background:** Infertility experience can impair quality of life in infertile women. The purpose of this study was to design a predictive model of the Quality of Life in infertile women based on social Capital, perceived Stigma and time Perspective.

**Methods:** 147 infertile women admitted to a hospital in Tehran in 2016 were included. The main instruments were, Fertility Quality of Life(FertiQoL) questionnaire, Social Capital questionnaire(SCQ), Infertility Stigma Scale(ISS) and Zimbardo Time Perspective Inventory (ZTPI). Gathered data were analyzed with multiple regression and SEM approach.

**Findings:** The mean age of sample was 33.51 (SD=5.9). Stigma was correlated significantly ( $p\text{-value}\leq 0.001$ ) with all six domains of quality of life ( $r=0.22$  to  $0.574$ ). The structural model had acceptable fitness in which social capital was indirectly associated with Quality of Life by mediation of Perceived Stigma ( $p < 0.05$ ,  $Z = 2.067$  and  $\beta = 0.1057$ ) and Time Perspective ( $p < 0.05$ ,  $Z = 2.044$  and  $\beta = 0.0521$ ). Our model predicted 38% of Quality of Life variance in infertile women.

**Discussion:** According to our results, attitude of person to future and society, influence Social Capital along with Quality of Life. Based on our results, culture building about infertility to reduce stigmatization of infertility, could promote Quality of Life of infertile women. As well, reducing stigma can decrease the effects of low social capital on quality of life regarding mediating role of perceived Stigma and can improve Future Time Perspective of patients which also promote Quality of Life of infertile women.

15:00 - 15:15

## Stigmatization and psychological distress (anxiety, stress, depressive symptoms) among Iranian breast cancer patients

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**Background:** The aim of this study was to investigate the degree to which Iranian breast cancer patients experienced stigmatization and its subtypes (enacted and internalized stigma) and whether there is any relationship between stigmatization and its subtypes with psychological distress (anxiety, stress, depressive symptoms).

**Methods:** In a three center study, 224 Patients were recruited from October 2014 to May 2015. Using measures of Socio-demographic questionnaire, levels of distress (DASS-21) and Stigma Scale for Chronic illnesses (SSCI-8), data were collected face-to-face. Statistical analysis was performed using Descriptive, Pearson's correlation, and linear regression tests.

**Findings:** The mean scores of enacted stigma (possible range of 5 to 25), internalized Stigma(3-15) and total stigma (8-40) were respectively  $6.97\pm 3.4$ ,  $4.97\pm 2.6$  and  $11.74\pm 5.5$  which shows low level of stigma in these patients. 39.7%, 48.2% and 37.1% of the patients were suffering from moderate to extreme depression, anxiety and stress, respectively. There were significant correlations between total stigma, and its subscales (enacted and internalized), with all distress symptoms (from  $r=0.387$  to  $0.505$ ;  $p<0.001$ ). Regression analysis revealed that both enacted and internalized stigma could predict depression ( $R^2=0.249$ ), anxiety ( $R^2=0.178$ ) and stress ( $R^2=0.24$ ) significantly ( $p<0.001$ ).

**Discussion:** The study demonstrated that a significant proportion of Iranian women with breast cancer have suffered from psychological distress. Despite low to moderate stigma level in Iranian breast cancer patients comparing some studies, but our study showed that stigma is a remarkable predictor of psychological distress Iranian breast cancer patients. Cultural interventions is needed to more reduce stigma and its psychological consequences.

# Stress and coping within the family

14:00 - 15:30

Aula D

Maria Nicoleta Turliuc

14:00 - 14:15

## The relations between parental stress and family resilience. A model of mediation

M.N. Turliuc<sup>1</sup>, D.S. Duca<sup>1</sup>, C. Măirean<sup>1</sup>, D. Muntele Hendres<sup>2</sup>

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<sup>2</sup>Alexandru Ioan Cuza University, Iasi, Romania

**Background.** Many studies indicate that parents of children with autism have higher levels of stress, than parents of typically developed children. At the same time, such families often show high levels of resilience. The current study aimed at understanding the relationships between parenting stress and family resilience among couples caring for children with autism, mediated by illness perception.

**Method.** Participants were 106 parents of children with autism (53 of married couples, 26 and 51 old,  $M = 43.05$ ,  $SD = 5.15$ , 53 women and 53 men), who are caregivers for children with autism.

Data were analyzed using structural equation modeling in Amos 21, based on the Actor-Partner Interdependence Model (APIM) and the APIMeM (the model for mediation).

**Findings.** Results showed a significant actor effect between female parenting stress and family resilience ( $r = -.48$ ,  $p = .004$ ), and a significant partner effects between male parenting stress and family resilience ( $r = .34$ ,  $p = .002$ ). Also, results showed that husband's illness perception mediated in a negative way the association between his own parenting stress and his wife's family resilience ( $p = .038$ ).

**Discussions.** The current findings suggest the important role of family members' perceptions of autism and the interdependence among family members. Parenting stress, illness perception and family resilience play important roles in understanding parental adjustment to diagnosis of autism.



14:15 - 14:30

## Addressing parent distress during paediatric medical procedures

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<sup>3</sup>RECOVER Injury Research Centre, Australia

**Background.** Paediatric burn dressing changes are repetitive, painful and distressing to the child. Some parents are distressed themselves following the injury, and this seems to impair their ability to support the child through the repeated procedures. Greater understanding this impact of parent distress on the child can lead to targeted intervention. We hypothesised parent distress would impact child coping and distress behaviour, through parent behaviour.

**Methods.** Eighty-seven families were recruited at the Pegg Leditschke Burn Outpatient Clinic, Lady Cilento Children's Hospital, Brisbane, Australia. Parents completed a mental health screen. Parent and child behaviour were observed during the dressing change. Mediation analyses were employed.

**Findings.** Parents with higher anxiety/depression demonstrated less coping-promoting, which reduced the positive effect on child coping ( $ab=-.04$ ; 95%CI $=-.11$  to  $-.01$ ). Parents with higher posttraumatic stress demonstrated more distress-promoting, which increased the negative effect on child coping ( $ab=-.04$ ; 95%CI $=-.13$  to  $-.0003$ ), and also increased the positive effect on child distress ( $ab=.21$ ; 95%CI $=.02$  to  $.61$ ). Independent of these mediations, parent mental health did not directly influence child coping or distress ( $c's<.22$ ,  $ps>.068$ ).

**Discussion.** Parent mental health affects how a parent supports a child, and leads to reduced child coping during a dressing change. This research suggests that some parents will need specific support to assist with their coping during paediatric burn dressing changes. A short video intervention, addressing psychological distress and behavioural modification is currently being tested for acceptability and feasibility in the busy clinical burn outpatient environment.

14:30 - 14:45

## Siblings of chronically ill and/or disabled persons - a look at stress and resources

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**Background:** Being a sibling of a person with a chronic illness and/ or disability is often associated with increased psychological distress and lower quality of life, which are often triggered by stress and overburdening.

**Methods:** The results of interviews with 10 experts (38 years) and 10 now adult siblings (28 years) were used to formulate 22 items assigned to the three areas distress, resources and impact on live. Sociodemographic data, the 22 items as well as other psychological constructs were collected.

**Results:** In total, N=1000 adult siblings (29 years  $\pm$ 11, 81% female) participated in the study. 290 were affected siblings (31 years,  $\pm$ 11, 88% female); regarding to sociodemographic data they differed statistically significantly from the n=710 siblings (28 years,  $\pm$ 10, 78% female) who were used as a comparative sample. Suitable subjects from this sample were filtered out and 290 pairs were matched. The comparison of affected and non-affected siblings showed statistically significant differences in a simultaneous examination of the three areas ( $F=50.64$ ,  $p<.0001$ ,  $\eta^2=.132$ ); affected siblings reported more distress, fewer resources and more impact on their lives.

**Conclusion:** Siblings of chronically ill and/ or handicapped persons reported retrospectively that they felt significantly more distressed in comparison to siblings of healthy children because of their life situation. They had fewer resources and more impacts on their own lives. Since siblings are a risk group, they should be offered support and mutual exchange of experiences in their childhood and youth as well as in adult life.

14:45 - 15:00

## Impact of perceived versus actual similarity in coping with stress on relationship functioning

J. Eggermann<sup>1</sup>, M. Vollmann<sup>1</sup>, C. Salewski<sup>1</sup><sup>1</sup>University of Hagen, Germany

**Background:** Studies on moderator effects of dyadic coping with daily hassles on relationship quality and health have yielded inconsistent findings. As shown for empathy, the perception of one's partner's efforts might be more important than the actual efforts. Therefore, the present study aims at examining potential moderating effects of perceived similarity versus actual similarity of dyadic coping on the relation between stress and relationship quality.

**Methods:** 147 couples completed paper-and-pencil questionnaires, including the dyadic coping inventory (DCI), a partnership questionnaire (PFB-K) and the multidimensional stress questionnaire for couples (MDS-P). Based on the DCI two discrepancy scores (for perceived similarity: equity index EI; for actual similarity: reciprocity index RI) were calculated and applied as moderators of the relation between stress and relationship quality. Moderator hypotheses were tested with the PROCESS tool.

**Findings:** EI of positive and negative dyadic coping moderates the influence of stress on relationship quality in men ( $\beta=-.12$ ,  $p=.01$  and  $\beta=-.18$ ,  $p=.004$ , respectively), but not in women ( $\beta=-.16$ ,  $p=.15$  and  $\beta=-.05$ ,  $p=.47$ ). RI of positive and negative dyadic coping moderates the influence of stress on relationship quality neither in men ( $\beta=-.03$ ,  $p=.70$  and  $\beta=-.05$ ,  $p=.45$ , respectively) nor in women ( $\beta=.02$ ,  $p=.77$  and  $\beta=-.004$ ,  $p=.95$ ).

**Discussion:** The negative impact of stress on relationship functioning is buffered by perceived, but not actual similarity of dyadic coping. This moderating effect occurs only in men, pointing to important gender differences. Strengthening the visibility of one's own coping efforts may help the partner to perceive them and can thus improve relationship functioning and health.

15:00 - 15:15

## Predicting quality of life of children with cancer by parent's personality and coping

S.A. Mousavi Moghadam<sup>1</sup>, M. Farjami<sup>2</sup>, H. Zamanian<sup>2,3</sup>, F. Ardeshiri<sup>2</sup>, T. Jalali<sup>4</sup>

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<sup>4</sup>Health Psychology & Behavior Medicine Research Group, Tehran University of Medical Sciences, Tehran, Iran

**Background:** The aim of this study was to design a structural equation model (SEM) to predict the quality of the life of children with cancer based on parent's personality and coping styles.

**Methods:** 112 Children with cancer who referred to mahak hospital from May to July 2016 were included. Research instruments were PedsQL-Cancer Module, Big Five Personality Questionnaire-Short Form and brief COPE scale. SEM was used by Lisrel along with regression analysis by SPSS.

**Findings:** It showed that the path of extroversion with mediating role of problem-focused coping ( $T=-6/639$ ) and emotion-focused coping ( $T=3/276$ ) on children quality of life is statistically significant ( $p$

**Discussion:** According our model, interventions targeting coping styles of parents could increase significantly the quality of life of children with cancer. As well, personality traits of parents have impact on children quality of life by changing coping of parents; so parents' personality should be considered specially in family-based interventions to change their coping as a predictor of children quality of life.

15:15 - 15:30

## Predicting quality of life of mothers of autistic children: a structural equation model

F. Ardeshiri<sup>1</sup>, S. Foroozanfar<sup>2</sup>, H. Zamanian<sup>3</sup>, R. Sadeghi<sup>1</sup>, M. Amini<sup>4</sup>

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<sup>4</sup>Department of Psychology, University of Tehran, Tehran, Iran

**Background:** Autism in children, as a source of stress, affects psychological health and quality of life of family and particularly parents. So, the aim of this study is designing a model which could predict mothers' quality of life based on coping and spiritual well-being by structural equation modeling

**methods:** 203 mothers of children with autism from three cities were selected non-randomly. Mothers were assessed by three instruments: Lazarus ways of coping scale, Elisson spiritual well-being scale and SF-36 quality of life scale.

**Findings:** Mean age of mothers was 36.01 (SD=6.92). Pierson Correlation showed a significant correlation between quality of life and just problem-focused coping types ( $r=0.538$ ) (not emotion-focused) and spiritual well-being ( $r=0.461$ ). Regression analysis showed that 21 percent of quality of life could be predicted by two domains of spiritual well-being containing religious and existential well-being. In structural equation analysis, regarding AGFI 0.93, RMSA 0.079 and CFI and IFI 0.98, the final model was confirmed and showed that only mental health dimension of quality of life could be predicted by problem-focused coping styles and spiritual well-being.

**Discussion:** Mental health of mothers of children with autism, could be improved by interventions targeting parents coping styles and spiritual well-being. Emotion-focused cognitive interventions along with logo therapy could be combined to improve quality of life of mothers of autistic children.

# Health and work – Psychosocial factors, technology and training

14:00 - 15:30

Aula G

Annalisa Casini

14:00 - 14:15

## How many calories do nurses burn at work? A real-time study of nurses' energy expenditure

J. Allan<sup>1</sup>, K. Sadko<sup>1</sup>, C. Bell<sup>1</sup>, D. Johnston<sup>1</sup>

<sup>1</sup>University of Aberdeen, United Kingdom

**Background:** More than 50% of nurses do not meet recommended levels of physical activity and 50-65% are overweight or obese. While nursing is typically viewed as an active profession, few studies have objectively measured nurses' activity levels during the working day. The present study aimed to quantify energy expenditure in nurses during typical shifts.

**Methods:** Nurses (n=96; 90 female, mean age=36.4, mean experience=10.6 years, mean body mass index(BMI)= 26.6) participated in a real time study of energy expenditure over one working shift. Heart rate and activity level were measured using an Actiheart monitor and used in combination with body weight information to calculate energy expenditure (EE) in 15-second epochs. EE/15sec was then scaled to represent energy expended over a standard 12-hour shift. Data were descriptively summarised and multi-level modelling was used to examine patterns in energy expenditure over the working day.

**Findings:** On average, nurses expended 1520 kcals over a 12-hour shift. When modelled over time, energy expenditure followed a cubic trend: rising initially at the beginning of the shift, then dropping mid-shift before increasing again towards the end of the shift. Energy expenditure was unrelated to age, grade/seniority or ward type (medical or surgical) but was significantly higher in nurses with a higher BMI ( $p<.01$ ).

**Discussion:** Nurses expend significant amounts of energy over a typical shift. Consequently, interventions aimed at helping nurses to achieve a healthy body weight may be better targeted at reducing food intake or increasing leisure activities than at increasing physical activity in the workplace.

14:15 - 14:30

## Daily intense technology use after work: does it help with psychological recovery?

C. Quinones<sup>1</sup><sup>1</sup>Open University, United Kingdom

### Background:

Information communication technologies (ICTs) have become a popular leisure platform. Psychological recovery during our leisure time is vital to replenish psychological and cognitive resources spent at work. In this paper I test whether intensive ICT use for private purposes can be an effective recovery strategy after work through a diary study.

### Methods

A total of 320 people completed the baseline survey. Of these, 84 participants responded to the diary over 4 consecutive days, 3 times a day (before lunch, after work and before going to bed). This led to 880 data points. Items from validated instruments were used (e.g. Compulsive Internet Use (CIU) (Meerkerk, 2010) psychological recovery, Sonnentag, (2007)).

### Findings

The impact of intensive Internet use on recovery appears to be moderated by trait levels of CIU. At high levels of CIU, the relationship between daily intensive Internet use and recovery before bed was negative ( $b=-1.18$ ,  $SE=0.37$ ,  $p<0.001$ ), the opposite happened at low levels of CIU.

Discussion: The findings suggest that for compulsive users, there seems to be a price to pay for 'easy access' to recovery activities, whereas non-compulsive users do experience positive effects from intensive ICT use. Thus, it is important that we experiment and test the real impact of after-work leisure activities on our health and amend these habits accordingly. Do these activities really help us feel more energised and more relaxed (i.e. recovered)? Or is it just a way to shut down uncomfortable emotions (e.g. frustration, anger or stress)?



14:30 - 14:45

## Exposure to psychosocial risk factors and consequences for elderly home care and support workers' health

A. Casini<sup>1</sup>, R. Bensliman<sup>2</sup><sup>1</sup>Université catholique de Louvain - UCL, Belgium<sup>2</sup>Université libre de Bruxelles - ULB, Belgium

### Background:

Home care and service workers are exposed to specific psychosocial risk factors. This study aims at evaluating which of the job-specific psychosocial risk factors predict burnout, musculoskeletal problems (MSP), and somatic stress symptoms (SSS) in elderly home care and support workers in the Walloon region of Belgium.

### Methods:

915 elderly home care and support workers (97.4% women) employed in 9 social enterprises filled an adapted version of the COPSOQ II questionnaire. Multiple linear regressions were computed including burnout, MSP, SSS as outcome variables, and quantitative, emotional, and cognitive job demand, job predictability, influence on work, work pace, possibilities for personal development, suffered violence, and work-home conflict as predictors. In addition, ANOVAs and post-hoc tests were performed in order to compare domiciliary job subtypes (i.e. healthcare jobs, and (non-)qualified service jobs) in terms of different exposure to the studied psychosocial risk factors.

### Findings:

Results show that quantitative, and emotional job demand, work pace, possibilities for personal development, suffered violence, and work-home conflict predict burnout ( $R^2 = .273$ ; all  $p < .05$ ). Quantitative, and emotional job demand, job predictability, and work pace predict MSP ( $R^2 = .119$ ; all  $p < .05$ ). Emotional job demand, work pace, and work-home conflict predict SSS ( $R^2 = .172$ ; all  $p < .05$ ). Moreover, differences exist between job subtypes in terms of exposition to the studied psychosocial risk factors.

### Discussion:

In order to improve the health of elderly home care and support workers, targeted interventions to address job-specific psychosocial risk factors should be implemented.

14:45 - 15:00

## The use of psychological training in stress management intervention for extractive sector employees

D. Molek-Winiarska<sup>1</sup><sup>1</sup>Wroclaw University of Economics, Poland

**Background:** The aim of the study was to check if psychological training was an effective intervention in reducing work-related stress in the case of workers in a copper mine. A targeted psychological training was developed basing on psychological diagnoses that had revealed workers' need for clear and precise communication, individual and team responsibility, conflict solving and mutual support. The hypothesis was: the psychological training reduces work-related stress by improving the coping with stress skills as specified by psychological diagnoses.

**Material and methods:** 97 employees were randomized to the experimental group (48 participants) and control group (48 participants). Work-related stress was measured using Job Content Questionnaire by Karasek, Occupational Stress Indicator by Cooper & Williams, and mental health was measured using Goldberg's General Health Questionnaire. Experimental manipulation was 24-hour-long psychological training.

**Findings:** Results are based on three diagnoses (using the same 3 questionnaires as above) – before the training, directly after the training and 3 months later for the experimental sample, and two diagnoses for control sample. MANOVA has revealed significant increase of JCQ decision latitude ( $F=15.33$ ,  $p<.00$ ) and social support (Superv.  $F=11.13$ ,  $p<.00$ ; Cowor.  $F=6.356$ ,  $p<.002$ ), a significant decrease in GHQ ( $F=31.2$ ,  $p<.00$ ). There were no significant differences in OSI.

### Discussion:

The psychological training for this specific group of workers was successful in terms of reducing work-related stress by increasing the coping with stress skills. In the cases of obstacles or impossibility of eliminating the sources of stress it is important to strengthen the coping with stress skills.

15:00 - 15:15

## Burnout among Hungarian teachers: its association with life satisfaction and psychosomatic health

M. Mihálka<sup>1</sup>, B. Pikó<sup>1</sup><sup>1</sup>University of Szeged, Hungary

**Background:** Teaching is a stressful occupation. Not surprisingly, burnout syndrome among teachers is also common and a great challenge since it may have many negative consequences, such as professional dissatisfaction, absenteeism, health problems, job stress, depression and lower involvement in school work. The main goal of the present study was to detect burnout syndrome in the Hungarian teacher population and analyze its relationship with life satisfaction and psychosomatic health. **Methods:** A representative sample of Hungarian teachers (N = 2062, aged between 23-74 years, mean = 48.1 and S.D. = 8.9; 83% females) was applied. Burnout was measured by Maslach Burnout Inventory - Educators Survey. The questionnaire also included the Satisfaction with Life Scale, and other health-related items. **Findings:** Burnout syndrome was more characteristic of male teachers, particularly depersonalization ( $p < 0.001$ ) and lack of personal accomplishment ( $p < 0.001$ ). Surprisingly, these two subscales showed higher levels among younger teachers. All of the subscales were associated with a lower perception of one's own health and satisfaction with life as well as more psychosomatic symptoms. Furthermore, depersonalization was related to the frequency of alcohol use. **Discussion:** Findings suggest that the risk of burnout syndrome is higher for male and younger teachers. As it seems they do not have the appropriate coping skills to prevent it. Burnout is associated with lower level of life satisfaction but more psychosomatic symptoms, health problems and substance use. Developing effective intervention should be necessary to map and handle job stress and prevent burnout.

# Psychobiological mechanisms in physical and psychological health

14:00 - 15:30

Aula B

Daniel Powell

14:00 - 14:15

## Youth stress and depression effect early markers for Type 2 diabetes: LOOK longitudinal study

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<sup>2</sup>Deakin University, Australia

<sup>3</sup>University of Canberra, Australia

**Background:** The purpose of this study was to determine whether children experiencing stress and depressive symptoms were at greater risk for current and future impairment in glucose homeostasis and increased adiposity, both risk factors for Type 2 diabetes.

**Methods:** In this longitudinal cohort study, participants were 791 healthy, initially grade 2 children (7-8 years; 394 girls), selected from the general community. Psychosocial stress was assessed using the Children's Stress Questionnaire, whilst depressive symptoms were assessed using the Children's Depression Inventory. Fasting blood samples for serum insulin and plasma glucose were collected to calculate the homeostasis model assessment-insulin resistance (HOMA-IR). Other measurements were height, weight, percent body fat (dual energy x-ray absorptiometry), physical activity (pedometers), and pubertal maturation (Tanner score).

**Results:** Boys who reported more symptoms of depression had higher insulin resistance, irrespective of adiposity ( $p = .016$ ); and longitudinally, we found a trend for boys who developed more depressive symptoms to develop higher insulin resistance ( $p = .073$ ). These findings did not extend to girls. Furthermore, boys and girls with higher depressive symptoms had higher percent body fat ( $p = .011, .020$  respectively); and longitudinally, boys whose depressive symptoms increased became fatter ( $p = .046$ ).

**Conclusions:** Our data provide evidence that early symptoms of depression increase insulin resistance, independent of adiposity. Our evidence that early symptoms of depression may lead to overweight and obesity provides further reason to suggest that early attention to children with depression, even in pre-clinical stages, may reduce risk of chronic disease in later life.

14:15 - 14:30

## Does early life adversity affect mental health and social cognition via an inflammatory response

G. Donohoe<sup>1</sup>, J. Holland<sup>1</sup>, M. Dauvermann<sup>1</sup>, D. Morris<sup>1</sup>

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**Background:** Early life adversity (ELA), including physical abuse or neglect and emotional abuse or neglect, is a significant risk factor for a range of mental health disorders. Changes in cognitive function, and in particular social cognition, are also associated with many of these disorders. In psychosis, ELA and cognitive deficits have, separately, been associated with an increased immune response. In this study we sought to determine whether ELA's might affect social cognitive performance and if so, whether these effects were mediated via an impact on immune response.

**Methods:** Using the Avon Longitudinal study of parents and children (ALSPAC; n~5,000), ELA was defined in terms of the experience of physical abuse or neglect, emotional abuse or neglect, witnessing domestic violence, and harsh parent before the age of 5 years. Social cognition was defined in terms of theory of mind performance while general cognitive ability was defined in terms of IQ. Immune function was measured using C-reactive protein and Interleukin-6.

**Findings:** Early life adversity was associated with poorer performance on a range of both general and social cognitive measures. While immune function was associated with both early life adversity and cognitive performance, it was not observed to mediate the effects of ELA on cognition.

**Discussion:** While increased immune response has been associated with both early life adversity and cognitive impairment, this response was not observed to mediate the relationship between these two aspects of cognition. Alternative hypothesis for understanding the mechanism by which ELA may result in poorer cognitive performance will be discussed.

14:30 - 14:45

## Childhood trauma, cortisol reactivity to stress and resting cortisol in suicide attempters and ideators

D. O'Connor<sup>1</sup>, J. Green<sup>1</sup>, E. Ferguson<sup>2</sup>, R. O'Carroll<sup>3</sup>, R. O'Connor<sup>4</sup>

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<sup>4</sup>University of Glasgow, United Kingdom

**Background.** Every 40 seconds a person dies by suicide somewhere in the world. The causes of suicidal behaviour are not fully understood. Dysregulated hypothalamic-pituitary-adrenal (HPA) axis activity, as measured by cortisol levels, is one potential risk factor. The current study investigated whether childhood trauma was associated with low levels of cortisol reactivity to a laboratory stressor and resting cortisol levels in suicide attempters and ideators.

**Methods:** One hundred and sixty participants were recruited to a previous attempt, suicidal ideation and a control. Participants completed background questionnaires, including the Childhood Trauma Questionnaire, before completing a stress task known as the Maastricht Acute Stress Test (MAST). Cortisol levels were assessed during rest and during the MAST.

**Findings:** The highest levels of childhood trauma were reported in the attempter group (78.7%), followed by the ideator (37.7%) and then the control (17.8%) groups. Moreover, after controlling for covariates (age, gender, BMI, time, medication, smoking status), regression analyses showed that childhood trauma was a significant predictor of cortisol reactivity to stress and resting cortisol levels, such that high levels of trauma were associated with lower cortisol levels in suicide attempters and ideators.

**Discussion:** These results are consistent with other findings that indicate that childhood trauma is associated with blunted HPA axis activity in vulnerable populations. The challenge for researchers is to elucidate the precise causal mechanisms linking trauma, cortisol and suicide risk and to investigate whether the effects of childhood trauma on cortisol levels are amendable to psychological intervention.

14:45 - 15:00

## Post-event rumination and impaired cortisol recovery following social-evaluative stressors in social anxiety

S. Maeda<sup>1,2</sup>, H. Shimada<sup>3</sup><sup>1</sup>Graduate School of Human Sciences, Waseda University, Japan<sup>2</sup>Research Fellow of Japan Society for the Promotion of Science, Japan<sup>3</sup>Faculty of Human Sciences, Waseda University, Japan

**Background:** Individuals with social anxiety show impaired cortisol recovery following social-evaluative stressors; however, the mechanism underlying such impaired recovery remains unclear. This study examined the effect of post-event rumination (PER)—repetitive thinking about past social situations—on cortisol recovery.

**Methods:** Forty-two university students (23 women, mean age = 22.0 ± 2.0 years) completed the Social Phobia Scale, the Social Interaction Anxiety Scale, and the Trier Social Stress Test (TSST), followed by thought sampling procedure that assessed their PER about experiences during TSST. Saliva sampling was conducted twice before TSST and six times after TSST, every 10 min. We examined whether social anxiety and PER predict cortisol recovery using linear growth models. To avoid biases in estimation, we analysed responders (>20% cortisol rise from baseline; n = 22) and non-responders (n = 20) in separate models, based on previous studies.

**Findings:** Among responders, PER predicted lower recovery rates ( $t = 2.33, p < .05$ ), and the effect was prominent at low levels of social anxiety ( $Z = 3.12, p < .01$ ). Among non-responders, no effect of PER was observed, and a linear declining trajectory was observed throughout the experiment ( $t = 4.10, p < .01$ ).

**Discussion:** These findings suggest that PER causes cortisol recovery impairment both at high and low levels of social anxiety, among those who exhibit cortisol response to social stressors. The linear declining trajectory among non-responders suggests that they responded to a novel experimental situation itself but not to TSST, which explains the lack of effect of PER on non-responders.



15:00 - 15:15

## The still under-appreciated role of cognitive neuropsychology in the diagnosis of progressive multifocal leukoencephalopathy

C. Scarpazza<sup>1</sup>, R. Capra<sup>1</sup>, F. Mattioli<sup>1</sup>

<sup>1</sup>Spedali Civili of Brescia, Italy

**Background:** Despite cognitive deficits frequently represent the first clinical manifestations of Progressive Multifocal Leukoencephalopathy (PML), an uncommon opportunistic infection occurring in patients with multiple sclerosis (MS) treated with natalizumab (NTZ), the importance of cognitive neuropsychology in PML diagnosis is still under-appreciated. The aim of the current study is to investigate the cognitive deficit at PML diagnosis in the Italian PML cohort.

**Methods:** All the Italian patients manifesting PML up to December 2016 (n=46) were included. The clinical data, lesion load, and longitudinal clinical course were compared between patients with (n = 19) and without (n = 21) cognitive deficit upon PML suspicion (the remaining six patients were asymptomatic).

**Findings:** Within patients with cognitive onset, 41.10% were presenting with language and/or reading difficulties; 26.31% with memory difficulties; 21.05% with apraxia; 10.5% with disorientation; 10.5% with neglect; 10.5% with agnosia, 5.26% with perseveration, 5.26% with dementia. Despite the time to diagnosis after symptoms detection was shorter for cognitive than non cognitive onset patients ( $p = 0.02$ ), the number of viral copies and the percentage of patients with unilobar lesion did not differ between groups ( $p=0.15$ ;  $p=0.3$ ), and the longitudinal disability course was more severe in cognitive than non cognitive onset patients ( $F = 3.45$ ,  $p = 0.017$ ).

**Discussion:** Cognitive deficits at PML onset manifest with symptoms which are absolutely rare in MS. Results suggested a delay in the cognitive “red flag” recognition by neurologists. Clinicians should be sensitive to the importance of formal neuropsychological evaluation as an important contribution to health psychology.

15:15 - 15:30

## Blood pressure-related hypoalgesia: insights from heart-brain pathways

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**Background:** High blood pressure (BP) is characterized by reduced pain sensitivity, known as BP-related hypoalgesia. The cause of such phenomenon has not been clarified, yet existing studies point to a key role of the arterial baroreceptors. We studied the neural correlates of pain perception during discharge of baroreceptors, activated naturally at systole by phasic ejection of blood from the heart. **Methods:** After determining individual pain thresholds, normotensive participants underwent an event-related fMRI design in which unpredictable painful and non-painful electric shocks timed to occur either at systole or diastole were delivered. Participant also underwent a 1-week home BP monitoring. **Findings:** At behavioral level, mixed models showed the least pain perception when painful stimuli were administered at systole compared to diastole ( $p=0.03$ ). When the group was divided into high and low systolic BP based on the median split, a main effect of BP status emerged with the high-BP group having overall lower pain perception ( $p=0.05$ ). Neuroimaging data revealed a main effect of Stimulus in a) right calcarine cortex, extending ventrally to the cerebellum, b) right postcentral gyrus, extending anteriorly to the right precentral gyrus and encompassing the right supplementary motor area; c) right insula. For the effect of Cardiac phase, a cluster located in the right postcentral gyrus emerged. **Discussion:** Results support that the negative association between BP and pain perception is stronger during baroreceptor discharge. Given that BP-related hypoalgesia interferes with early detection of myocardial infarction in an “at risk group”, the clarification of its basis has critical clinical implications.

# mHealth, mood, stress and wellbeing

15:30 - 17:00

Katrin Zieseimer

15:30 - 17:00

## Do daily fluctuations in inhibitory control predict alcohol consumption? An ecological momentary assessment study

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Deficient inhibitory control is predictive of alcohol consumption in the laboratory, however little is known about this relationship in naturalistic, real-world settings. In the present study we implemented ecological momentary assessment methods to investigate the relationship between inhibitory control and alcohol consumption in the real world. Heavy drinkers who were motivated to reduce their alcohol consumption (N = 100) were loaned a smartphone which administered a Stop Signal task twice per day at random intervals between 10 am and 6 pm for two weeks. Each day, participants also recorded their planned and actual alcohol consumption and their subjective craving and mood. We hypothesised that daily fluctuations in inhibitory control (Stop Signal Reaction Time) would predict alcohol consumption, over and above planned consumption and craving. Multilevel modelling demonstrated that daily alcohol consumption was predicted by planned consumption (B = .818,  $p < .01$ ) and craving (B = .021,  $p < .01$ ), but inhibitory control did not predict any additional variance in alcohol consumption. However, supplementary analyses demonstrated that the magnitude of the change in inhibitory control over the course of the day was a significant predictor of alcohol consumption on that day (B = .008,  $p < .01$ ), after controlling for planned consumption and craving. These findings demonstrate that short-term fluctuations in inhibitory control predict alcohol consumption, which suggests that transient fluctuations in inhibition may be a risk factor for heavy drinking episodes.

15:30 - 17:00

## Usability and acceptability of a smartphone-based ecological momentary assessment to capture relationship communication

S. Langer<sup>1</sup>, N. Ghosh<sup>2</sup>, L. Porter<sup>3</sup><sup>1</sup>Arizona State University, United States<sup>2</sup>Fred Hutchinson Cancer Research Center, United States<sup>3</sup>Duke University, United States

**BACKGROUND:** This study tested usability and acceptability of a smartphone-based ecological momentary assessment (EMA) to capture twice-daily reports of communication with one's partner, in preparation for a larger investigation of couple communication within the context of advanced cancer. Specifically, we adapted questionnaire-based measures of communication for EMA. **METHODS:** Adult married or cohabiting participants were recruited from researchmatch.org. At each notification (twice daily for 2 weeks), participants were asked if they'd conversed with their partner since awakening or the last notification. If yes, further questions assessed importance of the conversation and communicative behaviors including disclosure, holding back, protective buffering, and responsiveness. Ratings were made on a 1-5 scale, with higher values indicating more of the construct. A follow-up interview assessed usability and acceptability. **FINDINGS:** Demographic characteristics of the sample (n=30) were: M(SD) age = 36.27(12.10); 87% female; 90% Caucasian; 7% Hispanic. Among 756 total notifications, 603 were completed (79.8%). Conversations with the partner were frequent, 484/603 (80.3%), and rated as relatively important, M(SD) = 3.10(1.26). Ratings of communication were as follows: M(SD) disclosure = 3.71(1.17), holding back = 1.65(1.03), protective buffering = 1.85(1.00), and responsiveness = 4.16(0.76). Those completing the interview (n=28) reported the app to be convenient, M(SD) = 4.14(0.76), and the questions easy to answer, M(SD) = 4.39(0.69). Eighty percent completed the app within 5 minutes. **DISCUSSION:** Our smartphone-based EMA was usable, achieving an 80% response rate, and deemed acceptable. Next steps are to conduct psychometric analyses of the items and adapt for use with cancer survivors and partners.

15:30 - 17:00

## ‘Missing events’ in a mobile event-based dietary assessment

K. Zieseimer<sup>1</sup>, L. König<sup>1</sup>, K. Villinger<sup>1</sup>, D.R. Wahl<sup>1</sup>, H. Schupp<sup>1</sup>, B. Renner<sup>1</sup>

<sup>1</sup>University of Konstanz, Germany

**Background:** Mobile applications are becoming increasingly popular to assess eating behavior because they allow to record food intake within the eating situation. Compared to common questionnaire-based measures, data quality depends less on the remembered dietary intake but it requires frequent and extensive reporting in the daily routine. In two studies, both the frequency of recorded meals and snacks as well as the frequency and reasons of meals and snacks that were not reported (‘missing events’) were examined.

**Methods:** In Study 1, 38 participants (74% women) and, in Study 2, 35 participants (89% women) recorded their meals and snacks with an ecological momentary assessment over a period of eight days. Afterwards, frequency of and reasons for ‘missing events’ were assessed in semi-structured interviews.

**Findings:** On average, participants recorded 27.5 (SD = 10.7, Study 1) and 26.7 (SD = 7.5, Study 2) meals and snacks. Participants reported 3.8 (SD = 3.6) missed meals and 3.2 (SD = 2.7) missed snacks. Reasons for ‘missing events’ are attributed to three areas: 1) technical reasons and usability (‘low battery’, ‘effortful recording’), 2) mindless eating (‘being distracted’) and 3) situation-based (‘eating on the way’, ‘eating with others’).

**Discussion:** ‘Missing events’ may reduce data quality in mobile dietary assessments. Therefore, the reasons leading to ‘missing events’ such as technical reasons and usability or mindless eating should be considered when developing mobile assessment tools, e.g. by including reminders or simplifying the recording process.

15:30 - 17:00

## The behavioural signature of snacking – a visual analysis

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<sup>1</sup>University of Konstanz, Germany

**Background:** Because of its multifaceted nature, snacking behaviour is difficult to assess comprehensively. Research often focused on retrospective measurements or aggregated values, neglecting individual variability. Therefore, a more detailed analysis is needed to understand its complexity and investigate its heterogeneously discussed associations with overweight and obesity.

**Methods:** A smartphone-based Ecological Momentary Assessment was used to capture snacking behaviour in real-time and real-life. Analysis included data from 99 adults aged 20 to 86 years. During a study period of eight days, 400 snacking occasions were reported. To illustrate the behavioural signature of snacking, graphical visual analyses were conducted.

**Findings:** On a daily level, visual analysis identified distinct snacking peaks. Participants mostly snacked on fruits in the morning and at work, whereas sweets were snacked on in the afternoon and at home. On an individual level, high variability in snacking was found with frequencies ranging from one to 24 snacking occasions and averages of 67.7 to 709.7 kcal per person. Interestingly, visual analysis of clusters showed that individuals bordering on overweight showed more frequent unhealthy snacking compared to normal weight or obese individuals.

**Discussion:** Capturing snacking behaviour by ecological momentary assessment revealed large differences between individuals. A focus on inter-individual differences seems helpful for the development of individually tailored interventions and the identification of meaningful target groups.

15:30 - 17:00

## Perception of demand and control, effort and reward, of daily tasks, in hospital ward nurses

F. Martínez-Zaragoza<sup>1</sup>, J. Fernández Castro<sup>2</sup>, Á. Solanes-Puchol<sup>1</sup>, B. Martín-del-Río<sup>1</sup>, R. García-Sierra<sup>3</sup>, T. Rovira-Faixa<sup>2</sup>, S. Edo-Izquierdo<sup>2</sup>, G. Benavides-Gil<sup>1</sup>, E. Doval-Diéguez<sup>2</sup>

<sup>1</sup>University Miguel Hernández, Spain

<sup>2</sup>Universitat Autònoma de Barcelona, Spain

<sup>3</sup>CONSORCI SANITARI DE TERRASSA, Spain

**Background:** Currently the research on work stress is dominated by the Demand-Control model proposed by Karasek and colleagues and the Effort-Reward model by Siegrist and colleagues. Mostly, this research is based on retrospective evaluation questionnaires, so workers have to remember retrospectively workplace situations and stress occurred in the past. Present day, it has been increased the research on stress based on ecological momentary assessment methods.

**Methods:** This research assessed through a longitudinal design the work stress caused by different daily tasks during shift in a sample of ward nurses of hospitals settings. 103 nurses completed a brief questionnaire along five business days in a smartphone programmed with random alarms. There were recorded what task was being performed at the moment, following the WOMBAT classification, and were asked to rate demand, control, effort, and reward.

**Findings and Discussion:** Direct care to patients occupied 27% of the total time of the shift. Direct care tasks were perceived as more demanding and required more effort, but also were perceived as more controlling and rewarding than the other tasks.



15:30 - 17:00

## Mood and stress: how physical and social-evaluative stressors impact emotional inertia

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<sup>4</sup>University of Wuppertal, Germany

**Background:** Emotions fluctuate over time due to internal and external demands. If these natural patterns in emotional fluctuation change, affective disorders are more likely to appear. Emotional inertia can be used to study emotional fluctuation, and is regarded to be an underlying mechanism in the development and persistence of depression. Thus, a high emotional inertia is representing persistent emotions and a low emotional inertia frequent mood changes. In the current study the connection between stress, either physical stress (surgery= OP) or social-evaluative stress (TSST) and changes in emotional inertia were examined.

**Methods:** A total of 55 female participants (M=47.6, SD=14.07) underwent either a surgery (n=25) or completed the TSST (n=30). Participants completed an ambulatory assessment 3 days prior and 1 day post stressor and a total of 1787 observations were made (MOP=37.44, MTSST= 39.5). We assessed mood, perceived stress and social interactions every 40 minutes (+/- 15).

**Results:** Results indicated that emotional inertia was present under any condition. Inertia was moderated by type of stressor and time to stressor in a way that inertia was elevated if participants were confronted with a physical stressor and reduced if participants were confronted with social-evaluative stress. The effect of time to stressor on inertia was only present in the social-evaluative stress condition.

**Conclusions:** Although inertia previously was discussed as a trait this study indicates that it is dependent on the context. Therefore, we suggest to consider situational influences on inertia in future research.

# Social media and online support

15:30 - 17:00

Efrat Neter

15:30 - 17:00

## Life on the internet and happiness

K. Mitev<sup>1</sup>, E. Ivanova<sup>2</sup>, S. Karabeliova<sup>3</sup>, I. Zinovieva<sup>4</sup><sup>1</sup>Cardiff University, United Kingdom<sup>2</sup>Sofia University "St. Kliment Ohridski", Bulgaria<sup>3</sup>Sofia University "St. Kl. Ohridski", Bulgaria<sup>4</sup>St. Kliment Ohridski Sofia University, Bulgaria

The main purpose of the current study was to investigate the relationships between using online social networks and self-esteem, happiness, and tendencies towards Internet addiction. The Internet has been transformed from a tool that people use occasionally to an environment in which they operate and live daily. The participants in our study were 435 people, aged between 12 and 76 (M=28). The applied measures included questionnaires about: Internet addiction, self-esteem, happiness, and characteristics of online social networks use (Facebook, Twitter, and Instagram). The results revealed a significant negative correlation between self-esteem and the frequency with which people updated their status on Facebook. Thus, lower self-esteem was associated with more frequent updates of the status. Furthermore, we found a significant relationship between Facebook use and happiness. The more people used the online social network, the happier they were. Moreover, using Facebook, Twitter, and Instagram was positively correlated with the different aspects of Internet addiction, namely, social problems arising from Internet use, the Internet serving as a tool for mood modification, and problems with time management when using the Internet. Additionally, these same aspects of Internet addiction were inversely associated with respondents' happiness. The findings of the study are an essential indicator of the correlates of online social networks use, drawing attention to both positive and negative emotional tendencies. It is important to recognise the relationship between social network use and Internet addiction attesting to the potential problems of preference for online socialisation.

15:30 - 17:00

## Using social media to generate and collect primary data: the #ShowsWorkplaceCompassion Twitter research campaign

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<sup>1</sup>Coventry University, United Kingdom

<sup>2</sup>NHS England, United Kingdom

### Background:

Compassionate care for patients is a central tent of healthcare. The need for compassion towards healthcare staff in the workplace is increasingly understood. However, we don't currently know how healthcare staff understand and characterise compassion towards themselves rather than patients.

### Methods:

We utilised social media for the generation and collection of primary data regarding the characteristics of workplace compassion for healthcare staff. Participants were self-selecting users of Twitter. Between 21 April - 21 May 2016, participants were asked to contribute their views about what activities, actions, policies, philosophies, and/or approaches demonstrate workplace compassion in healthcare using the hashtag #ShowsWorkplaceCompassion. All tweets including the research hashtag '#ShowsWorkplaceCompassion' were extracted from Twitter and studied using content analysis. Data concerning the frequency, nature, origin and location of online engagement with the research campaign were collected using Bitly and Symplur software.

### Results:

Of 251 statements coded, 38% (n=95) concerned Leadership and Management, 30% (n=74) Values and Culture, 17% (n=44) Personalised Policies and Procedures, and 15% (n=38) Activities and Actions. Small acts of kindness, an embedded organisational culture of caring for one another, recognition of the emotional and physical impact of work, feeling valued, a sense of common purpose within a team, and speaking openly in order to learn from mistakes, characterised compassion towards healthcare staff in the workplace.

### Conclusions:

This study presents a new and innovative research approach using Twitter to both recruit participants and collect primary data. The utility and value of this approach is discussed.

15:30 - 17:00

## Role of online support groups for parents of adolescents with Type 1 diabetes during transition

K. Shepherd<sup>1</sup>, N. Coulson<sup>1</sup>, H. Buchanan<sup>1</sup>

<sup>1</sup>University of Nottingham, United Kingdom

**Background:** Parents caring for a child with Type 1 diabetes have reported experiencing physical, social and psychological problems. Whilst the Internet has become an accessible source of health related information, advice and peer support augmented by the use of online support groups (OSG's), little is known about the role of these groups for parents as their child transitions from paediatric to adult diabetes services in late adolescence. The aim of this study was to consider if and how OSG's are beneficial to parents during a period of change.

**Methods:** A mixed methods design was employed. 88 participants recruited from diabetes OSG's completed an online survey incorporating demographic information, validated scales (IPQ-R, DDS-P) and open-ended questions to assess illness perceptions, parental distress and empowerment. Data were analysed using SPSS, with open-ended responses coded using thematic analysis.

**Findings:** Pearson's correlation coefficients were calculated to examine relationships between the IPQ-R dimensions, DDS-P sub-scales, the empowering processes and outcomes sub-scales and the demographic data. Initial results indicated whilst parents using OSG's experienced personal distress and found the long-term effects of diabetes on their child's life most distressing, membership and participation was empowering and had beneficial psychological consequences including enhanced self-esteem. This was corroborated by the themes identified following thematic analysis of the qualitative data, including eustress as a novel positive outcome of OSG use.

**Discussion:** Diabetes OSG's provide a sense of community for parents with unique beneficial characteristics. Interacting with others who share similar experiences and concerns may reduce parental distress and empower individuals.

15:30 - 17:00

## Stigmatizing attitudes toward suicide: conformity in online chatting room

S. An<sup>1</sup>, H. Lee<sup>1</sup><sup>1</sup>Ewha Womans University, South Korea

The purpose of this study is to see how and to what extent individuals' social capital is associated with their views on suicide and what role suicide literacy can play in online settings. We set up a vignette experiment to see under what conditions people are more likely to defer to group's stigmatizing attitudes toward suicidal people. The vignette experiment illustrates that those with high desire to maintain social relationships are more inclined to follow the dominant view imposed in a group. By contrast, in terms of interpersonal trust, high trust in people was associated with lower levels of suicide stigma. More importantly, suicide literacy moderated the effect of trust on suicide stigma. Among those with high suicide literacy, interpersonal trust did not make a difference in terms of conformity to stigmatizing attitudes. When people were knowledgeable on the causes and treatments for suicidal ideation, they were more likely to express their view, opposing the majority's stigmatizing attitudes, even if they had low levels of interpersonal trust. The current study shows two sides of social capital by either perpetuating or reducing stigmatizing attitudes. Also, the potential of suicide literacy directs us to pay more attention to better understand beliefs and attitudes involving suicides for suicide prevention.

15:30 - 17:00

## Risks and resources of internet: the role of virtual sense of community

D. Caso<sup>1</sup>, V. Carfora<sup>1</sup><sup>1</sup>Università degli studi di Napoli, Federico II, Italy

**Background:** The Internet use could be simultaneously a resource and a risk. In fact, it provides opportunities to find a virtual social support and perceive a sense of virtual community, but the risk of developing an Internet addiction is well-know. In the current study, we examined if: the positive effect of sense of virtual community on psychological wellbeing of a woman registered in an online group for weight loss was negative mediated by addictive Internet use; the relationship between sense of virtual community and internet addiction was moderated by virtual social support.

**Methods:** Participants were 195 Italian women (mean age = 43.60; SD = 10.31), which were members of a private group on Facebook aimed to support weight loss. They completed an online questionnaire for measuring psycho-social wellbeing, sense of virtual community, addictive Internet use and virtual social support. Data analysis were conducted using Conditional Process Model for testing moderated mediation.

**Findings:** Findings showed that sense of virtual community explained both members' psychological wellbeing and addictive Internet use. Particularly, the positive effect of sense of community on psychological wellbeing was negative mediated by addictive Internet use. Finally, higher scores of virtual support increased the levels of addictive Internet use.

**Discussion:** This results suggested that taking into account Internet addiction is critical for considering the impact of sense of virtual community on psychological wellbeing. Future researches could investigate how help women to lose weight using online group without developing an addictive use of Internet.

15:30 - 17:00

## Food porn in social media and eating behaviors

E. Neter<sup>1</sup>, T. Adam<sup>1</sup>, D. Shoham<sup>1</sup><sup>1</sup>Ruppin Academic Center, Israel

**Background:** Sharing photos of food, labelled "Food Porn" is a prevalent activity. The study examined whether external eating and food craving, associated with overeating and obesity, are also associated with indicators of using social networks (SNs) and whether this association varies by gender.

**Method:** Participants included 179 women and men aged 14-79 in a convenience sample. Measures included use of social networks and amount of use, food-related use in SNs, external eating and food craving trait. Design - cross sectional.

**Results:** There were no gender differences in external eating and food craving. Across gender, there was no significant association between having SN accounts and external eating and food craving; there was a low positive significant correlation between the amount of SN's use and external eating and food craving ( $r = 0.16$  and  $r = 0.15$ , respectively,  $p$ 's  $< 0.05$ ); there was a positive moderate-high significant association between food-related SN's use, on the one hand, and external eating and food craving ( $r = 0.39$  and  $r = 0.49$ , respectively;  $p$ 's  $< 0.01$ ), on the other hand. Lastly, no interaction between gender and the use of SNs in predicting external eating and food craving emerged.

**Conclusions:** Having a SN account is unrelated to problematic eating patterns; amount of SN's use and amount of food-related activity is indeed associated with the ill-adjusted eating patterns in the same way across gender. Men have become as vulnerable as women in levels of external eating and food craving and their association with SNs use.



15:30 - 17:00

## Enhancing the independence of older adults with social media and smart home technologies

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<sup>1</sup>Massey University, New Zealand

### Background:

Like other developed countries, New Zealand is experiencing an ageing population, often with complex health problems, placing an unsustainable demand on healthcare services. The Ministry of Health has strongly directed a move to new models of care to support older people to remain in their community.

Smart home technologies (sensors, recording devices, etc) can monitor and control the environment, track activities of daily living, and recognise significant departures from normal behaviour, enabling people to safely remain living in their homes. However, existing systems tend to support only one-to-one relationships.

This paper presents findings from a project which is exploring the implications of, and stakeholder requirements for, integrating social media technologies and 'smart home' technologies to connect an older person with their formal support networks (i.e. to healthcare and social service providers) and informal support networks (i.e. to friends and family) thus enabling them to live independently at home.

### Methods:

An expert group workshop to explore requirements of such a system was conducted with a range of professionals and academics working in the areas of healthcare and health informatics at the Health Informatics New Zealand (HINZ) 2016 annual conference.

### Findings:

Thematic analysis of the discussions of the workshop identified three major concerns:

1. The complexity of the changing roles and responses,
2. The complexity of the flows and the interpretation of information and
3. Emergent issues of management and control.

The findings emphasise the need to gain a clear understanding of the perspectives of all stakeholders before undertaking technical design.

# Individual differences and health promoting behaviors

15:30 - 17:00

Ewa Gruszczyńska

15:30 - 17:00

## Exercise Status moderates the relationship between mindfulness/self-compassion and Body Mass Index

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Previous research described different relationships between mindfulness, self-compassion and Body Mass Index (BMI). While some research shows that mindfulness relates negatively to BMI, other research shows no association, and in some cases positive relationships; such literature resembles the findings around self-compassion and BMI. In an attempt to identify individual differences that may explain these inconsistencies in findings, we explored current physical exercise as a potential moderator with a sample of healthy non-smoking undergraduate students ( $n=340$ , males=17; Mage=21.1, SD=5.8; MBMI=21.1, SD=5.8). Preliminary correlational analyses indicated that self-compassion and mindfulness did not relate to BMI, while the latter showed no difference between current exercisers and non-exercisers. Using the PROCESS macro and bootstrapping procedure ( $n=5000$ , Model 1; see Hayes, 2013) indicated that there was a significant interaction effect of mindfulness and exercise status, as well as self-compassion and exercise status on BMI. Exercise status, when fluctuating from current non-exercisers to exercisers, shifted the non-significant effect of mindfulness and self-compassion on BMI to significant negative relationships. Results suggest that individual differences may strengthen non-existing or mixed results when exploring the effect of mindfulness and self-compassion on BMI, and advocate the need for further research of mindfulness and self-compassion in relation to eating and weight regulation.

15:30 - 17:00

## Optimism bias and dispositional optimism: implications for health and behavioural change

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**Objectives.** Optimism bias is defined as a cognitive bias that causes people that believe that their chances of experiencing negative events are lower and their chance of experiencing positive events are higher than those of their peers. Dispositional optimism is a generalized expectancy of positive future outcomes. Both constructs have important implications for physical and mental health.

Aim of this contribution is to evaluate the link between optimism bias and dispositional optimism and to assess their differential influence on the adoption of preventive behaviour, health status, and behavioural change in smoking and sun exposure habits.

**Method.** Participating in the study were 301 young adults (Male= 53%, mean age= 27; 35% smokers). They filled in self-report measures of: optimism bias, dispositional optimism, health preventive behaviour, health status, and socio-cognitive variables (i.e. task self-efficacy, risk perception, outcome expectancy, and behavioural intention) of the motivational phase of the Health Action Process Approach model, considering smoking and sun exposure habits.

**Results.** A medium-high correlation exists between optimism bias and dispositional optimism. Pearson correlation analysis shows that optimism bias has a specific and negative association with risk perception, whereas dispositional optimism displays a medium and positive relation with task self-efficacy. Both construct are weakly but positively related to preventive habits and physical health, but positively and moderately associated with mental health.

**Conclusion.** Optimism bias and dispositional optimism are highly correlated but distinct constructs with potential and differential effect for physical health and mental well-being.

15:30 - 17:00

## The benefits of positivity in sustaining psychophysical health in a sample of unemployed workers

A. Theodorou<sup>1</sup>, G. Alessandri<sup>1</sup>, C. Violani<sup>1</sup>

<sup>1</sup>Sapienza University of Rome, Italy

**Background.** Several studies demonstrated that unemployment is related to a deterioration of physical and psychological health (McKee-Ryan, et al., 2005; Wanberg, 2012). However, few studies focused on the personality factors that could sustain psychophysical health in unemployed workers. This study examines the role of positivity (Caprara et al., 2009) in supporting mental and physical health in a sample of unemployed workers, reducing the effects of perceived economic stress and promoting health behaviours.

**Methods.** Participants were 101 unemployed workers (51.5% female), aged 35 to 45, selected at a hiring hall in Rome, Italy, basing on the ILO criteria for unemployment. Measures of positivity, mental and physical health, perceived economic stress, and health behaviours were collected through a structured interview using a cross-sectional design. Data were analyzed through Structural Equation Modelling.

**Findings.** Hypotheses were only partially confirmed by the data. Positivity was positively associated with mental health in consequence of a reduction of the perceived economic stress and the adoption of health behaviours, whereas it was positively related with physical health as a result of adherence to health behaviours. No significant relation was found between positivity and physical health through perceived economic stress. The model fit was good ( $\chi^2(93) = 112.04$ ,  $p = .09$ , CFI = .97, TLI = .92, RMSEA = .045).

**Discussion.** Findings offer important directions for health professionals, especially positivity demonstrated to be an important personal characteristic to promote in order to sustain unemployed workers' psychophysical health.

15:30 - 17:00

## The predictors of self-care for health among parents with small children

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<sup>1</sup>Faculty of Christian Philosophy, Institute of Psychology, Cardinal Stefan Wyszyński University, Poland

### Background

Care of own health (for example, health behaviours) is determined by many variables. The authors of this study focused exclusively on objective stable factors such as personality traits, emotional intelligence and health valuation.

The aim of this conducted research was the assessment of relationship between self-care for health and its psychological constituents examined in the population of parents with small children. The most important issue was to explain how the psychological variables shape the self-care for health.

### Methods

The study included 240 parents (121 women and 119 men). They filled out three questionnaires: NEO-FFI Inventory, Health Value Scale and Care-for-Health Scale.

### Findings

The results showed that there was significant positive relationship between the general level of individual health self care (in subscales) and health valuation, extroversion, conscientiousness, openness to experience, agreeableness and emotional intelligence. The study has also indicated the negative correlation between self-care for health and neuroticism.

The general self-care for health (50%) could be predicted by health valuation, some personality traits and emotional intelligence.

### Discussion

In a chosen group of parents (regardless of gender) the strongest relationship between health self-care (both subscales: practices for health and active attitude toward own health) and health valuation was observed. Health evaluation was proved as the best predictor in each model.

Ascertaining of health self-care predictors can be useful for constructing health self-care promotion programs to address the parents of small children.

15:30 - 17:00

## Effects of self-efficacy and positive feedback on positive emotion and task performance

Y. Hojo<sup>1</sup>, K. Otake<sup>1</sup><sup>1</sup>Kwansei Gakuin University, Japan

Previous studies have shown that people with high self-efficacy displayed high performance when they receive negative feedback on the task. Recently, studies suggested that positive emotion was important for task performance. However, the relation between self-efficacy and positive emotion for task performance is unclear. We focused on the role of positive emotion and clarify the effect of self-efficacy and positive feedback on two different types of task performances. Thirty-one undergraduates were divided into high self-efficacy (HSE) and low self-efficacy (LSE) groups according to their scores on a generalized self-efficacy questionnaire. Participants in each group were randomly assigned to either positive feedback (PF) or neutral feedback (NF) conditions consisting of four conditions (HSE&PF, HSE&NF, LSE&PF, and LSE&NF). Participants started either one of the two tasks (the puzzle and the finding wrong words). After finishing the first trial performance of the first task, they received manipulated feedback about their performance and then filled a questionnaire about evaluating emotional (positive and negative) and cognitive aspects (e.g., task-specific self-efficacy, goal scores). Participants repeated this trial four times in each task. The result analyzed by three-way ANOVA showed that subjects under the PF condition obtained higher scores on all positive emotions compared with those under the NF condition in both tasks. Furthermore, those under the LSE&PF condition obtained higher performance, albeit only on the puzzle task. This finding suggests that PF may affect performance through positive emotion but depends on how high self-efficacy is and what type of tasks there are to perform.

# Stress and coping in youth and adolescence

15:30 - 17:00

Sahdia Parveen



15:30 - 17:00

## Risk and protective factors of music performance anxiety: the role of stress, self-esteem and self-efficacy

B. Dobos<sup>1</sup>, B. Piko<sup>2</sup><sup>1</sup>Doctoral School of Education, University of Szeged, Hungary<sup>2</sup>Department of Behavioral Sciences, University of Szeged, Hungary

**Background:** Performance anxiety – or “stage fright” – is particularly well-known in performance situations which are social situations where artists are evaluated by their auditory. Although music performance anxiety is a common problem, there are only a few studies on this subject in Hungary. Therefore, we investigated the risk and protective factors of music performance anxiety (MPA).

**Methods:** The sample consisted of musicians with an ongoing or completed music education (N = 100; aged between 15–35 years). Study participants completed the Kenny Music Performance Anxiety Inventory (Kenny, 2009), Perceived Stress Scale (Cohen & Williamson, 1988), Self-esteem Scale (Rosenberg, 1965) and General Perceived Self-Efficacy Scale (Schwarzer & Jerusalem, 1995).

**Findings:** Females reported higher level of stress and MPA and they had lower self-esteem than males. Low self-esteem was more likely to occur in classical musicians (compared to jazz, folk and pop), with increased stress level during solo performance setting. In multiple regression analysis gender and perceived stress were significant risk factors, while self-esteem and self-efficacy were protective factors.

**Discussion:** There were strong relationships between music performance anxiety and perceived stress, self-efficacy and self-esteem. These results indicate that young musicians are in need of more support from their parents, teachers and health care professionals. In terms of prevention, it is important to strengthen protective factors besides recognizing MPA and detecting stress and anxiety-prone situations. Music teachers should learn to apply certain methods of education and relaxation techniques to lower MPA.

15:30 - 17:00

## Effects of subtypes of reappraisal on positive and negative affect

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Reappraisal is one of the most effective strategies for regulating affect. It has been suggested that reappraisal has some subtypes. However, the effects of the subtypes of the strategies on affect have not been investigated in detail. We focused on the reappraisal subtypes of “positive reappraisal” and “putting into perspective.” The former pertains to looking for positive aspects of negative events, while the latter refers to the weakening of the importance of the negative event and emphasizing on its relativity through comparing the event with worse events or results. We experimentally examined the effects of these two subtypes on negative and positive affect. Participants were 107 undergraduate and graduate students from a Japanese university. They were randomly assigned two conditions, and were instructed to recall a recent negative event and their affect while experiencing that event. Then, they participated in a different reappraisal task for each condition. Both groups completed a questionnaire measuring the following three affects: active positive affect, non-active positive affect, and depression and anxiety. The results of a t-test for the change in affect suggested that positive reappraisal was more effective in enhancing active positive affect and in reducing depression and anxiety than the strategy of putting into perspective was. There was no significant difference in non-active positive affect, while both groups exhibited improved non-active positive affect after the task.

15:30 - 17:00

## Conduct problems, perceived school difficulties, and peer problems in adolescence: a vulnerability-stress perspective

J. Minkkinen<sup>1</sup>, R. Hotulainen<sup>2</sup>, A. Rimpelä<sup>1,3</sup><sup>1</sup>University of Tampere, Finland<sup>2</sup>University of Helsinki, Finland<sup>3</sup>Tampere University Hospital, Finland

**Background:** Increasing conduct problems (CP) during adolescence comprise a cause of societal concern. We studied CP trajectory between the ages of 13 and 18. Following a vulnerability-stress perspective our aim was to explore the role of school work difficulties (SWD) and peer problems (PP) in the development of CP controlling for vulnerability factors of low cognitive competence (CC) and low prosociality (PR).

**Methods:** Finnish adolescents (N=2,074) participated in longitudinal survey in the Helsinki metropolitan area 2011–2016. The data covered three time points in the age of 13 (T1), 16 (T2), and 18 (T3). CP, PP and PR were self-assessed through SDQ's subscales, SWD using eight-item indicator ( $\alpha=0,94$ ) and CC using learning-to-learn assessment. Cross-lagged path model and moderation modelling were conducted.

**Findings:** CP increased from T1 (M=1,66, SD=1,48) to T2 (M=1,86, SD=1,70) and decreased in T3 (M=1,62, SD=1,56). When controlling CP in T1 and T2, SWD and lower PR in T2 predicted CP in T3 (both  $p=0,000$ ). Several mediation paths were detected from SWD, PR and CC in T1 to CP in T3 via CP, SWD and PR in T2 (total indirect, all  $p\leq 0,001$ ). PP had no straight nor mediative effects on CP in T3 but had interactions with CC and SWD on CP in T3 ( $p<0,05-0,01$ ).

**Discussion:** CP trajectories in adolescence are affected by difficulties in school work and peer relationships. More support for adolescents with these problems may benefit for their healthy mental development from early adolescence to young adulthood.

15:30 - 17:00

## Effects of listening to computer generated music

E. Nishigaki<sup>1</sup>, A. Fujimura<sup>1,2</sup><sup>1</sup>Kansai Medical University, Japan<sup>2</sup>Ritsumeikan University, Japan

**OBJECTIVES:** The objective of this study was to investigate the effects of listening to computer generated environmental music (EVS) on positive and negative mood and feelings. We compared two different levels of pitch standard for instrument tuning.

**METHODS:** Seventy one college students participated to this study. Participants listened to two pieces of music (tuned in A = 440 Hz and in A = 432 Hz) for 10 minutes and evaluated their perception of emotion attached to each music. The Profile of Mood States 2nd Edition (POMS 2) and salivary amylase was measured before and after listening to music.

**RESULTS:** The overall mean Total Mood Disturbance (TMD) score significantly decreased after listening to music [t (70) =2.38, p<.001]. The mean scores of Vigor-Activity [t (70) =3.50, p<.001] and Friendliness [t (70) = 2.05, p=.044] also significantly decreased after the intervention. There was no difference in the amount of salivary amylase before and after the intervention. The participants felt being relaxed, and calmed after listening to music. 40 % of the participants evaluated pitch tuned in A = 440 Hz was more sleepy and less preferable than A =432 H.

**CONCLUSIONS:** The results indicate that listening to computer generated environmental music (EVS) is effective for decreasing negative mood. It is suggested that pitch standard tuned in A = 432 Hz is more relaxing than in A = 440 Hz. More research is needed to verify these results and further investigation is necessary on increasing positive mood and feelings.

15:30 - 17:00

## Exploring the role of gender in internalizing and externalizing behavior among maltreated youth

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**Background.** The negative effects of child maltreatment have been well documented. In response to maltreatment, girls and boys may experience different psychological, social and behavioral consequences. Studies revealed that adolescent males cope with exposure to maltreatment by externalizing their behavior compared to females who tend to internalize their behavior. The present study has two main objectives: 1) to investigate the prevalence of child maltreatment (emotional, physical, sexual) 2) to explore the role of gender and internalizing symptoms between maltreatment exposure and externalizing symptoms.

**Methods.** We used data from a nationally representative cross-sectional survey carried in Romania as a part of Health Behavior in School Aged Children (HBSC, 2014). We conducted secondary data analysis in order to explore the study objectives. The total sample consisted of 1712 youth (44,6% boys, 55,4% girls; 14-17 years old). We used univariate and bivariate descriptive statistics. In order to test the effects of gender and internalizing symptoms, we used structural equation modeling.

**Results.** We found significant gender differences in terms of exposure to emotional and physical maltreatment but not in the sexual one, with girls being more exposed to all types of maltreatment. Children with a history of maltreatment significantly reported more externalizing symptoms. The results of structural equation modeling revealed that internalizing symptoms partially mediated the relationship between maltreatment exposure and externalizing symptoms in the case of girls but not boys.

**Discussion.** Taking into account gender differences in youth's reaction to child maltreatment has practical implications for early identification and intervention in mental health issues.

15:30 - 17:00

## Relationship between emotional intelligence and coping styles among young people

J. Fernández Castro<sup>1</sup>, J. Puigbó<sup>1</sup>, T. Rovira<sup>1</sup>, S. Edo-Izquierdo<sup>1</sup>

<sup>1</sup>Universitat Autònoma de Barcelona, Spain

In the present study we investigated the influence and implications of emotional intelligence dimensions on the tendency to adopt certain strategies to cope with daily stress. The sample consisted of 50 people aged 18 to 25 years old. Emotional intelligence was evaluated through the TMMS-24 Scale, which assesses three dimensions of EI (Emotional attention, clarity emotional and emotional repair). Coping with daily stress was evaluated by a coping questionnaire based on the COPE through an ecological momentary assessment, reducing recall bias and capturing the behaviour in a dynamic and real way. It evaluates four types of coping styles: Problem-focused, Emotional-focused, Seeking social support, and Disengagement. The main results show that there is a predictive relationship between emotional Intelligence and coping with daily stress. Clarity and emotional repair have a positive influence on problem-focused coping. Additionally, emotional attention has a positive influence on disengagement; however, and emotional clarity and emotional repair have a negative influence on disengagement. The best predictor of emotion-focused coping was the emotional clarity, and the best predictor of seeking social support was the emotional repair.

# Self-regulation in chronic illness

15:30 - 17:00

Pamela Rackow

15:30 - 17:00

## Some novel constructs on quality of life among patients with irritable Bowel syndrome

C. Yastibaş<sup>1</sup>, G. Dirik<sup>1</sup><sup>1</sup>Dokuz Eylul University, Turkey

Irritable bowel syndrome (IBS) is known as a functional gastrointestinal disorder, prevalence rate of IBS was found around 10% and 20%. Research pointed out that IBS has negative impacts on patients' quality of life and in order to understand the underlying mechanism of the current study aimed to test a comprehensive model composed of Big Five Personality Traits and Common Sense Model. Moreover, the mediator roles of coping strategies and illness perceptions in the relationship between personality traits and quality of life were examined. The present sample consisted of 178 IBS outpatients consulting to gastroenterology clinics from tertiary health care services. Self-report measures of personality traits, illness perception, ways of coping and IBS quality of life were administered. The relationships of variables were analyzed through path analysis. The results of the analyses revealed that neuroticism and agreeableness were significantly associated with quality of life. As illness perceptions and coping strategies were included into the path analysis, illness perception seemed as an important mediator in the relationship between coping and quality of life. Specifically, it was found that illness outcome, illness coherence and psychological attribution had fully mediated the relationship between neuroticism and quality of life, whereas planning behavior as a coping strategy and psychological attribution had fully mediated the relationship between agreeableness and quality of life. These findings asserted that specific psychological and psychoeducational intervention programs that aimed to change illness perceptions and coping tailored according to personality traits could bring about an improvement in daily functioning of patients.



15:30 - 17:00

## The role of mindfulness and illness perceptions in psychological outcomes in parents of children with diabetes

S. Al-Tammar<sup>1</sup>, P. Norman<sup>1</sup>, A. Thompson<sup>1</sup>

<sup>1</sup>University of Sheffield, United Kingdom

**Background.** Kuwait ranks as the third country worldwide for the incidence of type 1 diabetes (T1D) with an incidence of 37.10 per 100,000 children. Standardized incidents of childhood diabetes between 10.00 and 19.99 per 100,000 are considered high. Despite the high incidence rate, there are few studies examining the psychological impact of diabetes.

**Objective.** The study sought to investigate the role of mindfulness and illness perceptions in explaining psychological distress and quality of life (QoL) in parents of children with T1D.

**Method.** A sample of 122 Kuwaiti parents of children with T1D completed self-report measures of generalized anxiety (GAD-7), depression (PHQ-9), illness perceptions (Brief-IPQ), mindfulness (FFMQ) and QoL (WHOQOL-BREF).

**Results.** High levels of psychological distress were observed, with 31.1% of parents reporting moderate and 19.7% reporting severe levels of anxiety. Similarly, 24.7% of parents reported moderate and 18% reported severe levels of depression. After controlling for child's age, child's age at diabetes onset and HbA1c, mindfulness and illness perceptions explained 40% of the variance in QoL, 47% of the variance in depression, and 35% of the variance in anxiety. Higher levels of mindfulness (Acting with awareness) were associated with lower levels of psychological distress and better QoL. More negative illness perceptions were associated with higher levels of psychological distress.

**Conclusion.** The current findings suggest that high levels of mindfulness might help to reduce distress and improve QoL. These findings may be used develop an intervention targeting mindfulness and illness perceptions, which may be helpful for parents adapt to having a child with T1D.

15:30 - 17:00

## Differences in temporal discounting in an online sample of people with chronic pain and controls

G. McMillan<sup>1</sup>, D. Dixon<sup>1</sup><sup>1</sup>University of Strathclyde, United Kingdom

### Background

Decision-making in chronic pain (CP) is difficult as pain decreases self-control required for deliberative decision-making leading to increases in temporal discounting, a decision-making bias. A recent study found that people with CP and high opioid use discount more than people with CP and no opioid use in both monetary and pain-related decisions. This study will compare temporal discounting in people with CP and controls as this has never been examined.

### Methods

The study is quasi-experimental between-subjects design. 110 participants recruited online will complete the Chronic Pain Grade Scale, Self-regulatory Fatigue Scale, Hospital Anxiety and Depression Scale, Pain Catastrophizing Scale and Pain Self-efficacy Questionnaire. Temporal discounting will be calculated by the proportion of choices where self-control was used for monetary gains and losses, pain relief and additional pain. ANOVAs will be conducted for each temporal discounting measure to determine differences in self-control between CP group and controls. Multivariate linear regression will be conducted to determine the relationship of pain, self-regulatory fatigue, pain catastrophizing, pain self-efficacy and depression and anxiety to self-control.

### Expected Results

It is expected that the CP group will discount more steeply than controls and higher levels of pain, self-regulatory fatigue, pain catastrophizing, anxiety, depression and lower pain self-efficacy will predict increased discounting.

### Current Stage of Work

The study is in the data collection phase. Data has been collected from 66 participants.

### Discussion

Examining temporal discounting in controls and CP groups is vital to understand the extent of self-regulatory deficits in CP.

15:30 - 17:00

## Sickle Cell Disease representation as a determinant for patient compliance

D. Oudin<sup>1</sup>, M.C. Gay<sup>2</sup><sup>1</sup>Paris Nanterre, France<sup>2</sup>Université Paris Nanterre, France

### Background:

Sickle Cell Disease (SCD) is a major health care and societal problem that affects millions of people worldwide. In France, SCD is the most common genetic disorder. Although medical care is improving, non-compliance rates are still high, leading to a high rate of hospitalization. In other chronic illnesses, compliance have been explained by dimensions of the illness representation (as defined in the Common Sense Model (CSM) of Leventhal). However no such work has been done in relation to genetic disorder nor has data been collected on SCD.

### Method:

Population: 79 adults recruited in French Parisian hospitals.

Psychometrics:

Representation: Illness Representation Questionnaire-Revised (IPQ-R),

Compliance: Morisky Medication Adherence Scale (MMAS),

Adherence: Beliefs about Medicine Questionnaire (BMQ),

### Findings:

Regression showed that three main factors of representation influence compliance in SCD and explain 29,2% of the variance. The emotional representation (emotional perception of SCD), treatment control (perceived effectiveness of treatments) and timeline acute/chronic (perceived duration of illness) indicating that patients with negative emotions on SCD are less compliant and those who perceive the effectiveness of their treatment and SCD as a chronic disease are more compliant.

### Discussion:

Compliance in SCD is influenced by illness representations in the CSM. This give us a theoretical background to understand adaptation to the SCD and to propose psychosocial interventions aiming at a better compliance in people with SCD.

15:30 - 17:00

## Diabetes self-management and self-efficacy in patients in diabetes education and follow up program

L. Perković<sup>1</sup>, J. Stančić<sup>2</sup><sup>1</sup>University of Applied Health Sciences, Croatia<sup>2</sup>Opća bolnica "dr. Ivo Pedišić" Sisak, Croatia

**Background:** It is important to identify patients who are at risk of poor self-management and non-compliance so to ensure additional education and psychological support in post education and follow up programs. Self-efficacy is a critical construct related to diabetes education and self-management.

The objective was to investigate relations between diabetes self-management, self-efficacy, optimism toward illness and patient evaluation of diabetes education, regarding some sociodemographic, illness and health characteristics.

**Methods:** We collected data from 50 diabetes patients, age 19 -73, 6 months after diabetes self-management education. The instrument includes a sociodemographic and clinical questionnaire, diabetes self- management behaviours scale, single questions about optimism toward illness and adequacy of education, and Diabetes Self-Efficacy Questionnaire – DSEQ (Roblin & Little & McGuire, 2004).

**Findings:** 64% of patients have indication of poor illness control (Hba1c >7). They think education was less adequate and score lower on some DSEQ subscales than those with lower Hba1c. Female subjects report better diabetes self-management. Lower self-management and self-efficacy was found in smokers, obese patients and those with other chronic disease and lower economic status. Unemployed patients score lower on DSEQ. Obese patients and smokers are less optimistic toward illness. Younger patients have better self-management and higher scores on some DSEQ subscales. We found significant correlations between self-management, self-efficacy, optimism and education evaluation.

**Discussion:** This research confirmed the correlation between diabetes self-management and self-efficacy. Male gender, older age, obesity, comorbidity, smoking, lower economic status, unemployment and higher Hba1c can be risk factors for diabetes self-management or self-efficacy, or both.

15:30 - 17:00

## Beliefs about the illness as predictors of emotional difficulties in cardiovascular patients

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**Background:** The aim of this research was to explore the relationship between illness perception, heart-focused anxiety, general anxiety, and depression in patients with cardiovascular diseases (CVD). Beck's cognitive model and Leventhal's self-regulatory model were used as a theoretical background.

**Methods:** The research design is correlational type. A sample of 177 patients (70.6% male; mean age 63.4 years; SD=11.78) hospitalized for a major cardiovascular event participated in this study. They completed the Revised Illness Perception Questionnaire, the Cardiac Anxiety Questionnaire, and the Hospital Anxiety and Depression Scale. Pearson correlations and regression analyses were computed.

**Findings:** Data analysis showed that the fear of heart sensation is a partial mediator in the relationship between illness perceptions, depression and anxiety. Patients who believe they cannot control their illness (by themselves or by therapy) and have a lower understanding of it, reported higher levels of fear of heart sensation and consequently higher depression and anxiety. Patients with lower understanding of their illness and those who believe that their treatment is not efficient, focus more on the symptoms and are more anxious and depressed. In addition, lower understanding of CVD is related with avoiding activities that may trigger the symptoms, which increases depression.

**Discussion:** The results of this study suggest that educating patients about their disease and modifying their maladaptive beliefs about the controllability of the illness, may reduce the anxiety due to CVD as well as general anxiety and depression in cardiac patients, which consequently may affect health behaviours and CVD recovery.

# Coping and quality of life in long-term conditions

15:30 - 17:00

Marta Marques

15:30 - 17:00

## Psychosocial determinants of health related quality of life in chronic Inflammatory Bowel Disease (IBD)

G. Wild<sup>1</sup>, I. Albanese<sup>1</sup>, M. Vitagliano<sup>1</sup><sup>1</sup>McGill University, Canada

**Background:** IBD comprises the two chronic inflammatory disorders of the gastrointestinal tract, Crohn's disease (CD) and ulcerative colitis (UC). IBD patients frequently experience psychological symptoms such as anxiety, depression and other impairments due to the complex interactions between the dysfunctional brain-gut axis. IBD patients report lower quality of life compared to age and sex-matched health controls.

**Aim:** Current research demonstrates that some of the main determinants of health-related quality of life (HRQOL) in IBD include work disability, increased disease severity, number of relapses, biological treatment and hospitalization rate. Despite the established strong psychosocial component of IBD, there is limited data available on how psychosocial factors influence HRQOL in these patients. The goal of this study is to characterize some of the psychosocial variables that influence HRQOL in IBD.

**Methods:** This study is an observational cohort of 93 IBD (59CD;34UC: 66 inactive, 27 active disease) patients attending McGill University Health Centre IBD clinic. Patients completed several validated questionnaires relating to different psychosocial parameters. Data was analyzed using SPSS version 17.0 software.

**Results:** Preliminary analyses of this patient population reveal statistically significant negative correlation between HRQOL and hospital anxiety ( $r=-0.299$ ,  $p<0.05$ ) as well as positive correlation between HRQOL and Generalized Self-Efficacy ( $r=0.557$ ,  $p<0.05$ ). Additionally, analyses of self-reported emotional intelligence (SREIT) in this population reveal significant correlation between SREIT and ability to adaptively cope with disease ( $r=0.435$ ,  $p<0.01$ ).

**Conclusion:** Psychosocial factors related to self efficacy and EI are key determinants of HRQOL in IBD and are being defined further in a multivariate model.

15:30 - 17:00

## Health-related quality of life in patients receiving Hymenoptera venom allergy therapy

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<sup>2</sup>Santa Maria del Prato Hospital ULLS1 Dolomiti, Feltre, Italy

**Background:** The impairment of the quality of life in patients with hymenoptera venom allergy is a field that has not been deeply investigated yet. In 2002 the Vespidae Allergy Quality of Life Questionnaire was developed. Starting from this questionnaire, the development of a disease-specific instrument in Italian language to measure health-related quality of life in patients receiving hymenoptera venom immunotherapy is the primary objective of this study.

**Methods:** The new questionnaire (76 items, 10 sub-scales) is given together with the State-Trait Anxiety Inventory form Y (STAI-Y) and the SF-12 Health Survey in order to support the construct validity. The questionnaire was given to 104 patients: 75 male and 29 female, age between 17 and 76, all of them receiving immunotherapy in Feltre, Italy.

**Findings:** Results support preliminary validation of the tool: most of the sub-scales have good internal consistency with alpha range between .60 and .90. The factor validity of the tool has been evaluated. The convergent validity shows that there is a good correlation among the questionnaire sub-scales but there is a low correlation with the other tools: Only social interactions and holidays scales show p-value < .05 with SF12 and STAI-Y1.

**Discussion:** This first contribute suggest that there is a need of this specific measure since it seems different from the measures analyzed by the STAI-Y and SF-12 tools. The new tool may offer a deeper and different view in the interpretation of medical outcomes by hymenoptera venom allergic patients.



15:30 - 17:00

## The experience of living with rheumatoid arthritis: a qualitative meta-synthesis

G. Parenti<sup>1</sup>, S. Cipolletta<sup>2</sup><sup>1</sup>NUIG, Ireland<sup>2</sup>University of Padua, Italy

**Background:** Rheumatoid Arthritis (RA) is an invalidating chronic condition affecting about 0.5-1% of the population. It entails a progressive deterioration of joints which limits individuals' ability to move and causes severe impairment in one's life. This condition is also associated with depression, anxiety and decreased quality of life eventually leading to increased morbidity and mortality. While the qualitative body of literature on the experience of living with the disease is quite broad, very few studies have attempted to bring the findings together providing a generalised model of understanding. This qualitative meta-synthesis aims at retrieving all the qualitative studies available and at developing an upper-ordinate understanding of RA, including not only a summary of the literature but mainly a third-order interpretation of the findings.

**Methods:** 27 articles were retrieved of which 13 were excluded not matching the inclusion criteria and 14 were considered for the meta-synthesis.

**Findings:** Two themes were retrieved from the studies included: "RA impact on life domains" and "confronting the illness". The former theme includes thirteen codes which represent the aspects of an individual's life that have been affected by the disease while the latter theme consists of two coping styles that have emerged despite it not being the core focus of the selected papers.

**Discussion:** RA invalidates patients' lives in several ways. The importance of this meta-study relies on the fact that it provides a state-of-the-art understanding of the disease which can be useful to develop tailored interventions supporting patients dealing with the disease.

15:30 - 17:00

## The relevance of perceived stress in the quality of life of pulmonary arterial hypertension patients

A. Aguirre-Camacho<sup>1,2</sup>, B. Moreno-Jiménez<sup>1</sup><sup>1</sup>Autonomous University of Madrid, Spain<sup>2</sup>National Association of Pulmonary Hypertension, Spain

**Background:** Pulmonary arterial hypertension (PAH) is an incurable rare disease causing high levels of physical disability and impairment in quality of life (QoL). We examined the impact of disease status, psychological flexibility, and social support on the QoL of PAH patients, following the needs-based model of QoL. Special attention was given to the mediating role of perceived stress.

**Methods:** Cross-sectional design. Seventy-two patients completed measures of disease status, psychological flexibility, social support, perceived stress, and QoL. A path analysis was conducted to examine the relationship among these variables.

**Findings:** The obtained model showed a good fit to the data:  $\chi^2(2)=1.36$ ,  $p=0.51$ ,  $RMSEA=0.00$ ,  $CFI=1.00$ , and  $TLI=1.02$ . Disease status ( $\beta=0.70$ ) and perceived stress ( $\beta=0.28$ ) were significant predictors of QoL. Disease status ( $\beta=0.28$ ), psychological flexibility ( $\beta=0.46$ ), and social support ( $\beta=-0.22$ ) were significant predictors of perceived stress. Perceived stress partially mediated the impact of disease status on QoL ( $\beta=0.08$ ) and fully mediated the impact of psychological flexibility ( $\beta=0.13$ ) on QoL. The indirect effect of social support on QoL via perceived stress approached statistical significance ( $\beta=-0.06$ ,  $p=0.08$ ).

**Discussion:** The effects of psychological flexibility and social support on QoL were fully accounted by a reduction in the level of patients' perceived stress, i.e. the extent to which they found their lives uncontrollable, unpredictable, and overloaded. This suggest that, controlling for disease status, patients with higher levels of psychological flexibility and/or social support may have shown a greater capacity to behave in ways that ensured need-satisfaction, i.e. higher QoL.

15:30 - 17:00

## The lived experience of women with Hereditary Angioedema (HAE)

P. Adams<sup>1</sup>, S. Kilinc<sup>1</sup>, A. van Wersch<sup>1</sup>

<sup>1</sup>Teesside University, United Kingdom

Background HAE is caused by a deficiency in the C1 inhibitor triggering episodes of edema. These attacks are life threatening due to inflammation of the larynx. Hereditary Angioedema (HAE) affects up to 1 in 100,000 and little is known about the psychological impact. Previous research found patients experiencing depression and anxiety. There is a 60% predominance in women being diagnosed. Women's conditions are also more symptomatic than those of men's, as HAE can be triggered through a heightened hormonal activity, stress and female medication. The aim of this research was to examine the lived experience in women in the UK with a diagnosis of HAE

Methods: 10 women were recruited through online membership via the HAE UK Association. The written accounts were analysed by Giorgi's (2012) descriptive phenomenological approach.

Results: The data revealed three themes: (i) of a double-edged sword, in which medication for HAE was found to be miraculous but with the downside of severe side effects; (ii) the second was restrictions of events and activities females could not participate in, and where females needed to be wary of HAE triggers; and, (iii) finally the rarity of the disease, as women were questioned about the legitimacy of their condition and experienced a lack of professional awareness.

Discussion: The findings revealed loneliness and isolation in these women which has not been identified thus far. Raising awareness seems imperative, especially as this disease seem to have effected various areas of the women's lives, such as work, family, and social activities.

15:30 - 17:00

## Relationship between coping strategies, quality of life and emotional health when living with retinitis pigmentosa

G. Garip<sup>1</sup>, K. Anil<sup>1,2</sup><sup>1</sup>University of Derby, United Kingdom<sup>2</sup>University of Southampton, United Kingdom

**Background:** Retinitis pigmentosa is a degenerative eye condition and identifying key factors to successfully self-manage this condition is important. This study investigated the relationship between engaging (ECS) and disengaging coping strategies (DCS), vision-related quality of life (VRQoL) and emotional health (EH) in adults living at home with retinitis pigmentosa.

**Method:** A cross-sectional, questionnaire study was completed by 105 participants (70 female; mean age 47). Participants completed the following measures: Coping Strategies Inventory - Short Form, the National Eye Institute Visual Functioning Questionnaire 25, Marylands Trait Depression Scale, the Warwick-Edinburgh Mental Well-being Scale and the Subjective Happiness Scale. A two-block hierarchical multiple regression was conducted.

**Findings:** ECS and DCS impacted psychosocial aspects of VRQoL but not overall VRQoL; ECS had a positive association with these psychosocial VRQoL variables (mental health:  $t=3.45$ ,  $p<.01$ ; dependency:  $t=2.11$ ,  $p<.05$ ) and DCS had a negative association (general health:  $t=-2.98$ ,  $p<.01$ , mental health:  $t=-5.70$ ,  $p<.001$ ; role difficulties:  $t=2.90$ ,  $p<.01$ ; dependency:  $t=-3.71$ ,  $p<.001$ ). EH improved with ECS (depression:  $t=-2.24$ ,  $p<.05$ ; mental wellbeing:  $t=3.74$ ,  $p<.001$ ; general happiness with life:  $t=3.74$ ,  $p<.001$ ) and declined with DCS (depression:  $t=6.07$ ,  $p<.001$ ; mental wellbeing:  $t=-3.21$ ,  $p<.01$ ; general happiness with life:  $t=-3.73$ ,  $p<.001$ ). VRQoL and EH decreased more with increasing DCS than VRQoL and EH improved with increasing ECS.

**Conclusion:** Although ECS improved VRQoL and EH, DCS had a larger impact suggesting that reducing DCS should be prioritised over developing ECS with regards to positively influencing VRQoL and EH in those living with retinitis pigmentosa.

15:30 - 17:00

## Psychosocial impact of caregiving in dementia and quality of life: a systematic review and meta-synthesis

G. Garip<sup>1</sup>, A. Cross<sup>1</sup>, D. Sheffield<sup>1</sup><sup>1</sup>University of Derby, United Kingdom

**Background:** With the rising prevalence of dementia comes an increase in the number of people providing informal care. Caregiving for a person with dementia can present challenges that may have a psychosocial impact on the individual in terms of quality of life.

**Methods:** A systematic review of the qualitative literature on the experiences, quality of life, and psychosocial impact of caregiving on adult informal caregivers of people with dementia. The meta-synthesis was conducted according to the principles of meta-ethnography to interpret and synthesise the studies identified from the review. Data quality was assessed using the Critical Appraisal Skills Programme criteria.

**Findings:** The review protocol was registered on PROSPERO (reference: CRD42016041747) and 1235 studies were initially identified from five databases. Fourteen studies describing the experiences of a total of 298 informal caregivers were entered into the review. The meta-synthesis elicited the following themes: 1) perceptions of the emotional impact of caregiving; 2) support needs and coping strategies for dealing with the emotional impact of caregiving; and 3) the role of culture and relationship dynamics in caregiving.

**Discussion:** Our findings highlight the need for a person-centered approach to care planning that also accounts for the needs of the informal caregiver to promote better caregiver well-being and quality of life. Caregiver emotional support, coping, resilience, and adjustment to caregiver identity should be reviewed as part of the care package for the person with dementia.

# Emotional and cognitive factors in pain and psychosomatic illness

15:30 - 17:00

Ed Keogh

15:30 - 17:00

## Ego depletion moderates the relationship between pain-related threat and attentional bias to pain-related stimuli

B. Jin<sup>1</sup>, S. Bae<sup>2</sup>, T. Jeong<sup>2</sup>, S. Cho<sup>2</sup><sup>1</sup>Department of Psychology Chungnam National University, Daejeon, South Korea<sup>2</sup>Department of Psychology, Chungnam National University, Daejeon, South Korea

### Background:

Pain demands attention. As pain becomes chronic, physical and/or psychological exhaustion (e.g. ego depletion) occurs. Given that attention resources are limited, it is not known how attention patterns for pain-related stimuli occurs in a state of ego depletion. We aimed to examine the effects of pain-related threats and ego depletion on attentional patterns for pain-related stimuli.

### Methods:

Twenty-nine college students in Daejeon, Korea were randomly assigned to receive either high or low level of pain-related threat, each of which included high and low ego depletion subgroups. Participants' eye movements were measured during a viewing task that featured sensory pain-neutral, affective pain-neutral and neutral-neutral word pairs. We conducted 2-way ANOVAs (pain-related threat by ego depletion) on attentional bias indices.

### Findings:

The low threat group had longer first fixation on pain-related words than neutral words, whereas the high threat group showed the opposite result. The high ego depletion group viewed pain-related words longer than the low ego depletion group. In the low ego depletion group, participants receiving low pain-related threat had a faster first fixation to neutral words than pain-related words, whereas those receiving high pain-related threat showed the opposite result. However, in the high ego depletion group, participants had a faster first fixation to pain-related words than neutral words, regardless of pain-related threat.

### Discussion:

We confirmed the moderating effects of the ego depletion on the relationship between the pain-related threat and attentional bias to pain-related stimuli. This implies the importance of ego depletion in the attention process of pain.

15:30 - 17:00

## Role of rumination on daily adjustment in complex regional pain syndrome: a diary approach

T. Jeong<sup>1</sup>, S. Cho<sup>1</sup><sup>1</sup>Chungnam National University, South Korea

**Background:** Rumination is a repetitive thought process for unresolved issues. It has been known to be an important predictor of pain intensity and adjustment in patients with chronic pain including complex regional pain syndrome (CRPS). Rumination may magnify the threat value of pain sensations, and thus may facilitate maladjustment to pain. This study aimed to investigate the role of rumination in the relationship between daily pain intensity and daily adjustment (i.e., avoidance, disability, concentration) in patients with CRPS, using an end-of-day diary.

**Method:** Twelve patients registered with the CRPS Association in Korea participated in this study. In the baseline phase, patients' demographic, pain-related variables, and rumination were measured by self-report questionnaires. During a subsequent diary phase, participants filled out an online-end-of-day diary over 15 consecutive days assessing daily pain intensity, daily avoidance, daily disability, and daily concentration. We used the hierarchical linear model for analyzing data.

**Results:** Results showed that the level of rumination moderates the effect of daily pain intensity on daily avoidance, daily disability, and daily concentration. Specifically, the higher the level of rumination, the more the effect of daily pain intensity on daily adjustment, whereas the lower the rumination, the less the influence.

**Conclusions:** This is the first study to examine the role of rumination on daily adjustment of patients with CRPS, suggesting that rumination may be an important factor in their daily adjustment. Thus, health professionals may consider helping patients effectively cope with their rumination.



15:30 - 17:00

## Affective instability in complex regional pain syndrome: daily relationships with pain severity and functioning

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### Background:

Complex regional pain syndrome (CRPS) is known to involve the most severe pain of all diseases, thus leading to impaired daily functioning. Many patients with CRPS experience emotional problems including affective instability, which may be closely related to the dysfunction of pain control due to the failure of emotional regulation. This study utilized a daily method to examine the role of affective instability in the relationship between daily pain severity and daily functioning (i.e., avoidance, disability, concentration) in patients with CRPS.

### Method:

Ten patients registered with the CRPS Association in Korea, participated in this study. They completed an online end-of-day diary over 15 consecutive days assessing affective instability and daily levels of pain severity, avoidance, disability, and concentration. Data was analyzed using multilevel modelling.

### Findings:

There was significant interaction between negative affect instability and daily pain severity on daily avoidance, daily disability, and daily concentration. The higher the negative affect instability of patients with CRPS, the greater the effect of daily pain severity on daily functioning, whereas the lower the negative affect instability, the less the influence. However, positive affect instability was not associated with all daily functioning variables.

### Conclusions:

Our findings indicated that negative affect instability moderates the relationship between daily pain severity and daily functioning. With increasing negative affective instability, pain is more likely to interfere with daily functioning. Thus, health professionals may need to consider assisting patients in using effective strategies for regulating emotions, particularly negative emotions.

15:30 - 17:00

## Attentional bias in breakthrough pain and the moderating effect of gender: a preliminary study

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<sup>2</sup>Department of Anesthesiology & Pain Management, Ajou University Hospital, Suwon, South Korea

<sup>3</sup>Department of Psychology, Chungnam National University, South Korea

### Background:

Attentional bias to pain-related stimuli varies according to its threat value. Breakthrough pain is temporary and considerably severe. Thus, patients with breakthrough pain are more likely to perceive pain-related stimuli as a threat than those without breakthrough pain. In addition, gender is also a factor affecting the perception of pain-related stimuli as a threat. This study examined the effects of breakthrough pain and gender on attentional bias.

### Methods:

This study recruited 11 and 13 patients with and without breakthrough pain, respectively, among patients with chronic pain at a university hospital in Suwon, South Korea. The participants' eye movements were recorded using an eye tracker during a free viewing task that features sensory pain-neutral, affective pain-neutral, and neutral-neutral word pairs. Three-way ANOVA was conducted on the attentional bias indices.

### Findings:

For females, the breakthrough pain group had a longer first fixation time and average fixation time on neutral words than sensory-pain words, whereas the non-breakthrough pain group had a longer first fixation time and average fixation time on sensory-pain words than neutral words. However, there was no significant difference in the affective-pain words, regardless of the group. For males, there was no significant difference in the attentional bias indices, regardless of the group and word type.

### Discussion:

This study revealed different attention patterns for pain-related stimuli depending on the breakthrough pain and gender.

These findings suggest that females with breakthrough pain tend to avoid pain-sensory words, whereas those without breakthrough pain tend to have difficulty in disengaging from pain-sensory words.

15:30 - 17:00

## Symptoms, physical activity and mood memories in asthma and chronic fatigue syndrome: mixed methods study

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**Background:** Enhanced cognitive processing of health-related information is implicated in inaccurate symptom perception and in the maintenance of chronic symptoms. The study investigated cognitive mechanisms of memories for illness- and health-related information in Chronic Fatigue Syndrome (CFS), asthma, and healthy controls.

**Method:** 87 CFS, 56 asthma, and 60 healthy controls participated in a mixed methods quasi-experimental Internet-based study. Participants recalled four events (physical activity, fatigue, pain, happiness), and filled out questionnaires about symptoms, functioning, and mood. A qualitative thematic analysis of memories' content was conducted, utilizing a data-driven atheoretical approach.

**Expected Results:** CFS and asthma groups recalled significantly richer and more diverse in content physical activity memories, compared to controls, reflecting a complex multidimensional construct. They also recalled activity memories related to illness, symptoms, or treatment, unlike healthy controls who viewed physical activity as purely exercise-related. CFS and asthma groups recalled intense and diverse fatigue memories, which, particularly for CFS, reflected a stable, global, profound view of fatigue.

**Current stage of work:** Data analysis

**Discussion:** The evidence supported the hypothesis that there is enhanced processing of health- and illness-related information in people with chronic conditions, which may contribute to symptom overperception and maintenance. Exploration of memory contents suggested that CFS and asthma groups perceived fatigue and activity as more complex, pervasive, profound, and multidimensional phenomena, than healthy people. The findings may be informative for cognitive-behavioural interventions that work to modify negative, stable and global views into less profound and catastrophic beliefs aiming to reduce activity avoidance and improve functioning.

15:30 - 17:00

## The relationship between pain catastrophizing and personal happiness in patients with fibromyalgia

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**Background:** Pain catastrophizing (PC) commonly accompanies experiences of chronic pain and is highly prevalent in patients with fibromyalgia. PC is associated with many functional constraints as well as psychological distress and therefore affects personal happiness. The aim of the study was to examine the involvement of several mediators in this relationship of PC and happiness in patients with fibromyalgia. We assessed mediating effects of alexithymia, pain anxiety, willingness to experience pain, and engagement in life activities (AE).

**Method:** A total of 95 female patients with fibromyalgia (age: M=45.3; SD=9.5) completed an online-questionnaire about PC (PCS), pain anxiety (PASS), alexithymia (TAS), pain willingness (CPAQ), activity engagement (CPAQ), and personal happiness (LGS). The proposed multiple mediation model controlled for age and pain severity.

**Findings:** PC significantly predicted all mediators (all  $p < .02$ ), but only AE mediated the relationship between PC and personal happiness (indirect effect:  $b = -0.37$ , 95%CI [0.53;1.05]).

**Discussion:** Psychological distress in patients with fibromyalgia is not directly connected with PC, but can be explained via AE. The acceptance of pain when engaging in activities could restore feelings of control over life, prevent rumination, and therefore preserve a patient's happiness. Fostering physical activity despite of pain might be an important link regarding the relationship between PC and well-being that could be promoted in cognitive-behaviour therapy. However, this cross-sectional study design does not provide information about variations in AE over time. Further research should therefore identify factors that contribute to the extent of willingness of activity engagement.

# Therapeutic approaches and adherence in chronic diseases

15:30 - 17:00

Lisa Mellon

15:30 - 17:00

## Assessing fidelity of delivery of the Community Occupational Therapy in Dementia (COTiD-UK) intervention

H. Walton<sup>1</sup>, I. Tombor<sup>1</sup>, J. Burgess<sup>2</sup>, T. Swinson<sup>2</sup>, J. Wenborn<sup>1,2</sup>, A. Spector<sup>1</sup>, M. Orrell<sup>3</sup>, S. Michie<sup>1</sup>

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<sup>2</sup>North East London NHS Foundation Trust, United Kingdom

<sup>3</sup>University of Nottingham, United Kingdom

### Background:

Measuring whether interventions are delivered as planned (fidelity of delivery) is key to evaluating effectiveness. Without assessing fidelity it is not possible to make conclusions about the planned intervention as intervention effects reflect the outcomes of what was delivered, not what was planned. This study aims to measure the fidelity of delivery of Community Occupational Therapy in Dementia (COTiD-UK), within a multi-site (n=15) randomised controlled trial across the UK. COTiD-UK is delivered by an occupational therapist over ten hours to the person with dementia together with their family carer, using seven key skills.

### Methods:

This study has a longitudinal observational design. All intervention sessions are audio-recorded. 10% of sessions (n=140) will be sampled from across sites and occupational therapists (n=27). Selected sessions will be transcribed and analysed for fidelity using checklists and coding guidelines developed for this study. These will be piloted and amended through an iterative process, until good inter-rater agreement (Kappa > 0.8) is achieved. Researchers will then independently code transcripts to measure fidelity. A percentage of transcripts will be double-coded to check for coder drift. Data will be analysed using descriptive statistics.

### Expected results:

Findings will demonstrate which components were delivered as planned. Findings will be compared across sessions, providers and sites.

### Current stage of work:

This project is in the pilot phase.

### Discussion:

These findings will be used to interpret the results of the randomised controlled trial of the COTiD-UK intervention.

15:30 - 17:00

## Importance of psychosocial interventions in pulmonary rehabilitation

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### Background.

Depression and anxiety are considered to be the most frequent comorbidities of respiratory diseases. Shortness of breath (dyspnea) causes constant fear, limitations in daily activities, loss of social roles, avoidance and lowered quality of life. Psychosocial segment of pulmonary rehabilitation provides an ideal setting for psychological interventions to treat these important issues. We were interested in the influence of standard psychological interventions used in pulmonary rehabilitation program on variables - anxiety, depression, stress and quality of life in patients with chronic obstructive pulmonary diseases.

### Methods.

In 45 subjects (22 asthma and 23 chronic obstructive pulmonary disease - COPD patients) we assessed levels of anxiety, depression, stress and quality of life, at the beginning and at the end of PR using DASS21 questionnaire and one-item quality of life (general). All patients went through standard three- week PR program. All were included in some kind of psychological support depending on their dominant problem– education, psychoeducation, cognitive-behavioral techniques, relaxation training, smoking cessation, weight reduction and/or emotional support.

### Findings.

We found a significant decrease in depression, anxiety and stress levels ( $p < 0.01$ ) and a significant increase in quality of life ( $p < 0.05$ ) at the end of three week intervention period compared to the baseline data collected before PR.

### Discussion.

Psychosocial support, as a part of pulmonary rehabilitation program is effective in decreasing anxiety, depression and stress levels, and in increasing quality of life. Comprehensive interdisciplinary program accentuates the importance of the whole person in disease with its biological, psychological and social characteristics.

15:30 - 17:00

## Robot-assisted therapy in chronic stroke patients: a daily diary n-of-1 trial

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<sup>2</sup>URPP Dynamics of Healthy Aging, University of Zurich, Switzerland

<sup>3</sup>Sensory-Motor Systems Lab, ETH Zurich, Switzerland

<sup>4</sup>Spinal Cord Injury Center, University Hospital Balgrist, Switzerland

**Background:** Stroke patients often face reduced mobility and loss of upper extremity function, potentially limiting independence in daily activities. In post-stroke rehabilitation patients should relearn important movements and skills. Robot-assisted therapy is a novel approach that has been shown to help patients significantly improve functioning in their paretic arm. However, it remains unclear whether these improvements, observed in clinical assessments in pre-post designs, also translate into daily activities. The aim of the study is to investigate how chronic stroke patients experience daily life and whether receiving robot-assisted therapy in a social environment results in heightened motor activity in the paretic arm.

**Methods:** In six experimental n-of-1 trials with chronic stroke patients, data on objectively measured at home activity, socio-cognitive variables related to at home activity, and indicators of wellbeing will be assessed across several weeks. After establishing a baseline, three different experimental conditions (no rehabilitation, solo robot-therapy, dyadic robot-therapy with partner) will be implemented and compared within patients.

**Expected results:** This study is a pilot feasibility study for testing the different experimental conditions and to inform a larger project.

**Current stage of work:** Currently, the solo and dyadic modes of training with ARMin (the rehabilitation robot) are being programed. Recruitment and data collection will commence in May 2017.

**Discussion:** Fostering daily at-home exercises of a paretic arm is an important goal in stroke rehabilitation. By examining the effects of different robot-assisted therapies on exercising behaviour, this study will contribute to the optimization of the stroke rehabilitation process.



15:30 - 17:00

## Move 2 Health: a partner-assisted physical activity intervention for cancer survivors

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**Background:** Physical activity is an essential part of cancer survivors' treatment plan as it helps prevent recurrence and improves downstream cardiovascular risk, the cause for most deaths in cancer survivors. Additional benefits include improvements in physical function, psychological outcomes, and quality of life. However, most survivors are not sufficiently active, and prior physical activity interventions for cancer survivors have had mixed success. Involving partners in a physical activity intervention is a novel approach that could increase the efficacy of the intervention and the sustainability of effects.

**Methods:** We conducted a two-arm, waitlist randomized controlled pilot study in which we delivered a home-based physical activity intervention to cancer survivors and their partners. The study goals were to show feasibility, acceptability, and preliminary efficacy.

**Findings:** We randomized 20 survivor-partner dyads (9 intervention and 11 waitlist control). 67% of the survivors who received the intervention rated it as useful (4 or 5 out of 5) in helping them increase their physical activity and 67% would recommend it to other survivors. 67% of the survivors in the intervention arm, compared to 27% in the control condition, reported increases in their physical activity at 2-months post-randomization. 56% of partners in the intervention arm, compared to 36% in the control condition, reported increases in their physical activity.

**Discussion:** Our pilot data suggest the feasibility, acceptability, and preliminary efficacy of a partner-assisted physical activity intervention. The next step is to conduct a large randomized controlled trial to fully test the efficacy of the intervention.

15:30 - 17:00

## Using motivational and volitional interventions to promote unsupervised walking in women with fibromyalgia

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<sup>3</sup>Rey Juan Carlos University, Spain

<sup>4</sup>University Complutense of Madrid, Spain

**Background:** Our aim is to test the efficacy of a motivational plus implementation intention (MIIC) intervention in increasing walking behaviour at short, medium and long term, comparing to a control condition (CC) and to only implementation intention intervention (IIC).

**Methods:** A triple-blind, randomized longitudinal study was conducted. In the first appointment 190 women with fibromyalgia attended for baseline assessment and were randomly assigned to experimental conditions: IIC (n=73), MIIC (n=59), CC (n=58). Participants completed measurements post-intervention, at seven, 12, and 36. Only 53% of MIIC and 38% of IIC completed properly the formulation of intentions. We performed hierarchical mixed effects univariate regression two-level models with repeated measures analysis.

**Findings:** Models showed time as fixed and random effects. Adherence to a fixed walking program, assessed by daily logs, was explained by time ( $F(2, 316)=37.199, p<.001$ ) and by MIIC ( $F(1,104)=6.986, p<.001$ ). No effects were found in steps assessed by pedometer. In secondary outcomes, distance (6MWT) was explained by time ( $F(1,238)=17.228, p<.001$ ), MIIC ( $F(1,118)=9.498, p<.01$ ) and by their interaction ( $F(1,238)=3.213, p=.07$ ). Pain and distress were explained by time ( $F(1,251)=19.706, p<.001$ ;  $F(1,251)=18.260, p<.001$ , respectively) and MIIC ( $F(1,124)=4.518, p<.05$ ;  $F(1,124)=8.540, p<.01$ ).

**Discussion:** MIIC intervention significantly increased self-reported walking behaviour and women in this condition were better than the other two groups in secondary outcomes.

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15:30 - 17:00

## Motivated, fit, and strong: changing fitness-fatness associations to increase physical activity in individuals with obesity

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**Background:** Regularly engaging in physical activity (PA) is related to health benefits regardless of body size. Yet, individuals with obesity frequently experience weight stigma, which can lead to PA avoidance when internalized. This study will determine if evaluative conditioning (EC) using positive images of persons with obesity increases PA in individuals living with obesity (primary outcome), and affects implicit and explicit attitudes about PA and internalized weight stigma (secondary outcomes).

**Methods:** Sixty adults that self-identify as living with obesity will be randomly assigned to an experimental or control group, each completing four online sessions one week apart. The experimental group will complete EC tasks to retrain automatic fitness-fatness associations. The control group will read Canada's PA Guidelines and complete PA goal-setting tasks. PA attitudes, internalized weight stigma, and PA behaviour will be measured pre-test, post-test, and at one-week follow-up. Multivariate analysis of variance will be used to determine between-group differences.

**Expected results:** It is hypothesized that participants in the EC group will have increased PA, and that implicit and explicit PA attitudes, and internalized weight stigma will mediate the relationship between the intervention and PA.

**Current stage:** Ethical approval has been obtained and data collection will begin in March 2017.

**Discussion:** The results of this study could demonstrate a way to reduce internalized weight stigma and increase PA in persons with obesity, a typically inactive population. Media and health promotion practitioners may choose to portray individuals with obesity in a non-stereotypical/positive way to promote PA to persons at every size.

15:30 - 17:00

## Interventions for improving adherence in solid organ transplant recipients

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**Background:** Adequate immune system suppression is required for survival of a solid organ transplant, thus immunosuppressive therapy forms the central part of treatment following an organ transplant. Odds of organ failure increase seven-fold for non-adherent individuals, consequently, identification of successful modes of intervention to improve adherence to immunosuppressant therapy is required.

**Objective:** This review aims to look at the benefits and harms of using interventions for improving adherence to immunosuppressant therapies in solid organ transplant recipients.

**Methods: Studies:** All RCTs, quasi-RCTs and cluster RCTs examining interventions to improve adherence following a solid organ transplant.

**Study population:** Adult and paediatric solid organ transplant recipients.

**Interventions:** Studies addressing interventions to improve adherence to immunosuppressant medication in comparison to a control arm will be included. Comparisons of interventions to usual routine care will also be included. Given the wide variation in types of interventions to address adherence, and methods of adherence measurement, interventions of any sort intended to affect adherence with prescribed, self-administered medications will be included. A combination intervention including one or more strategies will be included.

**Primary outcome:** Adherence to immunosuppressant medication.

**Expected results:** This proposed Cochrane Review will provide the highest form of evidence for improving adherence post-transplantation.

**Current stage of work:** Review Protocol submitted to Cochrane Kidney and Transplant Group

Conclusions: Given the reported high non-adherence rates, coupled with the critical importance of adherence to the immunosuppressant regimen to maximise and maintain successful transplantation, clear evidence is required to identify effective ways to improve adherence post-transplant.

15:30 - 17:00

## Fidelity of a very brief pedometer-based intervention to promote physical activity in preventative health checks

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<sup>3</sup>University of East Anglia, United Kingdom

**Background:** We conducted a randomised controlled trial of a very brief (<5 minutes) pedometer-based intervention for physical activity ('Step It Up') targeting adults aged 40-74 years attending health checks in primary care, and found no evidence of a positive effect on physical activity. The aim of this study was to assess intervention fidelity to illuminate the trial findings.

**Methods:** Control participants received the usual health check, and intervention participants received the health check plus 'Step it Up'. A sample of five consultations per practice was randomly selected for audio-recording. A standardised form was used to assess intervention duration, delivery intervention components and any contamination.

**Findings:** Audio-recordings of 37 intervention and 26 control consultations were obtained from 13/23 practices. Preliminary findings show that intervention duration ranged between 16 seconds and 7 minutes. Fidelity of intervention delivery was 60% in the intervention sessions, meaning that on average 9 out of 15 intervention components (e.g. feedback) were delivered. Fidelity varied considerably between practitioners (range 20% to 87%). Contamination in control consultations was minimal.

**Discussion:** Fidelity of delivery was moderate and varied widely among practitioners, whilst contamination was minimal. Mean intervention duration was less than five minutes. Obtaining audio-recordings in a pragmatic trial in primary care was challenging, and we do not know whether the sample of recordings was representative in terms of fidelity levels. The findings suggest that the training of practitioners in very brief physical activity advice can be improved.

# Cognition in older adults

15:30 - 17:00

Kristine Sneidere

15:30 - 17:00

## Is hypertension linked to age-related cognitive decline in executive function? Comparison of different statistics analyses

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<sup>6</sup>Aichi-gakuin University, Japan

<sup>7</sup>Nagoya University, Japan

**Background:** To examine the validity of Bucur and Madden (2010) proposal that BP-related cognitive decline is more pronounced for executive function than for elementary perceptual speed tasks, 6 years longitudinal data of BP and cognitive performances was examined by three types of statistical analyses.

**Methods:** Developmental change ratio for 6 years in executive function task was calculated individually for participants (over 60 yrs) and classified into Maintain (N = 36; mean regression coefficient was -3.4) and Decline (N = 62; mean regression coefficient was -12.8) groups. In study 1, performances for both groups in SBP and DBP compared by t-test. In study 2, number of participants of normal BP and high BP in Decline and Maintain groups was compared by Chi2 test. In Study 3, data of executive function tasks was analyzed by covariance analysis with age and gender as covariates and multiple regression analysis.

**Results:** Statistical analysis in Study1 showed a slight group difference in DBP but not in SBD. In Study 2, number of participants of normal BP was significantly larger than that of high BP. In Study 3, statistical results showed significant effect only in age but not in BP group.

**Conclusions:** The validity of proposal remains opaque because it depends on the type of used statistics. It became clear that age contributes strongly in the relation between BP and cognitive performance in elderly. However, several limitations remain in BP measurement control (e.g., measurement time zone and number of times).



15:30 - 17:00

## Decision aids for older cancer patients: effects of modality and narration style on information recall

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**Background:** Cancer patients are often involved in medical decision making. Especially for older cancer patients this can be difficult, as with aging, information processing changes and working memory capacity reduces. Decision aids have shown to be effective to some extent in improving decision making for older patients, but they seem insufficiently adapted to the changes in information processing and working memory that older patients face. The aim of this study is to investigate if two strategies that might reduce cognitive overload (modality and narration style) in a decision aid contribute to its effectiveness for older cancer patients.

**Method:** A 2(Modality: visual vs. audiovisual) X 2(Narration style: narrative vs. factual) X 2(Age: <70 years vs. >70 years) experiment will be conducted. Effectiveness will be measured in terms of information recall and informed decision making. Data will be collected in April 2017 amongst 210 analogue cancer patients, recruited via an online panel. Regression analysis will be carried out to analyse the data.

**Expected findings:** We expect audiovisual information to result in more recall than visual information only and that narrative information results in more recall than factual information. Besides, we expect that modality and narration style interact; the audiovisual, narrative condition will outperform the other conditions. Additionally, the effects are expected to be greater in older adults than in younger adults.

**Current stage of work:** Designing and pre-testing stimulus materials.

**Discussion:** Information provided in decision aids aimed at older cancer patients can be improved by applying the knowledge gained from this study.

15:30 - 17:00

## Relationships between dispositional optimism and cognitive functions in community-dwelling middle aged and older persons

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<sup>4</sup>Naruto University of Education, Japan

**Background:** Positive psychology is recognized as an important contributing factor in terms of well-being. Positive psychological constructs as dispositional optimism or purpose in life have been linked to positive health outcomes. However, there is little research in relation to it within the dementia field. In the present study we investigate an association between dispositional optimism and cognitive functions in the middle aged and the older.

**Methods:** Participants were 555 community-dwelling middle aged and older persons without dementia. The cognitive functions were measured by means of logical memory test, Money road test, Stroop test, D-CAT (digit cancellation test), verbal fluency test and MMSE. Dispositional optimism were assessed using 10 item questionnaire adapted from Japanese versions of the Life Orientation Test-Revised.

**Results:** Participants were divided into three dispositional optimism groups (upper, middle and lower) based on the score of the questionnaire. ANCOVA, using age, sex and education as covariate, dispositional optimism group as independent variables, and scores on the cognitive tasks as dependent variables, was conducted to investigate the effect of positive psychological constructs on the age-related decline of cognitive functions. A significant main effect of dispositional optimism was shown for the score on digit cancellation test, Stroop test and MMSE. The score of these cognitive functions in lower optimism group was lower than that in the other groups.

**Conclusions:** Greater dispositional optimism is associated with higher cognitive functions. It became clear that positive psychological constructs could reduce a risk of cognitive decline in old persons.

15:30 - 17:00

## Peculiarities of cardiac rehabilitation patients' general intelligence

J. Misiuniene<sup>1</sup>, R. Petroliene<sup>2</sup>, L. Sinkariova<sup>1</sup>, L. Alciauskaite<sup>1</sup>, L. Zajanckauskaite-Staskeviciene<sup>1</sup>

<sup>1</sup>Vytautas Magnus University, Lithuania

<sup>2</sup>Vytautas Magnus university, Lithuania

**Background.** We have a lack of older persons' intelligence studies, so we know a little about intelligence changes with age and after heart diseases. The aim of this study was to describe peculiarities of general intelligence structure of cardiac rehabilitation patients.

**Methods.** Study was conducted in Abromiskes Rehabilitation Hospital Inpatient Cardiac department (Lithuania) during the period of 2014–2016. Participants (N = 118) were administered Intelligence Structure test in order to assess general intelligence, consisting from verbal, numerical, figurative intelligence.

**Findings.** T-test showed no statistically significant gender differences ( $p > 0.05$ ). There was find negative correlation between participants' age and verbal, numerical and figurative as well as general intelligence (resp.,  $r = -0.310$ ,  $r = -0.192$ ,  $r = -0.290$ ,  $r = -0.277$ ,  $p < 0,05$ ). Cardiac rehabilitation patients have lower intelligence compared to their peers from standardization sample (supposed to be healthy), but these differences remain significant only for those who are older than 51 ( $p < 0.05$ ). According to the results of factor analysis, 51,5% of general intelligence in the age from 51 to 70 could be explained by two factors: verbal-numerical and figurative intelligence.

**Discussion:** Cardiac rehabilitation patients' intelligence doesn't differ according to the gender, but it significantly declines with an age from 41 to 70 years. 51-70 years old patients' intelligence is lower than healthy ones, but, in contrast, 41-50 years old patients' intelligence doesn't differ from healthy sample. The findings provide a support for intelligence de-differentiation hypothesis.

Research was supported by Research Council of Lithuania, project No. MIP-081/2014

15:30 - 17:00

## Cognitive reserve and cognitive functioning: a pilot study on a Russian sample

O. Strizhitskaya<sup>1</sup><sup>1</sup>Saint Petersburg State University, Russia

Cognitive functioning (CF) is one of the important domains affecting quality of life in older adulthood. CF or “cognitive health” affects general health and social interaction. Decrease in cognitive health can hide symptoms of somatic diseases, impact lifestyle habits etc.

In the present study we tested a model of cognitive reserve (CR) on a Russian sample. We assumed that cultural specifics can affect the role of different components of CR in CF.

Participants were 75 adults aged 50-77 from Saint-Petersburg, Russia. Methods: Cognitive reserve index questionnaire (CRIq), Montreal cognitive assessment test (MOCA). We assumed that Russian older adults having Russian as their native language have to use at least Latin alphabet. Thus we included in the model variables on knowledge of foreign languages: (1) European non-Slavic, (2) European Slavic, (3) Eastern languages.

Preliminary regression analysis of the components of CR showed three consistent with the original model components: education, work activity and leisure activity. Further analysis showed that general cognitive score was predicted by household duties, participation in social activities, professional qualified experience, knowledge of Slavic and Eastern languages. It is important to mention that while particular activities of the CR model predicted CF; generalized scores of the components did not.

These results open a very important cross-cultural perspective: the percent of people suffering from Alzheimer’s disease is approximately the same in most countries regardless of country-level socio-economic differences. In our case we can suppose that for Russian sample this model needs further differentiation. Supported by RFBR grant 16-06-00086

15:30 - 17:00

## Impact of regular aerobic activities on cognitive processes in seniors

K. Sneidere<sup>1</sup>, J. Harlamova<sup>1,2</sup>, V. Arnis<sup>1</sup>, Z. Ulmane<sup>1</sup>, I. Mintale<sup>3</sup>, K. Kupcs<sup>3</sup>, A. Stepens<sup>1</sup>

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<sup>2</sup>Rīga East Clinical University Hospital, Latvia

<sup>3</sup>Pauls Stradins Clinical University Hospital, Latvia

**Background:** World Health organization prognosis is that by the Year 2050 seniors aged over 60 will account for 22% of the world population (WHO, 2015). Recent research results indicate a relationship between aerobic physical activity and cognitive functioning (e.g. Erickson et al., 2011); however, there is still very little evidence on the impact of long-term aerobic activities on cognitive functioning.

**Methods:** This is a cross-sectional study, in which 33 healthy seniors aged 65 – 85 (M = 72.73, SD = 4.95) are currently involved. Participants are divided into three groups – seniors with regular long-term aerobic activity experience, seniors with recent regular aerobic activity experience and sedentary seniors. To assess working memory, The Numbers Reversed test (Woodcock, McGrew, & Mather, 2001) is used. To assess attention Map Test of Everyday Attention (Robertson, Ward, Ridgeway, & Nimmo-smith, 1996) and Reaction time test (Molotnovs, 2011) are used. To determine the physical activity of each participant a modified version of Social Determinants of Health Behaviours (FINBAL, 2008) is used. Data are analysed with ANOVA analysis with Post Hoc test (LSD).

**Expected results:** Preliminary results indicate significant differences in long-term aerobic activity group and sedentary group in attention switching ( $p = .015$ ), working memory ( $p = .031$ ) and simple reaction time ( $p = .045$ ).

**Current stage of work:** Data acquisition and analysis is still in progress.

**Discussion:** The study results indicate that involvement in regular long-term aerobic activities may have impact on such executive cognitive processes as working memory, attention and reaction time.

# Caring for the elderly

15:30 - 17:00

Nina Knoll

15:30 - 17:00

## Family caregivers of people with ALS: a qualitative study on two groups of mutual support

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<sup>2</sup>Amyotrophic Lateral Sclerosis Association, Italy

**Background:** Literature widely pointed out that being a family caregiver of a person with Amyotrophic Lateral Sclerosis (ALS) reduces the quality of life and increases the risk of experiencing health problems, but studies concerning psychological interventions are still sporadic. Departing from this premise, this study explored a pilot experience of two mutual support groups for family caregivers of people with ALS, one for partners and one for children. The aim was to identify some prominent aspects of these caregivers' experiences and to understand whether and how this intervention strategy might help them.

**Methods:** The two groups were facilitated by two psychologists. Sessions were once every three weeks for a total of ten sessions. Six partners (four men and two women) and six children (five women and one man) participated in the project. At the end of the groups, the first author interviewed participants and a content analysis of the transcripts was conducted.

**Findings:** The analysis showed five thematic areas: "Caregiving," "Being son/daughter of a person with ALS," "Being partner of a person with ALS," "Group evolution," and "Personal perception of the groups."

**Discussion:** Results pointed out that caregiver's experience is profoundly different in the case of the child or the partner of a person with ALS. Moreover, the comparison with peers and the mutual support with them helped participants to better cope with ALS and its consequences, to improve their care for patients and to overcome the typical caregiver's isolation.

15:30 - 17:00

## Key group processes to improve health in dementia informal caregiver support groups: a systematic review

I. Figueira<sup>1</sup>, L. Lima<sup>1</sup>, M. Palacín<sup>2</sup><sup>1</sup>ISCTE-IUL, Portugal<sup>2</sup>University of Barcelona (UB), Faculty of Psychology, Spain

**Background:** Research provides evidence on the positive impact of support groups (SGs), but the group processes that could promote that effect are under-researched. This systematically review aimed to available evidence of the group processes as potential mediators of the positive effect of SGs on health and well-being of informal caregivers of people with dementia.

**Methods:** In line with the prospectively registered protocol (PROSPERO CRD42017055468) in order to insure study quality we followed the PRISMA-P statement. The main concepts searched on the relevant electronic bibliographic databases (e.g., Web of science, SCOPUS) were: “dementia”, “support group”, “informal caregiver”, “group process”, “mediator”, “health”, “well-being”, “outcome”. The results were saved to EndNote software and in order to identify duplicate articles. The main inclusion criteria to select the studies were: quantitative, qualitative or mixed methods research, primary respondents were informal caregivers and are primary caregivers of people with dementia and group interventions aimed to promote health and well-being among the members.

**Expected results:** Focusing on the evidence of mediating processes, we expect that: 1) most studies will not identify the underlying group processes; and 2) “group identification”, “interdependence”, and “homogeneity” will be possible mediators of positive effects of support groups.

**Current stage of work:** Screening of all work identified by the searches is on-going.

**Discussion:** This study will contribute with evidences about what works and how it works, to better informed professionals when the purpose is to improve health in a group setting.



15:30 - 17:00

## A social perspective on perceived benefits in familial caring for an older adult

C. Samios<sup>1</sup><sup>1</sup>Bond University, Australia

This study examined the benefits perceived by family carers of an older adult and the social elements of the caring experience that may predict greater perceived benefits for carers. Seventy-four people who care for a family member over the age of 65 completed measures of caring tasks, social support, social sharing of emotions, and perceived benefits from the caring experience. The more time carers spent on psychosocial caring tasks the greater benefits they perceived in the areas of lifestyle changes and material gain. Social support predicted the perceived benefit of increased faith in people and social sharing of emotions predicted the perceived benefit of increased community closeness. This study, although preliminary, indicates the importance of the social context of caring in carers' perceived benefits.

15:30 - 17:00

## Developing a mealtime intervention to improve the health and wellbeing of care home residents

R. Watkins<sup>1</sup><sup>1</sup>University of Exeter, United Kingdom

Malnutrition is one of the greatest threats to the health, wellbeing and autonomy of older people, particularly those living in care homes. Whilst the need to improve their nutritional status has long been recognised, how this can best be achieved and whether (and which) interventions are effective at reducing morbidity and improving wellbeing is less clear. This research seeks to address this knowledge gap, building on the recognition that mealtimes have a critical socio-cultural role in the care of older people, both in terms of ensuring adequate nutrition and promoting broader health and wellbeing. This project has been informed by two recently published systematic reviews by PenCLAHRC (Abbot et al., 2013, and Whear et al., 2014), which suggest that simple changes to the mealtime environment (e.g. the style of food service, seating arrangements and the playing of music) can positively influence nutritional outcomes and the behavioural and psychological symptoms of dementia (BPSD). However, the quality of mealtime intervention studies to date has been generally poor due to small sample sizes, lack of randomisation, and inadequate control for confounding factors (including those pertaining to residents, staff and the individual care homes). This project aims to build on care home research, an often neglected area due to the challenges of working with (a) the resident population, who are often physically and cognitively frail, and (b) the care home sector which can involve private businesses, low paid and low valued care professionals with a high employee turnover.

15:30 - 17:00

## Social exclusion and well-being in older adults in rural and urban communities

K. McKee<sup>1</sup>, L. Dahlberg<sup>1,2</sup><sup>1</sup>Dalarna University, Sweden<sup>2</sup>Stockholm University and Karolinska Institutet, Sweden

**Background:** Social exclusion (SE) is a framework for understanding how social factors - often neglected in health psychology research - influence individual well-being and health. This paper describes a study on the association between SE and well-being in urban and rural communities.

**Methods:** The study had a cross-sectional survey design with a stratified sampling frame. Participants ( $\geq 65$  years old,  $N=1255$ ) were recruited from rural ( $n=628$ ) and urban ( $n=627$ ) metropolitan areas of Barnsley, U.K. and completed a questionnaire measuring indicators of four SE domains: civic activity, material resources, social relationships and services; plus an additional domain, neighbourhood, regarded as of particular importance for older adults. Hierarchical linear regression models were developed for 1) total sample; 2) rural areas; and 3) urban areas, in which well-being was regressed on SE indicators after controlling for self-reported health.

**Findings:** SE indicators accounted for 12.1% of the variance in well-being in the total sample (neighbourhood 2.3%); the corresponding figures for the rural model were 13.3% (4.3%) and for the urban model 17% (2.1%); all models and model increments  $p < .05$ . Four SE indicators were significant in the rural model, compared with six in the urban model, with only two common to both.

**Discussion:** After controlling for self-reported health, SE indicators explained significant variance in well-being. Of the SE domains, neighbourhood exclusion explained more variance in well-being in rural areas compared to urban, whereas exclusion from services explained more variance in urban than rural areas. This suggests that SE processes operate differently in urban and rural communities.

# Emotional and mental health in the family

15:30 - 17:00

Daniela Muntele Hendres

15:30 - 17:00

## Student's cognitive and emotional health and own versus mother's achievement goal orientation

D. Muntele Hendres<sup>1</sup>, V. Curelaru<sup>1</sup>, G. Diac<sup>1</sup>, D.S. Duca<sup>1,2</sup>, M.N. Turliuc<sup>3</sup>

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<sup>3</sup>Alexandru Ioan Cuza University, Romania

**Background.** When student's activity is motivated by mastery-oriented goals they have relatively high levels of self-esteem and progress while avoidance-oriented purposes induce maladaptive patterns. Our study adds the mother's motivations concerning own children's academic achievement and their implications in the student's emotional and cognitive health.

**Methods.** Questionnaires were distributed to 385 students (195 boys and 190 girls) from three school stages, 4, 8 and respectively 12, and their mothers. Achievement goals have been evaluated both in mothers and child; data for the satisfaction with student's life, depressive symptoms and learning self-efficacy have been collected from students and the parental self-efficacy, from mothers. Analysis included correlations, t tests, and regressions, structural equation modeling based on the bootstrapping technique.

**Findings:** The satisfaction with student's life, learning self-efficacy and student's depressive symptoms are different from one stage to another. Parental self-efficacy of mother does negatively correlate with children depression and it does mediate the relations between own children's academic mastery goals and the intensity of his depressive symptoms. Mother's performance oriented goals and failure avoidance goals were both correlated with depressive symptoms of the children. Mastery oriented student's goals, relationship-oriented and performance-oriented are positive predictors of the satisfaction with student's life while the avoidance goals are not correlated at all.

**Discussions:** Parameters like satisfaction with student's life, depressive symptoms and learning self-efficacy are stage specific and are predicted not only by the student's purposes in the academic activity but also by mother's goals concerning her children's academic development and by her parental self-efficacy.

15:30 - 17:00

## Efficacy of cognitive behavior therapy: Increasing self-efficacy, life-expectancy and regulating cognitive emotion among adolescents without caregivers

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<sup>3</sup>Sharif University of Technology, Tehran, Iran

<sup>4</sup>AJA University of Medical Sciences, Tehran, Iran

**Background:** The object of the present study has been evaluating the effectiveness of cognitive behavior therapy in increasing self-efficacy and life expectancy as well as regulating cognitive emotion among adolescents without caregivers.

**Methods:** In this study, semi-experimental design pre-test/post-test was done with the control group. The statistical sample included 38 teenagers without primary caregivers residing in orphanage located at Tehran city, and was selected by an available sampling method. These participants were randomly put in 2 groups of 19 individuals including the experimental group and the control group. The experimental group was trained in 12 sessions of 2 hours and 30 minutes. The measurement tools were Sherer, Hertz and CERQ scales to evaluate self-efficacy, life expectancy and cognitive emotion, respectively. The results were analyzed using T-Test method.

**Findings:** The results showed that the twelve training sessions improved the experimental group's self-efficacy, life expectancy and cognitive emotion ( $P < 0.05$ ).

**Discussion:** The obtained results suggest that the therapeutic sessions based on cognitive behavior therapy were effective in increasing self-efficacy and life expectancy as well as regulating cognitive emotion among adolescents without caregivers. Also, these strategies increased the use of positive strategies (positive refocus and programming, positive evaluation, acceptance) and decreased the use of negative strategies (self-blame, blaming others, rumination, catastrophizing).

15:30 - 17:00

## Remission of probable depression and associated factors among Hong Kong adolescents—a large-scale longitudinal study

X. Yang<sup>1</sup>, J.T.F. Lau<sup>1</sup><sup>1</sup>The Chinese University of Hong Kong, Hong Kong

**Background:** Few longitudinal studies investigated the trend and factors of reduction in depression among depressed adolescents. This study investigated the incidence of remission of probable depression among adolescents with probable depression (CES-D scores $\geq$ 16) during a 1-year follow-up period. Furthermore, the study tested the predictive factors of remission. We hypothesized that increases in perceived family support, self-efficacy, self-esteem and positive affect, and the decreases in conflicts with peer and parents, academic stress, social anxiety, and loneliness would predict remission status.

**Methods:** The study included 5,487 participants (40.8% male; Mage=13.49, SD=1.39) with probable depression at baseline. The above-mentioned factors were assessed by validated scales at both baseline and follow-up. The analyses of frequency, independent t-test, and logistic regression were conducted by SPSS19.0.

**Findings:** Around 39%(35%) of female(male) adolescents with mild depressive, 46%(45%) with moderate depression, and 11%(16%) with severe depression at baseline reported reductions in depression at follow-up. The increases of self-esteem (ORM=1.06; 95%CI:1.03, 1.10) and positive affect (ORM=1.07; 95%CI:1.04, 1.11) and the decreases of loneliness (ORM=.90; 95%CI:.88, .93) and negative events (ORM=.93; 95%CI:.89, .97) predicted depression remission among female adolescents. In addition to these factors, changes in family support (ORM=1.03; 95%CI:1.01, 1.05) and social anxiety (ORM=.97; 95%CI:.95, .99) predicted depression remission among male adolescents.

**Discussion:** The results suggest that individuals are resilient and remission from depression is possible. Gender differences in different predictive variables of depression remission were identified. The significant predictors of depression remission highlighted by the study can be used to design effective interventions for alleviation of adolescent depression.

15:30 - 17:00

## Group psychotherapy program at the pediatric clinic in clinical medical centre Rijeka (Croatia)

D. Vuković<sup>1</sup>, J. Vivoda Mladenčić<sup>1</sup>, T. Milovanović<sup>1</sup>, H. Sveško Visentin<sup>1</sup>, T. Kosec<sup>1</sup>, R. Kosić<sup>1</sup>

<sup>1</sup>Clinical Medical Centre Rijeka, Croatia

Emotional disorders have become one of the leading causes of impaired functioning, in both adults and children. The lack of psychotherapeutic treatments for the children with emotional and health problems has far-reaching consequences. Only the timely intervention during childhood, focused both on children and parents, can make a difference in the prevention of disorders and the maintenance of health in adulthood.

In the last 7 years, the care for children and adolescents mental health at the Paediatric Clinic in Clinical Medical Centre Rijeka has been furtherly improved by the daily hospital treatment that encourages a multidisciplinary approach, and is managed by a child psychiatrist. The main goal of the program is to strengthen the children's and parents' capacities to adapt to everyday life.

With the aim of monitoring the efficiency of the treatment, the conducting of psychological testing started at the beginning and at the end of the psychotherapy process in several groups of preadolescents with variety of health and emotional issues. We used Anxiety and Depression Scale for Children and Adolescents (SKAD-62, SDD), Rosenberg Self-Esteem Scale, and Paediatric Quality of Life Questionnaire (PQ-LES-Q). The measurement comparison speaks in favour of the reduction of obsessive compulsive symptoms, general and separation anxiety and the increase in the satisfaction with school functioning.

The obtained data indicate that this psychotherapeutic treatment shows some positive developments. Conducting further evaluations presents a certain challenge because often, those changes in children observed during the process, are not always possible to identify by standard test material.



15:30 - 17:00

## Parental encouragement and punishment and children`s self-esteem and emotional state

E. Nikolaeva<sup>1,2</sup>, S. Burkova<sup>3</sup><sup>1</sup>Herzen State Pedagogical University, Russia<sup>2</sup>Petersburg State Transport University, Russia<sup>3</sup>The Herzen State Pedagogical University of Russia, Russia

The cognitive and emotional development of the child, as a function of the style of upbringing, the particularities of the parents' personalities and the structure of the family, have been studied extensively. There is one subject that continues to be insufficiently accessible to psychological investigation: the system of encouragement and punishment in the family. A child's self-esteem, as a central part of their ego, their system of self-conception, is formed under the influence of statements made by significant adults, i.e. parents, family members, teachers... It can therefore be supposed that self-esteem depends considerably on methods of punishment and encouragement. At a moment of either punishment or praise, a child reacts emotionally, and that reaction should have an impact not only on these situations but on any problematical situations.

A total of 119 children between the ages of six and eight participated in the study. We have used to described the children's self-esteem Dembo scale; a child's notions about the methods of encouragement and punishment practiced in the family the special.

To analyze the heart rate variability of a child, we did an electrocardiogram. We have shown that the system of punishment that is used within a family is the ultimate factor in predetermining the self-esteem of a child between the ages of six and eight. The system of encouragement within a family is reflected in the predominance of the sympathetic component of the autonomic nervous system and the child's health.

The work is supported by RGSF Fund

15:30 - 17:00

## Adverse childhood experiences among youths with emotional and behavioural problems

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<sup>1</sup>Department of Health Psychology, Faculty of Medicine, PJ Safarik University in Kosice, Slovakia

**Background:** Prevention and reduction of emotional and behavioural problems (EBP) is essential for health and well-being of youths and their families. Adverse childhood experiences increases a likelihood of EBP occurrence and can indicate one of the routes of prevention. Therefore, the aim would be to explore associations of adverse childhood experiences with involvement in system of care (counselling, social care and healthcare) due to EBP.

**Methods:** Longitudinal prospective cohort study involves youths and their families, who enter the system of care for EBP or come from general population of the respective region (community sample). Current sample consist of 19 respondents (mean age=13.71 years old, 89% boys) from system of care and 59 respondents (mean age=13.45 years old, 52% boys) from community sample. Binary logistic regression models adjusted for age, gender, socioeconomic status and subjective well-being will be used to explore proposed associations of adverse childhood experiences with involvement in system of care due to EBP.

**Expected results:** We expect adverse childhood experiences and their accumulation to be more likely among youths within system of care in comparison with youths from community sample.

**Current stage of work:** There is still ongoing data collection with expected sample of 100 respondents from system of care and 100 respondents from community sample in the first wave of data collection at the end of June.

**Discussion:** Early identification of adverse childhood experiences which might increase risk of EBP has a potential to prevent occurrence of EBP and to assure in time delivery of care.

# Parents, children and health

15:30 - 17:00

Ryan Rhodes

15:30 - 17:00

## From enjoyment to physical activity or from physical activity to enjoyment? Parent-child dyadic associations

M. Kruk<sup>1</sup>, M. Boberska<sup>1</sup>, K. Horodyska<sup>1</sup>, K. Zarychta<sup>1</sup>, A. Luszczynska<sup>1</sup>

<sup>1</sup>SWPS University of Social Sciences and Humanities, Poland

**Background:** This study aimed at examining the patterns of associations between physical activity enjoyment and moderate-to-vigorous physical activity among children and their parents. Using a longitudinal dyadic design and cross-lagged associations we explored if these variables are chained in a specific order.

**Methods:** 879 parents-child dyads participated in the study, at Time 1, whereas at Time 2 (7-8 month follow-up) data from 603 full parent-child dyads were collected. Physical activity scales and Attraction to Physical Activity Scale (CAPA; adult and child versions) were filled out by parents and children at Time 1 and Time 2. Path analysis was conducted, accounting for the stability of the constructs over time, correlations of all Time 1 constructs and covariations between all Time 2 residuals.

**Findings:** Parental liking of exertion and exercise (T1) explained parents moderate-to-vigorous physical activity (T2) and child's liking of exertion and exercise (T1), explained child's moderate-to-vigorous physical activity (T2) whereas child importance of exercise (T1) predicted children's moderate-to-vigorous physical activity (T2).

**Conclusions:** The study provides an insight into the beneficial effects of attraction to physical activity (accounting for liking exercise and importance of exercise) for physical activity among children and their parents.

15:30 - 17:00

## Associations between parental sedentary behavior restriction strategies, screen environment, and body fat tissue among children

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**Background:** This study investigated associations between (1) parental and child's reports of parental strategies aiming at restricting sedentary behavior among children, (2) availability and the number of screen devices at home environment, (3) time spent on sedentary behaviors among children and (4) the main outcome, child body fat tissue measured at a follow-up.

**Method:** At Time 1, 879 dyads participated in the measurement. At Time 2 (7-8 month follow-up), data from 603 full parent-child dyads were collected. Children (aged 5-11) and parents provided their self-report data. Body weight and height were measured objectively with certified body weight scales (Time 1 and 2).

**Findings:** Path analysis indicated indirect effects of availability and the number of screen devices at home environment. Furthermore, we found that child's body fat tissue percentage (Time 2) was directly predicted by child's perceptions of parental strategies restricting sedentary behavior among children (Time 1). These associations were found after controlling for body fat tissue, child's gender age at Time 1. Effects of parental restriction strategies, as reported by parents, were not significant.

**Discussions:** The findings have implications for prevention of childhood obesity and other health consequences of high levels of sedentary behaviors among children.

15:30 - 17:00

## Promoting parent and child physical activity together: elicitation of potential intervention targets and preferences

R. Rhodes<sup>1</sup>, C. Lim<sup>1</sup><sup>1</sup>University of Victoria, Canada

**Background:** Promoting physical activities that involve both parents and their children would be very useful to the improved health and well-being of families, yet co-activity interventions have been particularly unsuccessful in past research. The purpose of this study was to elicit the salient parental beliefs about co-activity framed through theory of planned behavior (TPB) in order to inform future intervention content. **Methods:** A representative sample of Canadian parents (N = 483) with children aged six to 14 years of age, completed belief elicitation measures of TPB, as well as co-activity and program preferences. Analyses included content theming by physical activity belief and preference through tallies of the percentages of parents endorsing each belief. Exploratory analyses of differences in endorsed themes were conducted by parent (mother, father), age of child (6-10 years, 11-14 years), and sex of the child through chi-square tests. **Results:** The results showed that behavioral beliefs about health, inter-personal and educational/learning opportunities and control beliefs about lack of time, various incompatible parent/child factors, parental health, and bad weather were dominant themes. Most of these themes did not vary in endorsement by parent and child characteristics ( $p > .05$ ). By contrast, preferences for various activities varied by parent and child characteristics, yet parents overwhelmingly desired the activities to be outdoors, close to home, after work and originally delivered from community health professionals via internet or face-to face means. **Discussion:** The findings provide several considerations for specific targets to improve future physical activity intervention approaches among parents and their children.

15:30 - 17:00

## Associations between parental stress and happiness and child's health behaviors

R. Lehto<sup>1</sup>, E. Lehto<sup>1</sup>, R. Kaukonen<sup>1</sup>, M. Nislin<sup>2</sup>, M. Erkkola<sup>2</sup>, C. Ray<sup>1</sup>, E. Roos<sup>1</sup>

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<sup>2</sup>University of Helsinki, Finland

**Background:** Happiness and stress are shown to be associated with person's health behaviors. The aim of this study is to examine if parent's happiness and stress are associated with child's health behaviors.

**Methods:** This study is part of a cross-sectional DAGIS study that examined 3-6-year-old preschool children's health behaviors and their determinants in Finland 2015-2016. 809 guardians answered questions on personal happiness and stress. Perceived stress was assessed with a single question on a scale of 1-10. Happiness was assessed with a 4-item subjective happiness scale. Frequency of children's sugary food/drink intake and fruit and vegetable intake were assessed with a food frequency questionnaire, screen time with 7-day diary kept by parents and physical activity with accelerometer. Linear regression analyses and covariance analysis were adjusted with child's gender and age and parent's education level.

**Findings:** Children's screen time was higher among those children whose parent was in the highest stress quartile compared to all others (beta 12,8 p 0.005). Parent's happiness was negatively associated with child's screen time (standardized beta -0.08, p 0.04) and positively associated with child's fruit and vegetable intake (standardized beta 0.01, p 0.02). Parent's stress was not associated with child's health behaviors.

**Discussion:** Parent's stress and happiness were associated with some of child's health behaviors and should receive more attention when promoting children's health behaviors. Future studies should examine whether e.g. parent's resources (e.g. time, support), self-efficacy and coping could explain these associations.

15:30 - 17:00

## Parents' awareness, experience, knowledge and perceptions on cyberbullying within three semi urban districts in Malaysia

D. Fadil-Azim<sup>1</sup>, F. Abdul-Razak<sup>1</sup>, S. Letchmanan<sup>1</sup>, V. Lorganaden<sup>1</sup>, S. Singh<sup>1,2</sup>

<sup>1</sup>Perdana University, Malaysia

<sup>2</sup>Monash University, Malaysia

**Background:** To investigate parents' experience, knowledge, awareness, and perceptions on cyberbullying within 3 semi urban districts in Malaysia.

**Methods:** Cross sectional study based on an adapted self-administered Perceptions and Awareness of Cyberbullying (PPAC) questionnaire was administered on 130 participants. Majority [60%] of the respondents were females.

**Findings:** The mean age of the respondents is 31.8 years; with majority [63%] Malays, 22% Chinese and 13% Indians. Most [85%] of them are married with at least 1 child; 55% of the respondents had primary or secondary school education and 63% of them have a household income < EUR640.00. Respondents spent 6 hours a day surfing the net; most (90%) own social media accounts. Substantial [66%] number of the respondents demonstrated high levels of knowledge on cyberbullying; with 26% claimed they experienced cyberbullying before, either as a perpetrator or a victim. Half of them [52%] were cyberbullied via social media and 56% were cyberbullied by strangers. For those who agreed [84%] that internet use should be monitored and restricted; only 40% set rules on such use. Parents' awareness on cyberbullying is below average [49%]; however, their perception on cyberbullying has a positive correlation with the influence on the limitations or restrictions they impose on their children internet use( $r=0.611$ ).

**Discussion:** These findings conclude the fact that bullying culture is evident; it impacts both parents and their children. There is a need to integrate awareness on cyberbullying which targets parents and children - so that both are aware of the digital culture & safety measures.



15:30 - 17:00

## The relationship among family health climate, parents' physical activity and their 9-10-year-old children inactivity

B. Mieziene<sup>1</sup>, V. Cesnaitiene<sup>1</sup>, S. Sukys<sup>1</sup>, A. Emeljanovas<sup>1</sup>, L. Dilys<sup>2</sup>

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<sup>2</sup>Public Health Bureau of Kaunas Region Municipality, Afghanistan

**Background.** Health climate in the family is important for health behavior in children (Erkelenz, 2014). The aim of the study was to examine the relationship between family physical activity related health climate, physical activity (PA) and children's sedentary behavior.

**Methods.** This cross-sectional study included 284 children of 9-10-years-old age and their parents or guardians. Family PA related health climate was measured by PA sub-scale of Family Health Climate Scale (Niermann et al, 2014). Parents PA was evaluated using Leisure Time PA questionnaire (Godin & Shepard, 2011). Children's self-reported time in hours and minutes spent per day by watching TV, playing computer games, doing homework, reading and other sedentary activities was collected.

**Findings.** Descriptive statistics showed that 9-10 year-old children are sedentary about 430 minutes per day on average. Results of hierarchical regression analysis, controlling for child and parent genders, parental age and education and child's PA, did not reveal any significant relationships among children's sedentary behavior and family PA related health climate or parents' PA ( $p > .05$ ). However correlation analysis indicated that higher parents' PA was associated with better climate in the Values, Cohesion and Information areas as well as total PA related family climate ( $p < .05$ ).

**Discussion.** Children are inactive almost the rest of the day after school. Neither positive family PA climate nor parents' PA make significant impact on child's inactivity. Parents' motivation to engage their children in PA and children's motivation to be engaged in PA should be further investigated.

# Well-being across the life span

15:30 - 17:00

Siobhan O'Neill

15:30 - 17:00

## Quality of life related to health in institutionalized adolescents

A. Gonçalves<sup>1</sup>, A.P. Camarneiro<sup>1</sup><sup>1</sup>Nursing School of Coimbra, Portugal

Background: Institutionalized adolescents are "people in development" in a specific context. Host institution can be constituted as close and organized social support, playing fundamental role in health and quality of life.

Objective: Analyze relationship between personal variables (age, sex, body mass index-BMI), institutional residence time (IRT) and Health-related quality of life (HRQL).

Methodology: Descriptive-correlational study; Sample 385 adolescents. Instruments: Kidscreen-52 (Portuguese version, Gaspar & Matos 2008, ten dimensions); Sociodemographic and health questionnaire. Fulfilled ethical assumptions. Data Handled in IBM-SPSS, Version 22.

Results: Ages between 10 and 19 years (M=14.77, SD=2.034). Girls 64.1%; Boys 35.9%. IRT between 1 and 229 months (M=38.89, SD=36.07). BMI, M=21.773, SD=3.74.

Positive and significant correlation between Age and Mood ( $r=0.11$ ,  $p=.04$ ), between IRT and Autonomy-free times ( $r=0.12$ ;  $p=.02$ ).

Negative and significant correlation between Age and: Health-Physical Activity ( $r=-0.19$ ;  $p=.00$ ); Feelings ( $r=-0.13$ ;  $p=.01$ ); Family ( $r=-0.17$ ;  $p=.00$ ); Economic Issues ( $r=-0.11$ ;  $p=.03$ ).

Negative and significant correlation between BMI and: Health-Physical Activity ( $r=-0.31$ ;  $p=.00$ ); Feelings ( $r=-0.16$ ;  $p=.00$ ); Autonomy-Free Times ( $r=-0.15$ ;  $p=.00$ ); Family ( $r=-0.13$ ;  $p=.01$ ); Economic Issues ( $r=-0.10$ ;  $p=.04$ ); Friends ( $r=-0.12$ ;  $p=.02$ ).

Significant mean differences between boys and girls in eight HRQL dimensions (Student t,  $p < .05$ ). Self-perception and provocation, n.s..

Discussion: Higher HRQL in younger adolescents. BMI near the standard upper limit, and higher in girls. Adolescents with more IRT show more Autonomy-Free Times. Boys show worse result in Mood. It is advantageous to deepen health studies in this population.

15:30 - 17:00

## Objective health versus self-perceived health in Irish adolescents

S. O'Neill<sup>1</sup>, S. Dockray<sup>1</sup><sup>1</sup>University College Cork, Ireland

### Background:

There are many factors which contribute to self-perceived health; including depressive symptoms, sleep quality, smoking, and lack of physical exercise. These factors may influence self-perceptions of health in indirect ways, for example, many people may have lower vigour and more negative affect which influences self-reporting. There may also be direct effects, for example a correlation of these psychological and behavioural patterns and actual health, including obesity. Adolescent obesity is strongly predictive of lifelong obesity and increased risk of disease. Much research has focused on contributing factors to self-perceived health, but few have investigated the association between physiological indicators of health and self-perceived health. The aim of this research was to investigate these associations within an Irish adolescent population.

### Methods:

Participants aged 12-25 completed the Pittsburgh Sleep Quality Index, the Beck Depression Inventory, the Cohen-Hoberman Inventory of Physical Symptoms (CHIPS), and the Perceived Stress Scale. Measures were also collected of height, weight, blood pressure, waist-hip ratio, and heart rate.

### Findings:

A series of regression analyses indicate that depressive symptoms, perceived stress and poor sleep quality are associated with self-perceived health. There was a significant correlation between self-perceived health, weight status and physiological indicators of health.

### Discussion:

Self-perceived health may be a good indicator of actual health status in adolescents. The results are interpreted within a developmental framework, highlighting the bidirectional effects of perceptions and actual health.

15:30 - 17:00

## Cancer, quality of life and depression symptoms: the process of creativity

L. Delpech<sup>1</sup>, F. Sordes<sup>1</sup>, J. Sudres<sup>1</sup><sup>1</sup>Toulouse Jean Jaurès, France

The diagnosis of cancer is associated with the occurrence of psychopathological symptoms which cause even more difficulties to patients. Scientific research demonstrates that creativity could help increase the general population's quality of life and regulate their negative emotions, but only a few studies are available on the link between creativity and the regulation of patients' respective experience.

This study aims at measuring the impact of creativity on the patient's level of depression and quality of life.

Thirty-five subjects undergoing chemotherapy treatment (age: 61 + 11) took part in this study. The experimental protocol is composed of creativity, depression and QoL tests.

The results show that creativity is negatively correlated with depression level and positively with QoL ( $r=-.45$ ;  $p<.05$  and  $r=.54$ ;  $p<.01$  respectively). The linear regressions show that creativity is a variable which predicts a high QoL ( $F=13.83$ ;  $p=.001$ ). Also, 29,5% of the QoL variability is explained by creativity. A cluster analysis sorted out three different groups: Expressive non depressive person (ENDs); Inexpressive non depressive person (INDs) and Inexpressive depressive person (IDs). On this groups, an analysis of variance show that level of creativity and QoL are significantly different ( $F=7.07$ ;  $p=.003$ ;  $F=18.32$ ;  $p<.001$ , respectively).

These results suggest that creative person have a good QoL and people who have a good QoL are "protected" against depression.

The creativity could have a noticeable influence on how patients experience their cancer. Further studies on this phenomenon will be necessary. Maybe a creative therapy has now a justification in oncology.

15:30 - 17:00

## Everyday affect, symptoms and well-being in postmenopause: preliminary findings

L. Simpson<sup>1</sup>, H. Parr<sup>1</sup>, O. Furlong<sup>1</sup>, E. McSorley<sup>1</sup>, J. McCormack<sup>1</sup>, P. Magee<sup>1</sup>

<sup>1</sup>Ulster University, United Kingdom

**Background:** Postmenopause is characterised by permanent cessation of menstruation following loss of ovarian activity, leading to increased symptoms and psychological distress in some women. Soya isoflavones are dietary compounds that may have beneficial effects on well-being and provide an alternative to hormone therapy.

**Objectives:** This study will investigate the effects of dietary soy products on psychological well-being and menopausal symptoms in postmenopausal women. Baseline data only will be presented here.

**Methods:** This is a randomised control trial of community dwelling postmenopausal women, being asked to consume different amounts of soy isoflavones, via soy milk products. To date 43 women, with a mean age of 54 years (SD=4) have completed baseline measures of everyday positive and negative affect and its variability (assessed over four days, at four time points per day), menopausal symptoms and psychological well-being.

**Findings:** Bivariate correlations were conducted to determine the relationships between the baseline variables. Better psychological well-being is associated with fewer menopausal symptoms and higher reported levels of everyday positive affect in this sample. **Discussion:** Menopausal symptoms may impact on well-being in the postmenopause, there is a need to find appropriate interventions to help women manage this time more effectively. Dietary soy may provide a good way to alleviate menopausal symptoms and promote well-being, the ALPRO study will investigate this further.

15:30 - 17:00

## Mobile intra-EU vs. outside-EU vs. non-mobile postgraduates' life satisfaction between mental health and career attitudes

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<sup>3</sup>Centre of Information & Prevention, Luxembourg

<sup>4</sup>University of Luxembourg, Research Unit INSIDE, Institute Health & Behaviour, Luxembourg

Specific attention should be devoted to the needs of young adults enrolled in a mobility abroad programme of their universities. Among mobile vs. non-mobile postgraduates, our study analysed their life satisfaction (LS) as well as the associations with mental health-related factors and career attitudes. We determined factors contributing to their LS.

**Method.** In 2012/13, three groups (non-mobile = 66; mobile intra-EU = 382; mobile outside-EU = 44) who had obtained a financial aid from the Luxembourgish government, without family's socioeconomic criteria. Master students completed an online questionnaire, and analyses included multiple linear regression models in which only relationships ( $p < 0.05$ ) were introduced.

**Results.** Further mobility showed higher levels of LS (outside-EU 8.5/10, intra-EU 7.8 and 7.9 non-mobile). For all groups, health satisfaction (HS) was positively correlated with LS; for mobile outside-EU, it is the only determinant. For mobile intra-EU, the quality of their autonomy and their career adaptability were also associated to LS (regression parameter estimates  $\beta$ : 0.208 and 0.128, respectively), and worry ( $\beta$ : -0.146). For non-mobile, in addition to HS, their career optimism and planning were positively correlated to their LS ( $\beta$ : 0.402 and 0.214, respectively).

**Conclusion.** Promoting programmes proposed by the universities' services towards counselling and an accompaniment to their career project may enhance postgraduates' LS which is a major indicator for a successful mobility. The assessment of outside-EU' LS was higher than the EU-28 LS' indicator (age group 25-34 years; in 2013: 7.5/10). More cross-cultural research would be warranted to better understand the etiology of their LS.

15:30 - 17:00

## Mode of delivery and postpartum positive dimensions of well-being

L. Giuntoli<sup>1</sup>, M. Nucci<sup>1</sup>, G. Vidotto<sup>1</sup><sup>1</sup>Department of General Psychology, University of Padua, Italy

### Background

Psychological outcomes of mode of delivery were mainly studied in terms of depressive symptoms. Many of the studies lack information on positive dimensions of well-being such as life satisfaction, positive affect and flourishing. The aim of the present study was to compare the psychological outcomes of women after emergency Cesarean section (ECS), planned Cesarean section (PCS), instrumental vaginal delivery (IVD), medicalized vaginal delivery (MVD) and spontaneous vaginal delivery (SVD).

### Methods

In this cross-sectional study 102 Italian mothers between 1 and 3 months postpartum completed self-administered measures both on the positive and negative dimensions of well-being. A series of one-way ANOVAs with planned contrasts assessed the mode of delivery (ECS, PCS, IVD, MVD and SVD) differences on Flourishing Scale (FS), Satisfaction With Life Scale (SWLS), Scale of Positive and Negative Experience (SPANE), Beck Depression Inventory-II (BDI-II) and Edinburgh Postnatal Depression Scale (EPDS) scores.

### Findings

Results showed that there was a significant effect of mode of delivery on the FS ( $F(4,97)=3.42$ ,  $p\approx.01$ ), SWLS, ( $F(4,97)=3.98$ ,  $p<.01$ ), SPANE-P ( $F(4,97)=3.67$ ,  $p<.01$ ) and SPANE-N ( $F(4,97)=3.95$ ,  $p<.01$ ) scores. No significant differences were found on the BDI-II and EPDS scores.

### Discussion

Results emphasize the important role of positive dimensions of well-being in discriminating psychological outcomes of delivery mode. Indeed, ECS and IVD are associated to lower scores on well-being dimensions compared to PCS, MVD and SVD. No differences between mode of delivery were found on depressive symptoms scores suggesting that well-being measures are more sensitive in detecting postpartum psychological distress.



# Cognitions and eating behaviors

15:30 - 17:00

Varda Soskolne

15:30 - 17:00

## Healthy snacks consumption and the Theory of Planned Behaviour. The role of anticipated regret

L. Canova<sup>1</sup>, A.M. Manganelli<sup>1</sup>, A. Bobbio<sup>1</sup>

<sup>1</sup>University of Padua, Italy

Two empirical studies explored the role of anticipated regret (AR) within the Theory of Planned Behavior (TPB) framework (Ajzen, 1991), applied to the case of healthy snacks consumption.

AR captures affective reactions and it can be defined as an unpleasant emotion experienced when people realize or imagine that the present situation would be better if they had made a different decision. In this research AR refers to the expected negative feelings for not having consumed healthy snacks (i.e., inaction regret).

The aims were: a) to test whether AR improves the TPB predictive power; b) to analyze whether it acts as moderator within the TPB model relationships.

Two longitudinal studies were conducted. Target behaviors were: consumption of fruit and vegetables as snacks (Study 1); consumption of fruit as snacks (Study 2). At time 1, the questionnaire included measures of intention and its antecedents, according to the TPB. Both the affective and evaluative components of attitude were assessed. At time 2, self-reported consumption behaviors were surveyed. Two convenience samples of Italian adults were recruited.

In hierarchical regressions, the TPB variables were added at the first step; AR was added at the second step, and the interactions at the last step. Results showed that AR significantly improved the TPB ability to predict both intentions and behaviours, also after controlling for intention. In both studies AR moderated the effect of affective attitude on intention: affective attitude was significant only for people low in AR.

15:30 - 17:00

## Physical activity and healthy eating – relationships, cognitive transfer, and gender differences

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<sup>2</sup>School of Psychology, Cardiff University, United Kingdom

The aim of the present study was to investigate the relationships between two behaviours – healthy eating and physical activity (PA), as well as the hypothesised transfer of cognitions between the two. Research shows that cross-behaviour cognitions play a role in understanding the adoption of health behaviours and may be part of the explanation of how individuals regulate them. A study with 133 participants, most of whom were university students (84% - up to 25 years), was conducted. The applied measures included questionnaires about healthy eating and PA, based on the WHO recommendations; the Transfer Cognition Scale, which describes PA cognitions as supporting healthy nutrition behaviour; and a questionnaire, based on TRACS, about transferring cognitions from nutrition to PA. All measures showed good internal structure. T-tests registered that gender had a significant effect only on high-intensity PA. Moderate-intensity PA had a positive effect on healthy eating. Participants who met the recommendation for high-intensity PA were prone to spend more time seating on weekends. People who practiced high-intensity PA, were also more likely to transfer cognitions from PA to healthy nutrition. On the other hand, healthy eating behaviour correlated positively with transferring cognitions from healthy eating to PA, and negatively with seating time on weekends. The findings confirm that transfer cognitions are an aspect of the relationship between healthy eating and PA, and that high-intensity PA may have compensatory effect on seating time. These are important aspects of young adults' health which will be further researched and used in future interventions.

15:30 - 17:00

## Diet behavior in patients with diabetes in accordance with integrated model of SDT and TPB

L. Sinkariova<sup>1</sup>, B. Mieziene<sup>2</sup><sup>1</sup>Vytautas Magnus university, Lithuania<sup>2</sup>Lithuanian sports university, Lithuania

**Background.** Optimal blood sugar control include: regular blood sugar monitoring, the use of insulin and/or other diabetic medication, regular physical activity and a balanced diet (AADE, 2014). The aim of the study is to analyze the network of relationships in the integrated model of Self-determination Theory (SDT) and Theory of Planned Behavior (TPB) explaining diet motivation and behavior in patients with diabetes.

**Methods.** This cross-sectional study included 398 patients with diabetes. Among them 42.5 percent) were men and 41.6 percent had Type 1 diabetes. Diet was measured using diet scale from (SDSCA) measure (Toobert et al., 2000), Autonomy Support using HCCQ scale (Williams et al., 1998), Autonomous and Controlled motivation using TSRQ (Williams, 2004). Constructs within TPB were developed on the basis of the recommendations in manuals for researchers (Ajzen, 2006).

**Findings.** Results in the structural equation model (CFI=.95; TLI=.91; RMSEA=.07; SRMR=.06) showed that stronger intentions are related to diabetic diet only in Type 2 diabetes. Higher autonomous motivation is related to diabetic diet in both diabetes groups. Intentions in both diabetes groups are explained by descriptive norms, anticipated disappointment, perceived behavioral control, and autonomous motivation ( $p<.05$ ).

**Discussion.** Autonomy support stands out as an important factor in building the intentions to follow a healthy diet and relevant behavior. Autonomy support is related to a more healthy diet by strengthening self-determination, which, in turn, strengthens the perceived self-efficacy and awareness that other persons with diabetes also follow a more healthy diet.

15:30 - 17:00

## Implicit modulation of food cravings via facial feedback in emotional eaters

J. Schmidt<sup>1</sup>, A. Krause<sup>1</sup>, A. Martin<sup>1</sup><sup>1</sup>Bergische Universität Wuppertal, Germany

**Background:** During the last years, techniques for implicit health behaviour changes gained increasing attention. While there is a general consensus on the importance of automatic processes in modifying health behaviours, little research hitherto examined effects of implicit emotion and behaviour modification based on embodiment. The present study aimed at assessing modulatory effects of facial feedback on motivational food craving - as a relevant antecedent of dysfunctional eating behaviours. We further explored the moderating role of trait 'emotional eating'.

**Method:** A total of 61 women participated in an experiment based on food cue exposure and simultaneous manipulation of facial muscle activity. A read-aloud task either manipulated zygomatic muscle activity (smiling) or corrugator muscle activity (frowning). Participants rated their state food cravings before and after the cue exposure with the experimental tasks. Traits in emotional eating were assessed by self-report (DEBQ).

**Findings:** The manipulation of zygomatic muscle activity prevented an increase in food craving ( $p=.408$ ), while cravings increased during corrugator muscle activation ( $p=.029$ ). A significant interaction ( $p=.041$ ) showed, that the facial feedback effect was especially pronounced in individuals with high degrees of emotional eating. Here, smiling even reduced food cravings.

**Discussion:** The study shows that implicit modulations of motivational food cravings can be achieved by means of facial feedback. Targeting facial expressions associated with relevant emotional states may constitute another promising approach to prevent dysfunctional health behaviours, like overeating due to food cravings. Emotional eaters might especially benefit from such implicit techniques.

15:30 - 17:00

## Overweight stereotype threat: how overweight self-perception may impact women's capacity to select low-calorie food

L. Houtin<sup>1</sup>, P. Chekroun<sup>1</sup><sup>1</sup>Paris Nanterre, France

Overweight people are targeted by numerous stereotypes which can be deleterious for their food choices (Brochu & Dovidio, 2014) through stereotype threat (ST, Steele & Aronson, 1995). As many individuals perceive themselves as overweight (Chang & Christakis, 2003) and may fear to confirm these stereotypes (Carels et al, 2013), we suggest that they could also suffer from ST.

184 female students reported their weight perception before the sessions. In Diagnostic condition participants provided weight-related information and were introduced to a food-selection task pretending to test if overweight people badly select food. In Nondiagnostic condition, the instruction did not mention weight. All participants completed the PANAS, performed the task, completed a distraction task while they were offered M&M's and completed the PANAS again.

A significant Diagnosticity x Self-perceived weight interaction effect was found,  $\beta = -.16$ ,  $t(179) = -2.24$ ,  $p = .026$ . Overweight self-perception inhibits performance on the food-selection task in Diagnostic condition,  $\beta = -.31$ ,  $t(177) = -2.62$ ,  $p = .010$  and enhances it in Nondiagnostic condition,  $\beta = .19$ ,  $t(177) = 2.05$ ,  $p = .042$ . Participants eat more M&M's in Diagnostic than in Non-diagnostic condition,  $\beta = .17$ ,  $t(169) = 2.18$ ,  $p = .031$ . No other effect was found (all  $ps > .10$ ).

These results show that ST may have deleterious effects on the capacity to choose low-calorie food of overweight self-perceived individuals, whether they objectively are or not. This investigation is one of a series aimed at determining how believing to be overweight may lead to objective weight gain.

15:30 - 17:00

## Boredom proneness and rumination interactively mediate the effect of negative urgency on emotional eating

M. Opwis<sup>1</sup>, J. Schmidt<sup>2</sup>, C. Salewski<sup>1</sup><sup>1</sup>University of Hagen, Germany<sup>2</sup>University of Wuppertal, Germany

**Background:** Emotional eating (EE) has been found to be provoked by negative urgency (NU, tendency to act rashly when distressed) and the use of maladaptive emotion regulation strategies, like rumination. Another risk factor for emotional eating is the experience of boredom, which simultaneously facilitates rumination. The aim of the study was to explore the interplay of these factors: We assessed mediating effects of rumination in the relationship between EE and NU. Further, we tested whether this mediation is moderated by individual degrees of boredom proneness.

**Method:** A total of 456 subjects (74% f; age: M=33.8; SD=12.1; 19<BMI<30) completed an online-questionnaire trait about NU (I8), the general use of rumination (RS-8), boredom proneness (BPS), and EE (DEBQ). A double moderated mediation model was tested, with NU as predictor, EE as outcome, rumination as mediator and boredom proneness as a moderator on the direct and indirect path.

**Findings:** Rumination significantly mediated the relationship between NU und EE. However, this indirect effect was dependent on low degrees of boredom proneness (indirect effect  $b = -0.04$ , 95%CI [0.02;0.09]). There was no significant moderation regarding the direct path ( $p = .36$ ).

**Discussion:** The results are unexpected. Rumination often occurs in states of boredom and constitutes a prominent mechanism in explaining dysfunctional eating. However, individuals with a high tendency for boredom proneness may skip the phase of rumination and grasp food immediately and impulsively without reflecting their behaviour. Thus, mechanisms of action in explaining EE may differ depending individual characteristics.

# Changing physical activity and smoking behavior

15:30 - 17:00

Schmid Holger



15:30 - 17:00

## The yoga quick fix - effects of a two-week online-intervention on health-related outcomes

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**Background:** The usefulness of Yoga on health-related outcomes has been shown numerous times in the past. However, the effectiveness of an Online-Yoga intervention has not. Therefore, this study evaluated the effects of a two-week online yoga practice on different health related outcomes by using a correlative cross-sectional as well as a randomized controlled intervention study design.

**Method:** The sample of the cross-sectional study at the first time point consisted of 476 participants (399 female, 77 male). The data was collected online at four time points in total: Just before the yoga-course, after one week, after two weeks and four weeks after completion of the intervention.

**Findings:** The analysis of the cross-sectional data from the first measurement showed significant correlations between a regular yoga practice and the constructs body-awareness, mindfulness, satisfaction with life, and positive affect. No correlations were found for stress, depression, anxiety, and negative affect.

Within the intervention study 128 randomized participants (103 female, 25 male) were compared: An intervention group, which performed an online yoga course as a daily intervention for two weeks and a control group, which had to watch the daily news. In order to control for the effects of an existing yoga practice this variable was used as a covariate. However, none of the hypothesized effects emerged.

**Discussion:** Correlational analyses of the cross-sectional data partly support the positive effects associated with yoga on health related variables. No evidence for the short term efficacy of a two week online-yoga intervention could be shown, though.

15:30 - 17:00

## Behaviour change interventions associated with exercise adherence in patients with persistent musculoskeletal pain: systematic review

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<sup>1</sup>King's College London, United Kingdom

**Background:** Persistent musculoskeletal (MSK) pain is the leading cause of disability worldwide affecting upwards of 30% of the population. Exercise has positive results on patient outcomes however long term adherence rates are low, eliminating many of the benefits, particularly in patients with persistent MSK pain. There is a lack of research designed to enhance exercise adherence in this population. Psychological interventions can promote behaviour change and adherence, however appropriate theoretical models should be applied with constructs that target the relevant behaviours. The primary aim of this systematic review is to identify behavioural interventions associated with exercise adherence in patients with persistent musculoskeletal pain.

**Methods:** The following databases were searched: Embase, PsychINFO, MEDLINE, CINAHL and the Cochrane Central Register of Controlled Trials. Data were extracted and assessed for methodological quality by two independent reviewers using the Cochrane risk of bias tool.

**Expected results:** Preliminary results identified eight studies, including 1,113 participants, meeting the inclusion criteria. Over 20 behaviour change techniques (BCTs coded using the Behaviour Change Taxonomy V18) have been identified, with multiple measures of exercise adherence.

**Current stage of work:** Data is currently being coded and analysed using the Theory Coding Scheme and Behaviour Change Taxonomy. Effect sizes will be analysed using RevMan 5.3.

**Discussion:** In order to develop effective interventions for patients experiencing persistent musculoskeletal pain the effectiveness of various BCTs needs to be explored. The identification of effective interventions linked to theoretical constructs may enhance exercise adherence, and provide a better standard of care.

15:30 - 17:00

## Promoting physical activity in Rheumatoid Arthritis: developing a theory-based behaviour change intervention

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<sup>2</sup>University Hospitals Limerick, Ireland

**Background:** Rheumatoid Arthritis (RA) is a chronic, inflammatory condition. Physical activity has numerous benefits for people who have RA, however interventions targeting physical activity behaviour have had limited efficacy. This project aimed to develop a theory-based behaviour change intervention to promote physical activity in people who have RA.

**Methods:** Development was guided by the UK's Medical Research Council Complex Interventions framework and consisted of three components;

1. Narrative review which explored the use of behaviour change theory in previous interventions
2. Systematic review which examined the content and structure of previous interventions
3. Qualitative study which explored the preferences of key stakeholders (people who have RA and health professionals) about the design of the intervention

**Findings:** Previous interventions had limited consideration of behaviour change theory in design and had a large degree of variance in content, structure and delivery. A lack of knowledge of current physical activity recommendations for people who have RA was highlighted in the qualitative study, and delivery preferences were identified. The Theory of Planned Behaviour was selected and underpinned the mapping of the consolidated findings to the Behaviour Change Wheel. The proposed intervention will be a pilot study and will:

- target moderate-intensity aerobic physical activity behaviour
- be delivered by a physiotherapist in a community setting in four sessions
- incorporate behaviour change techniques to facilitate and support behaviour change

**Discussion:** We have developed a theory-based intervention which considers the preferences of key stakeholders. Future research will determine the feasibility and effectiveness of this intervention.

15:30 - 17:00

## Feedback on post-exercise affect to promote subsequent physical activity: a systematic review

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**Background:** Despite the documented health benefits, the UK population is inactive. One barrier may be the distal nature of many of the benefits of physical activity (PA) (e.g. weight loss). Raising awareness of the acute benefits of PA (increase in positive affect/mood), may promote behaviour change. A systematic review was undertaken to determine the evidence, feasibility and characteristics of interventions that aim to increase PA and include feedback on affect following a bout of PA.

**Methods:** We searched 17 electronic databases. We included qualitative and quantitative studies exploring or aiming to promote PA in adults or which discussed the idea of, or an intervention that included providing feedback (information) about activity-contingent affect. Studies reporting a PA outcome or attitudes surrounding the association between PA and affect and if and how it influences PA were included. A narrative synthesis, with scope for a meta-analysis, is being conducted.

**Findings:** Scoping indicates a large number of papers will be retrieved with few eligible papers. Eligible papers will likely consist of correlational and qualitative studies. Data extraction includes characteristics of interventions (including coding of Behaviour Change Techniques), physical activity outcome measures and results, and discussions of activity-contingent affect and its impact on PA.

**Discussion:** Promising approaches to promoting PA via raising awareness of the acute mood benefits of PA will be presented. Such interventions could be delivered via Smartphones, reaching a substantial part of the adult population, and may significantly affect public health. Results will be combined with qualitative work, to inform app development.

15:30 - 17:00

## Changes in autonomy over tobacco and nicotine dependence after implementation of ASPIRA smoking prevention program

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<sup>1</sup>University of Medicine and Pharmacy of Tîrgu Mureş, Romania

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The theory-based construct of autonomy supports the idea of a useful explaining concept of nicotine dependence of adolescents. This study focus on differences in the level of proneness toward nicotine use and the presence of symptoms of addiction among smoking teens comparing baseline and 6 months follow-up data. Participants were 272 currently smoking students selected from a cluster randomized control trial (N = 1835) of 9th-graders involved in the ASPIRA program. We assessed the vulnerability of developing nicotine addiction with the Hooked on Nicotine Checklist, completed with the Modified Fagerström Tolerance Questionnaire (MFTQ) along with the reported smoking status in the last 30 days, the amount of daily cigarettes and current smoking status. We performed comparison between test and retest with Cohen's kappa and paired samples t test. We measured the prediction role of the variables using step-way linear regression. The reported smoking status proved a slight but significant improvement after intervention at six-month follow-up. Data obtained before and after the intervention in the smokers' sample showed significantly lower scores at both scales MFTQ and HONC, underlining the important role of the intervention in changes on vulnerability to nicotine addiction. Our results suggest that the loss of autonomy is a significant predictor of nicotine addiction, in line with the newest studies proposing the autonomy theory as a useful approach in the assessment of nicotine dependence in adolescence.

15:30 - 17:00

## Participation in sport programmes for marginalized people: improvements in psychosocial and life domains

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<sup>2</sup>Deakin University, Australia

**Background:** Life Goals is a Dutch foundation that aims to use sports for the personal development of socially excluded people, such as homeless people, drug addicts, and ex-offenders. This study examined whether participation in two different sport programmes is associated with improvement in five psychosocial domains (i.e., health, self-reflection, emotional stability, self-management, and social skills), and three life domains (i.e., home situation, work/education, and leisure time). **Methods:** Self-report data were collected via an online monitoring system and included 89 participants (79.8% men, mean age: 28.6 years) with data collected at two points in time. Psychosocial domains were assessed with multiple items, and life domains with a single item. A mixed model tested for changes over time, while considering possible interactions with age, gender, programme type, and duration in the programme. **Findings:** Scores in all psychosocial and life domains showed significant increases over time. Few interaction effects were found. Remarkably, increases in health ratings were higher among players who had been shorter in the program. Further, players in the Dutch Street Cup showed an increase in self-management ratings, while players in the Dutch Trainee Cup program did not. **Discussion:** Socially excluded people appear to benefit from participation in the sport programmes. Improvements were found in all domains, and hardly relied on gender, age, program type and duration.

15:30 - 17:00

## Using the RE-AIM framework to evaluate a public health physical activity intervention in primary care

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### Background

Physical activity (PA) interventions are routinely used in Public Health, however few have evaluated both individual outcomes and operational processes. To address this gap, the RE-AIM framework (Glasgow et al., 2012) was utilised to evaluate delivery of Let's Get Moving (LGM), an NHS behaviour change intervention employing Motivational Interviewing (MI) techniques to promoting levels of physical activity.

### Methods

A UK local authority commissioned LGM in two GP surgeries. Patient records were screened to identify adults with a BMI >28 or on a diabetes register. Patients identified as physically inactive (N=248) were subsequently invited to participate in a 12-week, one-to-one MI intervention delivered by a trained practitioner. The primary outcome of interest was physical activity levels assessed by MET (Metabolic Equivalent Task) minutes/week scores, taken at baseline, 12 weeks, 6 and 12 months using the IPAQ questionnaire. Responses across time points were analysed using the Wilcoxon Signed Rank Sum Test. Interviews were conducted with GPs and Practice Managers to explore implementation of the intervention in Primary Care and explored using framework analysis.

### Findings

At 12 weeks, 6 months and 12 months there was a significant increase in total PA, walking and moderate activity, compared to baseline ( $p < .001$ ), Interviews highlighted key considerations for integration in to Primary Care- for example, allocating appropriate resources and IT systems able to easily identify the target group.

### Conclusions

Results show a significant increase in physical activity levels suggesting a brief MI intervention, delivered in Primary Care, can impact on short and longer-term changes in behaviour

15:30 - 17:00

## The effects of the anti-smoking educational program entitled Run for Health

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<sup>1</sup>University of Warsaw, Poland

### Background:

Anti-smoking Educational Program was developed in cooperation with the Chief Sanitary Inspectorate in Poland. The program is aimed at students in grades 4 of primary schools and is an innovative approach to prevent problems of smoking.

### Methods:

The study involved 471 children at the age of 10 participating in the pilot program, 413 children at the age of 10 that did not participate in the program (control group). The study also involved 366 parents of children participating in the program and 345 parents of children who did not participate in it. Another group consisted of 80 teachers. We used experimental design including two measurements, and the experimental and control group.

### Findings:

Children participating in the program had after classes: stronger motivation to care their health

( $z=-2.27$ ,  $p<0.05$ ,  $M1=4.82$ ;  $SD = 0.53$  vs.  $M2=4.94$ ;  $SD=0.37$ ), higher awareness of important factors influencing health: physical and mental condition ( $z=-2.74$ ,  $p<0.01$ ,  $M1=4.27$ ;  $SD = 0.84$  vs.  $M2=4.84$ ;  $SD=1.02$ ), inter alia. The analysis of the same variables showed lack of significant changes in the control group.

### Discussion:

The measurement results on attitudes towards the health of children participating in the program, indicate a significant impact on program content perception of health as an important part of everyday functioning. The results should be regarded as sufficient recommendation to implement the program on a large, nationwide scale.



# Sexuality, lifestyle and health

15:30 - 17:00

Caroline Kelleher

15:30 - 17:00

## Identifying psycho-social determinants and environmental conditions related to alcohol consumption during pregnancy

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**Background:** Fetal Alcohol Spectrum Disorders (FASD) represents a spectrum of birth defects caused by prenatal alcohol exposure. It is one of the most important preventable forms of non-genetic birth defects associated with intellectual disability. In order to systematically plan health promoting programs, it is necessary to identify specific psycho-social determinants and environmental conditions related to maternal drinking.

**Methods:** A systematic literature search on psycho-social determinants of maternal alcohol drinking behaviors was conducted in multiple databases up to July 2016, including PubMed, PsychINFO, PsychARTICLES, ERIC, CINAHL, EMBASE and MEDLINE. A query was generated and resulting hits were exported and screened during three rounds (titles, titles and abstracts, full text). Screening took place by one screener and was randomly checked by a second screener. Results were then extracted and analyzed.

**Findings:** Studies identified determinants related to maternal alcohol consumption using qualitative and quantitative research methods. None of the included studies was conducted primarily to investigate the association between psycho-social determinants and maternal drinking behavior(s). The focus of most researchers is on knowledge and risk perception. Attitudes and perceived norms get some attention, while self-efficacy and especially automaticity of behaviors get very little attention.

**Discussion:** Changing maternal drinking behavior requires understanding the determinants and environmental conditions first. It is recommended that the determinants of risk behaviors related to FASD are identified following a theory- and evidence-based procedure. Recommendations for future research are provided.

15:30 - 17:00

## Do 'sexual consent workshops' work? A randomised control investigation

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### Background

Sexual consent is acknowledged as an important component of positive sexual health. However, there has been scant development of theory-driven and evidence-based interventions to support young adults in developing sexual consent knowledge and preparedness. In order to address this limitation, this study investigated the effectiveness and acceptability of a 'SMART Consent' initiative in promoting positive attitudes and behavioural intentions among college students.

### Method

A sample of 292 college students (112 male; 178 female; 2 unspecified) were recruited and randomly allocated to either a sexual consent (Intervention) or sexual health (Control) condition. The intervention group took part in a two hour interactive consent workshop based on social norms and sexual scripting theory. The control condition comprised a two hour interactive workshop on other topics in sexual health. Participants completed pre- and post-workshop questionnaires assessing their attitudes toward consent and behavioural intentions.

### Findings

Participants in the intervention condition showed significantly higher intentions to engage in verbal consent behaviours ( $M = 34.28$ ,  $SD=6.76$ ), in comparison to the control group ( $M = 33.86$ ,  $SD=5.36$ ), after controlling for Time 1 responses. Participants also provided positive feedback on the quality and usefulness of the SMART Consent workshops.

### Discussion

This study provides preliminary evidence that sexual consent workshops may be effective in promoting greater intentions to engage in verbal consent communication. Guided by research and theory, consent workshops can be a practical addition to emerging research on sexual consent practices among young adults.

15:30 - 17:00

## STIS and HIV in Ireland: developing a national second generation surveillance system

C. Kelleher<sup>1</sup><sup>1</sup>Royal College of Surgeons in Ireland, Ireland

**Background:** According to a technical report by the European Centre for Disease Prevention and Control (ECDC, 2009), the Republic of Ireland does not have a functional second generation (combining biological and behavioural intelligence) surveillance system &#40;SGSS&#41;. Ireland's first national sexual health strategy (2015), specifically recommends the establishment of such a system. The current project aims to address this gaps using a collaborative approach with key stakeholders, with a view to building national consensus on the design of a national second generation surveillance system.

**Methods:** Using the Joint United Nations and World Health Organisation's framework for initiating second generation HIV surveillance system, this project will: assess the current surveillance systems; engage key stakeholders in a national consensus building workshop; conduct a feasibility study assessing acceptability of agreed STI and HIV behavioural indicators; and draft a national STI and HIV surveillance plan.

**Findings:** Data collection for Stage 1 has begun. A report on the strengths, weaknesses, opportunities and threats (SWOT) of current HIV/STI surveillance systems will inform data collection via the Delphi method in Stage 2 culminating in a consensus building workshop with key stakeholders.

**Discussion:** This work will provide critical data and evidence on the national surveillance of STIs and HIV in Ireland. It will also inform the development of a SGSS and have a measurable impact on sexual healthcare policy and services while facilitating the cross-comparison of STI/HIV trends internationally.

15:30 - 17:00

## Sexual risk taking under informal PrEP users

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<sup>1</sup>Maastricht University, Netherlands

<sup>2</sup>Silom Pulse Clinic Bangkok, Thailand

**Background:** PrEP (Pre-Exposure Prophylaxis) is a biomedical intervention to reduce HIV infections. Although the efficacy of PrEP has been demonstrated in several trials, PrEP is only available in a few countries. As a consequence, men who have sex with men (MSM) try to get PrEP via informal ways, for example via tourism to countries where PrEP is available and affordable. We explore whether informal PrEP users use PrEP correctly and if they involve in sexual risk taking behavior.

**Methods:** MSM clients of the Silom Pulse Clinic in Bangkok, and visitors of a Dutch PrEP interest website, completed a survey about PrEP use, sexual health and behavior. Data collection is ongoing. Our preliminary results are based on the analysis of the 100 respondents who completed the survey in the first weeks.

**Results:** 65 respondents (65%) were using PrEP informally. PrEP users showed high risk sexual behavior, such as a high amount of sexual partners in the past 6 months ( $M=19.9$ ,  $SD=22.0$ ) and visited circuit parties (26 participants, 40.0%) and sex parties (24 participants, 36.9%). A daily regimen (48 participants, 73.8%) prevailed, 16 participants (24.6%) used PrEP intermittently. Especially in this last group PrEP use seems “suboptimal”, such as low adherence and lack of checkups.

**Discussion:** While PrEP is an effective HIV prevention when used correctly, current availability forces users to engage in so-called PrEP tourism. The resulting lack of counseling and medical checks, as well as intermittent use, create a higher likelihood of suboptimal regimens and thus overestimated HIV protection levels.

15:30 - 17:00

## Health behaviors, lifestyle and gender in Brazilian adults

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<sup>3</sup>Faculty of Psychology and Education Science, University of Porto, Portugal

**Background:** It has been estimated that over 50% of the premature deaths in Western can be attributed to lifestyle. This work aimed to identify, from a gender-based perspective, the psychosocial factors associated with healthy lifestyles in the ELSA-Brasil cohort, the largest study concerning adult health conducted in Latin America.

**Methods:** The ELSA-Brasil is a longitudinal study and consists of 15,000 employees from higher education institutions. Data were collected using the ELSA-Brasil questionnaire, a multidimensional instrument. The indicator of lifestyle was constructed using four behaviors: tobacco use, alcohol consumption, physical activity and nutrition.

**Findings:** The women adopt healthier lifestyles than men. In women, strong associations were found between a healthy lifestyle and age 60 years or older (OR=2.21; IC95% 1.79-2.72), Asian race (OR=2.29; IC95% 1.57-3.36) and university level of education or higher (OR=1.89; IC95% 1.55-2.29). In men, being 60 years or older (OR=1.32; IC95% 1.08-1.61), of Asian (OR=1.66; IC95% 1.05-2.60) or Caucasian race (OR=1.20; IC95% 1.02-1.41), having a high-school equivalent level of education or higher (OR=1.36; IC95% 1.17-1.59), being retired (OR=1.31; IC95% 1.07-1.61), having a housekeeper (OR=1.34; IC95% 1.16-1.56), having a good or very good self-perception of health (OR=1.20; IC95% 1.02-1.41) and being satisfied with one's own body image (OR=1.23; IC95% 1.07-1.41) were the psychosocial factors associated with leading a healthy lifestyle.

**Discussion:** These factors, different between men and women, should be considered in health promotion interventions.

15:30 - 17:00

## University students' health representations: new definitions and challenges for the future

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<sup>4</sup>Institute of Psychology; CERPSAVI; Social sciences and Politics Faculty, Switzerland

Historically, health definition has been explored through different theoretical models. Last definitions of health date from the last decades of the 20th century. Some scholars and applied psychologists observe that those definitions don't fit with lay person's life experience and consequently impair health promotion campaigns efficacy.

The aim of this research is to explore health definitions given by young adults through their own discourses and provide some understanding of the motives of their health behaviours.

Semi-structured interviews were conducted with 138 Bachelor students (18 to 26 years old) and analysed with a thematic content analysis of discourses and a Lexicometric analysis using Iramuteq Software.

As results, after coders' agreement, we can assess that health and being healthy is a mixed individual experience that may include (or not): physical activity for wellness; healthy food behaviours; limited alcohol drinks; specific attention to sleep quality; limited medics consumption but regular use of homeopathy or other CAM; secure sexual behaviours (STI and pregnancy avoidance).

However, this idyllic picture of health and healthy behaviours in young adults should make us aware that, at the same time, unhealthy behaviours exist such as smoking, unhealthy eating, binge drinking and medication consumption. Their discourses show us that they seem adopt mixed behaviours combining their own experiences and public health recommendations or media prevention messages. More research reducing social desirability biases and exploring real practices and behaviours should be developed.

15:30 - 17:00

## Psychosocial predictors of condom use among Mozambican women at sexual risk

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**Background:** Heterosexual encounters remain the primary route of HIV/Aids and other sexually transmitted infections (STI) in Africa. Consistent condom use is the most effective method of HIV prevention. However, this preventive behavior not as successful as desired, because it is often associated with negative meanings attributed to sexual acts, and to condom preparation and negotiation. This paper aims to identify psychosocial predictors associated with condom use in Mozambican women at sexual risk.

**Methods:** Women (173), patients at a Gynecology clinic and at risk for STI infection, completed measures of condom use negotiation self-efficacy, perceived barriers against safer sex, and condom use.

**Results:** Regression results show that socio-demographic variables explained 14.5% of the variance ( $\Delta F(2, 170)=14.39, p < .001$ ) and marital variables explained 19% of additional variance ( $\Delta F(2, 168)=24.01, p < .001$ ). Women who were younger ( $\beta = -.27$ ), and had a higher level of education ( $\beta = .19$ ), used condoms more frequently. Regarding marital variables, women who were single (and living alone) ( $\beta = -.34$ ), and talked more about HIV/Aids with partners ( $\beta = .25$ ) presented higher levels of condom use. The final model, with condom use negotiation self-efficacy in step 3, explained 21.2% of additional variance in condom use ( $\Delta F(1, 167)= 78.29, p < .001$ ).

**Conclusions:** These results seem to support an exploratory predictive model of condom use that can inform interventions directed at behavioral change among Mozambican women at sexual risk.



# Risk and health communication

15:30 - 17:00

Angelos Kassianos

15:30 - 17:00

## The role of genetic counselling for colorectal cancer in improving emotional, cognitive, and behavioural outcomes

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**Background:** Genetic counselling is often recommended for individuals with a personal or familial history of colorectal cancer but the impact of this intervention has been less explored. The objective of this study was to assess the impact of genetic counselling on various outcomes: emotional (e.g., anxiety, depression), cognitive (e.g., knowledge, risk perception), behavioural (e.g., screening uptake).

**Methods:** An extensive search was conducted in electronic databases (PubMed, PsycInfo and Cochrane) investigating the literature published until January 2017. We included studies which investigated the impact of genetic counselling for colorectal cancer; clearly defined genetic counselling; included patients diagnosed with colorectal cancer or family members at risk. Two authors independently assessed the quality of studies.

**Findings:** Thirty-one studies met our inclusion criteria. Results show that genetic counselling improves cognitive outcomes such as knowledge and risk perception. Emotional distress (e.g., anxiety, depression) is usually higher immediately after the genetic test disclosure session but is decreasing at follow up assessments. In terms of screening adherence, genetic counselling had a positive impact for the mutation positive individuals, but mutation negative individuals usually failed to comply with the screening recommendations.

**Discussion:** This systematic review includes all studies which investigated the impact of genetic counselling for colorectal cancer. Studies included in this systematic review showed that genetic counselling improves emotional, cognitive and behavioural outcomes in individuals affected or at risk for familial colorectal cancer.

15:30 - 17:00

## Patient ratings of physicians: how meaningful are they?

J. Rhue<sup>1</sup><sup>1</sup>Ohio Univ Col of Medicine, United States

### Background:

Research has documented the importance of physician use of communication skills (empathy, listening, open-ended questions, and positive non-verbal behaviors) in their interactions with patients. As part of a curriculum of patient-centered care, our medical school, comprised of three campuses, provides training in doctor/patient communication skills to medical students.

### Methods:

In clinical interviews with patients from different cultural and ethnic backgrounds, 224 second year medical students practiced their doctor/patient communication in a clinical case and were rated on their skills by patients and by physician preceptors. Both used the same rating sheet, and patients at each campus received rating instructions.

### Findings:

Across all three campuses, analyses (T-Tests) revealed that patients rated students as performing better compared to the physician ratings ( $f=14.190$ ,  $df=2$ ,  $p<.001$ ). Patient ratings did not differ from each other across campuses.

### Discussion:

Findings suggest that patients see medical students as more skilled communicators and rate them more highly than do physician preceptors. These findings were unexpected, since patients had been instructed on using the rating scale. The overarching issue emerging from these findings relates to the meaning of patient ratings of their doctors. In an age of using the internet and social media for finding a physician, patients often use doctor ratings from other patients. Not only are such ratings global, their validity is questionable. Patients may misunderstand specific ratings or may simply view the physician as “good” or “bad” based on liking.

15:30 - 17:00

## Women's experiences of polycystic ovary syndrome diagnosis and treatment in Mexico: information delivery and communication

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**Background:** Polycystic ovary syndrome (PCOS) is the most common endocrine disorder affecting women across the lifespan. A timely diagnosis and evidence-based approaches are key in management of this condition. The aim was to examine women's experiences of PCOS diagnosis and treatment, and to assess receptiveness to a web-based intervention.

**Methods:** Women from two online support groups completed a web-based survey (n=105). Eligibility criteria included: being a Mexican resident, aged 18 to 45 years, and having a previous medical PCOS diagnosis. Mean age was 29 (SD  $\pm$ 4.7) years; mean BMI was 30.2 (SD  $\pm$ 5.7) kg/m<sup>2</sup>.

**Results:** For 19%, time to diagnosis was more than 2 years and 36% visited three or more health professionals before being diagnosed. Almost one-third (30%) reported not being directed to information about PCOS at diagnosis, 23% received information, and 47% received information but felt it was insufficient. Of those who received information, the majority (73%) felt dissatisfied with or indifferent to information provided, 69% reported having received information about lifestyle management (nutrition and exercise), 78% about potential infertility, and 28% about mental health support. After being diagnosed, Internet was the preferred source of PCOS information for the majority (90%), whilst 9% preferred clinicians. 98% of the women reported being interested in participating in a web-based lifestyle intervention for PCOS management.

**Conclusions:** PCOS diagnosis is often delayed, requires various health professionals, and leaves a gap on information provision. Findings suggest the need for development and feasibility trial of a lifestyle online intervention for women with PCOS.

15:30 - 17:00

## Health professionals' views about direct-to-consumer advertising of prescription medicines as a health communication approach

N. Khalil Zadeh<sup>1</sup>, K. Robertson<sup>1</sup>, J. Green<sup>1</sup>

<sup>1</sup>University of Otago, New Zealand

### Background:

Direct-to-consumer advertising of prescription medicines (DTCA) is legal only in New Zealand and the United States, but it reaches other countries through the Internet. In New Zealand, DTCA is self-regulated and there is a concern regarding the ethicality and the nature of prescription medicine advertising. Based on corporate social responsibility (CSR), pharmaceutical companies should interact legally and ethically within society and subsequently offer DTCA so that even lay people can make informed decisions. Therefore, this study examines health professionals' opinions of DTCA as a health communication approach to explore how DTCA can provide individuals with the information necessary to be able to make informed decisions.

### Methods:

This study is an exploratory qualitative study applying semi-structured in-depth interviews with 30 health professionals in New Zealand. Means-end chain approach and thematic analysis will be used collectively to identify the attributes and values required in DTCA to help individuals make informed judgments.

### Expected results:

This research will reveal health professionals' opinions regarding the effects of DTCA on individuals and society, and suggestions on how to offer medicine advertising that facilitates informed judgments.

### Current stage of work:

Semi-structured in-depth interviews with health professionals are currently being performed.

### Discussion:

This research will support health policymakers and advertisers by providing a guide for future medicine advertising, and by improving advertising of medicines, it will also improve patients' decisions.

15:30 - 17:00

## Information-seeking about diet and physical activity during a first pregnancy: an interpretative phenomenological analysis

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### Background

Pregnancy is a time when women may be more motivated to improve their diet and physical activity behaviours. By contrast, a first pregnancy is a period of intense change and women often report being overloaded with information. Our study aimed to explore women's receptiveness to health messages and information seeking behaviour at this time.

### Methods

Seven women participated during the second half of their first pregnancy. In-depth interviews guided by a broad topic guide were conducted, to elicit views on health behaviour change during pregnancy, and on the relative importance and trustworthiness of different sources of information. Verbatim transcripts were analysed using Interpretive Phenomenological Analysis.

### Findings

Information-seeking varied greatly between participants, with some voracious and proactive, and others actively avoiding information. This variation was linked to ease or difficulty in conceiving and degree of acceptance of their new mother role. Overall, women perceived health professionals, books and the internet as more reliable and trustworthy than information from friends, magazines and television. The immediacy of online sources to answer questions or relieve anxieties was valued by some women. Some women valued experiential advice from non-professionals, while others believed their own pregnancy to be unique. Midwives' advice was universally trusted but rarely the first choice when seeking information, due to infrequent contact.

### Discussion

While these women were receptive to health messages, innovative strategies may be needed to promote a healthy lifestyle to pregnant women who do not proactively seek information. Signposting to credible and accurate information online may be beneficial.

15:30 - 17:00

## An authority distribution: when decisions are made by patient and when for patient?

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**Background.** The benefits of medical interventions are grounded well by solid evidence, mostly quantitative and positivist. This leads the healthcare system to take authoritarian position and to insist (even through policies) on actions that are set as proper, with denial of the opposite. Real clinical practice, however, introduces an issue of autonomy. On what grade “the good” is a person’s own decision, but not just prescription? When informed consent is truly informed? And when nudging goes beyond ethical?

**Methods.** Literary review, semiotic analysis of clinical practice, and interviewing of post-myocardial infarction patients in live clinical setting with textual and discourse analysis.

**Findings.** 1) A shaky balance outlined in “authority distribution” among healthcare participants, with focus on communication skills bound to personality of a professional. The intra-individual borderlines exist, that determine a “should” vs. “may”. 2) Key phenomenal elements are listed, with suggested way of introduction into practice (e.g., the implicit experiences addressed by empathic listening; threshold for details in informed consent obtaining to be made explicit by interview structure). 3) The maturity of personhood of the professional is grounded as key element determining the grade of autonomy delegation in health related decisions for patient.

**Discussion.** Critical analysis of the relations of evidence, authority and patients’ experiences sets a need for clinician to possess skills that make her able to 1) adequately understand patient’s implicit [“empathy”]; 2) influence patient’s decisions [“manipulation”] to the 3) felt extent of ethically appropriate with consideration of complex issues such as spiritual, culture-dependent, family, etc. [“virtue”].

15:30 - 17:00

## Physicians' empathy for patients with chronic disease and patient perceptions

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<sup>5</sup>National School of Public Health, Greece

**Background:** Empathy is a cognitive attribute that involves an ability to understand the patient's pain, suffering and perspective combined with a capability to communicate this understanding and an intention to help. The purpose of this study was to reveal whether clinicians show empathy to patients with chronic diseases. Moreover, the study aimed at disclosing patients' beliefs about their doctor's empathy.

**Methods:** The study took place in an oncology clinic and a rehabilitation clinic in two general hospitals in Athens, Greece, after the approval of their bioethics committee. 143 patients and 32 doctors participated by filling in a questionnaire (Jefferson Scale of Physician Empathy). The statistical analysis was completed with SPSS and MATLAB programmes.

**Findings:** Results show high scores in empathy in these clinics and this fact is evidenced by answers of both patients and clinicians in the questionnaires. There is a statistically interesting result about patients' smoking. After the diagnosis, patients tend to follow their physician's advice and quit smoking, although this does not happen immediately after they are informed about their condition. Moreover, empathy in clinicians seems to depend on the amount of coffee they consume in their everyday life.

**Discussion:** The results of this study are very important because they create new perspectives about empathy. It is proved that empathy is related to clinicians' burn-out. Furthermore, the study demonstrates that patients with chronic diseases, who believe that their doctor understands their situation, have better chances to comply with the regulations needed for their treatment.



15:30 - 17:00

## Pregnancy and childbirth expectations: an exploratory content analysis

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Existing research on subjective experiences and expectations of childbirth is mainly quantitative. This study aims to obtain a more complete and comprehensive view of women's pregnancy experiences, expectations of childbirth and the way they cope with the childbirth scenario. We conducted 37 semi-structured interviews with pregnant women in the 10th-41st week of pregnancy. Regardless of the large age range (19-40), most of the women were first time mothers (59.5%). All of them were in a stable relationship with the future father (mostly married 69.4%) and with a high school or university degree (88.8%). Questions included on the interview script follow previous research findings. Recorded interviews were transcript, coded and analyzed with Alceste software. The initial analysis identified 37 units and 497 elementary context units (ECU) with 25 words each. Descending hierarchical classification preserved 73% ECU/4 classes: Expectations of childbirth, mother-baby relationship, relational context and health care. We can infer that, for this group of women sensorial sensations are decisive for mother-baby bond, there's a fear of childbirth pain, an anxiety of the unknown situation, and the consequent desire for a natural and stress-free childbirth. Considering childbirth preparation programs, we stress the importance of including, not only information regarding pregnancy/childbirth, but also support from the medical staff. Partner supports is empathized as a critical need (social, emotional and everyday task support). Future studies shouldn't overlook the importance of the role that health personnel and partners support play in the way woman cope with childbirth.

# Migration and cross-cultural health

15:30 - 17:00

Antonia Lyons

15:30 - 17:00

## Economic situation and intentions to leave home country: mediation effects of rootedness and normative beliefs

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Several studies have indicated that students' tendencies to leave the home country are strongly driven by economic conditions. However, despite similar economic conditions some individuals are more likely to do so than others.

**Aim:** To explore mediation effects of rootedness and normative beliefs (NB) on the relationship between perceived economic situation and a plan to leave the home country.

The data were collected using a web platform from 375 university students (76% girls;  $M=22.9$ ) at 18 universities in Slovakia. Rootedness (desire for change and home/family) and NB were measured by 10 and 13 item scales, respectively. The level of perceived economic situation and the plan to leave the country were measured by specific questions. Regression and mediation analyses were used for data analysis in SPSS 21.

More than 53% of students perceived their economic situation regarding their professional and family situation as rather pessimistic and 12% as very pessimistic. These students were significantly more likely to have plan to leave their country after university studies ( $\beta= .187$ ;  $p=.0003$ ). The mediation effect was confirmed as both the rootedness (desire for change) ( $\beta= .237$ ;  $p=.0004$ ) and NB ( $\beta= .067$ ;  $p=.033$ ) mediated the relationship between perceived economic situation and the plan to leave their country.

The results showed that those students who perceived their economic situation negatively in home country were more likely to have plan to leave the country after their study at university. However, this relationship is fully mediated through the desire for change tendency and partially through normative beliefs.

15:30 - 17:00

## “Who will hire me now?": Views on reemployment in aging immigrants

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**Background:** Despite active aging discourses and labor force integration goals, unemployment and dependency on welfare institutions among older workers still prevail, especially among vulnerable groups like immigrants or women. However, little is known about how older immigrants understand or cope with unemployment. The present study investigates the interplay between age, gender and immigrant status in making sense of unemployment, reemployment barriers and work prospects.

**Methods:** Semi-structured interviews were conducted with 12 Russian-speaking (six women and six men) and 12 Turkish (six women and six men) unemployed aging immigrants living in Germany. The age of participants ranged between 50 and 65 years old. Data were analyzed with thematic coding.

**Findings:** Older unemployed immigrants perceived age as an important barrier for reemployment and used old age to make sense of their unemployment, setting the stage for the internalization of negative age stereotypes. Gender norms may be less important than age perceptions in the context of unemployment.

**Discussion:** Public policy alternatives are discussed in relation to changing negative aging stereotypes concerning aging immigrants and promoting culturally-appropriate healthy aging intervention among such vulnerable groups.

15:30 - 17:00

## Caregivers' perceptions of the functions of child health surveillance services: exploring (different) patterns of representations

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**Background:** The access/use of health services is influenced by patients' beliefs/knowledge and representations of those services. In the case of immigrants such representations may also be influenced by their experiences with health services of their countries of origin, which may contribute to their health-related vulnerability. This study explored the representations of the functions of child health surveillance services (CHSS) of Cape Verdean and Brazilian immigrants in Portugal and whether such representations were influenced by their socio-economic status (SES).

**Methods:** 5 focus groups (n=19) and 17 semi-structured individual interviews were conducted with immigrants and non-immigrant child caregivers. Data was analyzed with a content analysis methodology, followed by multiple correspondence analysis.

**Results:** CHSS activities were framed in two main functions: health promotion and disease prevention. Some patterns of representations were associated with caregivers' SES: (1) "vaccination as the main function of CHSS" was a more common representation among immigrants or caregivers of low SES; (2); "CHSS as including several health promotion activities" (e.g., counselling, monitoring of physical growth or psychomotor development) was a representation more often held by non-immigrants or caregivers of high SES.

**Conclusions:** Drawing on a patient-centered perspective, these findings map (non)-immigrant caregivers' representations about CHSS in Portugal, which may contribute to understand their patterns of access and use of CHSS.

15:30 - 17:00

## Drinking motives and problematic alcohol use among Chinese and Filipino university students

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**Background:** This study aimed to (1) validate the factor structure of the Chinese version of the Alcohol Use Disorders Identification Test (AUDIT: Saunders, et al., 1993) and the Drinking Motives Questionnaire (DMQ: Cooper, 1994); (2) determine the equivalence of the Chinese and original English versions; (3) determine which among the drinking motives are associated with alcohol outcomes and whether the associations between the motives and alcohol outcomes vary between Chinese and Filipinos.

**Method:** The Chinese version of AUDIT and DMQ were administered to Chinese university students studying in Macau (n=272, female=101). The English measures were administered to Filipino university students (n=200, female=96). Both groups self-reported to have consumed alcohol in the past year.

**Findings:** Using multiple group CFA, we tested the factor structure and measurement equivalence of both measures. The two-factor structure of the AUDIT (consumption, and alcohol problems) was equivalent between Chinese and Filipinos on the configural, metric, and scalar levels. The four-factor structure of the DMQ (social, coping, enhancement, and conformity) was only equivalent at the configural and metric levels. Using multiple group latent variable SEM we examined the associations between drinking motives and alcohol outcomes controlling for age and gender.

**Discussion:** The study provides preliminary evidence of the usefulness of the AUDIT and DMQ instruments to measure alcohol motives and outcomes among Chinese university students. The differences in the association of drinking motives and alcohol outcomes between Chinese and Filipino university students reveal cultural differences and potential influence of these differences to health outcomes.

15:30 - 17:00

## Translation and validation of the Fear of Dental Pain (short-form) Questionnaire in China

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**Background:** Individuals who respond fearfully to dental pain are at increased risk of overestimated pain and escalating anxiety. The short form of the Fear of Dental Pain Questionnaire (s-FDPQ; van Wijk et al, 2006) is a validated measure developed to quickly screen patients in respect to their dental fear. As there is a high prevalence of dental fear/anxiety in Chinese adults, our study aimed to translate the s-FDPQ into Chinese and then explore the reliability and validity of this measure in a Chinese population.

**Methods:** We translated the s-FDPQ using the forwards-backwards method and pilot tested it on a small sample of adults in China. Following this, 349 Chinese adults completed the newly translated scale, as well as well as a standardised dental anxiety questionnaire (Modified Dental Anxiety Scale Chinese version) to test construct validity. 107 participants completed the s-FDPQ again 2 weeks later to gauge test-retest reliability.

**Findings:** The Chinese s-FDPQ was internally consistent ( $\alpha = 0.9$ ) and demonstrated construct validity ( $r = 0.7$  when correlated with the MDAS). Test-retest reliability was good ( $r = 0.7$ ).

**Discussion:** These findings suggest that the s-FDPQ is a reliable and valid measure for assessing Chinese adults' fear of dental pain. This Chinese version should help us conduct research in dental pain research to evaluate the cross-cultural stability of the s-FDPQ, to investigate the relationship between FDP and pain felt during dental procedures, and to explore health psychology interventions to positively influence pain experienced during dental procedures.

15:30 - 17:00

## Association of health literacy with self-rated health and health-related quality of life in Slovak adults

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**Background:** Self-rated health (SRH) and health related quality of life (HRQoL) is associated with many factors including health literacy (HL) defined by WHO as “the personal, cognitive and social skills which determine the ability of individuals to gain access to, understand, and use information to promote and maintain good health”. This association was determined mainly on chronic patients but only few studies focused on general population. The aim of our study is to examine the associations of HL with SRH and HRQoL in Slovak adult population sample.

**Method:** Cross-sectional study on 360 participants (RR=72%; 47.8 % of males, mean age=39, SD=14) recruited in dental offices was conducted. Data on demographics, 9 domains of health literacy (HLQ) and HRQoL (SF12) were collected by questionnaire. The effects of HL on HRQoL and SRH were analysed using t-test and logistic regression.

**Findings:** Significant association of health literacy with SRH (Odds ratios (OR) 1.49-2.11,  $p < 0.05$ ) and HRQoL was found. Higher levels of HLQ domains (6.-9.) were associated with higher odds (age and gender adjusted) to report above-average physical component score in HRQoL (ORs 1.61-1.88,  $p < 0.01$ ) and higher scores in almost all HLQ domains (except domain 5.) were associated with lower odds to report above average mental component score in HRQoL.

**Discussion:** Higher health literacy predicts better SRH, higher HRQoL in physical health but interestingly lower HRQoL in mental health. Concept of multidimensional HL proved to be perspective predictor of SRH and HRQoL also in general Slovak adult population.



15:30 - 17:00

## Mental health, social connectedness and quality of life according to emigration intention among graduate students

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Substantial evidence has accumulated through time showing that social connections are positively and causally related to mental and physical health, and consequently someone's quality of life. Research have shown that social connection is a greater determinant to health than obesity, smoking or high blood pressure. Lack of social connection and support are associated with declines in physical and psychological health as well as quality of life.

Young people at the beginning of their professional and adult life, who are unsatisfied with their lives, might be more prone to decision to leave society they live in, and search for a better life somewhere else. The aim of this study is to explore the satisfaction with life with mental health and social correlates of emigration intention among young professionals. Study comprises 300 graduate students and young professionals who completed their university degree in last 3 years. Mental health was measured by MHC-SF scale, satisfaction with life with Personal-wellbeing index. Results revealed significant difference in mental health and community connectedness between those who want to emigrate and those who want to stay. Significant positive correlations exist between mental health and social connectedness. Findings point to importance of social variables for mental health and satisfaction with life and the role of those as potential predictors of emigration intention. The results also provide insights to new trends, but more importantly, a possibility to act proactively for the social politics with the aim to diminish emigration rate and create prosperous communities where social exclusion is avoided.

# Cardiovascular health and wellbeing

15:30 - 17:00

Cristina Ottaviani

15:30 - 17:00

## Autonomic reactivity to psychosocial stress in individuals with problematic Internet use

T. Moretta<sup>1</sup>, G. Buodo<sup>1</sup>, D. Palomba<sup>1</sup><sup>1</sup>Department of General Psychology, University of Padova, Italy

**Background:** The link between stress reactivity and subjective urge/craving has been less systematically examined in behavioral addictions than in substance use disorders. The present study investigated whether problematic Internet users (PIU) show enhanced autonomic stress reactivity than non-PIU, indexed by lower Heart Rate Variability (HRV) and higher Skin Conductance Level (SCL) reactivity during the Trier Social Stress Test (TSST), and whether greater reactivity is related to stronger urge/craving.

**Methods:** Based on their Internet Addiction Test scores, participants were divided into PIU (N=24) and non-PIU (N=21). Their heart rate and skin conductance were continuously recorded during baseline, the TSST, and recovery. HRV and SCL reactivity during the TSST were measured as autonomic indices of the stress response. "Urge to be online" ratings were collected using a Likert scale before and after the TSST. A mixed-model approach was used to estimate group differences in stress reactivity.

**Findings:** HRV was significantly lower in PIU than non-PIU during baseline, but not during the TSST and recovery. Furthermore, only among PIU a significant negative correlation emerged between HRV during recovery and urge ratings after the test. No group differences emerged for SCL.

**Discussion:** Our findings suggest that problems in controlling one's use of the Internet is related to impaired self-regulation through parasympathetic mechanisms. Reduced autonomic flexibility may mediate the known negative impact of problematic internet use on physical health. HRV-biofeedback protocols may be developed as an adjunct intervention to prevent and/or reduce such negative effects.

15:30 - 17:00

## The influence of the educational load on the student's cardio rhythm variability

E. Nikolaeva<sup>1,2</sup>, S. Kotova<sup>1</sup><sup>1</sup>Herzen State Pedagogical University, Russia<sup>2</sup>Petersburg State Transport University, Russia

Innovative processes in high education system now are connected not only with the experiments with the contexts of the programs but with the changing the forms of teaching too. The purpose of the study was to compare the psychophysiological parameters, which reflect the state of regulative system and stress of the students, studying at the different forms of education. The most typical psychophysiological methods, allowing to appreciate the regulative mechanisms strait is variability of the cardiac rhythm (Myrtek, 2004). Variability of cardiac rhythm shows the activity of parasympathetic and sympathetic parts of vegetative nervous system &#40;Brenner et al., 1998&#41;. 314 students of the Herzen state pedagogical university were participants. The first group includes the full part students of the first (122 students, mean age  $18,3\pm 0,9$  yr) and the fifth (55 students, mean age  $22,2\pm 1,0$  yr) year, the second group – 46 students studying both in the college and at the university, the third group – part-time (61 students,  $22,2\pm 1,0$  yr.) and part-time accelerating training students (30 students, mean age  $36,0\pm 4,6$  yr. ). We made the cardiac rhythm record for each students using program-apparatus complex “OMEGA-M” with lead hand-hand. The different forms of education give the students different educational loads. We show that the younger student the more possibility she (he) will achieve the high marks with straining the vegetative regulation. This method could lead to the worsening student's health.

15:30 - 17:00

## Preliminary evidence on the link between metacognitive symptoms and altered autonomic activity in Anorexia Nervosa

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**Background:** We aimed at investigating the relationship among self-report psychological symptoms, metacognitions, and autonomic measures in Anorexia Nervosa (AN).

**Methods:** In a preliminary study 13 patients with AN and 13 healthy controls (HCs) participated in single-session protocol, during which Heart Rate (HR) and Skin Conductance Level (SCL) were recorded at rest, as representative measures of autonomic activation. Self-report questionnaires assessing eating disorder symptoms, state- and trait-anxiety, obsessive-compulsive symptoms and metacognitions were also administered. In a second pilot study, the same psychological measures were collected on 11 patients with AN and 12 HCs, but Heart Rate Variability (HRV) was extracted from HR, as a more adequate index of sympathetic/parasympathetic balance. Student's t-tests for independent groups (patients vs HCs) were used to compare all of the variables and correlations were performed to test the presence of possible associations between psychological and physiological measures.

**Findings:** Beyond the symptomatology characterising anorexic disorder, in both studies patients with AN reported more maladaptive metacognitions than HCs. As regards autonomic variables, we found a significant sympathetic hypoactivation (study 1) or even parasympathetic prevalence (study 2) in patients, which could not be ascribed to reduced BMI. Remarkably, significant correlations linked patients' reduced sympathetic/increased parasympathetic activity to dysfunctional metacognitive dimensions.

**Discussion:** These preliminary findings disclose a potential link between altered metacognition and altered autonomic activity, which can be capitalized in the treatment phase, by simultaneously rebalancing both levels. The concurrent use of metacognitive therapies and psychophysiological self-regulation protocols (e.g., through biofeedback procedures) could strategically strengthen the intervention efficacy.

15:30 - 17:00

## Predicting severity of coronary artery disease based on psychological distress

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**Background:** Empirical research has shown that psychological risk factors contribute to the risk of developing Coronary Artery Disease (CAD). The purpose of this study was to predict the severity of CAD based on psychological distress, including depression, anxiety and stress.

**Methods:** This study was under correlation research. 462 men and women were selected through convenience sampling. Psychological distress was measured using the Depression, Anxiety and Stress Scale (DASS-21) and severity of CAD was calculated on atherosclerosis in vessels by angiography. The data were analyzed by multi variable regression.

**Findings:** The result showed depression, anxiety and stress significantly could be predict severity of CAD ( $P < 0/01$ ,  $F(3.328) = 23/063$ ). Multiple correlation coefficient (R Square) is 0/174. That is indicate /4 of CAD severity is clarified by psychological distress. Depression ( $P < 0/01$ ,  $\beta = 0/263$ ) positively and meaningful predicts CAD severity. It should be noted that regression coefficients of stress ( $p = 0/052$ ,  $\beta = 0/123$ ) and anxiety ( $p = 0/073$ ,  $\beta = 0/110$ ) in level of %0/520 and %0/073 are meaningful that the findings are significant and valuable.

**Discussion:** There is meaningful positive correlation between psychological distress and severity of CAD. Therefore it is recommended, the role of psychological factors should be considered in heart disease prevention and treatment programs.

15:30 - 17:00

## Testing EPPM propositions among an at-risk population for cardiovascular disease: a think aloud study

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**Background:** The study experimentally tested six threat-to-efficacy ratio messages based on the EPPM for CVD and the associated health behaviours among older adults (60+ years) given the considerable lack of previous investigations in this area.

**Methods:** 24 participants (4 per group; Female = 14; Age, M = 74.38, SD = 7.16) were randomly assigned to one of six EPPM threat-to-efficacy CVD message groups: 1) “standard” message with 1/1 threat-to-efficacy ratio, 2) “low efficacy” message with 1/0 threat-to-efficacy ratio, 3) “low threat” message with 0/1 threat-to-efficacy ratio, 4) “high efficacy” message with 1/2 threat-to-efficacy ratio; 5) “high threat” message with 2/1 threat-to-efficacy ratio; and 6) “overload” message with 2/2 threat-to-efficacy ratio. A ‘think aloud’ methodology was utilised and a thematic analysis was conducted.

**Findings:** Findings were consistent across all groups. Important themes were those of different threat perceptions for varying CVD manifestations (heart disease versus stroke), the role of comparative (versus personal) threat and efficacy perceptions, and the impact of misleading levels of health literacy.

**Discussion:** The study presented the first empirical test of EPPM-based threat-to-efficacy ratios for communicating about CVD and associated health behaviours. The stark difference between threat appraisals for stroke versus other CVD manifestations was a novel finding. For the EPPM and other theories of health risk and decision-making, the impact of comparative risk and social examples for individual threat and efficacy perceptions needs to be counted. These findings, along with the highlighted issues for CVD health literacy, can be applied to future, tailored risk communications.

15:30 - 17:00

## An HRV-multi-feature approach for assessing depressive symptoms in cardiosurgical patients

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**Background:** Heart Rate Variability (HRV) is reduced both in depression and in coronary heart disease (CHD) suggesting common pathophysiological mechanisms for the two disorders. Within CHD, cardiac surgery patients (CSP) affected by postoperative depression are at greater risk of adverse cardiac events. Therefore, CSP require special attention in order to perform an early diagnosis of depression. In the present study we tested whether HRV multi-feature analysis could discriminate CSP with or without depressive symptoms and provide an effective estimation of symptoms severity.

**Methods:** Thirty-one patients admitted to cardiac rehabilitation program after first-time cardiac surgery were recruited. Depressive symptoms were assessed with the Center for Epidemiologic Studies Depression Scale (CES-D). HRV features in time, frequency, and nonlinear domains were extracted from 5-min-ECG recordings at rest and used as predictors of "least absolute shrinkage and selection" (LASSO) operator regression model to estimate patients' CES-D score and to predict their depressive state.

**Findings:** The model significantly predicted the CES-D score in all subjects as the mean square error (total explained variance of CES-D score was 89.93%). The model also discriminated depressed and non-depressed CSP with 86.75% overall accuracy. Seven of the ten most informative metrics belonged to non-linear-domain.

**Discussion:** To our knowledge this is the first study using a multi-feature approach to evaluate depression in CSP. The high informative power of HRV-nonlinear metrics suggests their possible pathophysiological role both in depression and in CHD. The high-accuracy of the algorithm at single-subject level opens to its translational use as screening tool in clinical practice.



# Questionnaire development

15:30 - 17:00

Gudrun Sproesser

15:30 - 17:00

## Sensitivity to change of the distress thermometer in a sample of pediatric cancer survivors

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**BACKGROUND:** The Quebec Cancer Board recommends screening for distress at all major phases of the cancer trajectory in patients and their family. Tools used to screen for distress have been extensively studied in regards to their criterion validity but very little is known on their reliability and sensitivity to change. The objective of this study is to ascertain the degree of sensitivity of the tool and explore moderators of sensitivity.

**METHODS:** Eighty adolescents and young adults (Age 21.6 yrs) who have been treated for a pediatric acute lymphoblastic leukemia have participated to this study. They responded to questions on two occasions. Test-retest measures involved the Distress Thermometer and the Positive and Negative Affect Scale. At retest, participants also took tests of emotion regulation including the Emotion Regulation Questionnaire, in order to evaluate emotional avoidance.

**FINDINGS:** Results from regression analyses indicate that sensitivity of the DT was fair with changes over 11 months correlating with the underlying concept of negative affectivity ( $r > .49$ ), but not positive affectivity ( $r < .10$ ). When considered according to pre-validated cut-point, the DT showed higher sensitivity to change in negative affect over the period. Hierarchical regression moderation models showed that emotional avoidance may hinder sensitivity perhaps because it is a barrier to emotional disclosure on the DT.

**DISCUSSION:** Sensitivity of the DT was fair on an ecological period of time. Sensitivity may depend on other important factors such as emotional approach. Measures of the DT in people who are more guarded should be considered cautiously.

15:30 - 17:00

## The Portuguese version of Nijmegen Gender Awareness in Medicine Scale: adaptation and validation study

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Health-care professionals' Gender Awareness has been discussed as a way to minimize gender biases in health. The present paper aimed to adapt and validate the Nijmegen Gender Awareness in Medicine Scale (N-GAMS) to the Portuguese population. This scale measures, gender sensitivity and gender-role ideology towards patients and doctors. One thousand and forty eight medicine students (M age = 22.90; 67.1% women) answered to the Portuguese version of the N-GAMS along with measures of Medical Empathy (JSPE-spv) and Sexism (ASI) in order to investigate the scale's construct and criterion validity. The scale three-fold structure was supported by a Confirmatory Factorial Analysis (CFI =.918, NFI =.883, IFI =.918; RMSEA =.062,  $\chi^2$  [134] = 407.503,  $p < .001$ ) : 1) gender sensitivity (n = 6 items;  $\alpha = .713$ ), 2) gender role ideologies towards patients (n = 7 items;  $\alpha = .858$ ) and 3) gender role ideologies towards doctors (n = 5 items;  $\alpha = .837$ ). Also, N-GAMS showed a good concurrent validity; gender sensitivity was positively associated with medical empathy and gender-role ideology was negatively associated with medical empathy and positively associated with sexism. To conclude, N-GAMS showed to be a reliable and valid instrument that may be used for research and interventional purposes in order to decrease gender bias in health.

15:30 - 17:00

## Psychometric assessment of the "child surgery worries questionnaire" among Portuguese children

S. Fernandes<sup>1</sup>, P. Arriaga<sup>1</sup>, F. Esteves<sup>2,3</sup>, H. Carvalho<sup>4</sup>

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Worries are common in surgical patients, especially in children. The present study analyzed the factor structure and the psychometric properties of the Child Surgery Worries Questionnaire (CSWQ) in a Portuguese sample (n= 490 children). Exploratory factor analysis, conducted via principal axis factoring with oblimin rotation provided evidence for a four-factor structure of the 21 item questionnaire. A confirmatory factor analysis was also conducted, showing the good fit of this solution. The CSWQ Portuguese version had one more subscale compared to the original Spanish version.

The analysis of the children's trait anxiety found convergent validity with the CSWQ. Females also scored higher worries than males on all subscales. Psychometric properties of this revised version of the CSWQ provided support for use with young children, showing an important value for healthcare practice in clinical and nonclinical settings

15:30 - 17:00

## Validation of a Chinese version of the Internet Gaming Disorder-20 Test

S. Yu<sup>1</sup>, A.M.S. Wu<sup>1</sup>, I.J. Pesigan<sup>1</sup><sup>1</sup>University of Macau, Macau

### Background:

The 20-item Internet Gaming Disorder Test (IGD-20 Test; Pontes et al., 2014) was developed based on the proposed diagnostic criteria for Internet Gaming Disorder (IGD) in the 5th edition of Diagnostic and Statistical Manual of Mental Disorders. It consists of six core components of addiction (i.e., salience, mood modification, tolerance, withdrawal symptoms, conflict, and relapse), which were not all covered in existing Chinese IGD measures. This study aimed to examine psychometric properties of a Chinese version of the IGD-20 Test.

### Methods:

The survey recruited 485 Chinese university students with Internet gaming experience who completed an anonymous questionnaire (IGD-20 Test, the modified Young's Internet Addiction Test [YIAT], and background information items).

### Findings:

The confirmatory factor analysis results showed that, after removing one item with low factor loading, the original six-factor model provided good model fit,  $\chi^2(137) = 449.5$ ,  $p < .001$ ; CFI = 0.937; TLI = 0.921; RMSEA = 0.069, 90% CI [.062, .076]; SRMR = 0.039. It also showed better fit than the one-factor model. Criterion-related and concurrent validity were supported by the positive association between IGD-20 scores and weekly gameplay ( $r = .44$ ,  $p < .001$ ) and the YIAT scores ( $r = .88$ ,  $p < .001$ ) respectively. The internal consistencies of the IGD-20 Test ( $\alpha = .93$ ) and the subscales ( $\alpha$ s = .62 to .83) were acceptable.

### Discussion:

This study validated a Chinese version of the IGD-20 Test, and confirmed its six-factor structure among Chinese students. This Chinese version facilitates future research of IGD. Future study may examine its psychometric properties among other age groups.

15:30 - 17:00

## A French validation of the Childbirth PostTraumatic Event Scale (CPTES)

N. Hannachi<sup>1</sup>, E. Spitz<sup>1</sup><sup>1</sup>Lorraine University, France

**Background:** International literature highlights that 2 to 6% of women are at risk to develop PTDS after childbirth (Denis & al., 2008; Alcorn & al., 2010) and 24 to 33% of women experience symptoms of PTSD (Van Son & al., 2005; Cigoli & al., 2006). The aim of this study is to validate a specific measure of PTSD after childbirth based on diagnostic criteria from Diagnostic and Statistical Manual of Mental Disorder, fifth edition (American Psychiatric Association, 2013) with four distinct diagnostic clusters: (B) Intrusion symptoms; (C) Avoidance; (D) Negative cognition and mood, and (E) Alterations in arousal and reactivity. Add to this the stressor criteria (A).

**Method:** A total of 342 French women were recruited during the last trimester of pregnancy. Then, they were contacted at two months and six months post-partum. The scale was inspired from the Traumatic Event Scale (Wijma & al., 1997) and the Perinatal PTSD Questionnaire (Demier & al., 1996).

**Findings:** A principal components analysis was conducted and a 4-factor solution, which explained 56, 3% of the variance, was retained: an intrusion factor (5 items), an avoidance factor (2 items), a negative cognition and mood factor (7 items) and an alterations in arousal factor (6 items). The scale has satisfactory psychometric properties.

**Discussion:** After the recognition of the PTSD disorder after childbirth, several studies have been carried out. This scale should be useful for scientific researchers and clinical practitioners for diagnosis of PTSD after child-birth.

15:30 - 17:00

## Are your questionnaires good enough? Reassessing scale validity, reliability and generating population norms using meta-analysis

N. Stenning<sup>1</sup><sup>1</sup>University of Leeds, United Kingdom

### Background:

Standardised measures are the cornerstone of quantitative health psychology research. After the initial validation efforts, the psychometric properties and construct validity of such questionnaires are rarely reassessed. This is problematic as scales can soon become 'gold standard' after being assessed on a sample that is restricted in range and size.

### Method

This paper demonstrates how meta-analysis may be used to assess the quality of a questionnaire. This is achieved by examining all papers citing a scale that publish at least one of the following; scale mean, standard deviation, reliability coefficient or correlation with another measure. These are weighted by sample size, assessed for risk of bias and meta-analysed to produce new scale norms and reliability information. Published correlation coefficients are used to generate a qualitative commentary of a scale's construct validity. This approach is illustrated by an analysis conducted on 89 studies utilising the Short Health Anxiety Inventory (SHAI).

### Findings:

SHAI mean scores were highest in hypochondriacal populations, followed by the medically unwell and university students. Internal consistency coefficients ranged from 0.76-0.97. As predicted the SHAI was correlated most highly with other measures of health anxiety, followed by general anxiety measures.

### Discussion:

SHAI scores vary consistently in different populations; the measure has dependable psychometric properties including internal consistency. A narrative review of correlations with other measures indicated the SHAI has good construct validity. This paper argues this method of analysis is useful for health psychology researchers and can be easily applied to other standardised measures used in the field.

# Health psychology approaches to implementation research

15:30 - 17:00

Andrea Patey



15:30 - 17:00

## Evaluating the implementation of a multidisciplinary lifestyle-enhancing treatment for severe mentally ill inpatients (MULTI-study)

J. Deenik<sup>1,2</sup>, D. Tenback<sup>1,3</sup>, E. Tak<sup>4</sup>, I. Hendriksen<sup>4</sup>, P. van Harten<sup>1,2</sup>

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<sup>3</sup>Utrecht University, Netherlands

<sup>4</sup>TNO-VU Medical Center, Netherlands

**Background:** There are serious metabolic health problems in especially long-term severe mentally ill inpatients. After studying physical activity, quality of life and psychological determinants to understand the context of the challenge to change lifestyle behaviour, we developed a multidisciplinary lifestyle-enhancing treatment. Results after 18 months showed significant improvements in physical activity, metabolic health, quality of life and psychosocial functioning. Additionally, we wanted to perform a process-evaluation, to support further optimization and valorisation of the treatment.

**Methods:** Four categories of determinants (innovation, professional/user, organisational context and socio-political context) were assessed using a questionnaire based on the Dutch validated Measurement Instrument for Determinants of Innovations (questions scored on a 5-point Likert-scale). The questionnaire was sent digitally to 42 healthcare professionals (HP). A reduced version (e.g. excl. organisational context) was administered to patients (N=33) in a semi-structural interview.

**Preliminary findings:** Both groups were positive about determinants of the treatment (M=3.88 and M=3.89, respectively), although patients stated it wasn't easy to participate in the treatment (M=2.18). Determinants of the HP and patients themselves scored positive (M=3.90 and M=3.76, respectively), while organisational context (e.g. staffing, facilities and financial recourses) scored low (M=2.80). Difficulties in getting patients involved, relapse after discharge and a lack of paramedical support and clear policy are main topics in open answers/suggestions.

### Discussion

- Overall, determinants of the treatment and users seems to facilitate treatment-implementation.
- Implementation strategies regarding organisational factors are needed.
- Detailed analysis of scores and open answers/suggestions will be done to gain more insight into preliminary findings.

15:30 - 17:00

## Are current audit and feedback interventions to change UK blood transfusion practice theory- and evidence-based?

F. Lorencatto<sup>1</sup>, N.J. Gould<sup>1</sup>, S.J. Stanworth<sup>2</sup>, M. Rowley<sup>3</sup>, L. Glidewell<sup>4</sup>, R.E. Walwyn<sup>4</sup>, R. Foy<sup>4</sup>, J.M. Grimshaw<sup>5</sup>, S. Michie<sup>6</sup>, J.J. Francis<sup>1</sup>

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<sup>6</sup>University College London, United Kingdom

**Background:** Audit and feedback (A&F) is a widely used healthcare quality improvement intervention. Although A&F can be effective, outcomes are heterogeneous. Applying behavioural theories and evidence can guide design of A&F. This study applied behavioural theory and evidence to specify feedback components and characteristics used in an established UK national comparative audit (NCA) programme targeting transfusion practice. This NCA's approach to A&F has remained largely unchanged since its establishment fifteen years ago.

**Methods:** A structured content analysis of 12 existing feedback reports was conducted, applying a coding framework to specify intervention content in terms of component behaviour change techniques (BCTs). Reports were coded for 11 BCTs consistent with Control Theory of behavioural regulation (e.g. 'review goals,' 'discrepancy,' 'action planning') and six feedback characteristics with demonstrated effectiveness in an A&F Cochrane review (e.g. verbal and written format; repeated/frequent feedback, inclusion of peer average/achievable bench mark [top 10%] comparators).

**Results:** Reports included 3 to 14 BCTs (mean: 8). Reports contained on average 4.5 (41%) BCTs consistent with Control Theory (range: 2-7; most frequent: 'feedback on behaviour' [n=11 reports]; least frequent: 'review goals' [n=0]), and 1.4 (23%) evidence-based feedback characteristics (range: 0-3; most frequent: 'peer comparison- average' [n=7], least: 'verbal + written format,' 'peer/supervisor source,' 'frequent/repeated' [n=0]).

**Conclusion:** Our findings suggest current feedback reports do not optimally include theory and evidence-based feedback characteristics likely to increase their effectiveness. There is thus scope to apply behavioural theory and evidence to enhance feedback provided in transfusion NCAs, in order to improve practice and, thus, patient outcomes.

15:30 - 17:00

## Web-based planning intervention to improve the uptake of diabetes UK information prescriptions in clinicians

S. Potthoff<sup>1</sup>, F. Sniehotta<sup>1</sup>, A. Rylance<sup>2</sup>, L. Avery<sup>3</sup>, J. Pesseau<sup>4,5</sup>

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<sup>2</sup>Diabetes UK, United Kingdom

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<sup>4</sup>Clinical Epidemiology Program, Ottawa Hospital Research Institute, Canada

<sup>5</sup>School of Epidemiology, Public Health and Preventive Medicine, Canada

**Background:** Interventions aimed at changing clinical behaviours to improve healthcare quality typically focus on a single behaviour and on change strategies targeting a reflective path to behaviour change. We developed an intervention for clinical behaviour change based on a dual process and multiple goal approach to test whether an action and/or coping planning intervention could support clinicians in implementing a new self-management advice tool into routine care—the Diabetes UK information prescription.

**Methods:** Clinicians were invited to participate via a routinely delivered e-newsletter. Participating clinicians were randomised in a 2 x 2 factorial design to receive a web-based intervention delivered via volitional help sheets: an action planning and/or a coping planning intervention, or neither, designed to facilitate delivery of the tool. Clinicians were asked to complete self-reported measures of their use of the tool at baseline and follow-up.

**What went wrong:** 1,600 clinicians were invited to take part and participants had the opportunity to win an iPad. However, only 2 clinicians responded and the study failed to reach recruitment targets.

**Possible solutions:** Reasons for lack of participation may include: lack of awareness of the tool, lack of engagement with the invitation and/or insufficient incentivisation. Recruitment rates could be improved by raising awareness of the tool and by embedding trials within existing infrastructures including continuing professional development events.

**Conclusions:** Our findings suggest that interventions aimed at improving the uptake of self-management tools should ensure that clinicians are aware and given access to such tools and that effective recruitment strategies are utilised.

15:30 - 17:00

## Shifting healthcare of premature children from a paternalistic to a family- centered-care approach

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<sup>3</sup>Université de Bretagne Occidentale, France

<sup>4</sup>Pôle Femme, Mère , Enfant, CHRU de Brest, France

**Background:** Parent role in the development of premature children is acknowledged. Family-centered-care (FCC) approach supports parental involvement in the care of their baby by fostering respect and dignity, parent participation in the care and decisions concerning the baby, information sharing, and collaboration with professionals. Nevertheless, a paternalistic approach, which lets little room for parents, is generally applied in neonatology intensive care unit (NICU) in France. Our objective is to implement FCC in a French NICU to improve quality of healthcare.

**Methods:** We chose the Intervention Mapping (IM) protocol, because changing healthcare delivery approach is complex and deserves an ecological perspective. IM provides tools to select social and behavioural sciences theories, bridge these theories with practice, develop and plan programme implementation and evaluation. IM involves multiple stakeholders to address the six-stages of the protocol.

**Preliminary results:** At first stage, a needs assessment, using focus groups, interviews, quantitative surveys of professionals and parents, and literature search, was conducted .It stressed that emotional status of parents, interpersonal and organisational aspects, which facilitate parental presence and involvement in healthcare, are necessary to consider for improving children care. Finally, it helped listing parental behaviours, environmental conditions and behaviours that need to be modified.

**Current stage of work:** The second stage has begun with a definition of multilevel objectives to implement FCC.

**Discussion:** For the first time the IM protocol is used in France to implement change in healthcare delivery. First conclusion is promising, making the IM protocol relevant to change healthcare approach in NICU.

15:30 - 17:00

## The evaluation of two public health integrated care services in Coventry

G. Pearce<sup>1</sup>, A. Baker<sup>2</sup>, K. Kwah<sup>1</sup>, E. Grunfeld<sup>1</sup>, K. Brown<sup>1</sup>

<sup>1</sup>Coventry University, United Kingdom

<sup>2</sup>Coventry City Council, United Kingdom

**Background:** The aim was to qualitatively evaluate two new multidisciplinary integrated public health services in Coventry. The first was an Integrated Neighbourhood Team (INT) designed to integrate professionals providing care to high users of health and social care services over 75 year olds. The second was a Multi-Agency Safeguarding Hub (MASH) designed to integrate professionals involved in child safeguarding.

**Methods:** Interviews were with a range of professionals (n=40) involved in the integration (INT: occupational therapists, community matrons, voluntary sector, psychologists and a lay member involved in the service design; MASH: school nurses, health visitors, social workers and police). We completed thematic analysis for each evaluation, and then synthesised findings together to identify key strengths and potential improvements.

**Findings:** Participants were often cautious of the service at first but once launched they all had positive experiences and felt invested in its success. Strengths included improved communication, information sharing, quicker decision making and increased understanding of each other's roles. Areas for potential improvement included increase staff capacity, reduce paperwork, improve IT systems for sharing data, and increase time for professional development and reflection as a team.

**Discussion:** Staff can be the driving force and determining factors behind the success of health services, and these findings highlight the importance of in-depth research with staff. They not only provide information about the strengths and weaknesses of a current service, but also vital insight into their general feeling of whether a service is working, if staff are engaged, and whether expectations are being met.

15:30 - 17:00

## Exploring factors influencing public health commissioners and service providers application of behavioural science research

K. Brown<sup>1,2</sup>, K. Curtis<sup>1,2</sup>, E. Fulton<sup>1,3</sup>, H. King<sup>2</sup>, J. Linnane<sup>4</sup>

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<sup>2</sup>Public Health Warwickshire, United Kingdom

<sup>3</sup>Public Health Warwickshire, United Kingdom

<sup>4</sup>Public health Warwickshire, United Kingdom

**Background:** Use of clinical and epidemiological evidence in public health is commonplace. Use of behavioural science evidence to support decision-making and action is not.

**Methods:** Twenty semi-structured interviews were conducted with public health decision-makers and practitioners from three UK local authorities. Questions were underpinned by the Theoretical Domains Framework (TDF) and the Capability, Opportunity, Motivation, Behaviour (COM-B) model. Thematic analysis was conducted applying a deductive approach.

**Findings:** Limits in knowledge around behavioural science research, and skills in assessing research quality were common. Public health decision-makers reported difficulties in deciding which theoretical models to draw on for commissioning specifications. They also held beliefs that research evidence can stifle innovation and overwhelm service providers. While commissioners' professional identity aligned with the importance of using research evidence, service providers' did not. Both groups reported low confidence in their ability to use behavioural science evidence, and would welcome training. Potential incentives for using evidence included: increasing ease of adoption for front-line services, adapting the format of academic papers and; making use of research evidence compulsory in commissioning. Local authority, public health and service provider cultures with their strong focus on outcomes were identified as barriers to evidence use. Environmental influences included challenges with the commissioning cycle and journal article accessibility.

**Conclusions:** Embedding behavioural science into the design and delivery of public health programmes requires targeting multiple levels of behaviour and the public health environment. Findings are being mapped to potential intervention components for testing within a UK public health department.

15:30 - 17:00

## Assessing staff supported self-management beliefs in a health board using the theory of planned behaviour

N. Anderson<sup>1</sup>, G. Ozakinci<sup>2</sup><sup>1</sup>NHS Borders, United Kingdom<sup>2</sup>University of St Andrews, United Kingdom

Due to increasing healthcare system demands, coupled with greater promotion of patient-centred care approaches, supported self-management (SSM) models are increasing in popularity. However, one element that may be overlooked in implementing SSM models is staff beliefs towards adopting this approach. Health psychology models may play an important role in healthcare through providing a framework to assess staff beliefs and design interventions accordingly. The present study seeks to use the theory of planned behaviour to assess beliefs towards SSM in staff working with patients' of long-term conditions in a regional Scottish health board.

Francis et al.'s (2004) theory of planned behaviour questionnaire development guide will be used to assess staff beliefs towards SSM. An elicitation study has been facilitated, recorded, transcribed, qualitatively coded and inter-rater coding agreements reached by two researchers (NA, GO). The next stage is to use the belief codes (identified by the elicitation study) to generate a questionnaire that will be piloted, amended and disseminated. Responses shall be collated and analysed using multiple regressions.

Elicitation study inter-rater coding by two researchers produced 82 codes (7 behavioural, 7 normative and 6 control belief categories). Based on the elicitation study codes, it is predicted that staff will have positive behavioural beliefs towards SSM but low perceived normative and control beliefs.

The study aims to provide an implementation science example for how a health psychology model may be used to assess long-term condition healthcare staff beliefs towards SSM in order to bridge the research-practice gap.

17:00 - 18:00

## Suicide as (health) behaviour: towards a psychological understanding of suicidal behaviour

Rory O'Connor

Professor of Health Psychology, Institute of Health & Wellbeing,  
University of Glasgow, Scotland



Suicide and attempted suicide are major public health concerns with complex aetiologies which encompass a multifaceted array of risk and protective factors. There is growing recognition that we need to move beyond psychiatric categories to further our understanding of the pathways to both. Recent approaches have conceptualised suicide as a (health) behaviour, such that an individual makes a decision to take their own life, therefore an appreciation of the psychology of the suicidal mind is central to suicide prevention.

Another key challenge is that our understanding of the factors that determine behavioural enactment (i.e., which individuals with suicidal thoughts will act on these thoughts) is limited. Although a comprehensive understanding of these determinants of suicidality requires an appreciation of biological, psychological and social perspectives, the focus in this presentation is primarily on the psychological determinants of self-harm and suicide. To address these issues, I will describe the Integrated Motivational–Volitional (IMV) Model of Suicidal Behaviour (O'Connor, 2011) which derives from health, social and clinical psychological theory. This tripartite model maps the relationship between background factors and trigger events, and the development of suicidal ideation/intent through to suicidal behaviour.

I will present a selection of research studies to illustrate how psychological factors increase suicide risk and what can be done to ameliorate such risk. The implications for the prevention of self-harm and suicide will also be discussed.



11:00 - 12:30

## Health psychology: part of behavioral medicine to produce strategic big-data medical research?

Chairs: Sven Ingmar Andersson, Anne Marie Plass

**Purpose:** To discuss critically the recent efforts to initiate a new direction for health psychology, as demonstrated in an editorial in 2017 by the new Editor of the APA Health Psychology journal, K. E. Freedland. It was suggested that health psychology is fundamentally concerned with physical and not mental health, is regarded as one of the disciplines of behavioral medicine which, in turn, is included within the areas of medicine, health care, and public health.

**Objectives:** To elucidate the status quo of health psychology with regard to education, coordination with other disciplines, employability and legislation, and to critically consider efforts to promote health psychology as a field aiming to produce big-data sets within behavioral medicine and medicine generally.

**Rationale:** The rationale for addressing this topic grew out of the editorial conclusions in Health Psychology (op. cit) to the effect that, in order for it to develop adequately, health psychology “must embrace large-scale team science to answer the most challenging and important questions in behavioral medicine”.

**Summary:** The roundtable includes four National Delegates of the European Health Psychology Society (EHPS) who are collaborating as Guest Editors of a European Health Psychologist Special issue on the implementation of health psychology in Europe and other EHPS-related countries. Each of us will initially address ideas regarding education, coordination with other disciplines, employability and health psychology legislation so as to facilitate a critical discussion of future directions in this field.

14:00 - 15:30

## Behaviour change: investigating mechanisms of action

Chairs: Susan Michie, Rachel Carey

### Objectives:

- To introduce and discuss two new methods for identifying, measuring and manipulating the mechanisms of action through which behaviour change techniques affect behaviour
- To consider the synergies of these two approaches and their contributions
- To foster international engagement and collaboration among these and related initiatives
- To identify a research agenda, building on this work, to advance thinking and application relating to behaviour change interventions

**Rationale:** To improve the effectiveness of behaviour change interventions, we need improved methods for selecting behaviour change techniques, applying theory to intervention development and evaluation, and measuring and manipulating putative mechanisms of action. Maximising the efficiency of evidence accumulation across research groups and countries requires opportunities for learning about each other's work and advancing ideas collectively. A roundtable discussion is an ideal format for this exchange of experience and perspectives.

**Summary:** The five contributors are from two multi-site, international, interdisciplinary projects – one based in the UK and one based in the USA. These are, respectively, the Human Behaviour Change Project (HBCP) and the Science of Behavior Change Project (SOBC). These initiatives both aim to advance our understanding of behaviour change and to apply that understanding to developing behaviour change interventions. The HBCP includes ontology development and Artificial Intelligence in its methods; the SOBC focuses on using the experimental medicine approach to identify, investigate, engage, and manipulate basic mechanisms of behaviour change.

Susan Michie will provide an overview of HBCP; Karina Davidson will present an overview of SOBC. Donald Edmondson will then outline progress to date on measurement and manipulation of mechanisms of action, and Rachel Carey will report on progress linking behaviour change techniques to mechanisms of action. Finally, Marie Johnston will discuss synergies between HBCP and SOBC, and ideas for future collaborations.

# Symposium: Attitudes towards, efficacy, cost-effectiveness and moderators of internet-and-mobile-based interventions for promoting mental well-being

9:00 - 10:30

Aula C

David Daniel Ebert

9:15 - 9:30

## Effectiveness of a web-based intervention in treating subthreshold depression and in preventing major depression

C. Buntrock<sup>1,2</sup>, D.D. Ebert<sup>3</sup>, D. Lehr<sup>4</sup>, F. Smit<sup>1,5</sup>, H. Riper<sup>1,6</sup>, H. Baumeister<sup>7</sup>, M. Berking<sup>3</sup>, P. Cuijpers<sup>1</sup>

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<sup>5</sup>Trimbos Institute, Netherlands

<sup>6</sup>University of Southern Denmark, Denmark

<sup>7</sup>University of Ulm, Germany

### Background:

Evidence for the impact of psychological Interventions in the treatment of subthreshold depression (sD) and in the prevention of Major Depressive Disorder (MDD) is conflicting. The aim of the present research was to evaluate the effectiveness of a web-based guided self-help intervention in the treatment of sD and on the onset of MDD.

### Methods:

In two randomized controlled trials, participants with sD were randomly allocated to a guided web-based intervention (n=202) and enhanced usual care (n=204) or to the same intervention with adherence-focused guidance (n=102) and a waitlist control condition (n=102). The primary outcome was time to onset of MDD in the intervention relative to the control group over a 12-month follow-up period using DSM-IV criteria and the reduction in depressive symptom severity as measured by blind diagnostic raters using the Quick Inventory of Depressive Symptomatology at post-treatment.

### Results:

Cox regression analyses controlling for baseline depressive symptom severity suggested the risk of MDD onset was significantly reduced by 41% in the intervention as compared to the control group (HR=.59, 95% CI .42-.82). The number-needed-to-treat to avoid one new MDD case was 5.9 (95% CI 3.9-14.6). The second study revealed a medium between-group effect size of  $d=0.40$  (95%-CI:0.12–0.68) and a NNT of 7 (95%-CI:3.7–41.2) to achieve one additional treatment response.

### Conclusions:

Reducing the incidence of MDD is possible by offering a web-based guided self-help intervention. Web-based self-help interventions with adherence-focused guidance could be an acceptable and effective approach to reduce a range of negative consequences associated with subclinical depression.

9:30 - 9:45

## Effect modifiers of internet-based stress-management. Results from three randomized trials

K. Weisel<sup>1</sup>, D. Lehr<sup>2</sup>, E. Heber<sup>3</sup>, M. Berking<sup>1</sup>, A. Zarski<sup>1</sup>, D.D. Ebert<sup>1</sup>

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<sup>3</sup>University of Southampton, United Kingdom

**Background:** Internet-based and mobile-supported stress management interventions (iSMIs) may be a promising strategy to reach impaired employees suffering from high chronic stress that would otherwise not make use of mental health interventions. However, it remains unknown whether severely impaired individuals, such as those with high levels of depression or anxiety, also profit from preventative iSMIs. The study aimed to identify moderators of treatment outcomes.

**Methods:** Data from three RCTs (N=791), designed to test the effectiveness of iSMIs, were pooled to identify effect modifiers and evaluate effectiveness in subgroups with different levels of initial symptom severity. The outcomes perceived stress, depressive and anxiety symptom severity were assessed at baseline, 7-week posttreatment, and 6-month follow-up. In multiple moderation analyses potential moderators were tested in predicting differences in change of outcome. Through simple slope analyses effectiveness of the iSMI was compared in subgroups with low, moderate and severe initial symptomology.

**Findings:** Highly stressed individuals profited more from the intervention through greater reduction of stress (low stress:  $d = .66$ , high stress:  $d = 1.27$ ), depressive symptoms (low stress:  $d = .6$ , high stress:  $d = 1.14$ ) and anxiety (moderate stress:  $.84$ , high stress:  $1.14$ ) after 6 months. Individuals with higher depression at baseline showed greater reduction of depressive symptoms (low depression  $d = .79$ , high depression  $d = 1.02$ ) and greater anxiety predicted higher anxiety reduction (low anxiety:  $d = .76$ , high anxiety:  $d = 1.16$ ).

**Discussion:** Highly impaired individuals benefit greatly from iSMIs and should, therefore, not be excluded from participation.

9:45 - 10:00

## Acceptance of internet- and mobile-based mental health promotion in university students

F. Kählke<sup>1</sup>, H. Baumeister<sup>2</sup>, R. Auerbach<sup>3,4</sup>, R. Bruffaerts<sup>5</sup>, P. Mortier<sup>5</sup>, P. Cuijpers<sup>6,7</sup>, H. Ripel<sup>6,7</sup>, M. Berking<sup>8</sup>, R. Kessler<sup>3</sup>, D.D. Ebert<sup>9</sup>

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**Background:**The College years are a peak age period for the first onset of mental disorders (MD). Internet- and mobile based interventions (IMIs) have shown to be effective in reducing risk behavior and preventing MD onset. However, the effects of such interventions on population level depends on the utilization in the target group. Hence, it is crucial to evaluate acceptance of and attitudes towards such approaches to develop strategies to overcome barriers of utilization.

**Methods:** The present study examines acceptance and predictors of acceptance in a representative sample of German first year university students and is part of an ongoing multicenter, prospective cohort study. Propensity scores are used to weight for non-response. Acceptance of IMIs is assessed for different target guidance forms and target-conditions and compared to acceptance of other intervention forms (i.e.face-to-face individual- and group counseling, within-/outside of the university).

**Findings:** 5.6%,28.1%,29.9% of N=1382 students would be interested to take part in pure self-help, guided self-help, respectively blended-(in combination with face-to-face sessions) IMIs. The most accepted types of interventions were procrastination (44.6%), followed by stress-management (43.8%), time-management (43.8%); sleep (37.8%); test-anxiety (34.4%); resilience (33.6%), social-anxiety(32.2%), depression(31.8%); perfectionism (23.2%); body-dissatisfaction (20.2%); problematic internet-use(16.8%). Details on predictors (i.e, 12-months/lifetime prevalence of MDs, previous help seeking behavior ao.), barriers of acceptance (i.e. low outcome expectancies, low perceived risk) and comparisons to other forms of interventions will be presented.

**Discussion:** IMIs are an acceptable form of mental health promotion for many college students, and should implemented in a guided und not unguided self-help format.

10:00 - 10:15

## Cost-effectiveness of an internet-based guided recovery training for better sleep and psychological detachment from work

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<sup>4</sup>Trimbos Institute (Netherlands Institute of Mental health and Addiction), Netherlands

**Background:** Lost productivity due to insomnia in the working-population is a common and costly problem. This study aims to evaluate the cost-effectiveness, cost-utility and cost-benefit of an internet-based guided self-help intervention which aimed to improve recovery from work-related strain in teachers with sleeping problems and work-related rumination.

**Methods:** School teachers (N = 128) with clinically significant insomnia symptoms and work-related rumination were randomized to guided internet-based guided self-help or a control-group, both with access to occupational care-as-usual. Economic data were collected at baseline and 6-month follow-up. We conducted a) a cost-effectiveness analysis with treatment response (Reliable Change [decline of 5.01 points] and Insomnia Severity Index < 8 at 6-month follow-up) as the outcome and b) a cost-benefit analysis and c) a cost-utility analyses with QALYS as outcome. Analyses were performed from both the societal (SP) and the employer's perspective (EP). Statistical uncertainty was estimated using bootstrapping.

**Findings:** Assuming intervention costs of €200 (\$245), cost-effectiveness analyses from the EP showed that at a willingness-to-pay of €0 for each positive treatment response, there is a 87% probability that the intervention is more cost-effective than occupational care-as-usual alone. Cost-benefit analyses led to a net-benefit of €418 (95%CI:-593.03–1488.70) (\$512) per participant in the first 6 months and a return-on-investment of 208% (95%CI:-296.52–744.35). Cost-utility analysis and detailed results from the SP will be presented.

**Conclusions:** Providing Internet-based guided self-help can be good value for money for improving recovery from work-related strain in teachers with sleeping problems and work-related rumination.

# Symposium: Social exchange processes and health behavior: new findings from innovative studies

9:00 - 10:30

Aula D

Pamela Rackow



9:00 - 9:15

## A dyadic process perspective for social interactions: social support and companionship in couples

G.(. Stadler<sup>1,2</sup>, M.T. Riccio<sup>3</sup>, J. Lüscher<sup>4</sup>, S. Ochsner<sup>5</sup>, N. Knoll<sup>6</sup>, R. Hornung<sup>5</sup>, U. Scholz<sup>4</sup><sup>1</sup>University of Aberdeen, United Kingdom<sup>2</sup>Columbia University, United States<sup>3</sup>New York University, United States<sup>4</sup>University of Zurich, Switzerland<sup>5</sup>Universitaet Zuerich, Switzerland<sup>6</sup>Freie Universität Berlin, Germany

**Background:** Psychosocial processes such as companionship and support have long been of interest to health scientists and relationship researchers alike. However, most studies so far have focused either on individuals or couples with cross-sectional designs. A new wave of dyadic longitudinal studies promises a better understanding of psychosocial processes and their links with well-being and health behaviour, examining both members of couples, close to real time, and with high ecological validity. We present data from two dyadic longitudinal studies of the links between companionship and social support with well-being and health behaviour.

**Methods:** Both partners of committed couples (Study 1: N = 90, Study 2: N = 99) filled out daily online diaries for over a month. We compare different statistical approaches, with a dyadic score model (Iida, Seidman, & Shrout, in press) allowing to model the dyadic level.

**Findings:** Companionship and support varied between couples, within partners, and from day to day within person in both studies. Companionship and support showed high correlations between partners ( $r > .49$ ,  $p < .05$  within and between persons), emphasizing the need for understanding the couple level. Both companionship and support emerged as intertwined, yet independent constructs with unique links to affect, relationship satisfaction, and health behaviour. In Study 2, smokers with higher companionship smoked fewer cigarettes, over and above support.

**Discussion:** Our findings demonstrate the need for a dyadic process perspective that integrates appropriate theory building, study designs, and statistical methods to better understand psychosocial predictors of well-being and health behaviour.

9:15 - 9:30

## Parental and child perceptions of environment on physical activity and BMI. Longitudinal dyadic study

K. Horodyska<sup>1</sup>, M. Boberska<sup>2</sup>, M. Kruk<sup>2</sup>, A. Luszczynska<sup>2,3</sup>

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<sup>2</sup>University of Social Sciences and Humanities, Poland

<sup>3</sup>Trauma, Health, & Hazards Center, University of Colorado, United States

**Background:** This study aims at investigating longitudinal associations between (1) parental perceptions of physical activity (PA) promotion in a local community, (2) parental and child perceptions of parental practical support referring to transporting a child to PA facilities, (3) parental and child physical activity, and (4) parental and child body mass index.

**Methods:** At Time 1, 879 dyads participated in the study. At 7-8 months follow-up (Time 2), data from 603 full parent-child dyads were collected. Children (aged 5-11) and parents provided their self-report data. Body weight and height were measured with certified body weight scales at Time 1 and Time 2.

**Findings:** Path analyses indicated that parental perceptions of PA promotion strategies (T1) explained moderate-to-vigorous child physical activity (T2). Analyses indicated also that parental but not child perceptions of transportation support (T1) had an indirect effect on child's body mass index (T2). All associations were found after controlling for child body mass index, child age and gender (T1). Effects of child perceptions were not significant.

**Conclusions:** Parental evaluations of transporting child to PA facilities and parental perceptions of PA promotion in local community may explain changes in child body mass index. Interventions should focus on parental awareness of PA promotion in a local community and parental transportation support.

9:30 - 9:45

## Helped by your friend and controlled by your partner? Social exchange processes and exercise

P. Rackow<sup>1</sup>, H. Giese<sup>2</sup>, U. Scholz<sup>3</sup><sup>1</sup>University of Aberdeen, United Kingdom<sup>2</sup>University of Konstanz, Germany<sup>3</sup>University of Zurich, Switzerland

**Background:** Social support and control are relevant for exercising. However, study findings are ambiguous. Possible explanations for these contradictory findings might be that the support and control provided by different members from the individual's social network are of different kind and that different kinds of support and control are provided by different network members. Therefore, the aim of this project was testing if different members of an individual's exercise specific network are associated with different facets of exercise related social support and control.

**Methods:** Participants (N=387; 64% female) reported about the social support and control from up to four members of their exercise specific social network. Possible network categories were: partner, friend, colleague, and relative. All models were multi-level models with up to four network members nested in one participant.

**Findings:** Overall, participants experienced differences within their network for the quality of support ( $\chi^2(6)=71.24$ ;  $p <.001$ ) and control ( $\chi^2(6)=19.30$ ;  $p <.001$ ). When comparing all network members, participants reported to receive most support from the partner ( $b = 0.35$ ,  $p <.001$ ). Participants reported more emotional ( $b = 0.63$ ;  $p <.001$ ) and instrumental support ( $b = 0.60$ ;  $p <.001$ ) from partners compared to others, but not more informational support ( $b = -0.19$ ;  $p = .115$ ). For control, it appeared that particularly relatives were perceived to be less positively controlling compared to others ( $b = -0.64$ ;  $p = .021$ ).

**Discussion:** The results provide a possible explanation for heterogeneous study findings and highlight the importance of assessing support and control in conjunction with the provider

9:45 - 10:00

## How friends in college influence students' alcohol consumption: a social network perspective

H. Giese<sup>1</sup><sup>1</sup>University of Konstanz, Germany

**Background:** The theory of planned behaviour emphasizes the important role of social norms in the prediction of behaviour. However, this and comparable models only take perceived norms rather than actual group behaviour into account. This study explores the extent to which norm perceptions and other cognitive constructs can explain social influence processes on alcohol consumption within a social network.

**Methods:** At three time points across three months, 109 psychology freshmen indicated their perceived norms, attitudes, self-efficacy, and intentions with regard to alcohol consumption as well as their actual drinking behaviour. In addition, they nominated friends among their fellow freshmen. RSiena longitudinal models were applied to explore both social influence and friend selection processes.

**Findings:** The average alcohol consumption by friends influenced the individual alcohol consumption in the following month ( $b = 1.89$ ,  $OR = 6.64$ ,  $95\%CI [1.28; 34.50]$ ,  $p = .022$ ) even when the effects of all cognitive variables postulated by the theory of planned behaviour were controlled for. Crucially, the selection of friends itself was not influenced by individual alcohol consumption (all  $ps \geq .279$ ).

**Discussion:** Social influence of college peers on alcohol consumption cannot be fully explained by perceptions of social norms and other cognitions.

10:00 - 10:15

## Can digital support groups promote healthy eating? A randomized trial in daily life

J. Inauen<sup>1,2</sup>, N. Bolger<sup>1</sup>, P. Shrout<sup>3</sup>, G.(. Stadler<sup>4</sup>, M. Amrein<sup>5</sup>, P. Rackow<sup>4</sup>, U. Scholz<sup>5</sup>

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**Background:** Social support has shown promise to regulate health behaviour. However, most research has focused on support by close others. We investigated whether support provided in digital groups can promote healthy eating. Furthermore, we tested the temporal development of intervention effects, and two mediating processes: Received social support and action control (i.e., awareness of standards, self-monitoring, and self-regulatory effort).

**Methods:** In this 2 x 2 trial (support vs. information-only x increasing fruit & vegetable consumption vs. decreasing unhealthy snack consumption), 208 adults were randomly allocated to intervention arms. Participants completed a 13-day daily diary on food consumption, support, and action control. During days 4-10, support participants were instructed to support their eating goal achievement in smartphone-based chat groups. Two independent raters coded the chat messages using the Social Support Behaviour Code. The data was analysed using multilevel modelling.

**Findings:** Social support participants showed a significant gradual increase in healthy eating over time. Compared to controls, support participants ate 1.4 servings of fruits and vegetables more (CI95: 0.3, 2.6) or 0.8 unhealthy snacks less (CI95: -1.4, -0.2) on the last intervention day. Of the 1144 chat messages, the most frequent support types were attentiveness (18.7%), informational (14.2%), and esteem support (12.8%). Intervention effects were mediated by action control.

**Discussion:** This study demonstrated that digital support groups successfully promote healthy eating. The results further provided interesting insights into the temporal dynamics of behaviour change, and emphasized the importance of investigating such dynamics for building a theory of behaviour change in daily life.

# Symposium: Confusion, Blues but Marchin' on: what is the state of Cognitive Bias Modification in addiction?

9:00 - 10:30

Aula E

Oulmann Zerhouni, Marilisa Boffo

9:00 - 9:15

## This but a scratch! Comparing frequentist and Bayesian meta-analysis on CBM on addictive behaviours

R. van Beek<sup>1</sup>, O. Zerhouni<sup>2</sup>, M. Boffo<sup>3</sup>, K. Nikolaou<sup>4</sup>, R. Wiers<sup>3</sup>, M. Marsman<sup>3</sup>

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<sup>4</sup>University of Sussex, United Kingdom

Different automatic cognitive biases have been found to underlie the onset and maintenance of addictive behaviours. Cognitive Bias Modification (CBM) interventions target these maladaptive processes by reducing or reversing them. Recent meta-analyses investigating the effectiveness of CBM interventions point in different directions. Using the Cochrane Handbook for Systematic Reviews of Interventions we conducted a systematic review of CBM interventions targeting alcohol and tobacco use. We aggregated published evidence on the effects of CBM on (i) cognitive bias and (ii) consumption in clinical and subclinical alcohol and tobacco users. We quantified the evidence using both frequentist and Bayesian random effects models.

Twenty studies investigating the effect of CBM interventions on cognitive biases and a number of clinical outcome measures were included in the analysis. A random-model analysis with the Sidik-Jonkman method showed a medium-sized reduction of bias toward alcohol and tobacco cognitive biases attributable to CBM and a small-sized reduction on actual consumption at post-test with 95% confidence intervals that did not encompass zero.

However, the Bayesian random-effects model showed only a small effect on cognitive bias for alcohol. Moderator analysis provided insights on potential moderators underpinning the effectiveness of CBM, such as type of addiction, number of training trials, type of CBM intervention, mode of delivery, and type of participants. While recent evidence has questioned the efficacy of CBM in addiction, we discuss the limitations of current research designs and provide suggestions for improvement.

9:15 - 9:30

## Effect of evaluative conditioning on implicit and explicit attitudes toward alcohol and intentions to drink

O. Zerhouni<sup>1</sup>, L. Bègue<sup>2</sup>, F. Comiran<sup>2</sup>, R. Wiers<sup>3</sup><sup>1</sup>University Paris Nanterre, France<sup>2</sup>University Grenoble Alpes, France<sup>3</sup>University of Amsterdam, Netherlands

Since implicit attitudes are highly predictive of alcohol consumption, a promising mechanism to bolster the effectiveness of evaluative conditioning would be affect misattribution. In line with dual process models of EC, we hypothesized that manipulating the learning context to bolster affect misattribution should strengthen EC effects on implicit attitudes toward alcohol, while encouraging propositional processing of CS-US pairs should strengthen EC effects on explicit attitudes.

In our study (n=114) we manipulated whether CS-US pairs were presented simultaneously or sequentially. Recollective memory was estimated with a process dissociation procedure. Both implicit and explicit attitudes were assessed immediately after the procedure. Behavioral intentions were measured after and one week after the protocol. We found that EC with sequential presentation had a stronger impact on implicit and explicit measures and on purchase intentions immediately after the procedure and one week after. We then conducted a small-scale meta-analysis including all studies EC on alcohol attitudes and drinking (k=4; n=420).

The present study provides new and meta-analytic evidence that (i) EC is an effective way to change implicit attitudes toward alcohol and (ii) evidence that EC is better described by propositional rather than dual process accounts.



9:30 - 9:45

## Randomized controlled trial of inhibitory control training for alcohol use disorders

A. Jones<sup>1</sup>, C. Nederkoorn<sup>2</sup>, K. Houben<sup>2</sup>, E. McGrath<sup>3</sup>, E. Robinson<sup>1</sup>, M. Field<sup>1</sup>

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<sup>2</sup>University of Maastricht, Netherlands

<sup>3</sup>University of Manchester, United Kingdom

**Introduction:** Inhibitory control is the ability to stop, change or delay a behaviour than is inappropriate in the current environment, and is thought to play a key role in the self-regulation of alcohol consumption. Inhibitory control training (ICT) is a novel behavioural intervention that yields robust reductions in alcohol consumption in the laboratory, by developing associations between inhibition with alcohol-related cues. **Methods:** Here we describe findings from a pre-registered randomized controlled trial in which 246 (130 male) heavy drinkers, who were motivated to reduce their alcohol use, were randomly allocated to one of four intervention groups: 1. General ICT (an escalating-difficulty stop-signal task); 2. Cue-specific action-cancellation ICT (an escalating difficulty stop-signal task that required inhibition to alcohol cues); 3. Cue-specific action-restraint ICT (a Go/No-Go task that required inhibition to alcohol cues); or 4. Active control (rapid categorization of alcohol cues). All participants completed the intervention online between 8 and 14 times over a one-month period. Changes in inhibitory control and self-reported alcohol consumption were measured before, during and immediately after completing the intervention, and at 6-week follow-up. **Results:** There was a robust reduction in alcohol consumption over time (a reduction from 322g to 213g alcohol per week;  $F(2, 402) = 77.12, p < .001, \eta^2 = .277$ ), however the critical group x time interaction was not significant ( $F(6, 402) = 1.10, p = .360, \eta^2 = .016$ ). **Conclusion:** We found no evidence that ICT influenced alcohol consumption in heavy drinkers, however there was a non-specific reduction in consumption across all groups.

9:45 - 10:00

## Cognitive Bias Modification targeting the cannabis and alcohol consumption of youth in juvenile detention centers

H. van der Baan<sup>1</sup><sup>1</sup>University of Amsterdam, Netherlands

### Background:

Juvenile delinquents use more drugs compared to general population youth, and persist when detained. CBM may be particularly useful in treating drug-use in this population, as they are impulsive and show poor behavioural control. This study investigates the feasibility and effectiveness of CBM for this population, targeting two predominantly used substances.

### Methods:

173 Dutch youth admitted to 6 facilities since 2014 (91.4% male; M-age = 18.35). Participation was voluntary. Participants were selected on CUDIT-R and AUDIT scores and completed five sessions of genuine or placebo versions of either attention-bias or approach-bias CBM, targeting cannabis or alcohol (based on severity of use). Substance use was assessed via self-report of lifetime and past-year frequencies. CUDIT-R and AUDIT were re-administered after 12 months. Follow-up data collection finishes March 2017. Bias scores were tested with One-Sample T-tests. Next, groups were formed based on severity of use. Attention data was analysed using simple ANOVAs, approach data with Mixed ANOVAs.

### Findings:

Attention-bias medians differed significantly from 0 for both total cannabis and alcohol users, and for at-risk cannabis users, but approach-bias medians did not. CUDIT-R scores of at-risk cannabis users correlated positively with both cannabis (.20) and control (.24) stimuli reaction times. Casual users' usage correlated positively with control reaction times (.54).

### Discussion:

Initial results indicate an attention-bias for cannabis but no approach-bias, particularly for at-risk users. Usage strongly correlated with control stimuli reaction times for casual users, suggesting that escalation of use impairs disengagement from cannabis cues. Insufficient severe alcohol users for significant effects.

10:00 - 10:15

## Online cognitive bias modification and motivational interviewing in Chinese smokers: a single-case experimental study

S. Wen<sup>1</sup>, H. Larsen<sup>1</sup>, M. Cao<sup>2</sup>, P. Kong<sup>3</sup>, M. Maric<sup>1</sup>, Y. Tang<sup>2</sup>, R. Wiers<sup>1</sup>

<sup>1</sup>University of Amsterdam, Netherlands

<sup>2</sup>Southwest University, China

<sup>3</sup>United Christian Hospital, Hospital Authority, Hong Kong

**Background:** Empirically validated smoking interventions are urgently needed in China. Relatively automatic action tendencies toward smoking-related cues have been related to smoking behavior. Re-training of addiction-related action tendencies using Cognitive Bias Modification (CBM) has been shown promising clinical effects, when participants are motivated to change. The aim of this study was to evaluate a smoking intervention where web-based CBM was combined with face-to-face Motivational Interviewing (MI) for Chinese smokers with a single-case experimental design.

**Methods:** After a pre-assessment, four Chinese smokers received 4-6 sessions of CBM combined with 2 sessions of MI (two received real CBM and other two received placebo CBM). A post-assessment took place directly after the intervention followed by a three-month follow-up assessment. Ecological Momentary Assessment was used to assess daily cigarette consumption (DCC) throughout the study. Several other aspects of smoking behavior were assessed along with Carbon Monoxide (CO) assessment.

**Results:** Compared with the DCC during the pre-assessment, smoking significantly decreased for the two participants receiving the real CBM in the short term (at the end of the intervention or/and two weeks after the intervention); and significantly decreased for one of the two participants receiving the placebo CBM both in the short term and long term (three months after the intervention). Additionally, CO levels, heaviness of smoking, and craving greatly decreased after the intervention for all four participants.

**Conclusions:** CBM may help Chinese smokers who are motivated to change, but more research is needed to understand the working mechanisms in smoking interventions targeting Chinese populations.

# Symposium: A biopsychosocial view on eating behavior

11:00 - 12:30

Aula E

Gudrun Sproesser

11:00 - 11:15

## Reactance to persuasive health messages as a function of message framing and message source

M. Stok<sup>1,2</sup>, B. Renner<sup>2</sup><sup>1</sup>Utrecht University, Netherlands<sup>2</sup>University of Konstanz, Germany

**Background:** Persuasive health messages do not always have the intended health-promotional effect; they sometimes backfire and lead to unhealthier behavior. Such boomerang effects may be due to reactance (i.e. motivation to restore one's sense of self-determination after perceiving a threat to decisional freedom). The current study jointly investigates effects of message forcefulness and message source on reactance to a healthy eating message, and on subsequent healthy eating intentions.

**Methods:** One-hundred-nineteen students were included in an experimental 2x2 between-subjects design. Participants were exposed to a supposed blog from either a peer (student) or a non-peer (elderly woman). The blog suggested replacing unhealthy snacks with healthier alternatives, using either controlling or autonomy-supportive language. Students subsequently reported level of reactance and healthy eating intentions. Baseline consumption of healthy snacks was controlled for.

**Results:** Hayes' macro for process analysis (model 7), showed that message forcefulness, but not source, significantly affected reactance ( $B = 0.71$ ,  $p < .001$ ). Moreover, reactance affected healthy eating intentions ( $B = -0.26$ ,  $p = .004$ ), mediating the relation between forceful language and intentions ( $B = -.18$ ,  $SE = .07$ ,  $CI [-.40, -.07]$ ).

**Conclusion:** Controlling language in a message promoting healthy eating induce more reactance than autonomy-supportive language, and increased reactance in turn led to lower healthy eating intentions. This has important implications for health promotion, as it suggests that using less forceful language may in fact promote the effectivity of health promotion messages. Our results also suggest that message source may be less influential in this regard.

11:15 - 11:30

## The positive eating scale: relationship with objective health parameters and validity in three countries

G. Sproesser<sup>1</sup>, V. Klusmann<sup>1</sup>, M. Ruby<sup>2</sup>, N. Arbit<sup>3</sup>, P. Rozin<sup>2</sup>, H. Schupp<sup>1</sup>, B. Renner<sup>1</sup>

<sup>1</sup>University of Konstanz, Germany

<sup>2</sup>University of Pennsylvania, United States

<sup>3</sup>Columbia University, United States

**Background:** The prevailing focus regarding eating behavior is on restriction, concern, worry, and pathology. In contrast, the purpose of the present studies was to focus on a positive relationship with eating in non-clinical samples from Germany, the USA, and India.

**Methods:** In Study 1, the Positive Eating Scale (PES) was tested and validated in a large longitudinal sample of German adults (T1: N = 772; T2: N = 510). Health risk status was measured with objective health parameters (fasting serum glucose, triglycerides, high-density lipoprotein cholesterol, blood pressure, waist circumference, BMI). In Study 2, the PES was tested in online samples from the USA, India, and Germany (total N = 749) in confirmatory factor analyses.

**Results:** Study 1 revealed acceptable psychometric properties of the PES, internal consistency ( $\alpha = .87$ ), as well as test-retest-reliability after six months ( $r = .67$ ). Construct validation provided evidence for convergent and discriminant validity. Importantly, a positive relationship with eating was associated with decreased health risk factors six months later, for example risk for metabolic syndrome, OR = .59, 95% CI [.42-.82], B = -0.54, p = .002, pointing to a health protective role. In Study 2, the structure of the PES was confirmed for German, Indian, and US-American adults, demonstrating validity across remarkably different eating environments.

**Conclusion:** A positive relationship with eating might be a fruitful starting point for prevention and intervention programs to promote physical and psychological health.

11:30 - 11:45

## Why are you eating, mom? Mothers' emotional, restrained, and external eating explaining children's eating styles

A. Luszczynska<sup>1</sup>, K. Horodyska<sup>1</sup>, M. Boberska<sup>1</sup>, M. Kruk<sup>1</sup>

<sup>1</sup>SWPS University of Social Sciences and Humanities, Poland

**Background:** Dyadic research investigating three types of eating styles (emotional, restrained, and external) usually focused on associations between maternal feeding practices and child eating styles. Much less is known about the associations between mothers' own eating styles and child eating styles. Using a longitudinal dyadic design we explored if three maternal eating styles may predict respective eating styles in children. Furthermore, the moderator effects of child's gender and obesity status were analyzed.

**Methods:** 739 mother-child dyads participated in the study. Children (55% girls) were 6-11 years old whereas mothers (or female legal guardians) were 23-59 years old. Dutch Eating Behavior Questionnaire (versions for adults and for children) were filled out by mothers and children at Time 1 and 7-8 months later (Time 2). Body weight and height were measured objectively. Path analysis was conducted, accounting for the stability of the constructs over time, correlations of all Time 1 construct, and covariations between all Time 2 residuals.

**Findings:** Maternal emotional and restrained eating (Time 1) explained respective eating styles (Time 2) in girls, whereas maternal emotional and external eating (Time 1) predicted respective eating styles (Time 2) in boys. Among children with overweight/obesity, maternal emotional and restrained eating styles (Time 1) explained respective eating styles in children (Time 2).

**Discussion:** These findings may help to explain why the vast majority of research so far explained child emotional eating style only. The reasons may include a lack of consideration of parental eating styles and moderating effects of child's gender and overweight status.

11:45 - 12:00

## Involving children in meal planning and preparation: dyadic effects on liking and consumption of vegetables

T. Radtke<sup>1</sup>, U. Scholz<sup>1</sup><sup>1</sup>University of Zurich, Switzerland

**Background:** Most children do not meet the recommended vegetable intake. Involving children in meal preparation could be an effective means to increase vegetable consumption. This assumption is based on the “IKEA effect”, which assumes that individuals like self-created objects more than objects created by someone else. Due to this higher preference for self-prepared objects higher levels of consumption of these objects is likely. Thus, this study assumes that children`s involvement in meal planning and preparation has a positive influence on vegetable consumption mediated via liking of vegetables.

**Method:** 920 parent/child dyads participated in the study. Parents had a mean age of  $M = 36.09$  ( $SD = 5.43$ ) and children (54% girls) were 8.22 years old on average ( $SD = 1.42$ ; range 6-11). Children and one of their parents provided self-reports regarding vegetable consumption via questionnaires. Hypotheses were tested with path analysis, accounting for intra-dyadic associations among respective constructs (e.g. parental and children`s food liking).

**Findings:** Analyses indicated a direct effect of children`s participation in meal preparation on liking of vegetables as well as a direct effect of liking on vegetable consumption. Results were unaffected by controlling for children`s age and gender as well as the role model behaviour of the parents concerning healthy eating. However, the assumed indirect effect of children`s participation in meal preparation on vegetable consumption via liking was only 10%-level significant.

**Discussion:** The findings emphasise the importance of parental encouragement for involving their children in the preparation of meals to improve liking of vegetables and vegetable intake.



12:00 - 12:15

## Genetic predisposition to obesity, restrained eating and changes in body weight over adulthood

H. Konttinen<sup>1</sup>, C. Llewellyn<sup>2</sup>, K. Silventoinen<sup>1</sup>, A. Joensuu<sup>3</sup>, S. Männistö<sup>3</sup>, V. Salomaa<sup>3</sup>, P. Jousilahti<sup>3</sup>, J. Kaprio<sup>1</sup>, M. Perola<sup>3</sup>, A. Haukkala<sup>1</sup>

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<sup>2</sup>University College London, United Kingdom

<sup>3</sup>National Institute for Health and Welfare, Finland

**Background:** There is no consensus on whether cognitive control of eating (i.e. restrained eating) is helpful, merely ineffective or actually harmful in weight management. We examined the interplay between genetic risk of obesity, restrained eating and changes in body weight and size.

**Methods:** Participants were Finnish 25- to 74-year-olds who attended the DILGOM study at baseline (n=5024) in 2007 and follow-up (n=3735) in 2014. Questionnaires (e.g. Three-Factor Eating Questionnaire-R18; self-reported weight at age 20 years) and clinical measurements (e.g. height, weight, waist circumference) were completed during the study. We calculated 7-year change in body mass index (BMI) and waist circumference (WC), and annual weight change from age 20 to baseline. Genetic risk of obesity was assessed by calculating a polygenic risk score of 97 known BMI-related loci.

**Findings:** Cross-lagged autoregressive models indicated that baseline restrained eating was unrelated to 7-year change in BMI and WC ( $\beta=0.00-0.01$ ,  $P=0.485-0.767$ ). Instead, higher baseline BMI and WC predicted greater 7-year increases in restrained eating ( $\beta=0.08$ ,  $P<0.001$ ). Polygenic risk score had a small positive correlation with restrained eating. Additionally, individuals with a higher genetic risk of obesity tended to gain more weight from age 20 to baseline and this effect was more pronounced in unrestrained than in restrained eaters ( $P=0.038$  interaction).

**Discussion:** Restrained eating appears to be an indicator of susceptibility to weight gain rather than a factor that causes weight gain in middle-aged adults. There was tentative evidence that restrained eating may be helpful in reducing genetic influences on long-term weight gain over adulthood.

Symposium: Beyond the qual/quant  
divide: doing rigorous and innovative  
qualitative research in health  
psychology

11:00 - 12:30

Aula F

Maria Del Rio Carral

11:00 - 11:15

## What story should we tell? Issues of representation in quantitative and qualitative health psychology research

C. Kerry<sup>1</sup><sup>1</sup>Massey University, New Zealand

This presentation will discuss issues involved in representing research findings from quantitative and qualitative research in health psychology. Most health psychology research is conducted quantitatively, from a hypothetico-deductive positivist perspective, seeking to uncover true relationships, and is based on a number of (taken-for-granted) epistemological and methodological assumptions, and specific notions of what constitutes theory. Findings are typically presented as objective, warranted through theoretical models and statistical analyses using agreed effect quantifiers (p values and effect sizes). This fosters the impression that the story told of the findings is factual, objective, real, and singular, and masks the many judgements and selection processes that frame and shape how and why a particular presentation of findings and conclusions is told. A growing minority of health psychology research is conducted qualitatively. This research, in contrast, works more inductively, with little agreement around epistemology and praxis, and therefore opens possibilities for presenting differing accounts of findings and conclusions. However, problematic issues arise for this research approach in terms of epistemological framings, generalizability, quality and interpretation, where tensions arise between reporting findings and conclusions drawn from participant accounts or researcher interpretation. These differing but parallel tensions in quantitative and qualitative research fuel the so-called 'divide' between these research approaches. Examination of these contentious issues allows us to find solutions and reflect more thoughtfully on the agendas of each research approach, on what stories should be told, and why different forms of story bring different, and valuable, forms of knowledge to the fore.

11:15 - 11:30

## Challenging beliefs in qualitative health psychology: how can interpretation be integrated in the research process?

M. del Rio Carral<sup>1</sup>, M. Santiago-Delefosse<sup>1</sup>

<sup>1</sup>University of Lausanne, Switzerland

In the past two decades, qualitative research has received increased attention from health psychologists. This growing interest is related to its potential to study the complexity of human behaviour in situations of health and illness. Qualitative methods can be used to analyse embodiment, subjectivity, as well as social, political and cultural issues that shape and organize lived experiences of well-being, health, chronic illness, etc. However, qualitative research lacks of scientific recognition within health psychology. One of the major criticisms that is often made is the interpretative basis underpinning its analyses and results. In this communication, we suggest that the interpretative basis is part of any research process in psychology, regardless its qualitative or quantitative perspective. Focussing namely on qualitative research, we argue that interpretation must not be avoided nor overlooked. On the contrary, we discuss that scientific rigour and reliability can actually be enhanced by making the interpretation procedures at stake explicit throughout different stages of the research process. A powerful tool to enable the “scientificity” of qualitative research in health psychology is reflexivity. This will be illustrated through a series of principles that underline its importance and usefulness, in particular to problematize how the researcher positions him/herself with regard to the research process and to the phenomenon under investigation.

11:30 - 11:45

## Innovative way of analysing qualitative data: the combined use of lexicometric and thematic analyses

A. Schweizer<sup>1</sup>, S. Lesage<sup>2</sup>, I. Gilles<sup>2</sup>

<sup>1</sup>University of Lausanne, Switzerland

<sup>2</sup>Institute of Social and Preventive Medicine, Switzerland

Since 1990, there has been an increasing development of qualitative methods for analysing data in social and human sciences. Among them, thematic analysis remains a cornerstone of qualitative analysis methods, widespread used. However, they have been criticised for the lack of “scientificity” and a “subjectivity bias” in the process of categories elaboration. In the recent years, software program “Iramuteq” proposing to perform lexicometric analysis and to increase the validity and rigour of qualitative analysis was developed. Iramuteq restricts the impact of researcher’s subjectivity, in cutting out the thematic analysis meaning units by obtaining units of analysis based on formal criteria. In a research focused on the workload and stress experienced by paramedics in Switzerland, we used these two analysis methods in combination (thematic analysis followed by lexicometric analysis assisted by Iramuteq software). This computer-assisted analysis produced results that were compatible with our thematic analysis and provided further information. The combined use of these two methods adds a greater value to the development of knowledge about people experiencing health / illness. However, it requires the need of reflexive adjustments by the researcher at each stage of the research.

11:45 - 12:00

## Methodological flexibility in Health Psychology

A. Lyons<sup>1</sup><sup>1</sup>Massey University, New Zealand

Valuable, nuanced knowledge can be gained from innovative qualitative research designs and multiple approaches to data collection. This is demonstrated with a research project that employed a number of qualitative methods to explore the role of social networking sites in young adults' drinking practices. There were three stages of the research (friendship group discussions; face-to-face individual interviews with online technology and screen capture recordings; online ethnography) which provided multiple datasets that were analysed separately and together. A number of analytic techniques were employed, including in-depth multimodal discourse analysis and thematic analysis, to answer a range of research questions. The findings across different data sets and analyses demonstrated tensions and complexities that would not have been generated using more traditional methods or one approach to data collection. The nuanced, sophisticated knowledge obtained highlights the value of being flexible with methodologies. It also reinforces the importance of examining young people's worlds from their own perspectives and not making assumptions as researchers. Health Psychology researchers would benefit from greater methodological flexibility, in order to understand and evaluate a range of research findings and also undertake innovative research. This will advance the field to produce effective and reliable knowledge about people's wellbeing, especially in today's digital world.

# Symposium: Pain as a social phenomenon: state-of-the art and new research trends

14:00 - 15:30

Aula D

Liesbet Goubert

14:00 - 14:15

## Exploring sex differences in pain expression communication

E. Keogh<sup>1</sup>, F. Cheng<sup>1</sup>, S. Wang<sup>1</sup><sup>1</sup>University of Bath, United Kingdom

**Background:** Being able to recognize someone is in pain is a fundamental aspect of caregiving. Pain is subjective, and so we rely on verbal and nonverbal cues. There are sex and gender differences in pain, and nonverbal expression recognition. However, direct evidence for sex differences in pain expression communication is limited. One reason could be due to the methods adopted, which often rely on recognition identification. The aim of the current study was to examine sex differences in pain expression recognition, utilizing an attentional bias task.

**Methods:** 53 adults (27 female) completed an attentional dot probe task, which comprises of male and female actors presenting facial expressions (pain, fear, and neutral). This task determines whether attention orients towards or away from a target, relative to a neutral, expression. There were two versions of the task: stimuli were presented for either 150msec or 1250msec.

**Findings:** An interaction between participant sex and expression type was found ( $F(1,49)=4.49$ ,  $p<.05$ ). Females showed a relative bias towards pain compared to fear expressions, whereas in males the opposite was found. An interaction was found between participant sex and stimulus duration ( $F(1,49)=4.30$ ,  $p<.05$ ). Females showed a general bias away from emotional expressions at shorter durations, but towards them when durations were longer.

**Discussion:** This study suggests that sex differences exist in the recognition of pain expressions. It also indicates the utility in adopting specific tests of attentional processing. The next step is to examine whether such biases effect the judgements people make about those in pain.



14:15 - 14:30

## Beyond solicitousness: a scoping review on informal pain-related social support

S. Bernardes<sup>1</sup>, P. Forgeron<sup>2</sup>, K. Fournier<sup>3</sup>, J. Reszel<sup>4</sup>

<sup>1</sup>Instituto Universitário de Lisboa (ISCTE-IUL), Portugal

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<sup>3</sup>Ottawa University, Health Sciences Library, Canada

<sup>4</sup>Ottawa University, School of Nursing, Faculty of Health Sciences, Canada

**Background:** Individuals with chronic pain (ICPs) cite social support (SS) as an important resource. The research has mostly focused on general SS or pain-specific solicitousness, resulting in a narrow understanding of the role of SS in pain experiences. Drawing on SS theoretical models, this review aimed to understand: (1) how pain-related SS has been conceptualized and measured, and (2) how the relationship between pain SS and pain experiences has been investigated.

**Methods:** Arksey and O'Malley's scoping review framework guided the study. A search was conducted in PsycINFO, CINAHL, MEDLINE, EMBASE using a combination of subject headings/keywords, from 2000 to 2015; 3864 citations were screened; 101 full texts were assessed for eligibility; references of 52 included papers were hand searched (which resulted in one additional study). Fifty-three studies were included.

**Findings:** Most studies were either a-theoretical or drew on the operant conditioning model. There are currently several self-report measures and observational systems to operationalize pain-related SS. However, the Multidimensional Pain Inventory remains the most often used, accounting for the fact that the most examined SS concept was solicitousness regardless if it was received (83.01%), provided (20.75%), or observed (5.66%). Most studies investigated the main effect of SS on pain outcomes (79.25%), and only a minority investigated the role of pain SS as a buffer or mediator.

**Discussion:** The role of SS for ICP has primarily been examined from the concept of solicitousness. A more robust theoretical understanding of SS is needed to design SS interventions to improve outcomes for ICPs.

14:30 - 14:45

## Help provision within couples faced with chronic pain: a motivational approach

L. Goubert<sup>1</sup><sup>1</sup>Ghent University, Belgium

**Background:** Research has indicated that receiving support from a romantic partner may not only benefit individuals with chronic pain (ICPs), but may also yield negative effects. Therefore, more research is needed examining the conditions under which partner support has (mal)adaptive effects. The present study used a motivational approach (i.e., Self-Determination Theory) to investigate the effects of partners' different types of motivation to help upon ICP outcomes and its underlying processes.

**Method:** A sample of 134 couples, where at least one partner had chronic pain, completed a diary for 14 consecutive days. Partners (81.3% males) reported on their daily helping motives, whereas ICPs reported on their daily received support, timing of help, need satisfaction and frustration and pain intensity.

**Findings:** Results showed that partners' daily helping motivation was significantly related to changes in ICPs' day-to-day need satisfaction and frustration. On days where partners helped primarily for autonomous reasons (i.e., enjoyment, full commitment) rather than for controlled reasons (e.g., avoiding guilt and criticism), ICPs indicated receiving more help, which partially accounted for the effect of partner's autonomous helping motivation on ICP need satisfaction and frustration. Timing of help moderated the effects of daily received support on ICP need satisfaction and frustration.

**Discussion:** Our findings indicate that considering the reasons why a partner provides help is important to understand when ICPs may benefit from daily support. Further, findings highlight the importance of receiving support on moments that it is needed most, and especially when there is little support provision present.

14:45 - 15:00

## The role of parental versus partner support in how young females cope with menstrual pain

L. Caes<sup>1</sup>, M. Christodoulou<sup>1</sup><sup>1</sup>University of Stirling, United Kingdom

**Background:** An important aspect of growing up is gaining independence from parents and relying more on peers for support. In relation to support in coping with pain experiences, it is however unknown whether young adults rely more on parental or peer/partner support and what the underlying mechanisms are explaining the influence of this social support. The current study aimed to explore the relative importance of parental versus partner support in how young females cope with menstrual pain. In addition, the role of pain-related self-efficacy as a mediator was explored.

**Methods:** A sample of 94 females between 18–20 years of age ( $M=19.17$ ,  $SD=0.77$ ) participated in an online survey requesting them to report on their pain intensity and disability during menstruation, perceived level of parental support and partner support as well as their level of pain-related self-efficacy.

**Findings:** No significant differences in pain during menstruation was reported by females in a romantic relation compared to single females. Parental support nor partner support directly influenced pain-related disability, while self-efficacy showed a strong negative association with disability. A trend was found for a positive association between parental support and pain-related self-efficacy, providing marginal support for an indirect relation between parental support and disability via pain-related self-efficacy.

**Discussion:** The findings highlight the importance of resilience mechanisms such as self-efficacy, over and above social support in explaining how young females cope with menstrual pain. However, preliminary support was found for adaptive parental support, rather than partner support, in stimulating resiliency towards pain.

15:00 - 15:15

## Parental psychological flexibility, catastrophizing, and parents' goals regarding their child in pain: a diary study

C. Van Gampelaere<sup>1</sup>, L. Caes<sup>2</sup>, T. Vervoort<sup>1</sup>, L. Goubert<sup>1</sup>

<sup>1</sup>Ghent University, Belgium

<sup>2</sup>University of Stirling, United Kingdom

**Background:** Protective parenting, aimed at reducing child pain, is shown to be associated with worse pain-related outcomes. To further our knowledge, it is useful to study parental behaviour within a context of multiple, possibly competing, goals. Specifically, parents may try to reconcile goals related to child pain reduction with other child-related goals (e.g., school functioning). This study investigates different goals parents hold regarding their child in pain, and examines the role of psychological flexibility (PF) and catastrophic thinking (CT) in persistently prioritizing pain reduction over other goals.

**Method:** Participants were 32 parents of children (9-16 years) suffering from chronic abdominal pain or headache, recruited through two hospitals (Ghent, Belgium). The PPFQ questionnaire was administered and goals were generated during a home visit. Subsequently, parents were asked to complete a daily diary (21 days), assessing child pain intensity, parental CT, parental goals for child pain reduction and child activity engagement, and the importance of pain goals versus other goals.

**Findings:** Results showed that pain intensity was associated with stronger parental focus upon pain reduction but, unexpectedly, also with a stronger tendency to encourage child activity engagement. Parents reporting more CT evidenced a higher focus upon pain reduction, and attached greater importance to pain control. Parents reporting higher levels of PF attached less importance to child pain control and also to other child-related goals.

**Discussion:** Findings highlight the importance of parental CT, PF and pain intensity in explaining parental goal pursuit in the context of paediatric chronic pain.

# Determinants of wellbeing

9:00 - 10:30

Aula A

Ann Ojala

9:00 - 9:15

## The positive effects of character strengths on the well-being of medical students over time

M. Hausler<sup>1,2</sup>, C. Strecker<sup>2</sup>, A. Huber<sup>1,2</sup>, M. Brenner<sup>2</sup>, T. Höge<sup>2</sup>, S. Höfer<sup>3</sup>

<sup>1</sup>Medical University of Innsbruck, Austria

<sup>2</sup>University of Innsbruck, Austria

<sup>3</sup>Medical University Innsbruck, Austria

**Background:** Character strengths are positively related to well-being. However, no detailed longitudinal analyses of the relations between different well-being aspects and character strengths exist until now. This study is the first analyzing a broad range of well-being aspects in relation to specific character strengths in a sample of medical students over time.

**Methods:** According to the existing literature we hypothesized that (1) hope, zest, gratitude, curiosity and love were the strengths the most correlated with well-being and (2) character strengths in general are more strongly related to psychological well-being (PWB) than to subjective well-being (SWB). Furthermore (3), we took an exploratory look on the relations between the 24 character strengths and six aspects of PWB (engagement, relationships, meaning, mastery, optimism, autonomy). 117 medical students were investigated twice in their first and third year of studies using the Values In Action Inventory of Strengths and the Comprehensive Inventory of Thriving.

**Findings:** Results showed that (1) hope, zest, gratitude, curiosity and love (amongst others) were relevant the most for SWB and PWB. (2) Correlations between character strengths and PWB were significantly stronger than with SWB. (3) The six aspects of PWB were differently correlated with the 24 character strengths.

**Discussion:** The results showed the importance to distinguish between the different well-being aspects in future research. Specific interventions for definite character strengths can be chosen to foster these aspects purposefully. This may allow for a more focused application of character strengths interventions in the setting of medical education.

9:15 - 9:30

## The role of relationship with nature and outdoor recreation on people's health and wellbeing

A. Ojala<sup>1</sup>, M. Neuvonen<sup>1</sup>, L. Tyrväinen<sup>1</sup><sup>1</sup>Natural Resources Institute Finland (Luke), Finland

There is increasing evidence that green areas support peoples' health and wellbeing. Not only visits to green areas, and the accessibility of green areas, but also subjective relationship with nature is hypothesized to have a positive linkage with wellbeing. There is also evidence, that visiting green areas reduces stress. In this study we combine this knowledge into one path model to explain subjective health. We studied the importance on nature relatedness and outdoor recreation together with anxiety and stress indicators on subjective health as an outcome variable.

The analysis was based on the randomly assigned survey data. The sample consists over 25-years old Finnish speaking respondents living in Helsinki, the capital of Finland. The data was gathered together with the National Institute for Health and Welfare (THL). The response rate was 46.9 per cent (n=3752). We used path analysis (SPSS AMOS 24) to analyze the data. The nature relatedness had a direct positive, and the anxiety and current feelings of stress had direct negative links to recreational visits and subjective health. The general anxiety as well as current feelings of stress had direct negative links to recreational visits. Finally, the more recreational visits, the higher was the subjective health. The full model explained 28 per cent of variance of the subjective health. The relationship with nature, as a motivation for recreational visits, could promote more active lifestyle and so better health. The importance of nature relationship and recreational visits in relation to anxiety and current stress should be studied further.

9:30 - 9:45

## Museums on prescription: a social prescribing intervention for isolated older adults

P.M. Camic<sup>1</sup>, L.J. Thomson<sup>2</sup>, H.J. Chatterjee<sup>2</sup>, B. Lockyer<sup>1</sup>

<sup>1</sup>Canterbury Christ Church University, United Kingdom

<sup>2</sup>University College London, United Kingdom

**Background:** Social prescribing, a relatively new UK health promotion initiative, links patients in primary care with local sources of support within the community. We sought to explore the impact and role of museums/art galleries within a social prescribing framework. The main research questions examined if a 10-week museum-based intervention programme could reduce social isolation and loneliness and increase wellbeing in older adults.

**Methods:** This mixed-methods longitudinal study involved 110 participants (65-86 years), identifying as socially isolated and lonely. Standardised measures were completed at multiple time points; detailed diaries from participants, museum facilitators and researchers, along with interviews (end of programme, 3- and 6-month followup), were analysed using thematic analysis.

**Findings:** Measures of psychological wellbeing (UCL-WM), mental wellbeing (WEBWMS) and loneliness (R-UCLA) were taken at baseline, mid- and end-programme and R-UCLA at 3- and 6-month followup. One-way analysis of variance found a highly significant increase over time for the UCL-WM,  $F(2,112) = 12.871$ ,  $p < 0.001$ , partial eta square = 0.187, observed power = 0.997, but no significant changes for WEBWMS,  $F(2,122) = 0.652$ ,  $p < 0.523$ ; or for R-UCLA;  $F(2,124) = 0.890$ ,  $p < 0.413$ . Qualitative themes included the importance of an engaging facilitator, learning new information and sharing this learning with other people within a supportive group environment. These critical components appeared to facilitate wellbeing effects, including mental stimulation, inspiring creativity and feeling more valued. For those that were particularly isolated, participating in the programme increased social confidence.

**Discussion:** Museums, as community-based partners, offer important resources for health psychologists to co-develop non-clinical, health promoting interventions.



9:45 - 10:00

## Sleep disruption in adulthood: the effects of technology use on quality and duration

S. O'Neill<sup>1</sup>, S. Dockray<sup>1</sup><sup>1</sup>University College Cork, Ireland

### Background:

Technology use as a disrupter of sleep quality has been emphasised in sleep research in recent years, with many studies focusing on the potential for screen time to delay sleep onset. The use of technology devices prior to bed-time and the corresponding exposure to blue light emitted by these devices can delay sleep onset, likely via melatonin suppression (Harad, 2004; Zeitzer et al, 2000). A less examined reason for sleep disruption following technology use is that there is a higher emotional arousal associated with technology use, for example, via social engagement, that disrupts sleep. The REST (Researching Experiences of Sleep and Technology use) Study examined the effects of technology use on sleep quality and health in adults. The study also investigated the effects of emotional arousal from using devices on sleep quality.

### Methods:

Participants (N=1104) aged 18+ from around the world completed the Pittsburgh Sleep Quality Index, the Epworth Sleepiness Scale and the Beck Depression Inventory, diary measures of emotional arousal and details of their use of technology prior to bed-time.

### Findings:

A series of regression analyses indicates that technology use and depression are associated with poor quality sleep, as measured by Global PSQI. Younger participants reported higher levels of technology use prior to bed-time and experienced greater sleep disruption.

### Discussion:

Technology use may represent an independent risk for sleep disruption via biological and psychological pathways. The results are interpreted within a developmental framework, emphasising the inter-individual differences in psychobiological dimensions of sleep.

10:00 - 10:15

## Developmental changes in resilience and life satisfaction during early adolescence

M. Bacikova-Sleskova<sup>1</sup>, J. Benka<sup>1</sup>, L. Hricova<sup>1</sup>, O. Kalina<sup>1</sup>

<sup>1</sup>Department of Educational Psychology and Psychology of Health, Pavol Jozef Safarik University in Kosice, Slovakia

### Background.

Early adolescence is a period characterized by huge changes in most aspects of adolescents' development. The changes that occur between childhood and late adolescence are well documented. However, a closer look at the developmental changes within the specific period of early adolescence is needed.

### Methods.

This work aims to study the developmental changes in resilience and life satisfaction in adolescents between the ages of 11.5 and 13. A five wave longitudinal study was performed with 497 adolescents (T1 mean age 11.52; T5 mean age 13.09; 59.4% of girls). Three subscales of the Adolescent resilience scale (novelty seeking, emotional regulation, positive future orientation) and the life satisfaction scale (6 life domains) were used.

### Findings.

Linear mixed models with longitudinal data revealed the following results: a significant decrease in life satisfaction ( $F=30.11$ ,  $p\leq.000$ ), novelty seeking ( $F=22.84$ ,  $p\leq.01$ ) and orientation for future ( $F=43.09$ ,  $p\leq.000$ ) with no interaction effect with gender. The significant level of the slope variance suggests between-subject differences in developmental trajectories for the studied variables. The negative covariance interaction suggests that the higher the initial levels for novelty seeking ( $Z=-3.16$ ,  $p\leq.01$ ) and positive future orientation ( $Z=-3.41$ ,  $p\leq.01$ ) reported by the respondents, the lower the decrease in time.

### Discussion.

Both life satisfaction and resilience significantly decreased in a short period of development. It seems to be crucial to implement prevention programs for adolescents as soon as during early adolescence to promote their positive development.

# Predicting behavior and health

9:00 - 10:30

Aula B

James Green

9:00 - 9:15

## Smoking behaviour, wrong beliefs and smoking risks perception in Portuguese adolescents

P. Vitória<sup>1,2</sup>, C. Nobre<sup>3</sup><sup>1</sup>Universidade da Beira Interior - Faculdade de Ciências da Saúde, Portugal<sup>2</sup>CIS-IUL, Instituto Universitário de Lisboa (ISCTE-IUL), Portugal<sup>3</sup>Ph+ Desenvolvimento de Potencial Humano, Lda., Portugal

**Background:** Smoking is the main avoidable cause of morbidity and mortality. The great majority of smokers started during their adolescence. Aims of this study were to get accurate information on the process of smoking behaviour acquisition and on smoking beliefs and smoking risk perception, of Portuguese adolescents.

**Methods:** 3847 students of 3rd cycle (n=2206) and secondary (n=1641) school grades participated in this study. The average age was 15.3 years (SD=1.6) and 58% were girls. The sample was gathered in 31 schools randomly selected in the five main administrative regions of Continental Portugal.

**Findings:** In the overall sample 10.6% of participants smoked regularly, 61.2% were never smokers and 3.2% ex-smokers. About 10% of participants had strong beliefs pro-smoking (e.g., totally disagreed with the statement “smoking damages my health”) and a significant part expressed lack of information on the effects of smoking (e.g., 38% answered “do not know” to the question “smoking helps to get less weight”). The majority believes that more than 60% of Portuguese population smokes. Among the smokers, only 16% declare that never had tried to reduce or quit smoking and only 21% declare that wanted to keep smoking.

**Discussion:** A significant part of Portuguese adolescent’s smoke. Wrong beliefs and lack of information were identified. Most of the smokers were not satisfied and wanted to quit. These results have implications on smoking prevention: beliefs on smoking effects and information on smoking risks should still be addressed. Cessation encouragement and support must be provided earlier in the smoking acquisition process.

9:15 - 9:30

## Positive, but not negative, emotions prior to donation predict first-time whole blood donor return

A. van Dongen<sup>1</sup>, B. Masser<sup>2</sup>, L. Williams<sup>1</sup><sup>1</sup>UNSW, Australia<sup>2</sup>University of Queensland, Australia

### Background:

Despite recognition that blood donation, like many health-related behaviours, is a highly affective experience, the impact of donors' emotional experience on subsequent behaviour remains relatively unexplored. The aim of this study was to fill this gap by measuring first-time blood donors' emotions throughout the donation process. Specifically, we assessed a range of discrete emotional states and then tracked intention and return behaviour.

### Methods:

First-time blood donors (N=310) were asked "How joyful/proud/sad/scared/stressed do you feel right now?" in the waiting area of the donation centre, in the chair before needle insertion, and in the refreshment area after donation. Donors' self-reported emotional experience was used to predict intention to return (measured in-centre) as well as actual return within the next 6 months.

### Findings:

Across timepoints, the vast majority reported experiencing positive emotions (94-97%), with a much lower percentage reporting negative emotions (4-64%, with the highest being for stress in the chair). Pride in the waiting area (Beta=.180, p=.017), and joy in the chair and the refreshment area (Betachair=.177, p=.044; Betarefreshment=.313, p=.001) predicted intention to return. Positive emotions in the waiting area predicted return (ORjoy:1.66, 95%CI[1.20-2.31]; ORpride:0.71, 95%CI[0.52-0.96]). Emotions in the chair and refreshment area did not predict return. In no analysis did negative emotions predict intention or return.

### Discussion:

Positive, but not negative, emotions in-centre predict intention to return and return behaviour among first-time blood donors. Further, negative emotional experience is relatively infrequent. Interventions targeting positive emotions prior to donation could be effective in boosting retention among this group of donors.

9:30 - 9:45

## Branded and generic medicines: does pharmacy education change preferences?

J. Green<sup>1</sup>, H. Arnold<sup>1</sup>, A. Beech<sup>1</sup>, W. Burroughs<sup>1</sup>, K. Hadley<sup>1</sup>, E. Harris<sup>1</sup>, S. Sullivan<sup>1</sup>

<sup>1</sup>University of Otago, New Zealand

**Background:** Generic medicines provide a low-cost, safe, effective alternative to branded medicines. Despite their objective similarity, patients often prefer branded medicines, imposing costs to the patient and health system, and may lead to lower adherence for generic medicines. The aim of this study was to examine explicit and implicit preferences for branded and generic medicines, and to determine whether formal education on medicine changed these preferences.

**Methods:** 309 university students participated in this cross sectional study. Participants completed questions on understanding and knowledge of generic and branded medicines, their preference for specific branded and generic medicines, their ability to identify branded medicines, Beliefs about Medicines Questionnaire (BMQ) general, Perceived Sensitivity to Medicines (PSM), and Affect Misattribution Procedure (AMP) measure of implicit attitude toward branded and generic medicines.

**Findings:** Pharmacy students were more confident of their understanding of generic ( $d = 1.2$ ) and branded medicines ( $d = 0.9$ ), and were more correctly able to define branded and generic medicines,  $\chi^2 = 5.0$ ,  $p = .03$ . Surprisingly, pharmacy students were not better at identifying branded medicines, and had similar preferences. Students better able to define the difference preferred more generics,  $d = 0.4$ . There were no differences between pharmacy and non-pharmacy students on the AMP measure.

**Discussion:** Despite pharmacy students being explicitly taught that generic medicines are as good as branded medicines, this had little influence. This has clear implications for encouraging the public about the benefits of generic medicines, as it appears even tertiary education on the matter has little impact.

9:45 - 10:00

## A new psychological perspective on the relation between socioeconomic status and health

S. Elbert<sup>1</sup>, A. Dijkstra<sup>1</sup><sup>1</sup>University of Groningen, Netherlands

Background: Socioeconomic inequalities are related to many health and illness outcomes, partly because individuals with a lower socioeconomic status (SES) behave less healthily. Evidently, this group does not use all modern knowledge available in society about the relation between behaviour and health. Therefore, a new psychological perspective is developed to explain these mechanisms: Lower-SES individuals may not adopt health messages associated with higher-SES sources, due to the painful upward social comparisons these involve. Moreover, this leads to a lower-SES culture that keeps itself in existence, with its own perceptions, social influences and behavioural patterns. Methods: In a pilot study, we tested the assumption that lower-SES individuals do not have all knowledge about health. Parents with a low/medium (n =126) or high level of education (n =129) indicated their agreement with statements about the relation between overweight in their children and health. Findings: Compared to the higher educated parents, low/medium educated parents agreed less with statements about overweight being associated with a greater risk of developing diabetes ( $p = .01$ ,  $\eta^2 = .03$ ), heart and vessel diseases ( $p < .05$ ,  $\eta^2 = .02$ ) and cancer ( $p < .01$ ,  $\eta^2 = .04$ , all controlled for parent's BMI). Discussion: Lower educated people seem not to have the available knowledge regarding these behaviour-health relations. Our psychological perspective gives new insight into the relationships between SES and health, and why differences maintain to exist. Future research needs to test further assumptions, in order to better understand the lower-SES group, often underrepresented in health interventions and health promotion research.

10:00 - 10:15

## Effects of self-affirming messages on smokers' responses to health warnings

L. Kessels<sup>1</sup>, K. Massar<sup>1</sup>, J. de Vreede<sup>1</sup>

<sup>1</sup>Maastricht University, Netherlands

### Background:

The aim of this study is to explore a new method of using self-affirmation theory to reduce defensive responses to health warning messages. Although self-affirmation suggests promising effects, the applicability for health campaigns is limited. In this new approach, participant's self-concepts were affirmed via textual information integrated on cigarette packs. Below the health warning an affirming message was presented on cigarette packs.

### Methods:

One hundred sixty four smokers were exposed to 5 cigarette packs showing health warnings (e.g.: "Smoking kills you") in combination with either an affirming message or a non-affirming message to assess defensive responses on health warnings evaluations and self-efficacy measures. The moderating effect of nicotine dependency was also examined.

### Findings:

Participants exposed to health warnings with an affirming message (affirmed participants) judged the warnings as more threatening than participants exposed to health warnings without an affirming message (non-affirmed participants). For participants with high nicotine dependence, an affirmation message resulted in a more positive evaluation of the health warnings and greater self-efficacy to stop smoking than a non-affirmation text. For participants with low nicotine dependence, there were no differences in health warning evaluation and self-efficacy levels between the affirmed and non-affirmed message conditions.

### Discussion:

These results suggest promising effects of affirming messages incorporated in health warnings to reduce defensive responses.



10:15 - 10:30

## Frightfully funny: combining threat and humour in health messages for men and women

L. Janssen<sup>1</sup>, H. Hendriks<sup>2</sup><sup>1</sup>Tilburg University, Netherlands<sup>2</sup>University of Amsterdam, Netherlands

Imperative for public health is investigating what factors may reduce defensive responses to health information, improving the adoption of health-conducive behaviour. The present research investigated gender differences in responses to threatening health-promoting information communicated with humour. Male and female participants were exposed to a health messages stressing the severe or less severe negative consequences of binge drinking (Experiment 1; N = 209) or caffeine consumption (Experiment 2; N = 242), that did or did not contain a funny visual metaphor (Experiment 1) or a slapstick cartoon (Experiment 2). Message evaluation, message attention, and attitudes and behavioral intentions were measured. ANOVAs showed that health messages were more persuasive when communicated with humour, but humour played a different role for men and women. For men, the humorous high threat message was more persuasive than the other three messages (attitude and intention to decrease caffeine consumption in Experiment 2:  $F(3, 130) = 10.34, p = .002, \eta^2 = .070$ ;  $F(3, 130) = 7.77, p = .006, \eta^2 = .056$ ). In contrast, for women, the humorous low threat message was most persuasive (attitude and intention to decrease caffeine consumption:  $F(3, 104) = 4.50, p = .036, \eta^2 = .041$ ;  $F(3, 104) = 4.61, p = .034, \eta^2 = .042$ ). By uncovering the moderating role of gender as a key audience characteristic, this research contributes to designing effective future health campaigns and provides important insights for future studies investigating the underlying mechanisms responsible for the different effects of threat and humour for men and women.

# Intentions and behaviour

9:00 - 10:30

Aula F

Mark Conner

9:00 - 9:15

## Effects of high treatability information on preventative intention of bowel cancer

Y. Wu<sup>1</sup>, A. Dijkstra<sup>1</sup>, S. Dalley<sup>1</sup><sup>1</sup>University of Groningen, Netherlands

**Background:** The information that indicates a disease is highly treatable is called 'high treatability information' (HTI). This HTI may decrease people's preventative intention of the disease. The current study examined the effects of HTI on preventative intention of bowel cancer. Procedure of self-affirmation was used to eliminate the defensive responses to HTI.

**Methods:** This study employed a 3(control versus low versus high treatability) × 2(self-affirmation versus no self-affirmation)-experiment. The participants (N = 717) were recruited from both China and the Netherlands, and they were randomly assigned to one of the six conditions. The main outcome was preventative intention of bowel cancer. The moderating effects of age and response efficacy were examined.

**Findings:** Analyses revealed a two-way interaction between treatability and age, whereby when participants were young, exposure to HTI decreased the preventative intention of bowel cancer. There was also a three-way interaction among treatability, self-affirmation and response efficacy, whereby when response efficacy was low and participants were self-affirmed, participants exposed to HTI showed lower preventative intention of bowel cancer than those exposed to low treatability information.

**Discussion:** These results suggest the negative effects of HTI on preventative intention of bowel cancer.

9:15 - 9:30

## The role of degree of intention formation in the relationships between intentions, habits and behaviour

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We explored the extent to which degree of intention formation moderated intention-behaviour and habits-behaviour relationships in two studies. In study 1 we tested these effects using data from a longitudinal study of 6 health behaviours (N = 865). Degree of intention formation was operationalized as the z transformed multiple correlation of intentions with attitude, subjective norms and perceived behavioural control across behaviours with an individual. Multi-level modelling of 5190 observations revealed reliable cross-level interactions between degree of intention formation and both intention and either a frequency or frequency x stability index of habit. Simple slopes analyses indicated that well-formed compared to poorly formed intentions were associated with stronger intention-behaviour and weaker habit-behaviour relationships. Study 2 replicated these findings with a frequency measure of habit in a longitudinal study of 20 health behaviours (N = 387) again using multi-level modelling (5858 observations). Study 2 also showed these effects of degree of intention formation were mediated by intention stability. These findings would suggest that future research on behavioural prediction should consider not only the strength of people's intentions to act, but also how well formed are the intentions.

9:30 - 9:45

## Combining factors in predicting behavioural clusters: a connectionist approach

G. Nudelman<sup>1</sup>, S. Shiloh<sup>2</sup><sup>1</sup>Philipps-Universität Marburg, Germany<sup>2</sup>Tel Aviv University, Israel

**Background:** Health behaviours differ in their characteristics, suggesting that the predictive value of predictors might differ as a function of the targeted behaviour. Health behaviours can also be clustered in categories according to their similarity. Therefore, consistent with a connectionist approach, our goal was to identify patterns of cognitive constructs that predict expectations to engage in clusters of health behaviours.

**Method:** A sample of lay people (N=1709) judged health behaviours representing clusters from the Health Behaviour Taxonomy on 14 constructs drawn from the literature, and rated their expectations to perform these behaviours. Analysis was conducted using Stepwise Multiple Regression.

**Findings:** Expectations to engage in all behavioural clusters were positively associated to varying degrees with 'frequency of performance', 'perceived behavioural control', and 'anticipated regret', and negatively associated with 'effort'. Moreover, expectations to engage in each behavioural cluster were primarily predicted by a unique combination of constructs: Nutrition behaviours (e.g., fruits and vegetables consumption) by 'effort' and 'positive affect'; Health Maintenance behaviours (e.g., teeth brushing) by 'impact on health' and 'effort'; and Risk Avoidance behaviours (e.g., seat belt use) by 'perceived behavioural control' and 'anticipated regret'.

**Discussion:** The findings demonstrate the utility of a connectionist approach to the field of health behaviours and support the structure representing their cognitive schema. This approach can help in developing an optimal solution for predicting different behavioural expectations. The identification of unique combinations of predictors for different behavioural clusters suggests that distinct factors need to be emphasized in interventions, according to the targeted behaviours.

9:45 - 10:00

## Integrating intention and self-control variables to better predict health behaviors

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According to the WHO, health behaviors change such as smoking, physical activity, and diet, could prevent 75% of cardiovascular-related diseases. Health psychology models identified intention's determinants to adopt healthy behaviors, but more studies are needed to better understand the intention-behavior gap. The recent integrative self-control theory (Kotabe & Hofmann, 2015) highlights the role of self-control in this gap, which represents our capacity to regulate, inhibit and override immediate desires and habits in order to act congruently with our long-term goals. However, this theory's premises have not been tested yet empirically, and notably the role of intention with regard to self-control correlates. This research aimed at examining the role of both intention and self-control correlates in predicting adoption of healthy behaviors (physical activity and healthy diet) and avoidance of unhealthy behaviors (tobacco and unhealthy diet). Students (N=390) completed an on-line questionnaire assessing self-control (traits and state), self-control correlates (problematic desire, desire-intention conflict, and resistance to the problematic desire), intention to adopt health behaviors, and health behaviors. Path analyses models were conducted for each behavior separately. Results partly confirmed the premises of the integrative self-control theory, by showing the expected relationships between self-control correlates and behaviors (tobacco  $R^2 = .61$ , physical activity  $R^2 = .14$ , healthy diet  $R^2 = .34$ , unhealthy diet  $R^2 = .08$ ). Self-control also predicted intention, however, contrary to the hypotheses, intention predicted behaviors directly without impacting the conflict felt between desire and intention. Results suggest that intention and self-control correlates act as different pathways of influence on health behaviors.

10:00 - 10:15

## Executive functions, self-report self-control and the intention-behaviour relationship

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**Background:** Self-control refers to the ability to regulate cognition and behaviour to achieve long term goals and involves both explicit pursuit of long terms goals and implicit associative processes that promote resistance to temptation (dual-processes). Self-control can be explicitly assessed through self-report questionnaires. Self-control conceptualised as a set of higher order neurocognitive processes (executive functions) is assessed by implicit measures such as stop-signal tasks. Both measures were independently found to moderate the intention-behaviour relationship in physical activity behaviour. To go beyond these results, we hypothesise that the interaction between self-report self-control and a stop-signal task can explain the discrepancy between physical activity intention and behaviour in a prospective study.

**Methods:** In a prospective design with two laboratory sessions participants (N = 134) completed standardised questionnaires (past physical activity behaviour, trait self-control and intention) and a computer based stop-signal task at session 1. Physical activity behaviour was assessed at session 2 (one week later). A discrepancy score between behaviour and intention was calculated and used as dependent variable.

**Results:** Hierarchical multiple regression analyses controlling for past behaviour revealed a two-way interaction effect of Trait Self-Control x Stop-Signal Task. Participants with poor performance in the stop-signal task showed a positive association between self-report self-control and the discrepancy score whereas participants with high performance in the stop-signal task showed no association between self-control and discrepancy score.

**Discussion:** Self-report self-control and executive functions interact in predicting the intention-behaviour relationship. Our results support dual-process theories of self-control.

10:15 - 10:30

## Reviving the conceptual intricacies of the intention construct in health research: recommendations and future directions

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**Background:** Intention has been an important concept in health behaviour theory/research by explaining and predicting behaviour, providing a keystone for intervention and serving as a critical comparison for the relative value of volitional and nonconscious factors to behaviour. Nevertheless, we propose that the intention concept has a double-barreled definition that was identified but not adequately addressed during the inception of popular intention-based models. Intention can mean a decision to perform a behaviour or not (dichotomous) and/or the commitment (continuous) to enact a behaviour. The purpose of this review was to overview the definition-level complexity of intention both from researcher and lay perspectives, discuss the operational and functional assumptions of intention based on this complexity, and provide recommendations for how to reduce this complexity moving forward. **Methods:** A search of seven dictionaries and research articles published between January 2012-2017 using Google Scholar with the in-title search terms: intention AND health was conducted. Within the relevant publications, citations for 'intention' were tracked to the original sources of conceptualization. **Results:** The two meanings of intention were present and prevalent across researcher and lay definitions. Further, we demonstrate that these separate meanings have different measurement requirements and are situated in different intention-based models. **Discussion:** We suggest that decisional intention be used to denote the direction meaning of intention and intention strength should be used to denote the intensity of commitment. We suggest that holding to these terms will improve measurement, theory testing, and intervention practices in health behaviour research that employs an intention construct.



# Individual differences, health behaviors and self-regulation

9:00 - 10:30

Aula G

Noa Vilchinsky

9:00 - 9:15

## Can childhood self-control compensate for the health impact of social disadvantage? Results from two cohorts

M. Daly<sup>1,2</sup><sup>1</sup>University of Stirling, United Kingdom<sup>2</sup>University College Dublin, Ireland

**Background:** The objectives of the current study were to determine whether the childhood capacity for self-control forecasts better health in midlife, and to decipher how self-control combines with early social disadvantage to predict adult health.

**Methods:** Participants (N=25,381) were members of the 1970 British Cohort Study and the 1958 National Child Development Study for whom it was possible to derive a composite measure of childhood social disadvantage (based on parental education, occupational prestige, housing tenure, and crowding) and for whom self-control was rated by teachers at age 10 (1970 cohort) and 7/11 years (1958 cohort). Follow-up assessments were between ages 42-55 years where a range of health outcomes were examined (i.e. presence of chronic conditions, self-reported health, pain, psychological distress, physiological dysregulation, and mortality).

**Results:** Across both cohorts, early life self-control reliably predicted each health measure (all  $p < .001$ ) in adulthood over and above background disadvantage. Early self-control did not moderate the link between disadvantage and health. Rather, self-control showed a graded relationship with midlife health that was sufficiently large to compensate for approximately 90% of the influence of initial social disadvantage on average.

**Conclusion:** This study provides new evidence that better self-control in childhood is associated with a range of favourable health outcomes in adulthood. Further, it shows that high levels of early self-control may enable those from disadvantaged backgrounds to maintain comparable health to their more affluent peers. These findings lend support to the notion that intervention programmes may help ameliorate health disparities by enhancing self-control among disadvantaged youth.

9:15 - 9:30

## Do people with food intolerance share characteristics with those with food allergy? A new approach

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**Background:** Medically diagnosed Food Allergy (FA) is increasing in incidence less than self-diagnosed Food Intolerance (FI). To what extent do individuals with FA and with FI share common characteristics in their psychological processing? Is it possible to identify areas of commonality between FA or FI groups and individuals with Asthma or Irritable Bowel Syndrome (IBS) or Chronic Fatigue Syndrome/Myalgic Encephalomyelitis (CFS/ME)?

**Methods:** 150 participants were in six groups: FA, FI, Asthma, IBS, CFS/ME, Healthy Control. All participants completed a series of on-line tasks and questionnaires.

**Findings:** Reported general health was significantly worse for the FI group than for the FA and control groups. Somatisation levels (PHQ-15) were significantly higher for the FI than for the FA and control groups, but did not differ significantly from those for the IBS and CFS/ME groups. Pain catastrophising, depression and anxiety were also significantly higher for the FI group than for the FA and control groups. Further, level of somatic bias (word association task) was significantly higher for the FI group than for the FA and control groups, but did not differ significantly from the levels for the IBS and CFS/ME groups, even when comparisons were controlled for levels of anxiety and depression.

**Discussion:** The results suggest that individuals with FI may share a tendency toward a characteristic type of processing (e.g. a greater sensitivity to stress) with some other illness groups. It is possible that this aspect of FI could be assisted by CBT or MBCT which are tailored to address this problem.

9:30 - 9:45

## Self-compassion, age-related stressors, and cortisol secretion in older adulthood

H. Herriot<sup>1</sup>, C. Wrosch<sup>1</sup>, J. Guoin<sup>1</sup><sup>1</sup>Concordia University, Canada

**Background:** With the onset of old age many individuals experience an increase in various age-related stressors (e.g., life regrets, acute physical problems, or functional disabilities) that can trigger disturbances in biological processes, such as cortisol secretion. A psychological factor that may protect older adults' physiological functioning in the context of age-related stressors relates to self-compassion. Self-compassion is defined by having a kind, non-judgmental, and supportive attitude towards oneself during times of stress or failure. Previous work among younger populations showed that self-compassion can influence emotional reactivity to stress and is associated with more adaptive biological responses to stress. This study examined whether self-compassion could also benefit older adults' cortisol secretion in the context of age-related stressors.

**Methods:** A cross-sectional study examined 233 community-dwelling older adults for their levels of self-compassion, age-related stressors (regret intensity, acute physical problems, and functional disability) and relevant covariates. Diurnal cortisol was measured on three non-consecutive days and the averaged area-under-the-curve (AUC) was calculated.

**Findings:** Multiple regression analyses revealed significant interactions between age-related stressors and self-compassion ( $|t| > -1.99$ ,  $p < .05$ ). Follow up analyses documented that greater self-compassion was associated with reduced daily cortisol secretion among individuals who reported higher levels of regret intensity, acute physical symptoms, and functional disability ( $|t| > -2.48$ ,  $p < .02$ ), but not among their counterparts who reported low levels of age-related stressors ( $t < .69$ ,  $p > .49$ ).

**Discussion:** These results suggest that self-compassion may represent an important personal resource that could protect older adults from stress-related biological disturbances.

9:45 - 10:00

## Low frustration tolerance and sleep quality: negative associations found in four independent studies

T. Kushnir<sup>1,2</sup><sup>1</sup>Ariel University, Israel<sup>2</sup>Ben-Gurion University of the Negev, Israel

**Background:** Dysfunctional thoughts impact many aspects of behavior, functioning and well-being. For example ruminations are associated with pre-sleep cognitive arousal and are predictors of poor sleep quality. We assessed the association between a specific type of dysfunctional thinking and sleep quality. Low Frustration Tolerance (LFT) is one of the core indicators of dysfunctional thinking, according to Rational-Emotive Behavior Therapy. LFT denotes intolerance of, and inability to accept unpleasant physical or emotional discomfort and therefore can also be viewed as discomfort-intolerance. This tendency to exaggerate frustrations and inconveniences may have various dysfunctional behavioural consequences, e.g. procrastination, resistance to change and failure to adhere to medical guidelines. One would therefore expect individuals with such a disposition to be prone to stress and distress and report impaired sleep quality.

**Method:** Altogether 421 Israeli men and women, ages ranging between 17 and 66, participated in four independent online studies. All participants completed the Pittsburgh Sleep Quality Index (PSQI), a measure of subjective sleep quality; and a measure of LFT (developed by Kushnir et al, 2006).

**Results:** Significant negative associations were found in all four studies between sleep quality (general score) and LFT: ( $r = -0.32, p < 0.01$ ;  $r = -0.341, p < .01$ ;  $r = -0.26, p < .05$ ;  $r = -0.35, p < .01$ ).

**Discussion:** The findings of significant negative correlations between LFT and sleep quality in four independent studies suggest that this association is not random and should be explored further. Although we view LFT to be trait-like, the correlational nature of these findings precludes a causal interpretation. A longitudinal approach is warranted.

10:00 - 10:15

## Body image and breastfeeding maintenance – a comparison of obese and healthy weight postnatal women

V. Swanson<sup>1</sup>, F. Denison<sup>2</sup>, A. Keeley<sup>3</sup><sup>1</sup>University of Stirling, United Kingdom<sup>2</sup>MRC Centre for Reproductive Health, University of Edinburgh, United Kingdom<sup>3</sup>Edinburgh Napier University, United Kingdom

**Background.** Breastfeeding promotes maternal and infant health. Obese women have lower breastfeeding initiation and maintenance than healthy weight women. The influence of psychosocial factors on breastfeeding, including body image and post-childbirth psychological well-being are often not considered in research. We aimed to investigate these issues for women after childbirth in hospital, and 6-8 weeks later, studying the impact of body image and psychological distress on breastfeeding maintenance at 6-8 weeks, comparing obese and healthy weight women.

**Methods:** A longitudinal semi-structured questionnaire survey measured demographic and biomedical factors around childbirth. Body image and psychological distress were assessed within 72 hours of birth and by postal questionnaire at 6-8 weeks, for 70 obese and 70 healthy weight women initiating either exclusive (breastmilk only) breastfeeding or mixed feeding (including formula milk) in hospital. Breastfeeding status was assessed at 6-8 weeks.

**Results.** Obese women were less likely to exclusively breastfeed in hospital and maintain breastfeeding. Body satisfaction was lower overall in obese women, but all women had low body image satisfaction around childbirth, which reduced further by 6-8 weeks postnatal. Better body image was related to maintaining breastfeeding at 6-8 weeks, and lower postnatal psychological distress, although education status was the most significant predictor in the final model. Body image mediated the relationship between weight and breastfeeding maintenance.

**Discussion.** Self-image can have an important influence on health behaviour. Body satisfaction should be explicitly discussed in relation to breastfeeding. Normalising post-childbirth bodies, encouraging women to focus on 'function' over 'form' may be a useful strategy.

10:15 - 10:30

## Emotion regulation, psychological capital and altruism in patients with cardiovascular disease: a case-control study

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<sup>3</sup>University of Tabriz, Tabriz, Iran

**Background:** Psychological factors play an important role in well-being of patients with cardiovascular diseases (CVD) as well as increasing risk of CVD in normal population. Because of the lack of research on comparing emotion regulation, psychological capital and altruism between CVD patients and healthy population, the aim of this study was to assess these factors in a case-control study.

**Methods:** The 100 non-randomly included participants were categorized into two groups: 50 patients with CVD with age range of 30-60, and 50 paired-matched healthy persons. Three instruments of Cognitive Emotion Regulation Questionnaire (CERQ-P), Psychological Capital Questionnaire (PCQ) and Altruistic Behavior Scale were used. Data was analyzed using the paired and independent t-test statistical analysis.

**Findings:** Significant differences were seen between case and control groups with respect to their cognitive emotion regulation ( $t=-2.27$ ;  $p<0.025$ ), psychological capital ( $t=9.03$ ;  $p<0.001$ ) and altruism ( $t=7.52$ ;  $p<0.001$ ). The differences were observed in all components of cognitive emotion regulation and psychological capital as well.

**Discussion:** CVD, as a chronic disease, lead to psychological problems such as disrupted emotion regulation and lower psychological capital. Psychological interventions are suggested considering our results to improve psychological capital and teach emotion regulation techniques to CVD patients. On the other hand, the difference in altruism and psychological capital might be due to baseline characteristics of CVD patients which suggest a higher risk of CVD in normal population with lower altruism and psychological capital; Although further longitudinal studies in needed to confirm increasing risk of CVD in people with lower altruism and psychological capital.

# Multimethod assessment of emotional and cognitive factors in pain and fatigue

9:00 - 10:30

Aula I

Frank Doyle



9:00 - 9:15

## Network analysis of depressive symptoms and vital exhaustion in patients with acute coronary syndrome

F. Doyle<sup>1</sup>, D. Hevey<sup>2</sup><sup>1</sup>Royal College of Surgeons in Ireland, Ireland<sup>2</sup>Trinity College Dublin, Ireland

### Background

There is controversy in the literature over the relationship between depression and vital exhaustion, which is characterised by feelings of fatigue, but without characteristic low mood. Recently, it has been argued that psychopathological symptoms are better reflected as a network, rather than indicative of latent traits. In this approach, co-morbidity or relationships among different traits are hypothesised to arise from the direct associations among multiple, potentially overlapping, conditions. We therefore analysed symptoms of depression and vital exhaustion to determine the interrelationships among these symptoms.

### Methods

408 patients with acute coronary syndrome (ACS) completed questionnaires on depression and vital exhaustion. Items were subjected to network analysis using multidimensional scaling in Stata, using all items (n=23) in the first network, and a second network using only items that best reflected 14 unique symptoms.

### Results

Both analyses showed a single network, indicating no evidence for separation of depressive and exhaustion symptoms, with 20 and 17 bridges respectively. The networks had low reciprocity (0.086 and 0.103 respectively), however, which indicated for example that 'feeling slowed' was a result of having other depressive symptoms, but not vice versa.

### Conclusions

There was no evidence for a separation of depressive and exhaustion symptoms. Findings instead showed that certain depressive symptoms are more likely to be as a result of having others. Network analysis can provide unique insights into the interrelationships among psychological variables, and provides an avenue for theory testing and development.

9:15 - 9:30

## Emotional processing as mediator of positive/negative affect on social adjustment in Irritable Bowel Syndrome (IBS)

A. Sibelli<sup>1</sup>, P.T. Chalder<sup>1</sup>, D.H. Everitt<sup>2</sup>, D.J. Chilcot<sup>1</sup>, P.R. Moss-Morris<sup>1</sup>

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### Background:

Although high levels of distress are associated with IBS symptom severity and related social disability, the mechanisms through which distress leads to IBS outcomes are unclear. The aim of this study was to investigate: (a) if emotional processing and positive affect (PA) are associated with IBS symptom experience and related disability (b) if emotional processing mediates the relationship between positive/negative affect and IBS outcome.

### Methods:

Cross-sectional correlations and mediation analyses of baseline trial data. Adults meeting IBS Rome III criteria (n=558) completed standardised questionnaires measuring: beliefs about the unacceptability of experiencing and expressing negative emotions (BES); awareness of emotions (impoverished emotional experience, IEE); anxiety and depression; PA; IBS symptom severity and work/social adjustment.

### Findings:

Symptom severity and poorer social adjustment were positively correlated with BES and IEE and negatively correlated with PA.

Mediation analyses showed a small indirect effect of anxiety and depression on work/social adjustment (not on symptom severity) through IEE:  $b=0.26$ , 95%CI [0.15-0.37],  $p=0.00$  (direct effect of anxiety  $b=0.34$ ,  $p=0.00$ );  $b=0.17$ , 95%CI [0.04-0.37],  $p=0.00$  (direct effect of depression  $b=0.84$ ,  $p=0.00$ ). Similar results found for BES.

There was also a small indirect effect of PA on work/social adjustment through IEE,  $b=-0.11$ , 95%CI [-0.16--0.07],  $p=0.00$  (direct effect  $b=-0.19$ ,  $p=0.00$ ). Similar results shown for BES.

### Discussion:

Emotional processing partially explained the relationship between positive/negative affect and work/social adjustment in IBS. Future psychological interventions in IBS may benefit from addressing negative beliefs about expressing emotions and from encouraging emotional awareness and experience of positive emotions. This may reduce related social disability.

9:30 - 9:45

## Identification with illness in patients with Irritable Bowel Syndrome and its relationship with somatic symptoms

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### Background

Irritable Bowel Syndrome (IBS) is a functional illness with symptoms of abdominal pain and bowel dysfunction. Little is known about the implicit psychological factors that contribute to symptom severity. To address this issue, models from cognitive psychology were deployed to predict that IBS patients will identify with their symptoms due to schema enmeshment. It was hypothesised that level of de-identification with health would correlate with symptom severity, illness duration, additional symptoms and somatosensory amplification.

### Methods

This study had a cross sectional design with 42 IBS patients and 41 matched healthy participants. 'Identification with illness' was measured with the Implicit Association Task (IAT), a reaction-time task that measures associations implicitly, and thus avoids response biases. Participants completed questionnaires on illness duration, illness severity (GSR-IBS), depression, anxiety and stress (DASS-21), additional symptoms (ASC), somatosensory amplification (SSAS) and alexithymia (TAS-20).

### Findings

Patients with IBS implicitly de-identified with health compared to control participants ( $F(1, 81) = 11.83, p < .001, d = .75$ ), and the strength of de-identification was positively correlated with additional non-specific somatic symptoms ( $r(40) = .36, p < .05$ ). Exploratory analysis revealed significant positive correlations between difficulty in identifying feelings (an aspect of alexithymia) and the relevance of illness in IBS patients ( $r(40) = .43$ ) and healthy participants ( $r(39) = .37$ ).

### Discussion

Health de-identification is considered maladaptive because it could lead to an unnecessary increase in focus on symptoms. The illness/health IAT could be used to identify treatment responders and to investigate the mechanisms of change in psychological treatments for IBS.

9:45 - 10:00

## A qualitative exploration of fatigue in End-Stage Kidney Disease (ESKD)

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<sup>2</sup>King's College Hospital, United Kingdom

**Background:** Fatigue is commonly experienced in End-Stage Kidney Disease (ESKD) patients. In order to develop patient-centred psychosocial interventions to help patients manage fatigue symptoms, a more in-depth understanding regarding the experience fatigue is needed.

**Objective:** The objective of this study was to explore renal patients' experiences of fatigue, across renal replacement therapy (RRT).

**Methods:** Twenty-five in-depth semi-structured interviews were conducted. Interviews were audiotaped, transcribed and analysed using inductive thematic analysis with elements from grounded theory and framework analyses.

**Results:** Main themes included the strong role of the illness and treatment in the aetiology of fatigue. Two contrasting streams of illness-fatigue interpretations emerged: catastrophizing versus normalising. Patients emphasized the importance of having a sense of purpose in facilitating active management of fatigue. Many patients described the consequences of fatigue on their functioning. Low mood, frustration, and anger were common emotional consequences of fatigue. Three dominant fatigue management strategies emerged: one related to accommodation of activities around fatigue, another on increasing activities to counteract fatigue, and the third one revolved around self-compassion. Social support emerged as an important aspect of the fatigue experience, serving as a source of motivation, yet patients were wary of becoming a burden to others.

**Conclusion:** Findings identify casual attributions, behavioural and emotional reactions, management strategies, and facilitators of active management of fatigue in ESKD. Untying fatigue from the illness and treatment may help patients to develop alternative less catastrophic perceptions of fatigue, increase their perception of control over fatigue, and facilitate active fatigue management.

10:00 - 10:15

## Time-course of attentional bias for pain-related information: the role of pain catastrophizing

J. Lee<sup>1</sup>, J. Lee<sup>1</sup><sup>1</sup>Chung-Ang University, South Korea

**Background:** The purpose of this study is to examine the role of pain catastrophizing in gaze patterns of pain face expressions across time.

**Methods:** Total 75 undergraduates were recruited and were assigned into three groups depending on their scores on Korean version of Pain Catastrophizing Scale (K-PCS) and their chronic pain status: high catastrophizing chronic pain group (N = 25), low catastrophizing chronic pain group (N = 25) and healthy control group (N = 25). Participants observed pictures of faces displaying pain, presented simultaneously with neutral faces, while their eye movements were measured using iView XTM Red-IV eye tracking system.

**Findings:** In order to examine participants' attentional bias toward pain face expressions across time, analyses were performed to compare total gaze durations of pain faces with those of neutral faces in two different time points (0-500ms and 2500-3000ms). Results revealed that high catastrophizing group gazed at pain faces significantly less than neutral faces in 0-500ms ( $t = -2.696, p < .05$ ), whereas they gazed at pain faces significantly longer in 2500-3000ms ( $t = 2.645, p < .05$ ). No significant results were found for low catastrophizing group and control group.

**Discussion:** Results suggest that chronic pain individuals, who endorsed high level of pain catastrophizing, exhibit less preference toward pain stimulus at the beginning; however their attentional preference for pain stimulus increased during later stage of their attention. These results have clinical implications as gaze behaviors observed in high catastrophizing group may impair the ability of high catastrophizing individuals to cope with chronic pain effectively.

10:15 - 10:30

## The association between fatigue and self-esteem in patients with rheumatoid arthritis

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<sup>3</sup>Department of Educational Psychology and Health Psychology, Faculty of Arts, PJ Safarik University in Kosice, Slovakia

### Background

Fatigue is one of the most prevalent and yet neglected symptoms in Rheumatoid Arthritis (RA). Little attention has been paid to the multidimensional nature of fatigue and its wide-ranging consequences for functional status and quality of life. RA-related fatigue appears to be strongly associated with psychosocial factors. Therefore, the aim of this study was to assess the associations between fatigue, functional status, and self-esteem in RA patients.

### Methods

The sample consisted of 297 RA patients (80.8% female; mean age  $56.03 \pm 11.57$  years). All patients completed the Health Assessment Questionnaire (HAQ), the Rosenberg Self-Esteem Scale (RSE) and the Visual Analogue Scale - Fatigue (VAS). Multiple linear regressions were used for statistical analyses.

### Findings

Sociodemographic (age, gender, education) and clinical variables (C-reactive protein, ESR, disease duration) explained 5% of total variance in fatigue. When HAQ (functional status) was added a 10% boost was achieved. Self-esteem explained additional 7% of the total variance in fatigue.

### Discussion

Lower self-esteem was found to be significantly associated with fatigue in RA patients. This result suggests that fatigue may interfere with the way in which RA patients see and value themselves. Caregivers and physicians can encourage patients to use various strategies to enhance self-esteem in order to mitigate the negative effects of fatigue on health and quality of life in RA patients.

[Grant support: APVV-15-0719]

# Resilience and adaptation in coping with stressful life experiences

11:00 - 12:30

Aula A

Paula Repetto

11:00 - 11:15

## Can the experience of hope increase the propensity to cope actively in a stressful situation?

M.M. Małkiewicz<sup>1</sup><sup>1</sup>Cardinal Stefan Wyszyński University, Poland

Background: Personality traits, as being relatively stable, fail to answer why coping behaviour of the same person changes across different stressful situations. Thus, appraisal that is incorporated in emotion of hope might be particularly useful in understanding both active and avoidant coping efforts. Current research was drawn upon the transactional model of stress and coping and the definition of hope proposed by Lazarus. The main aim of the study was to examine: How much variability of the preferred coping strategies can be explained by selected personality traits and cognitive components of hope? Which personality traits and hope appraisals have the most and the least impact on coping behaviors?

Methods: 316 participants (195 women, 121 men; age  $M = 23,5$ ) filled in the following measures: Costa and McCrea's personality NEO-FFI Questionnaire; Spielberger's anxiety STAI Scale (Part II: trait); Carver and Bridges optimism LOT-R Scale; Snyder's hope KNS Scale; Erikson's hope BHI-12 Scale; Rotter's locus of control IE Questionnaire; Lazarus's appraisal pattern OPPW Scale (Małkiewicz, 2014) and core relational theme for hope PTR-N Scale (Małkiewicz, 2014); Carver, Scheier and Weintraub's coping strategies COPE Inventory. Canonical correlation analysis was conducted to meet the goals of this study.

Findings: Selected personality traits would predict 23% of preferred coping strategies in stressful situations, while combined with hope would predict 29% of chosen coping strategies. High level of hope was positively associated with active coping, planning, positive reinterpretation and growth, and negatively with denial, behavioral and mental disengagement. The results indicated that hope determines active coping.



11:15 - 11:30

## The ways of coping: does it lead to post traumatic growth?

K. Martskvishvili<sup>1</sup>, A. Neubauer<sup>2</sup><sup>1</sup>Tbilisi State University, Georgia<sup>2</sup>University of Graz, Austria

For many years psychologists have traditionally been focused on investigating the negative influence of stress rather than being focused on “positive changes experienced as a result of the struggle with trauma”. The presented paper uses Tedeschi and Calhoun (1996) model of posttraumatic growth and deals with establishing whether personality variables and the ways of coping can predict how effectively individuals cope with trauma, specifically, whether those variables lead to posttraumatic growth. 118 participants (M(age)=39.56; SD=15.04) who experienced at least one traumatic event in life (e.i. death of close person, being forced to flee from their homes, financial difficulties due to losing a job and etc.) were administered with the instruments of assessing big five personality traits and emotion related self-perceptions, along with the Coping Scale (Carver, sheier & Weintraub 1989) and The Posttraumatic Growth Inventory (PTGI; Tedeschi & Calhoun, 1996). The results showed that personality traits predict the ways of coping and accordingly, the strategies used for coping with the stressful event lead to posttraumatic growth; the relationship between personality traits and posttraumatic growth is mediated by the ways of coping. The obtained empirical data sheds light on the mechanisms how the ways of coping can lead to the posttraumatic growth.

11:30 - 11:45

## Flexible coping and the relationship between secondary stressors associated with a earthquake/tsunami and PTSD

P. Repetto<sup>1,2</sup>, E. Guic<sup>1,2</sup>, N. Bronfman<sup>2,3</sup>

<sup>1</sup>P. Universidad Catolica de Chile, Chile

<sup>2</sup>CIGIDEN, Chile

<sup>3</sup>Universidad Andres Bello, Chile

**Background:** The percentage of people who will manifest symptoms of Posttraumatic Stress Disorder (PTSD) after a natural disaster range widely (4.5-50%). However, there is still much we need to learn about the factors that explain these findings. Coping has been found to explain outcomes among individuals exposed to stressors. In the present study we examined the role secondary stressors and flexible coping on the presence of PTSD symptoms among adults exposed to an earthquake/tsunami.

**Methods:** Study was conducted between 2-3 months after the Pisagua Earthquake that hit the north of Chile on april, 2014. Participants were a representative sample of 701 adults (58.3% females, age 18-95, mean age= 40.59, 62.3% employed), living in Iquique or Alto Hospicio, who completed a survey applied by trained interviewers. For the purposes of this study we included the measures of exposure to the event, secondary stressors, PTSD, flexible coping, and sociodemographic conditions.

**Findings:** More symptoms were reported among: females ( $t= 3.987$ ), having perceived that their own lives and of close ones were at risk ( $t=3.503$ ), having losses (personal, social and/or material) ( $t=3.903$ ). Flexible coping was associated with less symptoms ( $t=-8.699$ ).

**Discussion:** Findings show the role of secondary stressors on the development of these symptoms and the protective role of flexible coping. These latter findings suggest the importance of promoting this type of coping as the number of natural disasters appear to increase as well as the population exposed. Cross sectional nature of the study and use of self-report are limitations that must be recognized.

11:45 - 12:00

## Religious coping strategies as a way to cope with stillbirth

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<sup>3</sup>Université de Nantes, Laboratoire Psychologie des Pays de la Loire, France

**Background:** While research on religious beliefs as an adjustment is on the rise, less is known regarding such process following stillbirth. The aim of the present study is to a) identifying a typology of Moroccan women who experienced stillbirth based on several dimension of religious coping strategies and b) examining whether these profile differ on grief, anxiety, posttraumatic stress disorder (PTSD) and posttraumatic growth (PTG) symptoms. **Methods:** One hundred Moroccan women who experienced stillbirth participated to a cross-sectional study. At 6weeks following stillbirth, they completed questionnaires assessing Religious Coping Strategies (RCS), PTSD, PTG, anxiety and grief symptoms. Cluster analysis was used to identify groups of participants based on RCS scores and groups were compared by their mean scores on psychopathological scales through ANOVAs. **Findings :** Five clusters were identified : one with high level of plead and religious avoidance coping strategies, one with high level of interpersonal coping strategies, one with multiple religious coping strategies, one with discontent religious coping strategies and one with low religious coping. High levels of psychological symptoms were found in the 5 clusters and PTG symptomatology was associated with increased RCS. **Discussion:** Our findings suggest that, while religious coping strategy do not protect from short-term psychopathological symptoms following stillbirth, they play an important role in the development of positive reactions. As PTG symptoms have been reported be a protective factor for long term symptomatology, further longitudinal studies focusing in this area is warranted.

12:00 - 12:15

## Healthcare practitioners' experiences and relationship issues in the neonatal intensive care unit context

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<sup>2</sup>Ecole des Hautes Etudes en Sciences Sociales (IIAC), France

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<sup>4</sup>Centre hospitalier du Mans (Service de réanimation néonatale et pédiatrique), France

<sup>5</sup>Université de Bretagne occidentale, Faculté de Médecine et Sciences de la Santé, France

**Background:** Breastfeeding and skin-to-skin contact are key determinants in the care of premature infants. Thus, parents become key actors and care partners in neonatal intensive care units (NICU). Also, parents feel extremely vulnerable in this context, and are in need of support from health professionals. In turn, NICU healthcare practitioners (HCPs) are highly exposed to stressful and difficult situations. Objectives are to understand how HCPs perceive parents, as well as to explore practices and issues encountered throughout the care of premature babies and the support of families.

**Methods:** A qualitative study was carried out in a NICU in Brest university hospital, France. Semi-structured interviews were conducted with 26 HCPs, including physicians, residents, nurses, healthcare managers, and a social worker, all of whom worked in the unit. Interviews were analysed using Alceste textual data analysis software.

**Findings:** The Alceste program produced a dendogram showing two main networks of classes. The first one focuses on HCPs' practices, along with their descriptions of the babies' difficulties and the issues encountered by parents (e.g., breastfeeding, skin-to-skin contact). The second one focuses on the difficulties that HCPs have in dealing with traumatic experiences, misrepresentations of premature babies, and relationships with parents. Sharing emotions, receiving support from others as well as gaining respite are some coping strategies used by HCPs to face painful experiences.

**Discussion:** Understanding HCPs experiences and perceptions in a NICU allows to enhance healthcare and HCPs' wellbeing. It also helps to adequately support families.

12:15 - 12:30

## The role of obligation, willingness and preparedness for caregiving when supporting a relative with dementia

S. Parveen<sup>1</sup>, G. Fry<sup>1</sup>, V. Morrison<sup>2</sup>, R. Fortinsky<sup>3</sup>, J. Oyebode<sup>1</sup>

<sup>1</sup>University of Bradford, United Kingdom

<sup>2</sup>Bangor University, United Kingdom

<sup>3</sup>University of Connecticut, United States

### Background:

Using Knight's Socio-cognitive model of stress and coping, this study explored caregiver cultural obligations and willingness to care for a relative with dementia and the impact on coping and wellbeing. In addition the impact of caregiver preparedness on managing transitions in care was considered.

### Method:

Eleven south Asian and 10 white British family caregivers of people with dementia participated in in-depth interviews, followed up twice at six-month intervals. Thematic analysis was conducted on data.

### Findings:

South Asian caregivers cited religion as a main source of obligation to provide care whereas white British caregivers discussed community and social pressures. All carers discussed family reciprocity and availability of family as motivators with willingness to care being associated with family and personal context. Preparedness influenced how caregivers coped and whether they were willing to continue providing care. Existing understanding of dementia and sense of preparedness influenced use of coping strategies to manage care transitions. South Asian caregivers particularly found negotiating with health and social support services challenging. Finally caregivers of people with more advanced dementia experienced complex emotions while considering transfer to a care home or providing end of life care.

### Discussion:

The transitions in the caregiver role had an impact on the caregiver's willingness and sense of preparedness to provide care. These factors played a significant role in the caregiver's capacity to cope with changes, their willingness and ability to continue providing care, and their wellbeing. The findings suggest the need to develop interventions to improve caregiver preparedness.

# Testing theories of health behavior change

11:00 - 12:30

Aula B

Ralf Schwarzer

11:00 - 11:15

## Mechanisms of Health Behaviour Change with dental hygiene as an example

R. Schwarzer<sup>1,2</sup><sup>1</sup>Freie Universität Berlin, Germany<sup>2</sup>SWPS University of Social Sciences and Humanities, Poland

Background: In health behavior change, several constructs have been found important such as self-efficacy, planning, action control, and behavioural intention. Findings from five intervention studies on dental hygiene will be compared in terms of the functional roles of these constructs.

Methods: Two-arm interventions were conducted in Iran (N=166), Poland (N=287), China (N=284), and India (N1=205, N2=112). Very brief treatments were inspired by the Health Action Process Approach with the aim to improve participants' self-efficacy, planning, and action control.

Findings: Quantitative analyses yielded time by treatment interactions in all five studies confirming the usefulness of the interventions (all  $p < .05$ ). The main focus was on ex post modeling the roles of the treatment ingredients which resulted in sequential mediation effects in four studies and a moderated mediation effect in one study where self-efficacy and action control operated as moderators.

Discussion: The interventions have been found to produce changes in motivation and one or more of the treatment ingredients (self-efficacy, planning, and action control) which in turn had some effect on later dental behaviours. However, the models were inconsistent, raising the question whether individual differences in participants' readiness for change might be responsible for this inconsistency.

11:15 - 11:30

## Using theory-based messages and implementation intentions to reduce binge drinking in new university students

P. Norman<sup>1</sup>, T. Webb<sup>1</sup>, A. Millings<sup>1</sup>

<sup>1</sup>University of Sheffield, United Kingdom

**Background.** Excessive alcohol consumption, including binge drinking, increases when students enter university. This study tests whether combining messages based on the theory of planned behaviour (TPB) with instructions to form implementation intentions reduces the frequency of binge drinking in new university students.

**Methods.** Students (N = 415) were recruited at the end of their first month at university and randomly assigned to condition in a 2 (TPB messages) × 2 (implementation intention) factorial design. Cognitions about binge drinking, as specified by the TPB, were assessed immediately post-intervention. Frequency of binge drinking was assessed one month later (n = 205).

**Findings.** Participants who received the messages had significantly weaker intentions to engage in binge drinking (d = 0.32) and less favourable cognitions about binge drinking (affective attitude, descriptive norms, and self-efficacy) than those who did not receive the messages. One month later, participants who were instructed to form an implementation intention to avoid binge drinking reported fewer instances of binge drinking (d = 0.37), although this effect only approached significance (p < .10). The main effect of messages on the frequency of binge drinking at follow-up and the interaction between messages and implementation intentions were non-significant.

**Discussion.** The findings provide some support for the use of interventions based on the TPB to reduce intentions to engage in binge drinking and for forming implementation intentions to reduce the frequency of binge drinking in new university students. However, no evidence was found for the synergistic effect of combining the two interventions.



11:30 - 11:45

## Self-efficacy for quitting vs. temporary abstinence: two aspects of the complex smoking process

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<sup>2</sup>CIPRET-Genève, Centre de prévention et d'information sur le tabagisme, Switzerland

**Background:** Behaviour change strategies for smoking cessation present different components, including self-efficacy. We hypothesized that self-efficacy to quit smoking (quitting self-efficacy, QSE) and self-efficacy to temporarily abstain from smoking (abstinence self-efficacy, ASE) are different aspects of the smoking cessation process.

**Methods:** The study included 156 smokers attending public psychiatric services, participating in a motivational intervention with a 26-hour tobacco-abstinence period. Pre- and post- measures on 10-point QSE and ASE scales were compared according to success of 26h temporary abstinence, quit attempts at 1 week and decision to quit.

**Findings:** ASE (median 8 at pre- and 10 at post-intervention; n=128; p<.001) and QSE (median 8 and 9; n=124; p=.05) significantly increased during the intervention. Patients succeeding with temporary abstinence (55.3%) had higher ASE before the intervention than patients who failed (median 9 versus 7; p<.001), but no difference was observed for QSE (p=.06). After intervention, both ASE and QSE were significantly higher in patients who had remained abstinent for 26 hours (p<.001 and p=.004, respectively). In smokers making a quit attempt immediately after the intervention (33.3%), ASE and QSE were significantly higher, before and after the program (p<.05). ASE increased from pre- to post-assessment both in quit attempters (p=.001) and non-attempters (p<.001), whereas QSE did not change significantly (attempters p=.26; non-attempters p=.18).

**Discussion:** Results suggest that mental preparation and intention-based elements related to QSE might differ from readiness for action-based elements involved in ASE. They highlight relevance of action-oriented interventions based on temporary abstinence and interest of eliciting unplanned quit attempts.

11:45 - 12:00

## Evidence that implementation intentions support self-regulatory effort and improve adolescent sleep

C. Armitage<sup>1</sup><sup>1</sup>University of Manchester, United Kingdom

**Background.** Lack of sleep among adolescents is a major risk factor for psychiatric disorders, including self-harm. The present study aimed to: (a) test for the first time whether an implementation intention-based intervention could improve adolescents' sleep, and (b) see whether the operation of implementation intentions could be improved by asking people to form second-person "if you-then you" plans as opposed to first-person "if I-then I" plans.

**Methods.** 151 adolescents (aged 12-16 years) were given a supporting tool and were randomized to: (a) form "if I-then I" plans, (b) "if you-then you" plans, or (c) a control condition in which they were not asked to form "if-then" plans.

**Findings.** Grammatical person did not affect the operation of the "if-then" plans, but adolescents who formed "if-then" plans were significantly more likely to achieve recommended levels of sleep,  $\chi^2(1, N = 121) = 3.65, p = .04$ . The effect of the intervention on sleep was mediated by changes in self-regulatory effort (95% CI = 0.20, 9.04).

**Discussion.** "If-then" plans can support self-regulatory effort and improve sleep among adolescents. The supporting tool described in the present research could be deployed at low cost with high public health reach to achieve improvements in adolescents' sleep.

12:00 - 12:15

## Comparing the effects of self-affirmation and positive affect on reactions to a health message

P. Harris<sup>1,2</sup>, P. Harris<sup>1</sup>, E. Miles<sup>1</sup>

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<sup>2</sup>University of Southampton, United Kingdom

**Background:** Positive affect has frequently been proposed as a possible mediator of the effects of self-affirmation, yet studies have found inconsistent evidence even for the hypothesis that self-affirmation boosts positive affect. In two studies we tested this hypothesis.

**Methods:** In Study 1 (N = 270) we analysed self-affirmation and control essays for their use of positive affective language. In Study 2 (N = 76), participants (who did not meet guidelines for fruit and vegetable consumption) completed a self-affirmation task, a positive mood induction, or a control task, a computerised positive affect measure, and then read information on the health consequences of insufficient fruit and vegetable consumption.

**Findings:** In both studies, self-affirmed participants were more likely to use positive emotional language in their writing compared to control participants, implying a positive affective state. In Study 2, participants in the self-affirmation and positive mood conditions also scored higher on the computerised positive affect measure than control participants. Subsequently, self-affirmed participants consumed more fruit and vegetables than those in the positive mood condition at one-week follow-up; however, this effect was not mediated by either measure of positive affect.

**Discussion:** The studies provide evidence that self-affirmation does boost positive affect. However, neither measure of positive affect mediated effects on outcomes in Study 2, undermining claims that it is a mediator of self-affirmation effects on the processing of health-risk information.

12:15 - 12:30

## Does self-efficacy information improve the effects of pictorial fear labels on cigarette packages: real-life experiment

B. van den Putte<sup>1,2</sup>, S. Mollen<sup>1</sup>, G. Nagelhout<sup>3</sup>, A. Dijkstra<sup>4</sup>, E. Smit<sup>5</sup>

<sup>1</sup>University of Amsterdam, Netherlands

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<sup>4</sup>University of Groningen, Netherlands

<sup>5</sup>University of Amsterdam/ASCoR, Netherlands

**Background.** The effectiveness of scary health warning labels on cigarette packages is heavily debated. It is posited that fear arousing warnings will be effective only when self-efficacy is high. Shortly before pictorial labels were introduced in the Netherlands, we tested whether pictorial labels that combined negative health consequences with self-efficacy information were more effective.

**Methods:** Dutch smokers (18-82 years) were randomly assigned to one of four warning label conditions: pictorial negative consequences (FEAR), pictorial self-efficacy information (SE), pictorial negative consequences and self-efficacy combined (COMBI), and textual negative consequences (TEXT). Each condition contained eight different labels. Participants were asked to put self-adhesive stickers on their own cigarette packages during four weeks. To check, they were asked six times to report the code on the stickers (368 participants passed this test). Main dependent variables were quit intention, quit attempt and cigarettes per day. ANCOVA was conducted (covariates were education, addiction, quit attempt in last year, first wave quit intention).

**Findings:** At the last wave, results showed a main effect of condition on quit intention ( $p=.039$ ) and quit attempt ( $p=.031$ ), but not on number of cigarettes smoked ( $p=.551$ ). Post-hoc tests showed that pictorial fear labels were more effective than textual fear labels. The SE and COMBI labels were not significantly more effective than pictorial and textual fear labels. Self-efficacy at first wave did not interact with condition effects.

**Discussion:** Findings support the use of pictorial warning labels that concentrate on negative health consequences. Self-efficacy information did not improve the effect of warning labels.

# Innovative approaches to user acceptance and engagement in mHealth

11:00 - 12:30

Aula C

Arie Dijkstra

11:00 - 11:15

## User centered design methods to promote acceptance, comprehension and utility of eHealth

P. van Empelen<sup>1</sup>, H. van Keulen<sup>2</sup>, N. van Kesteren<sup>1</sup>

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<sup>2</sup>TNO, Netherlands

**Objectives.** Compliance with eHealth interventions is problematic. In order to promote acceptance, utility and retention of eHealth interventions it is important to understand how users will interact with such interventions. User-centered design and usability testing can be used in different phases of systematic intervention development, in order to optimize the content, structure and interface of the intervention. Our aim is to discuss practical strategies that can be used as part of the design process.

**Method.** We provide examples of the usage of different types of user-centered design strategies to optimize the design of eHealth interventions, derived from the systematic development of three different interventions: nietofwelzwanger.nl (preconception care intervention), SoaSeksCheck (web-based STI conversational agent), KitB (HPV vaccination intervention). All three interventions were systematically planned, using Intervention Mapping. User interaction methods were used at different stages of the design (pre-, design, and pretest phase) to understand content, layout, design choices (e.g., avatars, tone of voice). User-centered design strategies used were: competitive testing, storyboards, eye tracking, interactive think aloud methodology, and experimental pre-testing.

**Findings.** These strategies greatly improved our understanding of design criteria, intervention navigation and acceptance. For instance, competitive testing (based on existing interventions) and storyboards contributed to understanding layout and interaction criteria (look and feel, navigation etc.). Eye tracking heat maps enabled understanding exposure and navigation behavior. Experimental pre-testing enabled the testing of alternative designs.

**Discussion.** Implementation of eHealth can be greatly improved by using user-centered design. We provided strategies that promoted user involvement in the design and testing phases.

11:15 - 11:30

## Studying the learning model of smartphone feedback applications: the case of the step counter

A. Dijkstra<sup>1</sup>, E. Kooy<sup>1</sup><sup>1</sup>University of Groningen, Netherlands

### Background

The Learning model of Smartphone Feedback Applications (LSFA) states that many users of feedback application, such as the Step Counter (SC), stop using the device because they learned enough about the feedback parameters, making feedback from the device unnecessary. The concept of learning about one's steps was studied here.

### Methods

Ten participants were asked to wear the (FitBit Zip) Step Counter for 10 weeks. Participant's learning experiences were assessed weekly by a self-report on whether the participant's perception of the own physical activity had changed because of the SC. In addition, secondary learning was tested in 3 monthly measurements.

### Findings

The quantitative data are presented by individual, showing a variety of individual lines and curves with regard to learning. The data are qualitatively analyzed by looking for meaningful patterns over time. One pattern suggests no experience of learning at all during the ten weeks. Another pattern showed a high learning experience that stayed high during the ten weeks. A last pattern showed declined learning in the ten week interval.

### Discussion

The data stress that learning as proposed by the LSFA may occur, but may depend on people's fore knowledge and that the learning speed may vary and may at least take several weeks. The LSFA and the present data suggest that the SC might be embedded in a learning protocol (e.g., supported by the smartphone app) that directs and boosts learning to optimize the effects of its feedback.

11:30 - 11:45

## Valuable steps ahead? Engagement and satisfaction with a wearable activity tracker matter for successful self-regulation

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<sup>5</sup>Universität Mannheim, Mannheimer Institut für Public Health, Germany

### Background:

Wearable activity trackers such as the Fitbit are promising interventions to increase physical activity in the workplace. One question that emerges is how individuals' engagement, perceived support, and satisfaction with such a device align with the evidence- and theory-based social cognitions (e.g., intentions, planning) that have been shown to promote physical activity.

### Methods:

This study presents secondary analyses of data obtained from a larger trial. A total of 104 employees of a German pharmaceutical company (40 to 76 years old, 83.9 % men) received a complimentary activity tracker (i.e., Fitbit One) and completed three self-report surveys on physical activity (T1, T3), theory-based, social-cognitive (i.e., intentions, T1; action planning, T2) and Fitbit specific variables (i.e., perceived support, engagement and satisfaction with tracker, T2). Moderated mediation analyses was conducted to examine whether the translation of intentions into behaviour via plans was moderated by individuals' perception of and interaction with the wearable device. Baseline physical activity served as covariate.

### Findings:

Individuals were more likely to translate their intentions into behaviour via plans if they perceived their activity tracker as supportive, and were highly satisfied and engaged with their tracker. Overall, the Fitbit specific and physical-activity related predictors explained nearly one third of the variance in activity behavior ( $R^2=.32$ /engagement,  $.29$ /satisfaction,  $.35$ /support).

### Discussion:

The results deliver preliminary support that wearable activity trackers are an emerging solution for supporting individuals in their self-regulation. Most importantly, how individuals perceive and interact with a wearable activity tracker seems to be key for successful self-regulation and behaviour change.



11:45 - 12:00

## Review of electronic adherence monitoring devices in chronic disease – effect on adherence and outcomes

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**Background:** Poor medication adherence is associated with increased morbidity and mortality. Electronic adherence monitoring devices (EMDs) have emerged, some of which incorporate adherence-promoting functions such as reminders, but the effectiveness of these devices in improving adherence and clinical outcomes is not yet known.

**Methods:** A systematic literature search of databases including Ovid, MEDLINE, EMBASE, PsycINFO, and CINAHL was conducted for all randomised controlled trials published between 1946 and March 2015 which assessed the effect of EMDs in chronic disease. Outcomes of interest included adherence, clinical outcomes and patient feedback on the EMD or adherence intervention.

**Findings:** Thirty-six trials were included investigating 4437 total patients. Most (81% - 29/36) were in adults, in an outpatient setting (47% - 17/36), and focused on tablet dose forms (56% - 20/36). Significant improvements in adherence were reported in two-thirds (67% - 24/36) of studies, though 3 noted this was lost when the EMD-based adherence intervention was removed. Clinical outcomes were measured in 78% (28/36) of studies; only 29% (8/28) of these showed statistically significant improvements. These trials were in children with asthma, adults with HIV and older adults with cardiac conditions. Patient-perceived EMD acceptability was reported in 17% (6/36) of studies; feedback was negative in two-thirds (4/6) of these and included complaints about device size and intrusiveness.

**Discussion:** EMDs have the potential to improve adherence but whether these improvements translate into clinical benefits is unclear. Further research measuring effects on clinical outcomes and patient acceptability of EMDs is needed.

12:00 - 12:15

## Adolescents engagement with an Internet- and mobile phone-based smoking cessation program

R. Paz Castro<sup>1</sup>, S. Haug<sup>1</sup><sup>1</sup>Swiss Research Institute for Public Health and Addiction ISGF, Switzerland

**Background:** Although engagement with mobile phone-delivered smoking cessation programs is assumed to improve intervention success, the trajectories of program use over time, and their associations with baseline characteristics and treatment outcomes have not been examined yet.

**Methods:** We performed a secondary data analysis on a dataset from a study that compared an Internet- and mobile phone-delivered integrated smoking cessation and alcohol intervention to a smoking cessation only intervention for adolescents (N= 1418). During the three months of the intervention that was based on the Health Action Process Approach, participants in both intervention groups received one text message prompt per week that either assessed smoking-related target behaviours or encouraged participation in a quiz or a message contest. Sequence analyses were performed to identify program use trajectories. Multinomial logistic regression analyses were conducted to identify predictors of typical trajectories.

**Findings:** Three trajectories of program use emerged: 1) stable active participation (n= 646, 45.6%), 2) decreasing participation (n=501, 35.3%), and 3) stable non-active participation (n=271, 19.1%). Adolescents who were younger, who had no immigration background, who saw more benefits of quitting smoking and who reported binge drinking preceding the baseline assessment were more likely to have an active program use trajectory. Decreasing participation was associated with highest tobacco reduction rates, followed by stable active participation and stable non-active participation.

**Discussion:** The majority of participants showed an active program use. However, decreasing engagement with the program might be a stronger indicator of behavior change initiation than stable active engagement.

12:15 - 12:30

## Implementation and evaluation of an Interactive-Voice-Response intervention to support medication adherence. A pilot study

K. Kassavou<sup>1</sup>, V. Houghton<sup>1</sup>, S. Edwards<sup>1</sup>, J. Brimicombe<sup>1</sup>, S. Sutton<sup>2</sup>

<sup>1</sup>Cambridge University, United Kingdom

<sup>2</sup>University of Cambridge, United Kingdom

**Background:** medication non-adherence is a significant challenge to public health and current practices show limited effectiveness and time to address each patient's reasons for medication non-adherence. The Interactive Voice Response (IVR) pilot study is a theory and evidence based intervention that aims to support medication adherence to patients with hypertension. This presentation will describe the factors that impacted on intervention fidelity and engagement, as well as the acceptability of the intervention content to promote medication adherence.

**Methods:** mixed methods study generated data from call log files, inbound voice messages, and interviews with participants. Quantitative data informed qualitative data analyses, and integrated into a thematic analysis.

**Findings:** The tailored schedule of the calls, the personalisation and the variation of the content were found to be particularly appealing, and were perceived to promote engagement with the intervention. IVR messages that included friendly reminders to take medications as prescribed, and advice tailored to each participant's reasons for medication non-adherence, as well as information about health consequences were perceived to support medication adherence behaviour. Participants recommended phone calls that coincide with medication schedules, and include coping plans to support medication adherence when they anticipate a change in their routine.

**Discussion:** Overall, participants agreed on the need for, and the potential benefits of, an IVR intervention to support medication adherence between primary care consultations. Future studies could usefully test the feasibility of tailored IVR interventions to support medication adherence in primary care.

# Physical and cognitive function in later life

11:00 - 12:30

Aula D

Samuel Nyman

11:00 - 11:15

## Social asymmetry and physical health outcomes: results from the Irish longitudinal study on ageing

J. McHugh Power<sup>1,2</sup>, F. Kee<sup>1</sup>, R.A. Kenny<sup>2</sup>, B. Lawlor<sup>2</sup>

<sup>1</sup>Queen's University Belfast, United Kingdom

<sup>2</sup>Trinity College Dublin, Ireland

**Background:** We previously showed that Social Asymmetry (SA), a novel metric describing susceptibility to experiencing loneliness relative to social isolation status, is associated with cognitive outcomes. Here we investigate its association with physical health outcomes.

### Methods:

**Design:** Longitudinal cohort study. **Participants:** 8163 adults over 50, representative of older Irish adults. **Measures:** SA calculated from UCLA Loneliness scale and Social Network Index. Counts of a) physical impairments, b) impairments in activities of daily living (ADL), and c) impairments in instrumental activities of daily living (IADL) as outcomes. **Covariates:** age, gender, cognitive status (MMSE), depressive symptomatology (CESD), a count of cardiovascular conditions and a count of chronic illnesses. **Analysis:** Hierarchical regression analyses were conducted on all three outcomes both cross-sectionally, and at follow-up at Wave 2, two years later, as residualised change scores.

**Findings:** Of the participants, 16% were classified as Discordant: Susceptible to Loneliness; 31.5% as Concordantly (high) Lonely and Isolated; 36% as Concordantly (low) Lonely and Isolated, and 16.5% as Discordant: Robust to Loneliness. Discordant: Susceptible to Loneliness was the category cross-sectionally associated with highest levels of physical ( $\beta = -1.66^{***}$ ), ADL ( $\beta = -0.9^*$ ), and IADL impairments ( $\beta = -1.9^{***}$ ). Additionally this category was associated with higher levels of increase in physical ( $\beta = -0.08^{**}$ ), ADL ( $\beta = -0.02^{***}$ ) and IADL ( $\beta = -1.7^{***}$ ) impairments.

**Conclusion:** Individuals most at risk of increases in physical and functional impairment cross-sectionally and over time are those who have the largest discrepancy between (high) levels of loneliness and (low) levels of isolation.

11:15 - 11:30

## Longitudinal psychosocial predictors of cognitive function in old adults

D. Lucanin<sup>1</sup>, E.A. Delale<sup>2</sup>, J. Despot Lucanin<sup>2</sup>, A. Koscec Bjelajac<sup>2</sup>, M. Stambuk<sup>2</sup>

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<sup>2</sup>University of Zagreb, Croatian Studies, Croatia

The implications of declining cognitive functioning on old persons' daily lives are complex and not well understood, despite its importance. Recent longitudinal studies on ageing regard the age changes in cognition as important determinant of adjustment to ageing, quality of life and survival (Allerhand, Gale, and Deary, 2014). Independence in old age is as much determined by cognitive functioning as by physical functioning. Normal cognitive changes are important to understand because they can affect an older adult's daily functioning and they can help distinguish normal from disease states (Harada, Natelson Love and Triebel, 2013).

The aim of this study was to determine the longitudinal predictive contribution of psychosocial factors to the cognitive function in old persons.

Participants were 167 retirement homes' residents in Zagreb, Croatia, followed-up for eight years, assessed at three measurement times: in 2008, 2010 and 2016. Their age was 69-100 years, average 85 years in 2016 (77 years at baseline), 80% were women, ambulatory and not diagnosed with dementia. Variables were cognitive function, functional ability, self-perceived health, social participation, depression, life satisfaction, and sociodemographic. Trained interviewers collected data individually.

Different regression analyses models indicated that the observed set of predictors explained 34% - 37% of the cognitive function variance in 2016. The significant longitudinal predictors were baseline cognitive function, social participation, functional ability, and age.

Identifying long-term predictors of cognitive changes has implications for the development of prevention strategies and interventions to delay cognitive impairment in old age and improve quality of life.

11:30 - 11:45

## What influences quality of life in people with memory complaints?

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**Background:** Memory complaints (MCs) are experienced by a large proportion of older adults and are often a source of distress and worry. Because of the perceived threat of Alzheimer's disease, MCs are known to be associated with depression, anxiety and poor quality of life. This study aims to examine how cognitive impairment and memory problems perceptions influence the quality of life of people with MCs.

**Methods:** 130 persons with MCs have been recruited: 45 in community and 85 at a Memory Center. Memory problems perception, quality of life and mood were assessed and a neuropsychological battery was administered to the 85 persons recruited at the Memory Center. Correlations and regression analyses predicting quality of life were carried out.

**Findings:** Actual cognitive impairment is not related to quality of life. The memory problems perception seems to be related to quality of life and predict it, in particular the emotional impact, personal control and coherence of memory problems.

**Discussion:** this study provides preliminary results that have to be confirmed in a longitudinal survey. However, these results pointed the importance of psychoeducation and individualized care in the diagnosis process of memory disorders.

11:45 - 12:00

## Metacognitive beliefs affect sleep quality in older adults

N. Cellini<sup>1</sup>, E. Sella<sup>1</sup>, L. Miola<sup>1</sup>, M. Sarlo<sup>1</sup>, E. Borella<sup>1</sup>

<sup>1</sup>University of Padova, Italy

**Background:** Sleep plays a critical role in physical and mental health. During aging, there are physiological changes that influence sleep quality. Metacognitive activities, such as dysfunctional beliefs and attitude about sleep as well as nighttime thought management strategies, may also affect sleep quality. Here we aim to examine the relationship between metacognitive activity and objective and subjective sleep quality in elderly people.

**Methods:** Metacognition such as dysfunctional beliefs, metacognitive beliefs about sleep, and thoughts control strategies related to sleep were assessed in fifty older adults (33 female,  $M_{age}=70.4\pm 7.43$  years) with no symptoms of dementia and depression. Participants' perceived sleep quality was assessed via a reliable and widely used self-report, namely the Pittsburgh Sleep Quality Index, while objective measures of sleep were obtained via 7-day of actigraphic recordings. Univariate and multivariate regression analyses were employed to assess the relationship between metacognitive measures and perceived and objective sleep quality.

**Findings:** The results showed that the age per se did not influence the quality of sleep. In contrast, metacognitive beliefs were positively associated with poor sleep quality and with the frequency of thoughts control strategies. Higher strategies of cognitive and behavioral distraction were instead positively related with subjective sleep quality. Interestingly, objective sleep measures were not associated with metacognitive variables.

**Discussion:** In summary, the current results show that metacognitive beliefs negatively affect the perception of sleep quality in older adults. Interventions targeting these metacognitive beliefs may improve sleep quality and positively impact the well-being of older adults.



12:00 - 12:15

## Systematic review of behaviour change techniques used to increase physical activity among people with dementia

S. Nyman<sup>1</sup>, N. Adamczewska<sup>1</sup>, N. Howlett<sup>2</sup>

<sup>1</sup>Bournemouth University, United Kingdom

<sup>2</sup>University of Hertfordshire, United Kingdom

### Background:

Evidence supports the use of behaviour change techniques (BCTs) to increase physical activity among the general adult population. However, little is known about the effectiveness of BCTs among people with dementia (PWD). We systematically reviewed the published literature to explore the BCTs that increase physical activity among PWD.

### Methods:

We searched PsychINFO, MEDLINE, CINAHL, and the Cochrane Central Register of Controlled Trials from 01/01/2000 to 01/12/2016. The following inclusion criteria was applied: randomised controlled trial or quasi-randomised trial, with people diagnosed/suspected to have dementia, that used at least one BCT, with follow-up data on a measure of physical activity. Included studies were appraised for risk of bias and BCTs. Findings were narratively synthesised using categories of either 'very promising', 'quite promising', or 'non-promising', and BCTs were judged as having potential promise if they featured in at least twice as many very/quite promising interventions than non-promising interventions (Gardner et al., 2016).

### Findings:

Ten articles from 9 trials were included that reported physical activity findings on behavioural outcomes (n=5; 2 very promising, 1 quite promising, 2 non-promising) or intervention adherence (n=5; 1 quite promising, 4 non-promising). Thirteen BCTs were used 66 times across the trials. While no BCTs had potential promise to increase intervention adherence, 3 BCTs had potential promise for improving physical activity outcomes: goal setting (behaviour), social support (unspecified), and using a credible source.

### Discussion:

We found a dearth of studies aimed at increasing physical activity among PWD, with at present only three BCTs showing potential promise.

12:15 - 12:30

## Acceptability of a tai chi intervention for people living with dementia and their informal carers

Y. Barrado-Martín<sup>1,2</sup>, S.R. Nyman<sup>1,2</sup>, M. Heward<sup>2</sup>, R. Polman<sup>1</sup>

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<sup>2</sup>Bournemouth University Dementia Institute, Bournemouth University, United Kingdom

**Background:** Falls are a public health issue amongst older adults. Exercise interventions are effective in preventing falls, however, few intervention studies have involved people living with dementia and explored their experiences. This study identifies the factors that influence participants' acceptability of a group- and home-based Tai Chi intervention delivered with dyads (older people living with mild-to-moderate dementia and their informal family carers). This will inform how to make exercise interventions more attractive to them.

**Methods:** 10 dyads from two localities in the South of England took part in weekly Tai Chi classes and practised at home over a period of 3 or 4 weeks. Field notes were used to record researcher's observations during classes, as well as dyads and instructor's feedback at the end of the classes. Feedback and improvement suggestions from participants were sought at the end of the 3/4 weeks through 2 focus groups (1 at each locality). Thematic analysis of the field notes and transcripts was managed in Nvivo.11.

**Findings:** The preliminary findings were: Participants enjoyed the classes, the socialising component and valued the instructor's qualities. Dyads discovered a new common activity, appreciated the role of repetition to learn the movements and the importance of incorporating home-practice into their routines. Main barrier for their acceptability of the intervention was following the booklet provided to support their home practice.

**Discussion:** The results of this study provide valuable information about areas of improvement (e.g., recruitment, research procedures and supporting materials) for future exercise interventions for people living with dementia.

# Training and supporting health care professionals

11:00 - 12:30

Aula I

Daryl O'Connor

11:00 - 11:15

## Understanding barriers to collaboration between parents and healthcare professionals in the care of premature children

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<sup>3</sup>Université de Bretagne Occidentale, EA 4685 Laboratoire des Interactions Epithélium Neurone, France

<sup>4</sup>Pole Femme Mère Enfant, CHRU Brest, France

**Background:** Parental closeness and relationship with premature children is acknowledged as a key element of positive child development. In hospital this proximity is often impeded by the way healthcare is provided and rooted in a perception of medical care delivery. Our objective was to understand parents' and healthcare professionals' (HCPs) perceptions regarding a potential involvement of parents in the medical decision process.

**Methods:** Thematic secondary analyses of semi-structured interviews conducted with 20 fathers of premature children admitted in a neonatology intensive care unit (NICU), and 12 HCPs from the same unit were used to address collaboration issues between stakeholders. Two questionnaires surveys, which addressed parental involvement in nursing care and healthcare plan discussion at medical round, were also conducted with 35 families and 54 HCPs of the same NICU.

**Findings:** Qualitative analyses show that parents and HCPs understand the importance of parental role in the healthcare of the child. However, parents perceive they are insufficiently supported by HCPs; and HCPs often feel judged by parents. Quantitative analyses show that even if 91% of parents reported they would like to participate in medical round, 40% "never/rarely" attend it. A majority of HCPs admitted parental attendance as beneficial for parents (67%) and for them (62%). Conversely, a majority perceived that parental attendance at medical round would: inhibit some discussions between staff (81%) increase round duration (77%) and generate anxiety in parents (64%).

**Discussion:** This mixed method research suggests a need to use behaviour change theories to implement new healthcare practices.

11:15 - 11:30

## Workplace factors influencing General Practitioner wellbeing, potential coping strategies, and consequences for patient care

L. Hall<sup>1,2</sup>, J. Johnson<sup>1,2</sup>, J. Heyhoe<sup>2</sup>, I. Watt<sup>3</sup>, D. O'Connor<sup>1</sup>

<sup>1</sup>University of Leeds, United Kingdom

<sup>2</sup>Bradford Institute for Health Research, United Kingdom

<sup>3</sup>University of York, United Kingdom

**Background:** Increasing numbers of General Practitioners (GPs) are suffering from poor wellbeing and/or burnout, but there is a lack of qualitative studies investigating this area. In order to address this, the present study aimed to explore 1) workplace factors contributing to GP wellbeing and burnout, 2) strategies to help prevent burnout and improve wellbeing, 3) GPs perceptions on the consequences of burnout and poor wellbeing on patient care.

**Methods:** Five focus groups with 25 GPs in the UK were held between September 2015 and February 2016. Discussions were audio recorded and transcribed verbatim. Thematic analysis was used to interpret the data.

**Findings:** Workplace factors contributing to GP wellbeing fell under two distinct themes: Internal Influencers, and External Influencers. Similarly, strategies to improve wellbeing and prevent burnout fell under two corresponding themes: Individual and Practice Level Strategies, and External Changes. There were clear parallels between the sub-themes within the factors influencing GPs' wellbeing, and strategies to improve wellbeing. These included: Breaks, Support, Control, and Resources. GPs' perceptions of how poor wellbeing and burnout could impact on patient care fell under three themes: 1) Quality of care, 2) Patient safety, and 3) Downward Spiral.

**Discussion:** The strategies suggested by GPs to improve wellbeing warrant further consideration by researchers, policy makers, physicians, and healthcare organizations worldwide. Failure to do so may result in healthcare staff becoming even more burnt-out, which could have detrimental consequences for physicians' health, the number of doctors in the workforce, and patient safety.

11:30 - 11:45

## Does mindfulness meditation have the potential to reduce stress and burnout in NHS General Practitioners?

K. Hamilton-West<sup>1</sup>, T. Pellatt-Higgins<sup>1</sup>, N. Pillai<sup>2</sup>

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<sup>2</sup>Ivy Court Surgery, United Kingdom

**Background:** Research indicates a crisis of low morale among UK General Practitioners, with 73% describing their workload as unmanageable, 71% suffering or at risk of burnout, 42% considering early retirement and 25% leaving the profession entirely. We aimed to examine potential benefits of Mindfulness Based Cognitive Therapy (MBCT) for reducing stress and burnout in this population.

**Methods:** NHS GPs (N=22) completed measures of stress (Perceived Stress Scale; PSS) and burnout (Maslach Burnout Inventory; MBI) before attending an 8-week MBCT course (baseline) and then again one-month (T2) and three months (T3) after the end of the course. Paired t-tests were used to analyze the change from baseline at follow-up. Qualitative data on participants' experiences of the course were analysed using thematic analysis.

**Results:** All GPs attended at least six of the eight sessions. Data were obtained from 22 participants (100%) at baseline, 21 (95%) at T2 and 13 at T3. PSS scores were significantly lower at T2, compared to baseline, as were MBI Emotional Exhaustion and Depersonalisation scores. All differences were significant at  $p < .001$  and maintained at T3. Participants reported that the course helped them to manage work pressures, feel more relaxed, enjoy their work and experience greater empathy and compassion (for self, colleagues and patients).

**Discussion:** NHS GPs experienced lower levels of stress and burnout after attending an 8-week mindfulness course. The intervention is acceptable to GPs and has potential to be offered more widely. Further research is needed to evaluate this approach within a larger randomized controlled trial.

11:45 - 12:00

## Treatment innovation for Medically Unexplained Symptoms: developing clinical competence, a case study

C. Willis<sup>1,2</sup>, T. Chalder<sup>3</sup><sup>1</sup>Kings Health Partners, United Kingdom<sup>2</sup>City University London, United Kingdom<sup>3</sup>Kings College London, United Kingdom

**Background:** Medically Unexplained Symptoms (MUS) are common and often complex with co-morbid presentations of anxiety, depression and long term conditions (LTC's). The development of competence to deliver effective treatments for MUS with or without LTC co-morbidity is important for patients, health professionals, the wider healthcare system and the economy. Innovative treatment approaches are being developed yet there is little research in the development and evaluation of clinical skills competence in this area. The primary objective was to develop and evaluate the competence of mental health practitioners to adapt an innovative transdiagnostic cognitive behavioural approach to treat patients with MUS.

**Methods:** A single case study was used to guide future directions in training and research development. Kolb's experiential learning model and didactic teaching methods were used to teach clinicians how to adapt a transdiagnostic CBT model to treat specific MUS conditions with or without LTC co-morbidity.

**Findings:** Confidence increased significantly by 28% to 74.5% in a sample of 16. Knowledge also increased but not significantly due to high pre workshop scores. On average participants agreed strongly that the workshop included a good balance of teaching methods; the content was understood and relevant to clinical practice and would be applied following the workshop.

**Discussion:** The development and evaluation of competence to treat MUS and LTC effectively will be discussed including consideration of the implementation of the new IAPT LTC/MUS NHS services. It is limited by the evaluation of a single workshop but identifies directions for further training and research.

12:00 - 12:15

## Navigating the 'MAP' of behaviour change: developing effective training for health professionals working in diabetes

W. Maltinsky<sup>1</sup>, V. Swanson<sup>2</sup>

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<sup>2</sup>University of Stirling, United Kingdom

**Background:** Improving self-management and associated health outcomes for people with diabetes is challenging due to the complexity of the condition. Behaviour change training for health professionals has focused on motivation and goal setting, but less on implementing planning and maintenance. We trained diabetes health professionals in action and coping planning techniques, employing reflective and automatic processes to build sustainable change in health outcomes for patients.

**Method:** Competency Frameworks were used to develop and deliver face-to-face training in action planning and prompted/cued techniques to over 150 health practitioners, including GPs, practice nurses, consultants, dieticians and podiatrists working in diabetes care in nine areas in NHS Scotland. Training was over 1.5 days, two weeks apart. Mixed method evaluations included participant satisfaction ratings, and qualitative assessment of goals, action/coping plans post-training and at follow-up. Plans were rated for specificity, prompts, barrier identification and resolution and use of techniques after Reinwand et al, 2016.

**Findings:** Participants rated training highly for enhancing confidence, work-related skills, understanding and applicability to practice. Many plans scored 'excellent/moderate' for specificity (47, 47%); prompts for the new behaviour (42, 89%) with most (31, 74%) specifying environmental restructuring prompts. Participants reported difficulty using techniques after session 1 and discussion of barriers to implementation as most helpful in session 2.

**Discussion:** Training was very favourably received. Individuals reported introducing new techniques into their practice at follow-up. Detailed behavioural goals appear to be more difficult to generate than subsequent prompts and cues to action.



12:15 - 12:30

## (De)humanization and health care: an integrative review

E. Diniz<sup>1</sup>, S. Bernardes<sup>1</sup>, P. Castro<sup>1</sup><sup>1</sup>ISCTE, Portugal

**Background:** Dehumanization in health - viewing or treating patients as less than human - is a pervasive and relevant social issue. Most research on the topic has been conducted by health service researchers, who mainly seek to identify and describe (de)humanizing health care practices. This literature, rather a-theoretical, has been blind to recent theoretical developments on dehumanization processes taking place in social psychology. We contend that the integration of social psychological models and health services research on dehumanization is important for the development of this topic. As such, this study aimed to develop a comprehensive and integrative review of research on (de)humanization and health. **Methods:** Drawing on scoping review methodology, a database search was first performed and identified 2,867 records on (de)humanization and/or social representations/metaphors of the body in health, which were screened by two independent researchers according to inclusion/exclusion criteria; a total of 59 papers were included. **Results:** Findings show that (de)humanization in health has been investigated by different theoretical/empirical perspectives and levels of analysis (intra and interpersonal, organizational). Two main groups of studies were identified: (1) on contents and meanings of (de)humanization, which either explored dehumanizing social representations/metaphors of the ill body or health care practices and services; (2) on psychosocial processes, which investigated predictors, outcomes, mediators, or moderators of (de)humanization. **Discussion:** An integrative model of (de)humanization processes in health is put forth, which will contribute to the empirical and theoretical development of research on the topic.

# Adherence to treatment and self-management

14:00 - 15:30

Aula A

Falko Sniehotta

14:00 - 14:15

## Modes of adjustment and adherence with photoprotection: a qualitative study of Xeroderma Pigmentosum patients

M. Morgan<sup>1</sup>, J. Walburn<sup>1</sup>, R. Anderson<sup>1</sup>, J. Weinman<sup>1</sup>, R. Sarkany<sup>2</sup>

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<sup>2</sup>Guy's and St Thomas' NHS Foundation Trust, United Kingdom

**Background:** This study of patients with a rare genetic condition, Xeroderma Pigmentosum (XP), goes beyond traditional approaches in explaining adherence and non-adherence and examines photoprotection behaviours (use of sunscreen, covering up and other avoidance measures) in the context of patients' broader adjustment to this chronic condition.

**Methods:** Qualitative design based on semi-structured interviews conducted at home with 23 patients (17 men and 6 women, aged 16-63 years) recruited from a specialist XP centre in London, UK. Transcripts coded, entered into NVivo10 and analysed thematically based on a Framework approach. Triangulation of findings was undertaken through clinical discussion groups and measurement of adherence in the clinical setting.

**Findings:** Participants were categorised into three modes of adjustment to XP: 1) Dominated: fears of cancer and reducing risks through high photoprotection was central to their lives, involving considerable activity restrictions and a high emotional burden, 2) Integrating: photoprotection integrated with other aspects of individuals lives as a 'habit' and 'just something I do.' High integration associated with particular life circumstances and a level of adherence that participants regarded as reducing their risks, whereas small numbers had lower integration/adherence although accepting the need for photoprotection, 3) Resistant: participants resisted acknowledging XP to avoid an illness identity with very 'patchy' photoprotection. These categories were validated by XP specialists and qualitative descriptions of adherence were supported by clinical measurement.

**Discussion:** Patients' modes of adjustment to a chronic condition contributes to explanations of adherence behaviours and informs clinical communication and strategies for facilitating better self-management.

14:15 - 14:30

## Using n-of-1 methods to understand a complex behaviour: photoprotection in patients with xeroderma pigmentosum

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**Introduction:** XP is a very rare inherited disease, involving an inability to repair UV-induced damage and increased melanoma risk. The only treatment is complete avoidance or protection from UV. No research on the complexity of photoprotection behaviours in XP exists. The aim of this study was to understand this complexity by specifying a method to combine and profile multiple preventive behaviours used over time.

**Methods:** 14 adult XP patients completed an n-of-1 study over 50 days. They recorded time spent outside, context, photoprotection of the face (visor, hat, glasses, scarf/face-buff, hoodie), and sunscreen use in an activity diary, and self-reported their level of photoprotection and satisfaction. Analyses included summarising the proportion of outdoor time that each photoprotective behaviour was used, and the correspondence between self-report and clinical level of protection.

**Findings:** Photoprotection behaviour and sunscreen use varied considerably between- and within-participants. Protection was often inadequate (e.g., 10/14 participants used none/very poor protection >20% of time) and didn't correspond with self-reports. Covariation with satisfaction suggested varying levels of behavioural awareness. Initial protection was not always maintained for the duration of the outdoor occasion, and sunscreen was not reapplied frequently enough.

**Discussion:** This is the first attempt to measure and describe the photoprotection behaviour of XP patients. The detailed insights gained have implications for the selection of an appropriate primary outcome for further research and the specific behavioural target for planned interventions to improve photoprotection. The method of profiling multiple preventive behaviours may also be of use in other poorly-understood complex behaviours.

14:30 - 14:45

## Long-term adherence to inhaled corticosteroids: does it make a difference for asthma control?

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**Background:** Chronic conditions often require continued daily use of medication, yet adhering to these regimens is difficult to sustain long-term. In asthma, inhaled corticosteroids (ICs) help achieve and maintain asthma control but ICs adherence is suboptimal. Evidence is scarce regarding its long-term dynamics and role in managing asthma. We examined the longitudinal variation of ICs adherence and its effects on asthma control.

**Methods:** A prospective cohort of persistent asthma patients (12-40 yrs) in France and the United Kingdom were followed up for 24 months by 4-monthly computer-assisted telephone interviews (CATIs), assessing ICs adherence and asthma control. We used longitudinal multilevel models to predict the risk of uncontrolled asthma based on within and between-patient variations in adherence, and patient and treatment characteristics.

**Findings:** In 2416 CATIs from 542 patients (mean age 269 years, 53% women, 85% French), 33% used <60%, 14% 60-80%, 24% >80% of prescribed ICs; 29% were fully adherent. During follow-up, 111 patients maintained asthma control, and 151 remained uncontrolled; 135 maintained >80% adherence, and 131 remained below 80%. Patients with higher average adherence were less likely to report uncontrolled asthma (OR=0.70[0.56-0.86], p<.001), as were male patients (OR=0.60[0.40-0.92], p<.05). Higher baseline asthma severity and add-on therapies predicted uncontrolled asthma (OR=1.88[1.46-2.42], p<.001; OR=1.64[1.03-2.61] and 2.57[1.06-6.24], p<.05). Within-person adherence variation was unrelated to asthma control.

**Discussion:** High adherence and good control proved difficult to achieve or maintain long-term. Between-person results suggest a protective effect of sustained adherence in managing asthma. The dynamic interplay between adherence and asthma control requires further investigation.

14:45 - 15:00

## Treatments continue to improve but adjustment challenges remain: self-management and wellbeing in people with HIV

J. de Wit<sup>1,2</sup>, P. Adam<sup>1</sup>, L. Mao<sup>1</sup><sup>1</sup>UNSW Sydney, Australia<sup>2</sup>Utrecht University, Netherlands

**Background:** Combination antiretroviral treatment (cART) has made HIV infection a chronic, manageable condition. Simultaneously, attention for psychological challenges in people with HIV has however rapidly diminished in research and practice. This study assessed wellbeing in a contemporary sample of people with HIV and examined associations with HIV self-management, biographical, illness, social, economic and psychological variables.

**Method:** A self-selected sample of 360 people with HIV in Australia participated in a national online survey. Reflecting the local epidemic, participants were mostly men (96.4%) and self-identified as gay (90.3%). Average age was 46.7 years (SD=10.9). Participants completed a self-report questionnaire assessing socio-demographic characteristics; health status and treatment of HIV; income and financial strain; social support and social stigma; beliefs regarding cART; HIV self-management; and depression.

**Results:** Participants' scores on the PHQ-9 indicated that 26.4% had experienced major depression in the past two weeks. Participants' scored positively on the 5-point Wallston et al. HIV self-management scale (Mean=3.98; SD=0.71). Logistic regression analysis showed independent negative associations of depression with HIV self-management (O.R.=0.54,  $p<.05$ ), quality of life (O.R.=0.44,  $p<.001$ ), subjective health (O.R.=0.61,  $p=.01$ ) and financial strain (O.R.=0.38,  $p<.05$ ).

**Conclusion:** Major depression was experienced by a quarter of participants in this study of HIV-positive people with access to state-of-the-art HIV treatment. This suggests that while life expectancy of people with HIV is approaching that of non-infected people, their wellbeing may not. Findings underscore the continued importance of adjustment support for people with HIV, including the promotion of self-management and alleviating financial strain from living with chronic HIV.

15:00 - 15:15

## It helps to be connected: association between HIV self-management and measures of social support

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**Background:** In Australia, nearly 75% of people diagnosed with HIV receive antiretroviral treatment (cART), and for over 90% of them the therapy is successful at suppressing the viral load below detectable levels. Consequently, HIV has become a chronic condition, requiring patients to monitor and self-manage their condition throughout their lives. In this study, we explored the demographic, psychological and social variables associated with better self-management in a sample of people living with HIV in Australia.

**Methods:** A cross-sectional survey was carried out in a sample of 360 people living with HIV in Australia (96.4% male). Self-management was assessed using Wallston et al.'s HIV self-management scale. Demographic information was collected along with responses to items measuring psychological and psycho-social variables.

**Findings:** Bivariate analyses indicated that people who managed their condition better tended to be more educated, had higher income, did not suffer from financial difficulties, had a live-in partner, experienced less stigma, had access to higher levels of social support, and knew other people living with HIV. When all variables were entered into the model, living with a partner, knowing other people living with HIV, beliefs about cART, and self-reported stigma remained significantly associated with HIV self-management ( $F(12, 309)=12.47$ ,  $p<.001$ ,  $R^2=.32$ ),.

**Discussion:** Our results suggest that HIV self-management is associated with a wide range of psycho-social variables. Even though the direction of this relationship cannot be established on the basis of this cross-sectional study, it does highlight the importance of social factors for being able to manage one's condition.

# Interventions to change physical activity

14:00 - 15:30

Aula B

Nelli Hankonen



14:00 - 14:15

## Movement as medicine for CVD prevention: piloting two behaviour change interventions delivered in primary care

K. Knittle<sup>1,2</sup>, L. Avery<sup>2</sup>, S. Charman<sup>2</sup>, S. O'Connell<sup>2,3</sup>, F. Sniehotta<sup>2</sup>, M. Trenell<sup>2</sup>

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**Objectives:** Physical activity (PA) can improve cardiovascular disease (CVD) risk factors, and due to its large reach, primary care may be the ideal setting to reduce CVD risk via PA promotion. This study pilot tested the Movement as Medicine for CVD Prevention Program (MaMCVD), which entails two theory-based behavioural interventions - one for patients and one for healthcare professionals (HCPs) - to promote PA in primary care.

**Methods:** This single-group study tested MaMCVD in 3 primary healthcare practices in Northeast England. Fifteen HCPs completed an online course in PA counselling and motivational interviewing techniques. After the course, HCPs delivered behaviour change consultations to patients with increased CVD risk (n=84). Patients had access to a website containing behaviour change techniques derived from self-determination and self-regulation theories. Outcomes were assessed at baseline and 3 months.

**Results:** Questionnaires and coded audio recordings revealed that HCP's counselling skills and self-efficacy improved over the course of the trial. Among patients, intention for PA and subjective PA significantly increased from baseline to 3 months. Small changes in objective PA were also observed. 47% of patients made use of the online behaviour change tools.

**Conclusions:** The MaMCVD intervention was acceptable to HCPs and patients, but uptake by patients was low. This study provides initial evidence for the feasibility of combining motivational and volitional interventions to promote PA in primary care settings, and identifies ways to improve MaMCVD before further testing or implementation. These include addressing HCP misconceptions about the patient website, usability issues, and recruitment/retention problems.

14:15 - 14:30

## Exploring the interplay between message format, personal-relevance & need for cognition on physical activity message processing

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<sup>4</sup>Maastricht University, Netherlands

**Background:** Need for cognition (NFC) and personal relevance influence information processing. Messages are more effective when they are tailored to increase relevance and it may be that tailoring to increase processing style suitability (based on NFC) enhances efficacy further. However, dual processing models like the Elaboration Likelihood Model would suggest that this may be futile. This study investigates the impact of adapting physical activity messages based on NFC, and explores the interplay between message format, NFC, personal relevance and message efficacy.

**Methods:** A lab-based two group randomized trial was conducted. Participants (n = 50) were inactive adults (74% female, M age = 24) randomly exposed to messages optimised for high or low NFC. Attention was assessed as gaze duration in areas of interest (AOI) and changes in Theory of Planned Behaviour constructs were assessed via self-report. Analyses were conducted using linear regression.

**Findings.** There was no interaction between group and NFC on AOI or group and relevance on AOI (all  $p > 0.05$ ). A main effect of relevance on AOI was observed, with a 2% increase of time in AOI per unit increase in relevance ( $p = 0.04$ ). A similar pattern of results was observed for all Theory of Planned Behaviour related outcomes (all  $p < 0.05$ ). Exploratory analyses suggest that highly relevant messages may have a greater impact on behaviour change determinants for people with high NFC.

**Discussion:** Matching physical activity messages based on NFC may not increase intervention efficacy. Messages targeting individuals with low NFC may not require tailoring.

14:30 - 14:45

## Applying motivational, self-regulatory and habit-formation techniques in a computer-tailored physical activity intervention in healthcare professionals

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**Background:** The aim of this study was to develop and test the efficacy of computer-tailored intervention to increase healthcare professionals' physical activity and psychological wellbeing. This was the first study to compare the additive effects of three forms of a tailored intervention using different techniques from behavioural theory, which differ according to their focus on motivational, self-regulatory and/or habitual processes.

**Methods:** Participants (N = 141) were healthcare professionals from four hospitals in Perth, Western Australia (94% female; M age = 45 years; M BMI = 26.31). Participants were randomised to one of four conditions: (1) education only (control), (2) education and motivation, (3) education, motivation and self-regulation, and (4) education, motivation, self-regulation and habit-formation techniques. All intervention groups received a computer-tailored intervention and text-messages relevant to each condition. Intervention effects were tested using a 4 (condition: control, motivation, self-regulation, habit) × 2 (time: baseline, follow-up) generalized linear mixed model.

**Findings:** Intervention compliance was modest, with 53% (n=75) of participants providing follow-up data at 3 months. Complete-case analyses revealed that self-reported physical activity improved significantly among participants in the education and motivation condition (95% CIs: 99.57-7619.01 total PA minutes). There was also a reduction in depression and anxiety symptoms over time in the aforementioned condition, but no change in stress.

**Discussion:** The most effective condition included less information and fewer behaviour change techniques as compared to other intervention conditions. The results may be explained through low participant engagement with the intervention: more comprehensive information may have been ignored or overburdened participants.

14:45 - 15:00

## Process evaluation of the Let's Move It intervention: protocol and results on implementation fidelity

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<sup>8</sup>UKK Institute, Finland

### Background:

A cluster-randomised trial tested the Let's Move It multi-level intervention to promote youth physical activity and decrease sedentary behaviour in Finnish vocational schools in years 2015-17. A process evaluation is needed to illuminate trial findings and inform later dissemination. Our aims are to 1) describe the overall protocol for a process evaluation of Let's Move It, and 2) report preliminary results on fidelity of intervention implementation.

### Methods:

Data collection included semi-structured interviews with a subsample of students (n=36), focus group interviews with teachers (n=16), quantitative process data (fidelity and dose, as well as theorised causal mechanisms) for both students (n=1120) and teachers (n=120), online material usage data, interviews and field diaries regarding the school context. Qualitative and quantitative data will be analysed iteratively, and then triangulated with the results from the primary outcome evaluation.

### Findings:

The Let's Move It process evaluation protocol encompasses a comprehensive examination of causal mechanisms, implementation, and context. Out of intervention students, 80 % attended at least half of the 6 sessions. Altogether 64 teachers attended at least one sitting reduction workshop (out of 3). Intervention arm teachers reported having used sitting reduction strategies to decrease student total sitting time ( $p = .017$ ) but not breaking up sitting ( $p = .050$ ).

### Discussion:

This talk demonstrates the potential of process evaluation in providing various insights for behavior change science. We point to key features in process evaluation such as the need to prioritise research questions to optimise scarce resources, accounting for the need to triangulate data.

15:00 - 15:15

## Barrier-belief lifestyle counseling in primary care: a randomized controlled trial of efficacy

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**Background:**Theory-based behavior change strategies were newly developed to intervene on barrier-beliefs to handle potential causes of relapse and inhibit the role of beliefs as mediating factors in lifestyle behavior. The aim was to analyze the effects of a barrier-belief counseling intervention (BBCI).

**Methods:**A multicenter randomized controlled trial, with balanced randomization, was conducted in a primary care setting in two 6-month intervention groups: BBCI (n=123) and SLI (n=122) and a non-treated hanging control group (n=36) in inactive adults (aged 18-70). Outcomes on physical activity (accelerometer and SQUASH questionnaire), diet (self-report), body composition (BMI, body fat, waist), and quality of life (EORTC QLQ-C30, LASA, Cantril's Ladder) were measured with follow-ups at 6, 12 and 18 months and analyzed using a multiple regression analysis. Missing data was imputed with the predictive mean matching method combined with the last carried-forward method.

**Results:**A barrier-belief counseling intervention was significantly ( $p<.01$ ) more effective on physical activity in the short and the long term compared with the standard lifestyle group intervention and control group, and improved physical activity in the short term significantly ( $p<.05$ ) with small effect sizes, diet in the short and the long term with small and moderate effect sizes respectively, body composition in the short and the long term with small effect sizes and quality of life in the short and the long term with a moderate effect size.

**Conclusions:**The barrier-belief approach can be seen as an effective lifestyle counseling intervention on the long term and seems promising for implementation in healthcare practice.

15:15 - 15:30

## Health behavior changes in Latino US-Mexico border residing adults participating in chronic disease preventive interventions

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**Background:** Non-communicable diseases are the leading cause of death among Mexican-origin adults. There is growing evidence for the effectiveness of community health worker led group interventions in lowering risk. This study aims to examine the behavioral and perceived health impacts of one such intervention tested in a US border community--Pasos Adelante, and contrasts those findings with those of its Northern Mexico adapted and delivered intervention, Meta Salud. The former is a Centers for Disease Control disseminated intervention based on its clinical impact, but little is known about which behavioral change objectives have been successfully addressed.

**Methods:** The primary data comes from the largest cohort to date for evaluating Pasos (N =347); participants were recruited from community and clinical settings. Pasos was developed from a social cognitive theory-based intervention with extensive adaptations based on community participatory methods. Questionnaire data at baseline, conclusion of program, and at 6-month post program initiation were analyzed (e.g., generalized linear logistic mixed models).

**Findings:** Pasos participants reported more physical activity (e.g., meeting CDC guidelines), healthier dietary choices and more positive perceived health at both post program assessments. Across both interventions, participants showed improved indicators of physical activity, whole milk consumption, sugary drink consumption, fruit consumption, mental health and self-rated health (ps<.05).

**Discussion:** The findings suggest these interventions clinical improvements are likely to due to changes in many of the targeted health behaviors and psychosocial improvements. However there were less evidence for consistent changes in some behaviors (e.g., time sitting; vegetable consumption)--illustrating areas for strengthening these interventions.

# Social change and health

14:00 - 15:30

Aula C

Benjamin Schuez

14:00 - 14:15

## Socioeconomic status and health behaviour self-regulation: moderating effects in social-cognitive theories

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**Background:** Health inequalities are to a large degree due to socioeconomic differences in health-related behaviours. However, the mechanisms by which socioeconomic status (SES) affects health behaviour are a topic of ongoing debate. Previous research is inconsistent as to whether SES moderates effects of social cognitions on health behaviours and has been limited by inconsistent operationalizations of SES, single health behaviours, and demographically narrow samples. This paper presents two studies addressing these shortcomings in a multi-behaviour framework.

**Methods:** In two paid online studies using Amazon mTurk (Study 1, US participants) and Prolific Academic (Study 2, mainly UK participants), 1,005 (Study 1) and 1,273 (Study 2) participants each provided multiple indicators of SES (education, income, occupation status, ZIP code) and cross-sectional (Study 1) or 4-week longitudinal (Study 2) data on TPB predictors and health behaviours. Hierarchical random-effects models with cross-level interactions were used to examine moderating effects of SES on TPB-behaviour relations.

**Findings:** Education significantly moderated intention-behaviour and attitude-behaviour effects in both studies, with better educated individuals indicating stronger positive effects. In addition, an area-based measurement of SES (Study 1) moderated attitude-behaviour effects such that these relationships were closer in participants who lived in areas with higher SES.

**Discussion:** Education appears to be an important resource for the translation of intentions into behaviour, while other SES indicators showed less consistent effects. This has implications in particular for interventions aiming at increasing intentions to change health behaviours, as these might in fact increase health inequalities.



14:15 - 14:30

## Incorporating photographic data in health psychology research: the LGBT persons living with MS study

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**Background:** This study explores the experiences of lesbian, gay, bisexual, and trans (LGBT) individuals living with the chronic condition of multiple sclerosis (MS) whose effects are both specific and profound. Long-term conditions have been under-explored in LGBT communities outside of the context of HIV, especially via a multi-methodological qualitative approach.

**Methods:** The research employs an innovative integrative conceptual framework, in order to investigate this topic. It is posited within a critical health psychology epistemological paradigm, theoretically informed by phenomenological psychology and visual ethnography. The integrated data have been collected via interviews and participant-authored photographs which have been analysed using Interpretative Phenomenological Analysis (IPA). Twenty-eight participants, including participants from several European countries, have taken part.

**Findings:** The analysis of the data has produced several themes. For the purposes of this paper we specifically discuss the theme of 'Living with MS: Visual and verbal accounts of adjusting to disability and ableism in the LGBT communities'. MS is a transformative condition which alters the core self of individuals and fundamentally alters their perceived, and felt relations with other members of the LGBT communities. Their life is infused by heteronormativity assumptions, and influenced by heterosexist and ableist experiences, creating a new lifeworld.

**Discussion:** We discuss insights from the study, applications for intervention and aware-raising and consider additional opportunities for applied and impactful opportunities which the participant-authored photos have provide us with. We illustrate this with our reflections on a recent dissemination and engagement event which took the form of a public photographic exhibition.

14:30 - 14:45

## What does cancer screening mean to women from deprived neighbourhoods

L. Gatting<sup>1</sup>, M. Kotzur<sup>2</sup>, K. Robb<sup>2</sup>

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**Background:** People from more socioeconomically deprived areas are less likely to attend cancer screening and experience worse cancer survival rates. This study aimed to explore how cancer screening is discursively constructed in the accounts of women from deprived neighbourhoods and how this may influence screening behaviour.

**Methods:** Interviews were conducted with 21 women, aged 52 to 64 years, from deprived neighbourhoods in Glasgow, UK. Eleven women had participated in all three of breast, cervical and bowel screening and ten had participated in none, according to their NHS records. Thematic Analysis, informed by constructionism, was used to interpret the data.

**Findings:** Three themes developed through the analysis;

Theme 1 ('need' to 'just do it') described the ways in which cancer screening was constructed as good, sensible and responsible, alongside a 'just do it' rhetoric. Theme 2 ('knowing' if 'something is wrong') described how participants focused on knowing (or not) if something was wrong (or not) with their bodies. Women who had not done any screening stated that people can know their own bodies (without screening). Theme 3 (The procedure) covered how participants described the different screening procedures.

**Discussion:** This study provided insight into barriers to screening uptake that go beyond the individual. For example, popular discourse around needing to 'just do it' worked to suppress informed decision making. A greater understanding of deprived women's relationships with cancer screening can be used to inform public health campaigns. Such interventions may benefit from exploiting the 'just do it' rhetoric.

14:45 - 15:00

## Behaviours of young mothers from areas of deprivation; implications for health promotion and cancer prevention

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<sup>3</sup>Queens University Belfast, United Kingdom

**Background:** Evidence suggests younger mothers may have poorer health behaviours, and subsequently increased cancer risk. We aimed to better understand the health behaviours of younger mothers and the factors that influence their lifestyle choices, in order to improve cancer prevention and health promotion in this population.

**Methods:** A photo-elicitation approach was used, where young mothers (n=27; aged 16-24 years), recruited predominantly from areas of deprivation in three UK cities, were provided with cameras and asked to capture 'a week in your life'. Photographs were developed and participants invited to an initial focus group where photographs were used to elicit discussion exploring participants' health behaviours. Data were thematically analysed to identify key themes, particularly those relating to barriers and facilitators of positive health behaviours and cancer. Participants were invited to a second focus group, to explore and validate identified themes further.

**Findings:** Themes emerged from the data, relating to: 1) the mothers' personal perceptions of health, 2) health-related behaviours, and 3) beliefs about cancer and its causes. Barriers to positive health behaviours included a lack of money, childcare and cookery skills; facilitators included social media, commercial weight loss programmes and local community organisations.

**Discussion:** This research provides an evidence base to inform future health-related research in young mothers, particularly relating to cancer prevention interventions. Traditional health psychology models of behaviour change and health promotion would need to be adapted, by drawing on this evidence base, in order to engage this population and motivate prolonged positive health behaviours.

15:00 - 15:15

## The health effects of the global financial crisis

R. De Vogli<sup>1</sup><sup>1</sup>University of Padova, Italy

In 2008, the world experienced the worst financial crisis since the Great Depression. The crisis is often described in relation to its proximal risk factors such as the proliferation of risky loans and mortgage-based securities, but the root causes of the Great Recession include distal risk factors such as indiscriminate capital flow, excessive financial deregulation and high concentration of wealth in the top distribution. Ultimately, the crisis is a by-product of neoliberal policies and the “self-correcting market” ideology that guided national and global macroeconomic reforms since the 1970s.

Evidence indicates that the Great Recession led to increases in unemployment and suicides, especially in Europe and in the United States. Estimates based on the effects of previous economic downturns suggest that the crisis produced negative health and nutritional outcomes in developing countries. Data, however, also shows that crises can be characterized by increases in life expectancy at birth. These favorable trends seem more likely to be experienced by countries with a more egalitarian distribution of income and stronger social protections that can decouple the link between unemployment and suicides during crises.

New rules and regulations at the national and global level are needed to prevent future financial crises. Redistribution of wealth and investments in social protection are necessary for the safeguard of health in times of economic recession.

15:15 - 15:30

## “You can’t walk around with Photoshop on your face”: experiences of acne and contemporary media

K. Adkins<sup>1</sup>, A. Thompson<sup>1</sup>, J. Moses<sup>1</sup>, P. Overton<sup>1</sup>

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**Background:** The sociocultural model of body image proposes that mass media has a pervasive influence on how women feel about their bodies. However, existing research neglects women’s experiences of media and living with an appearance-altering skin conditions. The study aims were to identify and examine young women’s experiences of acne in the context of contemporary media (e.g. internet, social media, advertising).

**Method:** Semi-structured interviews, incorporating photo-elicitation, were conducted with 15 women with chronic acne. Interviews and images were analysed using a dual-deductive inductive approach to thematic analysis, informed by the sociocultural model of body image.

**Results:** Three themes are discussed: (1) ‘Media portrayals of acne’, reveals frustration with ‘perfect skin’ as the societal ideal, the absence of acne in the media, and stereotypes about people with acne; (2) ‘Skin-dissatisfaction’ looks at how women with acne negatively compare themselves to images of ‘perfect skin’, judging themselves as deviating from this ideal, and seeking to meet this ideal through the use of airbrushing, make-up and the multiple treatments; and (3) ‘Media as a source of information’ considers how women seek, use, and appraise different sources of information on acne.

### Discussion

The results of the study can only be partially understood in relation to existing sociocultural theory, and theories of appearance comparison. The study adds to the existing literature, by revealing, in detail, women with acne’s use and perceptions of modern media and the influence that this has on their psychosocial wellbeing. Furthermore, participants raised ideas for how societal attitudes could be changed.

# Cognitive behavioral intervention in chronic disease

14:00 - 15:30

Aula E

Robbert Sanderman

14:00 - 14:45

## Which exercise or behavioral interventions are most effective for treating fatigue in multiple sclerosis?

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**Background:** Fatigue is one of the most common and disabling symptoms of Multiple Sclerosis (MS). There are no recognised biomedical treatments for MS fatigue. The aim of this study was to determine the most promising exercise and behavioral treatments for MS fatigue by (a) providing a narrative synthesis of all the interventions where fatigue was a primary outcome including a breakdown of the key contextual and treatment components (b) a network meta-analysis of all controlled exercise and behavioural trials conducted to date where fatigue was a primary or secondary outcome.

**Methods:** 17 databases were searched, papers hand-searched, and relevant authors contacted. Studies were screened and assessed for eligibility by two independent reviewers. Information was extracted according to Cochrane and TIDieR guidance and statistical data were double extracted. Treatment manuals were obtained and coded by content of intervention, treatment context and relevant BCTs and interventions grouped accordingly. Effect sizes were expressed as standardised mean differences (SMD). The network meta-analysis was estimated using restricted maximum likelihood by the mvmeta command and network packages.

**Results:** 1880 abstracts and 227 full text articles were screened. 82 studies with 179 treatment arms were included in the meta-analysis. SMD ranged from -0.07 (-0.33, 0.47) for resistive exercise to -0.61 (-0.85,-0.37) for exercise with more than one overload component and -.91 (-1.37, -0.45) for balance exercise. Cognitive behavioural therapy (CBT) was the most effective behavioral treatment (SMD=-.61; 0.85, -0,37). CBT for fatigue had higher estimates SMD=-.77 (-1.21, -.33) than CBT for distress SMD=-.56 (-.88, -.23). Combining behavioural and exercise programs showed no added benefit.

**Discussion:** Balance and exercise programmes with more than one overload/progression component and CBT for fatigue appear the most promising interventions for MS fatigue. BCTs did not discriminate across interventions. More detailed knowledge of the content was important for developing relevant groups of interventions.

14:45 - 15:00

## “I see myself as a little warrior”: patient perceptions of online-CBT for distress in haemodialysis

J. Hudson<sup>1</sup>, R. Moss-Morris<sup>1</sup>, F. Picariello<sup>1</sup>, J. Chilcot<sup>2</sup>

<sup>1</sup>King's College London, United Kingdom

<sup>2</sup>Institute of Psychiatry, Psychology and Neuroscience, King's College London, United Kingdom

### Background:

Psychological distress is common in haemodialysis. Access to cognitive-behavioural therapy (CBT) tailored specifically to manage distress associated with haemodialysis is limited. Online CBT is a pragmatic solution. This nested qualitative study explored the utility and acceptability of the improving distress in dialysis (iDiD) online CBT programme among haemodialysis patients randomised to either the therapist supported or unsupported arm.

### Method:

Nested semi-structured interviews within the iDiD feasibility randomised controlled trial were performed on 14 haemodialysis patients (11 supported arm; 3 unsupported arm). Interviews occurred either face-to-face or over the phone post-treatment. Thematic analysis was performed.

### Findings:

Four distinct yet interrelated themes were identified. Two themes centred on utility. First, patients valued the tailoring of iDiD CBT “active ingredients” to the renal context. Second, patients commented on downstream improvements on health outcomes – notably confidence, agency, and resilience with limited reference to changes in negative affect. Two themes related to acceptability. First, patients identified external (e.g. time) and psychosocial barriers (e.g. emotional readiness) to engagement. The second theme highlighted the value of human cognitive and emotional intelligence gleaned from patients in the supported arm. An overarching theme also emerged: haemodialysis illness trajectory. Opinions about iDiD were contextually linked to current and past illness stressors.

### Discussion:

iDiD was perceived as a useful intervention. The most commonly reported patient gains were an improved self-concept of their ability to manage multimorbid illness rather than distress specifically. Framing iDiD as a self-management support tool may promote engagement: methods of identifying illness related distress are needed.



15:00 - 15:15

## Self-construing during body psychotherapy for chronic depression – a secondary analysis of RCT trial data

C. Malighetti<sup>1</sup>, F. Röhrich<sup>2</sup>, D. Winter<sup>3</sup>, S. Cipolletta<sup>1</sup>

<sup>1</sup>University of Padua, Italy

<sup>2</sup>University of Essex, United Kingdom

<sup>3</sup>University of Hertfordshire, United Kingdom

**Background:** Previous research suggested that repertory-grid based measures identified different features of depressive disorder than the cognitive and mood symptoms. The present study investigated construing of the self and the body in clients with depression. **Methods:** During the RCT data of nineteen included patients was collected pre/post Body Psychotherapy or the waiting control condition, using The Manchester Short Assessment of Quality of Life, Hamilton Rating Scale for depression, Rosenberg Self-Esteem scale, a Visual Analogue Scale (VAS) on body cathexis and Repertory Grids. **Findings:** The results did not show significant change in patients' personal construing during BPT. Before treatment, a high level of body cathexis was significantly associated with a greater distance of ideal self from self ( $r = -.615$ ,  $s = .007$ ), future self ( $r = .501$ ;  $s = .041$ ) and body ( $r = -.518$ ;  $s = .028$ ). Severity of depression was associated with less favourable construing of the body ( $r = -.579$ ;  $s = .012$ ) and high rigidity in construing ( $r = .517$ ;  $s = .028$ ). After treatment, a high level of body cathexis was associated with high self esteem ( $r = .484$ ;  $s = .036$ ) and high scores on the self esteem scale were associated with a higher distance between ideal self and body ( $r = -.530$ ;  $s = .020$ ). **Discussion:** The relationships demonstrated between repertory grid measures of self-construing and questionnaire measures of symptoms, self-esteem, and quality of life are consistent with previous research, and the present study also indicates that unfavourable construing of the body is part of the experience of depression.

15:15 - 15:30

## A skeptical look at mindfulness-based training for physical health problems

J. Coyne<sup>1</sup><sup>1</sup>UMCG, Netherlands

**Background:** Mindfulness-based training (MSBT) is widely recommended for improving both physical and functional outcomes in chronic health problems. This presentation evaluates the quality of evidence supporting such recommendations.

**Methods:** A systematic narrative review identifies key meta-analyses and randomized trials evaluating MSBT for physical health problems. Key findings will be evaluated with respect to quality of conduct and reporting and the influence of conflicts of interest on results.

**Findings:** Strong findings are claimed in meta-analyses for MSBT across a full range of chronic physical and mental health problems. However, when these meta-analyses are evaluated in terms of standard measures of quality and conflict of interest, a clear pattern emerges. Positive findings are largely limited to poor quality meta-analyses from authors with conflicts of interest. High-quality comprehensive meta-analyses fail to identify many benefits of MSBT versus other active treatments. In terms of RCTs, positive findings are largely limited to subjective self-report in comparisons with no treatment and inadequate control conditions. Overall quality of RCTs is low. Claims about MSBT influencing immune and brain function in any unique or clinically significant fashion are as yet unwarranted. Whether patients assigned to mindfulness training actually practice is seldom assessed and results are mixed. Under conditions in which MSBT is typically evaluated, acupuncture would appear effective.

**Discussion:** Clinicians and policymakers need to be alert to the overall poor quality of meta-analyses and randomized trials from promoters of MSBT. There is little need for further research comparing MSBT to no treatment or inadequate control conditions.

# Relationships and psychological issues around pregnancy and child birth

14:00 - 15:30

Aula F

Wim Nieuwenboom

14:00 - 14:15

## Psychological developmental benefits for children of mothers taking folic acid supplementation throughout pregnancy

A. Cassidy<sup>1</sup>, M. McLaughlin<sup>1</sup>, L. Henry<sup>1</sup>, K. Pentieva<sup>1</sup>, C. Walsh<sup>1</sup>, H. McNulty<sup>1</sup>, D. Lees-Murdock<sup>1</sup>

<sup>1</sup>Ulster University, United Kingdom

**Background:** Folic acid supplements taken during the first trimester of pregnancy can have beneficial effects on children's brain development. Little is known if continued supplementation throughout pregnancy has any additional effects.

**Method:** A randomised controlled trial of folic acid supplementation in pregnancy, with parental rating using the Resiliency Attitudes and Skills Profile &#40;RASP&#41;; the Strengths and Difficulties Questionnaire (SDQ), and the Trait Emotional Intelligence Questionnaire Child Short Form (TEIQue-CSF). Children aged 7 whose mothers received folic acid throughout pregnancy (n= 22) were compared to those whose mothers only received it during the first trimester (n=17).

**Findings:** Children whose mothers received the full term supplement scored significantly higher on emotional intelligence (t=3.84 p<.001) and resilience (t=5.03, p<.001). Hierarchical Multiple Regression Analysis identified folate level at 36th gestational week as an important predictor of emotional intelligence (EI) and resilience.

**Discussion:** Folic acid supplementation continued throughout pregnancy may enhance psychological development in children.

14:15 - 14:30

## Psychopathological symptoms in low risk pregnancies and obstetrical outcomes

A. Camarneiro<sup>1</sup>, J. Justo<sup>2</sup><sup>1</sup>Nursing School of Coimbra, Portugal<sup>2</sup>University of Lisbon, Faculty of Psychology, Portugal

**Background:** Psychopathological symptoms (PS), ineffective coping and psychosocial risk (PR) have been repeatedly observed to associate with obstetrical difficulties (OD).

**Objectives:** To understand the relationship between PS and PR on one side and OD on the other side.

**Methods:** Predictive study: second trimester of pregnancy and post-delivery. Sample: pregnant women (N = 395) with low obstetrical risk. Instruments: Sociodemographic and Clinical Questionnaire, Brief Symptoms Inventory (BSI) and Problems' Solution Inventory (PSI).

**Results:** Obstetric Pathology was observed in 24.3% of the sample. These women presented significantly higher values in BSI - Interpersonal Sensitivity ( $t = -2.13, p = .035$ ) and PSI - Asking for Help ( $t = 2.43, p = .016$ ). Comparisons between women with different obstetric pathologies show significant differences in anxiety ( $p = .04$ ), hostility ( $p = .008$ ) and in PSI - strategies of emotional control ( $p = .02$ ). Women with gestational diabetes present the lowest values of PS and pregnant women with hypertension present the highest values of PSI – emotional control. Obstetric pathology and type of delivery did not present any associations with sociodemographic variables.

**Conclusion:** The evolution of low obstetric risk pregnancies is difficult to predict. It is necessary to ensure the mental health of the pregnant woman namely promoting effective strategies of problems' solution. Never the less, clinical guidance of pregnant women that develop obstetric pathology is fundamental for a healthy outcome at delivery.

14:30 - 14:45

## Testing Dyadic Coping, Marital Adjustment and Anxiety as moderators of Fathers Pre-Natal Attachment

M. Pires<sup>1</sup>, R. Brites<sup>1</sup>, O. Nunes<sup>1</sup>, J. Hipólito<sup>1</sup>, M.L. Vasconcelos<sup>1</sup>

<sup>1</sup>Psychology Research Center CIP-UAL - Universidade Autónoma de Lisboa, Portugal

Despite extensive evidence on the influence of couples' relationship variables on mother-infant attachment, few studies have addressed father's perspective. This study investigates the impact of dyadic coping, marital adjustment (consensus) and anxiety on fathers' prenatal attachment.

A community sample of 250 men, aged 21-52 years old ( $M = 32.95$ ;  $SD = 5.94$ ), completed DAS-Dyadic Adjustment Scale (Spanier, 1976), DCI-Dyadic Coping Inventory (Bodenmann, 2008), HADS-Hospital Anxiety and Depression Scale (Zigmond, & Snaith, 1983) and PAAS-Paternal Antenatal Attachment Scale (Condon, 1993). All men were in a stable relationship with the mother to be. Most were first time fathers ( $n = 128$ , 55.2%), with a high school or a university degree ( $n = 145$ , 59%).

Following missing data analysis the SEM was evaluated in two steps with AMOS software: a) quality of measures adjustment b) causal model. The global measure model presented a good fit ( $CFI = .89$ ;  $GFI = .70$ ;  $RMSEA = .07$ ;  $P[rmsea \leq .05 < .001]$ ;  $MECVI = 4.51$ ). The path analysis  $DCI > Attachment$  is a stronger one ( $B_{DCI,PAAS} = 0.27$ ;  $SE = .11$ ;  $\beta_{DCI,PAAS} = .17$ ;  $p = .01$ ). Although the other paths have a lower impact on attachment, together they improve the model explaining fathers' pre-natal attachment, and producing an overall better fit.

Results highlight the importance of further studies addressing the transition to parenthood from the perspective of fathers to be. In future models, individual as well as other couples' relationship variables should be considered.

14:45 - 15:00

## Strengthening the building of realistic expectations: first time fathers with realistic expectations have happy wives

W. Nieuwenboom<sup>1</sup>, C. Benz<sup>2</sup>, H. Schmid<sup>3</sup>, V. Anderegg<sup>4</sup>, G. Bodenmann<sup>4</sup>

<sup>1</sup>University of Applied Sciences Northwestern Switzerland - School of Social Work, Switzerland

<sup>2</sup>University of Applied Sciences Northwestern Switzerland, Switzerland

<sup>3</sup>University of Applied Sciences and Arts Northwestern Switzerland, Switzerland

<sup>4</sup>University of Zurich, Switzerland

**Background.** As prior research suggests, transition to parenthood is detrimental to relationship functioning among the parents, which might in turn also affect the parent-child relationship. It was hypothesized that training programs for couples facing the birth of their first child will reduce these negative effects by creating realistic expectations with respect to new tasks, roles and time lapses after birth.

**Methods.** In a randomized controlled pre-post-follow-up design, 273 couples were assigned to one of three conditions: Couple Care and Training Program (CCC-P, strong intervention), designed to support couples during and after the transition state to first parenthood (n=74), a self-directed learning approach in which parents use a DVD to learn knowledge and skills needed to adapt to parenthood (moderate intervention) (n=104) and treatment as usual (TAU, no intervention) (n=95).

**Findings.** Analysis shows a small but significant correlation between strength of intervention and the difference between the expected and received practical support after birth ( $r = .16$ ,  $p \leq .05$ ) with TAU fathers showing the largest difference. Only among fathers, the intervention has a positive effect on the perceived satisfaction of the mother ( $r = .13$ ,  $p \leq .05$ ) which is mediated by expectations for practical support ( $r = .16$ ,  $p \leq .05$ ).

**Discussion.** Our hypothesis has partially been confirmed. Interventions targeting on building realistic expectations among future parents are promising in order to promote a healthy couple relationship after birth.

15:00 - 15:15

## PTSD after childbirth and mother-infant bonding on French / Tunisian samples

N. Hannachi<sup>1</sup>, E. Spitz<sup>1</sup><sup>1</sup>Lorraine University, France

Background: Post-Traumatic Stress Disorder (PTSD) after childbirth is among disorders that affect women in the perinatal period. International literature highlight that 2 to 6% of women are at risk to develop PTSD after childbirth (Denis & al., 2008; Alcorn & al., 2010). An Iranian study reports a prevalence of PTSD in 20% of women 6 to 8 weeks after childbirth (Modarres & al., 2012). According to the DSM V, PTSD involves four distinct diagnostic clusters: Intrusion symptoms; Avoidance; Negative cognition and mood; and Alterations in arousal and reactivity. The aim of this study is to evaluate the prevalence of PTSD in French/Tunisian populations and to investigate the influence of PTSD symptoms on post-partum mother infant bonding.

Method: Sample of n= 342 French women and n= 211 Tunisian women were recruited during the last trimester of pregnancy and at 2 months postpartum. They have completed measures of PTSD (CPTES, Hannachi & Spitz, 2016) and Bonding (PBQ, Brockington, 2001).

Findings: Results show that 3, 2 % of French and 21, 4% of Tunisian women present post-traumatic stress disorder at two months after their childbirth. About the impact of the disorder on the mother-infant bonding, we find that PTSD is significantly correlated with a poor post-partum bonding in French women and Tunisian women ( $\beta = .34$ ;  $\beta = .62$ ,  $p < 0, 01$  respectively).

Discussion: Results suggest that PTSD after childbirth is associated with unfavourable outcomes for mother-infant bonding. Psychological support for women during the perinatal period is needed to prevent post-partum disorders and its consequences.



15:15 - 15:30

## Stress experienced by parents in the neonatal intensive care units

M. Kostović Srzentić<sup>1</sup>, Z. Pukljak Iričanin<sup>1</sup>, M. Grubić<sup>2</sup>, A. Bogdanić<sup>2</sup>, B. Filipović Grčić<sup>2</sup>

<sup>1</sup>University of Applied Health Sciences, Croatia

<sup>2</sup>University Hospital Centre Zagreb, Croatia

**Background:** Birth and hospitalization of infant in neonatal intensive care unit (NICU) is a stressful experience for parents. It relates to illness and treatments the neonate is undergoing, separation from the child and relationship issues. Parental stress may lead to mental health problems, particularly in mothers, and can be a risk factor for child development. Objective of this study was to assess psychological distress in parents of neonates. Stressors related to NICU and outside the hospital, stress reduction technique and care satisfaction were explored.

**Methods:** 132 parents (69 mothers, 63 fathers), aged 17 to 50, completed Parental Stressor Scale-NICU, External Stressors Scale, Stress Reduction Scale, CORE-18 and satisfaction survey. Average gestational age of infants from two regional NICU was 31 week (24-42), birth weight 1520 grams (580-3520) and hospitalization duration 34 days (5-164).

**Results:** The most stressful dimension in NICU was parental role alteration. The impact of significant others on parents' feelings was the most stressful among stressors outside the hospital. Meeting financial and work obligations was the most stressful for fathers and discharging before baby for mothers. Confiding in others and researching about infant's condition were mostly used stress reduction techniques, prayer rated as most effective. Even 50% of parents were in clinically significant distress, more mothers than fathers. Care satisfaction was related to lower stress.

**Conclusions:** High level of psychological distress in parents was found. Considering this is the first study in this field in Croatia, results serve as guidelines for psychological support and research related to NICU.

# Risk and health communication

14:00 - 15:30

Aula I

Ciska Hoving

14:00 - 14:15

## Avian Influenza 2006 and 2016: are there differences in risk perception and intention?

N. Lages<sup>1</sup>, J. Kollmann<sup>1</sup>, L.J. Debbeler<sup>1</sup>, B. Renner<sup>1</sup>

<sup>1</sup>University of Konstanz, Germany

**Background:** In 2016, the cases of Avian Influenza across Europe and Germany increased to such an extent that it was the most important outbreak after the peak in 2006. This raises the questions (1) how the outbreaks in 2006 and in 2016 differed in progression and information given by the health institutes, (2) whether the associated risk perception and intention for preventive behavior change differed between 2006 and 2016.

**Methods:** Two online surveys were conducted in 2006 (N = 421) and 2016 (N = 358) respectively, assessing both risk perception and intention for behavior change (e.g. becoming vegetarian, to get vaccinated).

**Findings:** In 2006, there were 115 documented cases of Avian Influenza, 79 people died worldwide. In 2016, not a single documented case of an affected human occurred. Conversely, risk perception was higher in 2016 as compared to 2006 ( $t(777) = -2.24$ ,  $p = .025$ ,  $d = .16$ ). Intention did not differ between surveys ( $t(777) = -0.88$ ,  $p = .380$ ,  $d = .06$ ).

**Discussion:** Although in 2016 the outbreak did not reach the severity of the 2006 outbreak, people had higher risk perception in 2016. This might suggest that public risk perceptions are less responsive to the actual danger and spread of the disease than to a more general 'feeling of risk'. Implications for assessment of perceived risk and public preventive measures will be discussed.

14:15 - 14:30

## Usability, acceptability and effect of a comprehensive preconception care intervention targeting low SES women

H. van Keulen<sup>1</sup>, P. van Empelen<sup>1</sup>, I. Aalhuizen<sup>2</sup>

<sup>1</sup>Netherlands Organisation for Applied Scientific Research (TNO), Netherlands

<sup>2</sup>KNOV, Netherlands

**Background:** Preconception care (i.e., a healthy lifestyle among future parents before conception) improves healthy pregnancy and birth. However, future parents, especially those with a low socio-economic status, are unaware of it. Therefore, a comprehensive preconception care intervention was developed for female students of intermediate vocational education; the aim was to improve informed decision making about preconception care.

**Methods:** The intervention was developed using Intervention Mapping and user-centered design. It consisted of: 1) A classroom educational lesson provided by trained midwives (N = 9), 27 lessons were provided at 4 schools in school year 2015/2016; and 2) A tailored website 'nietofwelzwanger.nl'. A pretest-posttest design using online surveys among students attending the lesson was used to evaluate intervention effects on informed decision making, as well as to examine intervention acceptability. Effects were analyzed by paired t-tests using multiple imputation. Google Analytics (October 2015/2016) were used to examine use of the website.

**Findings:** At posttest, students (N = 298 from 2 schools) made a more informed decision regarding preconception care than at pretest ( $t = 3.06$ ;  $p < 0.01$ ). They were positive about the lesson (mean grade = 7.6;  $sd = 1.2$ ) and website (mean grade = 7.2;  $sd = 1.1$ ). The website was visited 3,035 times, of which 2,458 (81%) unique visitors.

**Discussion:** Findings suggests that the intervention is a promising strategy to improve informed decision making about preconception care, and is positively evaluated by the target group. Implementation and further dissemination of the preconception care intervention is a logical next step.

14:30 - 14:45

## Identifying clusters in practice nurses' adherence to smoking cessation counselling guidelines

C. Hoving<sup>1</sup>, M. Stroom<sup>1</sup>, D. de Ruijter<sup>1</sup>, H. de Vries<sup>1</sup>, E. Smit<sup>2</sup>

<sup>1</sup>Maastricht University, CAPHRI, Netherlands

<sup>2</sup>University of Amsterdam/ASCoR, Netherlands

**Background:** General practice nurses often provide smoking cessation counselling, but adherence to evidence-based counselling guidelines is suboptimal. To better understand the heterogeneity in guideline adherence, this study's aim was to identify subgroups based on guideline adherence beliefs and to test how these subgroups differ on adherence behaviour.

**Methods:** Cross-sectional online questionnaire data from 157 practice nurses was used to conduct a hierarchical cluster analysis. Clusters were based on perceived pros and cons, and self-efficacy to perform guideline steps. Clusters found were compared on general adherence and performance frequency of counselling steps (always-never) using t-tests and Mann-Whitney U tests, respectively.

**Findings:** Two clusters were identified; Assured Optimists (AO; high pros, low cons, high self-efficacy) and Pessimists (P; low pros, high cons, low self-efficacy). Assured Optimists reported significantly more often to be adherent in general (MAO=6.05, MP=4.47, T=3.37,  $p < .01$ ) and to perform counselling steps related to active counselling (e.g. increasing motivation to quit, MdnAO=2, MdnP= 3, U= 1845,  $p < .001$ ). No differences were found for protocol elements focused on assessment.

**Discussion:** Practice nurses who reported a more positive view on their adherence to smoking cessation counselling guidelines are not more likely to assess smoking behaviour and beliefs compared to those who reported a more negative view, but are more likely to actively counsel their smokers. Validation of the cluster solution found is recommended. Interventions focusing on improving practice nurses' beliefs on smoking cessation counselling guideline adherence might be more likely to find results on active counselling steps than assessment steps.

14:45 - 15:00

## Do demographic characteristics moderate differences in don't know responding between cognitive and affective risk questions?

E. Janssen<sup>1</sup>, P. Verduyn<sup>1</sup>, E. Waters<sup>2</sup>

<sup>1</sup>Maastricht University, Netherlands

<sup>2</sup>Washington University, United States

### Background:

Risk perception is a central construct in many health behavior theories. However, many people report uncertainty about their risk of cancer and other diseases. This reported uncertainty is higher for cognitive than affective risk perceptions. We explored whether this difference varied in magnitude by sociodemographic characteristics that are associated with differential reliance on affect in decision making: sex, age, education, race, numeracy, and family history.

### Methods:

We used secondary data analysis (N=835) to compare the frequency of “don't know” responses (DKR) to items assessing cognitive and affective perceived risk (e.g. “I feel...”). Absolute and comparative risk perceptions of both colon cancer and other “exercise-related diseases” were assessed for each of the items. All eight items included an explicit DK response option. Multilevel logistic regression analyses explored sociodemographic characteristics as potential moderators.

### Findings:

The odds of DKR were higher for cognitive than affective perceived risk (OR=0.64, 95%CI=0.54-0.75,  $p<0.001$ ). This difference occurred for absolute but not comparative risk perceptions. No interactions with sociodemographic characteristics were found ( $ps>.05$ ).

### Conclusions:

Participants responded “don't know” less often when asked to indicate their affective (versus cognitive) absolute perceived risk. This effect was consistent in magnitude across many sociodemographic and family history characteristics. Thus, interventions that help people understand the cognitive aspects of risk perceptions (e.g., probability likelihoods) may target the whole population rather than certain subsets. To inform those interventions, the mechanisms driving the difference in cognitive vs. affective DKR need to be identified.

15:00 - 15:15

## Perceived risk, self-efficacy and outcome beliefs as predictors of physical activity and BMI: 5-year follow-up

M. Vornanen<sup>1</sup>, H. Konttinen<sup>1</sup>, M. Peltonen<sup>2</sup>, A. Haukkala<sup>1</sup>

<sup>1</sup>University of Helsinki, Finland

<sup>2</sup>National Institute for Health and Welfare, Finland

**Background:** Perceived risk, self-efficacy and outcome beliefs are central concepts in several health behaviour theories, but their long-term effects on lifestyle changes remain unclear. We examined, in a five-year follow-up, whether perceived risks of diabetes and cardiovascular disease (CVD) predicted changes in physical activity (PA) or Body Mass Index (BMI kg/m<sup>2</sup>), or whether low PA and high BMI rather predicted higher perceived risks. Further, we examined whether perceived risks, self-efficacy, and outcome beliefs together predicted changes in PA or BMI.

**Methods:** Participants were high diabetes risk participants (N=432) and randomly selected low to average risk participants (N=477) from FINRISK 2002 study, followed-up in 2007. Perceived absolute lifetime risks of diabetes and CVD, health action self-efficacy, outcome beliefs, and PA were self-reported; weight and height were assessed in health examinations. Structural equation models were adjusted for age and gender.

**Findings:** In cross-lagged autoregressive models, we found no associations between perceived risks and PA, but higher baseline BMI predicted higher perceived risk of diabetes ( $\beta=.15$ ,  $P<.001$ ) and CVD ( $\beta=.10$ ,  $P=.009$ ) in the low/average risk group. In structural regression models, self-efficacy predicted increased PA (low/average risk group:  $\beta=.13$ ,  $P=.011$ ; high risk group:  $\beta=.17$ ,  $P=.012$ ), but not BMI change, whereas perceived risks or outcome beliefs did not predict changes in PA or BMI.

**Discussion:** Perceived risk may rather reflect actual risk factors, such as high BMI and low PA, than predict lifestyle changes. Interventions aiming for long-term health behaviour change and maintenance should target risk perceptions together with other socio-cognitive factors, such as self-efficacy.

# Acceptance and adoption of mHealth

15:30 - 17:00

Eline Smit



15:30 - 17:00

## User acceptance of Electronic Health Records: the relationship between comfort levels and consent

D. Whiddett<sup>1</sup>, I. Hunter<sup>1</sup>, B. McDonald<sup>1</sup>, T. Norris<sup>1</sup>, J. Waldon<sup>2</sup>

<sup>1</sup>Massey University, New Zealand

<sup>2</sup>University of New South Wales, Australia

### Background:

This paper presents findings from a study of the relationship between a person's level of comfort with a situation and their willingness to consent to it happening, in the context of sharing personal information using electronic health records (EHRs).

### Methods:

87 vignettes were defined which describe the sharing of personal health information with various people for various reasons. Different degrees of anonymity and levels of detail were also considered.

A representative sample of the adult population of New Zealand was interviewed using Computer Aided Telephone Interviewing (CATI) technology. Respondents were presented with a random selection of vignettes and asked how comfortable they would be to share their information (on a scale of 1-10) and whether they would give consent (yes/no).

### Findings:

31,146 pairs of responses were obtained from 4209 respondents. The percentage of respondents who would consent to share at a particular level of comfort followed a modified logistic regression curve. The percentage consenting rises very steeply between the comfort levels of 3 (20% consent) and 6 (90% consent). No significant differences arose from respondent characteristics, nor from most parameters of the situation. The only significant difference was that at any particular comfort level, people were more likely to consent if the recipient is a hospital doctor or ambulance paramedic.

### Discussion:

The results suggest that the best way to increase acceptance of innovations in healthservice delivery, such as using EHRs, is to focus on ways to increase the comfort level of people in the 3 to 6 range.

15:30 - 17:00

## Psychosocial correlates of weight loss in an eHealth intervention among Type 2 diabetes mellitus patients

K. Ryan<sup>1</sup>, S. Dockray<sup>1</sup>, C. Linehan<sup>1</sup><sup>1</sup>University College Cork, Ireland

### Background:

The current study aims to understand the psychosocial correlates of weight loss for those with Type 2 Diabetes in an eHealth intervention

### Methods:

A longitudinal, correlational study design was employed to assess the psychosocial correlates of weight loss for those with Type 2 Diabetes Mellitus (T2D). Fifty participants completed measures at baseline assessing: personality traits, social support, health related quality of life, stage of change, current processes used in weight management and self-efficacy for exercise and dieting behaviours. Participants then undertook an 8 week eHealth intervention which was designed to restrict dietary intake (DI) and increase physical activity (PA) with the aim of weight loss. Behaviour change techniques utilised included goal setting for DI and PA, education components, behavioural monitoring (via MyFitnessPal mobile application) and feedback. The outcome measure was body weight at 8 weeks (post-intervention). Initial bivariate correlations were conducted to assess associations of psychosocial measures and body weight. A hierarchical multiple regression model was constructed to understand the correlates of clinically significant weight loss (e.g. >5% loss of original body weight) as a result of the eHealth intervention.

### Results:

Results indicate that the eHealth intervention resulted in clinically significant weight loss in those with T2D. At baseline, strong social support was associated with weight management actions ( $r=.57$ ,  $p<.001$ ), while negative affect was linked to weight consequences evaluation ( $r=.3$ ,  $p<.001$ ), mediating readiness for behaviour change.

### Conclusions:

Understanding and accounting for individual differences among patients is important in tailoring the content of eHealth interventions to improve clinical outcomes.

15:30 - 17:00

**Early Career Award winner****Identifying autonomy-supportive message frames in online health communication**E. Smit<sup>1</sup>, H. de Vries<sup>2</sup><sup>1</sup>Amsterdam School of Communication Research, University of Amsterdam, Netherlands<sup>2</sup>Maastricht University/CAPHRI, Netherlands**Background**

To date, scholars have mainly focused on tailoring the content of online health communication, yet effect sizes remain small. To increase its public health impact, testing strategies that might increase the effectiveness of online computer-tailoring is a priority. The aim of this study is to explore the potential of message frame tailoring, by identifying the most autonomy-supportive message frame within an online health communication intervention aimed at the promotion of vegetable intake.

**Methods**

Two strategies will be studied that have been found to increase perceived autonomy-support in the face-to-face setting, i.e. offering choice and using non-controlling language. A 2 (choice vs. no choice) x 2 (non- controlling vs. controlling language) experiment will be conducted. Participants (N=492) will be recruited via a research panel and will be randomly assigned to one of the conditions. Measurements will occur before (T0; demographics, present behaviour) and directly post-intervention (T1; perceived autonomy-support).

**Expected results**

It is hypothesized that both offering choice and using non-controlling language increase perceived autonomy-support, but that the combination is most effective.

**Current stage of work**

Currently, intervention materials have been adjusted for use in each of the four conditions. Next steps will entail pre-testing among experts and the target population, finalizing intervention materials and data collection (expected in April-May 2017).

**Discussion**

The results from this study will contribute to the increased effectiveness of online computer-tailored health communication, a low-cost health behaviour change strategy. As the Internet ensures a great reach, this increased effectiveness will improve its impact on public health.

15:30 - 17:00

## Does smoker profile determine adoption of a decision aid to improve evidence-based Cessation support uptake?

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<sup>2</sup>Maastricht University Medical Centre, CAPHRI, Netherlands

<sup>3</sup>University of Amsterdam/ASCoR, Netherlands

**Background:** Using evidence-based smoking cessation support tools can double the chance of successful quitting, but uptake is low (6-13%). An online decision aid can help smokers choose the right tool to aid their cessation efforts, but it is unclear whether smokers are interested in adopting such a support tool. Aim of this study is to identify smoker profiles and to investigate the influence of these profiles on smokers' intention to use such a decision aid.

**Methods:** Cross-sectional online questionnaire data (based on Self-Determination Theory) from 200 current smokers wanting to quit smoking within six months will be collected. Smoker profiles will be identified using a hierarchical cluster analysis based on general causality orientations, locus of control and decision-making style, and compared on demographics, smoking-related behaviour and cognitions and intention to use the decision aid, using regression analyses.

**Expected results:** We expect to be able to present at least two clusters of smokers, which will significantly differ in their intention to use a decision aid to support evidence-based cessation tool selection. However, as no current similar studies are available, we have not developed specific working hypotheses.

**Current stage of work:** Data will be collected in the first half of 2017.

**Discussion:** The study will result in increased knowledge on different smoker profiles based on cognitive beliefs and decision making characteristics. Findings will be directly applied to inform the content and diffusion of a decision aid to support evidence-based cessation tool selection for current smokers.

15:30 - 17:00

## How well does within-individual variation in self-efficacy beliefs predict smoking behaviour?

N. Schuez<sup>1</sup>, L. Brinken<sup>1</sup>, U. Scholz<sup>2</sup>, M. Frandsen<sup>1</sup>, S.G. Ferguson<sup>1</sup>, B. Schuez<sup>1</sup>

<sup>1</sup>University of Tasmania, Australia

<sup>2</sup>University of Zurich, Switzerland

**Background:** Momentary health cognitions may be better suited to predict everyday behaviour than once-off assessments of cognitions. This study investigates the impact of within-individual variation in momentary self-efficacy on smoking behaviour.

**Methods:** Two Ecological Momentary Assessment (EMA) studies assessed smokers' self-efficacy to reduce smoking on a daily (Study 1: n = 62, 1,465 participant days of observation) and moment-by-moment (Study 2: n = 33, 528 participant days of observation) level. In Study 1, within-individual deviation from the individual's overall mean in self-efficacy to cut down the number of cigarettes is used to predict the number of cigarettes smoked each day. In Study 2, within-individual deviation from the individual's daily self-efficacy score is used to predict the amount of time that passes until the next cigarette.

**Expected results:** It is expected that in addition to the level, variation in self-efficacy will predict the number of cigarettes smoked (Study 1) and time to the next cigarette (Study 2). We expect that on days with higher than usual self-efficacy, less cigarettes will be smoked (Study 1) and that time until next cigarette will be longer (Study 2).

**Current stage of work:** Data collection is finished and analyses have commenced.

**Discussion:** If not only the level of self-efficacy across the time of study, but also the individual deviations from the persons' mean scores contribute to explaining daily smoking behavior, this should call for more research focusing not only on interindividual differences, but also on intraindividual associations between self-efficacy and smoking behavior in daily life.

15:30 - 17:00

## Use and appreciation of a tailored counselling intervention for practice nurses: a multi-method process evaluation

D. de Ruijter<sup>1</sup>, E. Smit<sup>2</sup>, R. Hudales<sup>1</sup>, H. de Vries<sup>1</sup>, C. Hoving<sup>1</sup>

<sup>1</sup>Maastricht University, department of Health Promotion, Netherlands

<sup>2</sup>University of Amsterdam/ASCoR, Netherlands

### Background

An individually tailored e-learning intervention for practice nurses was developed to improve smoking cessation counselling in Dutch general practice. Aim of this study was to evaluate the use and appreciation of this intervention.

### Methods

Detailed information on usage was collected from log data of the e-learning intervention. A process evaluation was conducted as part of a randomized controlled effectiveness trial of the e-learning intervention. Practice nurses in the intervention group (N=216) of the trial answered questions about their experiences with and appreciation of the intervention during the six-month trial period. Additionally, in-depth feedback was collected through telephone interviews with a subsample of these practice nurses (N=17).

### Findings

During the six-month trial period, e-learning modules with tailored advice were used 262 times (mean 1.78); smoking cessation counselling information 212 times (mean 1.44); and 54 messages were posted on the online forum. Practice nurses evaluated the tailored modules as moderately positive regarding level of intelligibility (2.9/5) and reliability (2.7/5), and perceived content as rather lengthy (3.3/5). Overall the intervention was marked with a sufficient score (7.1/10). Interview data illustrated that practice nurses perceived the intervention as useful, but also complex to navigate through. Time constraints and lack of smokers to counsel were barriers to program use.

### Discussion

Despite rather low use, practice nurses still positively evaluated the e-learning intervention. The intervention's impact could potentially be improved by optimizing its content (e.g. reduce length) and user experience (e.g. simplify navigation), thereby stimulating adequate and more frequent application by its users.

# Individual differences and mental health

15:30 - 17:00

Talma Kushnir

15:30 - 17:00

## Self-insight and depressive symptoms: the causal relationship between them

M. Nakajima<sup>1,2</sup>, Y. Tanno<sup>1</sup><sup>1</sup>University of Tokyo, Japan<sup>2</sup>Japan Society for the Promotion of Science, Japan

Enhanced self-insight is considered as essential to psychological adjustment (Grant et al., 2002; Stein & Grant, 2014). Empirical research also show the strong negative association between self-insight and depressive symptoms (e.g. Grant et al., 2002; Silvia & Phillips, 2011), however, although previous research essentially assume the causal relationship that self-insight alleviates depressive symptoms, no empirical research have confirmed their actual causal relationship yet. Accordingly, the aim of present research was to examine the causal relationship by online longitudinal survey. In the survey, 230 Japanese participants answered a packet of questionnaires two times with an interval of four weeks that measured self-insight and depressive symptoms (male = 61, female = 169, mean age = 37.49, SD = 8.47). The results of structural equation modeling showed that the model assuming depressive symptoms at time 1 expect decreased self-insight at time 2 was more valid than the model assuming self-insight at time 1 expect decreased depressive symptoms at time 2 (AIC = 19.06, BIC = 50.00; AIC = 40.55, BIC = 71.50). This result suggest that increase of depressive symptoms impaired self-insight rather than self-insight alleviated depressive symptoms. Therefore, enhanced self-insight was possible to be impaired by increase of depressive symptoms that is caused by other factors. This finding indicates that it might be more important to consider how we can prevent decrease of self-insight associated with increased depressive symptoms than how we can proactively improve self-insight. Further investigations are required to verify our findings.



15:30 - 17:00

## Individual differences in psychiatric rehabilitation success, depending on mood state at the time of admission

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<sup>1</sup>Therapiezentrum Bad Hall, Austria

<sup>2</sup>Medical University of Graz, Austria

**Background:** New approaches of Austrian rehabilitation programs focus on the prevention of mental illnesses and offer treatment not only to mentally impaired individuals, but also to people, who are at risk of developing a mental disorder or have recovered from one. Aim of the study was to compare the rehabilitation success of depressed and euthymic patients.

**Methods:** 157 patients were recruited from a psychosomatic rehabilitation center for governmental employees. They were divided into two groups, "depressed" (n=59) and "euthymic" (n=98), using the Beck's Depression Inventory (BDI-II) and the Hamilton-Depression-Scale (HAMD). The participants completed the Maslach Burnout Inventory – General Survey (MBI), the Symptom Checklist – Revised (SCL-R) and the Stress Coping Questionnaire (SVF) at the beginning and the end of the 6-weeks rehabilitation program. Multivariate variance analyses with repeated measures were applied to assess differences.

**Findings:** Age, sex, body mass index and verbal intelligence did not significantly differ in the two groups. After six weeks, both groups showed significantly lower psychiatric symptoms (BDI-II, HAMD, SCL-R) and reported a significantly lower use of negative coping strategies (SVF). Burnout symptoms (MBI-GS) only improved in the euthymic group.

**Discussion:** In general, there was a strong positive rehabilitation effect. Remarkably, the burnout symptoms only decreased significantly in the euthymic group. Euthymic patients seem to be able to focus on their stress management skills, while depressed patients primarily concentrate on improving psychiatric symptoms. These results underline the importance of psychiatric/psychosomatic rehabilitation programs for mentally ill as well as remitted patients, and as a preventive measure.

15:30 - 17:00

## Suicidality and self-rated health among outpatients with depression and schizophrenia

N. Gostautaite Midttun<sup>1,2</sup>, A. Goštautas<sup>3</sup>, M. Labašauskaitė<sup>4</sup>, R. Zekas<sup>5</sup>

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<sup>3</sup>Vytautas Magnus University, Lithuania

<sup>4</sup>Municipality of Kaunas region, Lithuania

<sup>5</sup>Health Promoting Kaunas Region, Lithuania

**Background** Mental illness is a major risk factor for suicide, while adequate treatment can reduce this risk. For improving effectiveness of treatment it is important to understand prevalence and relationships between symptoms, suicidality and health. This knowledge might also facilitate clearer goals for health psychologists providing interventions in clinical setting. Aim of this analysis was to determine prevalence of suicidality among patients with schizophrenia and depression, and disclose relationships between depressive symptoms, self rated health (SRH) and suicidality.

**Methods** Data was collected within an ongoing Quality of life project in Kaunas region (Lithuania), conducted together with regional municipality and social partners. For this analysis data of outpatients with depression (male N40, female N198) and schizophrenia (male N64, female N102) were used, focusing on 3 interrelated items of suicidality (thoughts, intentions, attempts), two depressive items (sadness and lack of energy) and SRH. Contingency tables and chi square were used for statistical analysis.

**Findings** Suicidal thoughts, intentions and attempts were more prevalent among outpatients with schizophrenia, than depression. Lower SRH was associated with higher prevalence of intentions and attempts among female and suicidal attempts among men. Sadness and lack of energy both had a statistically significant relationship with suicidality.

**Discussion** Prevalence of suicidality among mentally ill and strong relationship with symptoms of sadness and lack of energy provide evidence and direction for the psychological interventions within a multifaceted psychiatric treatment.

15:30 - 17:00

## Time perspective and anxiety in adult with major depressive disorder

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**Background:** Time perspective (TP) can be described as an individual's attitude toward personal past, present and future. Literature suggests that it plays a major role in several areas of psychological functioning (self-esteem, self-efficacy, coping with illness) and impacts actual thoughts and behaviors. However, it has been seldom studied in psychopathology and mental health. This study investigates the differences of TP between depressed and non-depressed subjects, and its relationship with anxiety.

**Methods:** 26 patients diagnosed with major depressive disorder paired by sex, age and education level to 26 non-depressed participants were included. Participants were asked to answer time perspective (ZTPI), depression (BDI-13) and anxiety (STAI-Y) self-reported inventories. Statistical analysis included correlations analysis and comparisons of scores between depressed patients and non-depressed participants.

**Results:** Results indicate that TP is significantly altered among depressed patients. Depressed patients display a more negative view of their past, a less hedonistic perspective towards their present, and a more fatalistic perspective when compared to non-depressed participants. The same correlations are observed with anxiety.

**Discussion:** Results underline the importance of considering TP in depressed patients, and encourage an in depth study of the relationship between TP, mood disorders and anxiety. Considering the prevalence of depressive symptoms and anxiety in somatic and chronic diseases, as well as the role played by TP in coping with illness, it would be interesting to further investigate TP as one of the possible explaining factors in individual differences regarding the occurrence of depression and anxiety in this population.

**Keywords:** time perspective, depression, anxiety.

15:30 - 17:00

## Types of adults with different levels of social anxiety and conflict behavior

G. Kozhukhar<sup>1</sup>, T. Karpovich<sup>2</sup><sup>1</sup>Moscow State University of Psychology and Education, Russia<sup>2</sup>Minsk State Linguistic University, Belarus

**Background:** The purpose of the study was to find out and describe types of adults singled out due to the level of social anxiety and conflict-handling modes.

**Methods:** The sample consisted of 106 college educated adults aged 22-46 ( $M = 33.29$ ,  $SD = 5.74$ ), 30 males (28.3%) and 76 females (71.7%) among them. The data were collected via Sagalakova – Truevtsev social anxiety and social phobia questionnaire, Thomas – Kilmann conflict mode instrument.

**Findings:** The results of descriptive statistics, k-means clustering and dispersion analysis allowed to distinguish three significantly different groups of adults: with moderately increased social anxiety ( $n=30$ ), with increased social anxiety ( $n=51$ ) and with high social anxiety ( $n=25$ ). The adults of the last group possessed high level of all types of social anxiety included into the general index. They were significantly lower in competing, collaborating and compromising and higher in avoiding and accommodating than the other groups were. At the same time, no significant difference was found in collaborating and accommodating between all the adults.

**Discussion:** The limitations of the study are connected with a small sample that was not balanced in sex, age and level of social anxiety expression, and only two diagnostic instruments used. However, we consider the received data help to forecast different types of phobias in adults due to their conflict-handling modes and to change their conflict behavior in the training program so that to overcome different types of social anxiety.

15:30 - 17:00

## Are tattoos (l)inked to positive body image and affective personality traits?

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Nowadays, 14% of the French population is tattooed. Previous studies on intrapersonal characteristics related to getting tattooed have not examined much of positive body-related attitudes. The aim of this study was to investigate whether positive dimensions of body image (i.e. body appreciation, investment and comparison) and affective personality traits differ according to being tattooed or not.

509 french-speaking individuals (26.5 years; 82% women), 58% of which were tattooed, have voluntarily participated. They completed measures on body image (Body Appreciation Scale, Body Investment Scale and Physical Appearance Comparison Scale) and personality (Affective Neuroscience Personality Scales). Data were analysed first using t-tests, then with multivariate logistic regressions. Tattooed individuals' scores were compared to those of non-tattooed individuals. More, lightly versus heavily-tattooed participants were also compared on the basis of their scores on body image and personality measures.

Results indicated that tattooed individuals take greater care of their body and compare themselves less to others than non-tattooed individuals. In addition to this, data analyses pointed out that the Anger trait from the personality measure is the one that is associated with having a tattoo.

The study's findings bring questions concerning the impact of tattoos in the mental economy linked to one's relation with one's body and their possible adaptative role in front of either weakening events for the body (i.e. physical illness, impairment). These findings are discussed in relation to the gender impact on the tattoo phenomenon and on the body image concept.

15:30 - 17:00

## Adverse childhood experiences and early-adult somatization: the role of romantic attachment in a female group

M.E. Brianda<sup>1</sup>, C. Sacchi<sup>1</sup>, P. De Carli<sup>1</sup>, A. Simonelli<sup>1</sup>

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**Background:** Adverse childhood experiences (ACEs) are proved to be related to, or even predictive of, several psychological and physical latter impairments. Somatization has a higher incidence among individuals with a history of ACEs and among females. Studies highlighted the importance to investigate the role of mediating factors between childhood maltreatment and adult symptomatology. Although little is known about the specific case of somatic unexplained symptoms, its relation with childhood maltreatment seems to be influenced by the role of romantic attachment. The main objective of our study is to check the effect of emotional ACEs on early-adult somatization through the mediation of avoidance and anxiety levels of romantic attachment in a female group.

**Methods:** Participants were 346 female students (mean age=23.17) who completed a self-report protocol composed by the Childhood Trauma Questionnaire-Short Form (CTQ-SF), the Experiences in Close Relationships Scale-Revised (ECR-R) and the Symptom Check-List (SCL-90). A structural equation modeling has been applied in order to test the mediation of romantic attachment (ECR-R) in the relation between emotional maltreatment (CTQ-SF) and somatic symptoms (SCL-90).

**Findings:** The total model fit resulted adequate and it proved that romantic attachment mediates the relation between emotional maltreatment and adult somatization ( $b=.15$ ,  $SE=0.05$ ,  $z=2.76$ ,  $p=.006$ , 95% CI [0.04, 0.25]).

**Discussion:** Our results stress the importance to consider the relational level within intervention programs for female victims of adverse childhood experiences. Addressing the treatment of these individuals towards adult relational functioning might prevent negative effects of ACEs and thus reduce public health costs.

# Individual differences in special health-related conditions

15:30 - 17:00

Melanie Jagla

15:30 - 17:00

## Psychological characteristics of the patients of rhinoplasty surgery

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### Background:

Rhinoplasty nowadays is one of the main performed cosmetic surgeries. The conducted research is part of a study which primary objective is the assessment of personality traits of two groups of patients who are undergoing rhinoplasty.

### Methods:

The patients were divided in two groups depending on the cause of rhinoplasty. The first group included patients who were undergoing the surgery because of aesthetic reasons, while the second group included patients undergoing the operation because of breathing problems. All participants completed following questionnaires before the surgery: Personality questionnaire VP+2-70 (measuring following seven traits: extraversion, neuroticism, positive and negative valence, conscientiousness, aggressiveness, openness) and DMT, a questionnaire created for research purposes for the evaluation of dysmorphophobic tendencies (thinking about the body part which are considered unattractive in an obsessive manner and the distress caused by it). Data were analyzed by using SPSS software. Differences between groups were evaluated by using the Mann-Whitney U test.

### Findings:

Results showed a highly significant difference between two groups according to the rank means, showing higher aggressiveness, positive valence (narcissism) and dysmorphophobic tendencies in the aesthetic rhinoplasty group (aggressiveness - AR:14.57; FR:8.00; narcissism - AR:14.61; FR:7.94; DMT- AR:12.96; FR:7.07).

### Discussion:

Bearing in mind that dysmorphophobic tendencies are more distinct among patients undergoing aesthetic rhinoplasty, a psychological assessment before the surgery is advisable to avoid patient dissatisfaction or unnecessary operations.



15:30 - 17:00

## Relationships between quality of life and intellectual or emotional abilities depending on brain tumor localization

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Recently we found that patients with brain tumour were characterized by positive relations between the components of IQ and health-related quality of life (QL) in patients with brain tumours at preoperative period. The present study was undertaken to determine a role of tumor's localization in relationships not only between IQ and QL but also between neuroticism (N, the personal trait of emotional stability in behavior) and QL.

To study plasticity of functional neuronal networks relating human adaptability we analysed the relationships between scales and IQ or N in patients with brain tumours (n=40) vs. control subjects (n=39). The localization of the tumours in frontal or parietal regions of the left and right hemispheres was determined according to MRT.

The obtained patterns of significant correlations between psychological and health status characteristics indicated that patients with the left frontal damage of brain were characterized maximal changes in psychic functions vs. control group whereas minimal changes were found in the group with the right parietal localization of tumours. In these last described two groups the QL scores correlated negatively with N and positively with IQ. The patients with the right frontal damage of brain were characterized by negative relation between IQ and 'Role of interactions due to physical problem' of the SF-36.

The variable relationships between IQ, N, and SF-36 scores can be ascribed to flexible strategies of potential adaptability in individuals with brain damage due to compensatory reconstructions in neuronal systems depending on tumour localization.

15:30 - 17:00

## Links between ischemic heart disease patient's personality traits and intelligence

J. Misiuniene<sup>1</sup>, L. Sinkariova<sup>1</sup>, R. Petroliene<sup>1</sup>, L. Zajanckauskaite-Staskeviciene<sup>1</sup>, L. Alciauskaite<sup>1</sup>

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**Background.** According to earlier studies intelligence and personality traits predict a healthy behavior or it's changes (Costa, McCrae, 2012; Sorberg, Allebeck, 2014). If effect of conscientiousness and neuroticism on health behavior explain by individual differences in executive function (Hall, Fong, Epp, 2014), links between intelligence and personality traits might be also important for ischemic heart disease patient. The aim of this work is to find links between ischemic heart disease (IHD) patient's personality traits and general intelligence.

**Methods.** Study was conducted in Abromiskes Rehabilitation Hospital Inpatient Cardiac department (Lithuania) during the period of 2014–2016. Participants (N = 89) were administered Intelligence Structure test in order to assess general intelligence and filled NEO Five Factor Inventory (NEO-FFI) for evaluating personality traits.

**Findings.** Results showed no statistically significant correlations between intelligence and extroversion, agreeableness and conscientiousness ( $p > 0.05$ ). IHD patients with higher verbal and general intelligence are tending to have lower neuroticism (resp.  $r = -0.285$ ,  $r = -0.382$ ,  $p < 0,05$ ), but, in contrast, higher openness (resp.  $r = 0.268$ ,  $r = 0.240$ ,  $p < 0,05$ ). Also, higher numerical and figurative intelligence correlate with lower neuroticism (resp.  $r = -0.347$ ,  $r = -0.287$ ,  $p < 0,05$ ).

**Conclusion.** Our study confirmed the links between personality traits and intelligence in the sample of ischemic heart disease patient's: verbal, numerical, figurative and general intelligence is negatively correlated with neuroticism as well as verbal and general intelligence is positively correlated with openness.

Research was supported by Research Council of Lithuania, project No. MIP-081/2014

15:30 - 17:00

## Mindfulness and virus: the negative association between mindfulness and hepatitis b virus concentration

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Hepatitis b, a widely prevalent disease in the world, cannot be cured thoroughly by medical treatments yet. Both buddhist-derived and Langer mindfulness are beneficial for the promotion of individual's physical health, while the association between mindfulness and HBV might be interfered by mental problems. This study took the first step at the exploration of associations between mindfulness and HBV concentration.

164 chronic HBV patients in China were recruited, and 154 participants' data were valid. All of them demonstrated active immune reactions to HBV and their HbeAg is active.

HBV-DNA is the concentration of hepatitis b virus, measured by the hospital. Three psychological scales with relevant background information were collected: Depression Anxiety Stress Scale (DASS), Mindful Attention Awareness Scale (MAAS) and Langer Mindfulness Scale (LMS).

We controll the unrelated variables and get the result that DASS can moderate the associations between LMS and HBV-DNA (LMS\*HBV-DNA:  $\beta=.224$ ,  $p=.0164$ ,  $\Delta R =.036$ ), which indicates that LMS has a more influential negative relation with HBV-DNA when DASS is low. After controlling unrelated variables as above, we find that MAAS could still predict HBV-DNA ( $\beta=-.229$ ,  $p=.023$ ). An extra finding is that the correlation between diagnosis time and HBV-DNA, MAAS, LMS, DASS is .073, -.326, -.302, .343, respectively.

Result suggests that two types of mindfulness both have the potential to reduce HBV concentration, although it needs further intervention studies to test. The associations provide details to mind-body relationship. Finally, the dark side of hepatitis b diagnosis and subsequent treatment should be considered.

15:30 - 17:00

## Associations of lifetime trauma exposure and bariatric surgery outcomes in adults with obesity

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**Objective:** This study aimed to examine the associations of lifetime traumatic experience with pre- and post-surgery eating pathology and postoperative weight-loss in a sample of bariatric surgery patients using electronic medical record (EMR) data. **Methods:** Pre-surgery lifetime exposure to traumatic event, pre- and post-surgery dysfunctional eating patterns, and post-operative total and excess weight losses were extracted from EMR of 200 consecutively admitted bariatric surgery patients in 2013 and 2014. Logistic regression analyses were conducted to determine whether the presence of lifetime traumatic experience was associated with post-surgery lower weight-loss and dysfunctional eating patterns at pre- and post-surgery. **Findings:** Up to 60.5% of the patients (81.5% women; age=44.4±11.5 years; BMI<sub>pre</sub>=44.9±5.5 kg/m<sup>2</sup>) reported that they were exposed to a traumatic event during their lifetime. Before surgery, trauma exposure was associated with impulsive, compulsive or restrictive eating patterns (OR=2.40; 95%CI=1.45–4.13), overeating or disturbed eating (OR=1.55; 95%CI=1.16–2.09), and grazing or night eating behaviors (OR=1.72; 95%CI=1.15–2.62). After surgery, trauma exposure was associated with lower weight loss at 6 months (OR=2.06; 95%CI=1.15–3.84) and 24 months (OR=2.06; 95%CI=1.15–3.84), and to overeating or disturbed eating (OR=1.53; 95%CI=1.03–2.29) 12 months after surgery. **Discussion:** Despite limitations of a retrospective study design, the results of this study suggest that bariatric surgery candidates with a history of trauma exposure could benefit from closer medical, dietetic, and/or psychological follow-up care to avoid insufficient postoperative weight-loss as well as reappearance of dysfunctional eating patterns after surgery.

15:30 - 17:00

## Does growing up with a chronically ill and/or disabled sibling affect one's personality?

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**Background:** Growing up with a chronically ill and/or disabled sibling is a special life situation. Due to the illness/ disability, the siblings are often not treated equally by their parents and other persons. Aim of the study is to investigate whether this circumstances have effects on personality factors as well as on justice sensitivity and locus of control at a later age.

**Methods:** 290 affected and 290 non-affected siblings (parallelized, 31 years  $\pm$ 11, 88% female) were examined by using three short questionnaires to assess the Big-Five personality factors as well as justice sensitivity and locus of control.

**Results:** A 25-item version was used to assess the Big Five. Significant differences between the two groups ( $F=6.48$ ,  $p\leq.0001$ ,  $\eta^2=.053$ ) were found during simultaneous examination of the five scales. The affected siblings reported higher values in neuroticism and lower values in extraversion and conscientiousness. The simultaneous examination revealed a higher justice sensitivity ( $F=5.00$ ,  $p=.001$ ,  $\eta^2=.033$ ) and a more pronounced external control ( $F=21.44$ ,  $p\leq.0001$ ,  $\eta^2=.036$ ) of the affected siblings.

**Conclusion:** The results show that growing up with a chronically ill and/or disabled sibling can have a significant effect on one's personality. For this reason, it is important to offer help and support in childhood and adolescence, as these persons represent a risk group, but also support through meetings or internet-forum should be offered for adult siblings.

# Severe forms of stress

15:30 - 17:00

Magnus Elfström

15:30 - 17:00

## Pre-rehabilitation beliefs and appraisals predict post discharge dependent coping strategy and functional independence in SCI

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The purpose of the study was to examine the relationships of pre-rehabilitation personal beliefs and appraisals to post discharge dependent coping strategy and functional independence. In a longitudinal cohort study design, all patients sustaining a spinal cord injury aged 16 or above were approached in selected British, Swiss, Swedish, German, Austrian and Irish spinal centres, and were asked to complete a questionnaire booklet at 6 and 12 weeks post injury and again 1 and 2 years post injury. Seventy-three persons participated at all four measurements. The mean age was 42.4 years (SD = 14.3). A path-model was hypothesized from the stress, appraisal and coping model and empirical results. Structural equation modelling was used to test the hypothesized model. Alternative models, including gender, age and concurrent depression were also tested. In the final model, sense of coherence and perceived manageability scores at 6 weeks significantly predicted loss appraisal scores at 12 weeks, which in turn predicted coping strategy social reliance scores at 1 year. Social reliance at 1 year, and severity of injury at 6 weeks predicted functional independence scores at 2 years. The final model was identical to the hypothesized model, with the exclusion of threat appraisals. Model fit indices were very acceptable. Gender, age, and concurrent depression did not significantly contribute to the path-model. The significant relations were confirmed in cross-sectional analyses in another sample. To conclude, as hypothesized, pre-rehabilitation personal beliefs and appraisals significantly predicted post discharge dependent coping strategy, this predicted later functional independence.

15:30 - 17:00

## Research on the relationship between anxiety, stress and binge eating

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Binge eating is specific to the eating disorder spectrum, and it is characterized by fast consuming large amounts of food in a certain period of time, compared to other periods of someone's life. It is usually accompanied by feelings of unease, sometimes taken to the extreme, regarding body shape or weight. Thus, over time, research has systematically shown a relationship between anxiety, stress and food spectrum disorders. We were interested in measuring the relationship between anxiety and binge eating on one hand, and between stress and binge eating, on the other hand. N=55 participants (all females) were pseudo-randomly selected for the study to respond to 3 scales (Binge Eating Scale, DASS 21-R – Anxiety and Stress Sub-scales). Results show a medium positive correlation between Binge Eating Scale and Anxiety sub-scale of DASS-21R ( $r_s=.39$ ,  $r_s^2=0.15$ ,  $p<0.05$ , bilateral, confidence interval between 0.05 and 0.65), also a positive medium correlation between Binge Eating Scale and Stress sub-scale of DASS-21R ( $r_s=.32$ ,  $r_s^2=0.10$ ,  $p<0.05$ , bilateral, confidence interval between 0.06 and 0.54). The analysis of determination coefficient shows that, with a 95% probability, 15% of the binge eating is caused by anxiety, and 10% of it is caused by stress. The conclusions are upheld by the results that have been found and could make a further contribution regarding the relationship between the food spectrum disorders and the anxiety spectrum disorders.



15:30 - 17:00

## The anxiety course during predictive genetic testing protocol for HBOC or HNPCC in pre-symptomatic persons

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**Background :** To study the evolution of anxiety and the use of emotional suppression strategies during the course of a predictive genetic testing protocol for breast / ovarian cancer (HBOC) or Lynch syndrome (HNPCC) in pre-symptomatic persons belonging to a family in which an hereditary mutation has been identified.

**Method :** Thirty three mutation-positive individuals and 48 mutation-negative individuals participated in this study. They completed questionnaires to measure anxiety-state (Stai-YA Scale), emotion regulation processes (ERQ Scale), and coping strategies (WCC Scale) at 3 times: just before the first oncogenetic counseling (Baseline, T0), 15 days after the test disclosure session (T1) and 6 months after the test disclosure (T2).

**Findings :** The generalized estimating equation (GEE) revealed an interaction effect time \* gene status. Non-carriers had their level of anxiety declined between T0 and T1 while it increased in carriers. The level of anxiety returned at baseline level for both groups between T1 and T2. The emotional suppression course evidenced an interaction between time and mutation status. Indeed, a decreasing of the suppression between T0-T1 was associated with the decline of the anxiety course at T1 for non mutation carrier while the suppression remain stable for carrier and associated with the anxiety level.

**Discussion :** The predictive genetic testing for HBOC and HNPCC does not seem to induce major psychological problems at short and medium term. Moreover, generally, expressive suppression was associated with higher stress and anxiety, which leads us to consider clinical implications for modifying this emotional regulation strategy.

15:30 - 17:00

## Posttraumatic stress symptoms in parents of sick neonates

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The goal of this study is to determine the level of posttraumatic stress symptoms (PTSS) in parents of children treated in NICU and to determine factors associated with the PTSS.

Participants were 36 mothers whose children were hospitalized at the NICU. The participants filled in on-line questionnaire in the period from 6 months to 3 years after NICU discharge. Posttraumatic stress was measured with Impact of event scale questionnaire, and NICU stress was measured with Parental Stress Scale: Neonatal Intensive Care Unit.

38% of participants had high level of PTSS symptoms, 16% had moderate level and 45% had low level of symptoms. Symptoms of PTS were more pronounced in parents who had higher levels of parental stress in NICU ( $r_p=0,629$ ,  $p<0,001$ ). Parenting stress in NICU was positively correlated with duration of first hospitalization ( $r_p=0,35$ ,  $p<0,05$ ). Parents whose child was hospitalized more than once had higher levels of parenting stress in NICU ( $t=2,29$ ,  $p<0,05$ ), but did not show higher levels of PTSS symptoms.

We have found high prevalence of posttraumatic stress symptoms in mothers of infants treated in NICU which puts them to hightened risk for development of PTSD. The symptoms of PTS are more pronounced in mothers who had higher level of parental stress in NICU. Our results stress the importance of early recognition of parents who are at greater stress while their child is in NICU in order to provide them with proper psychological care aimed to reduction of stress which may in long term prevent development of PTSD.

15:30 - 17:00

## Attributed shame and negative attitudes towards STI-testers: a threat management perspective

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Background: Perceived shame and stigma, involving individuals' fears of being labelled with negative attributes, are proposed barriers limiting STI-testing uptake. But does negative labeling of STI-testers actually occur? And what motivates them? Evolutionary psychologists (functionally) characterize social life as a 'double-edged blade' - involving affordances and threats. We hypothesized two motivations underlying potential negativity towards testers: 1) motivations to avoid promiscuous individuals, and 2) a disease-avoidance motivation. Design: Using an online vignette method (negative attitudes and attributed shame as outcomes), two studies were conducted (n= 245 and n=793). Study 1 examined whether perceptions of 'infectiousness' and 'promiscuity' depended on testing behavior (tested vs. untested). Study 2 followed-up and manipulated vignette description on infectiousness (risky vs. safe sex), promiscuity (low vs. high), and testing behavior (tested vs. untested). Results: Strong correlations (r's in the .36 to .54 range) between study variables were observed in Study 1, and testing led to a reduction in these outcomes ( $\omega^2=.05$ ). In Study 2, substantially 'large' effects were observed for the infectiousness ( $\omega^2 = .23$ ), promiscuity ( $\omega^2 = .066$ ), and testing manipulations ( $\omega^2 = .06$ ). The effect of infectiousness on the outcomes was moderated by testing condition ( $\omega^2 = .01$ ). Discussion: Despite perceived stigma and shame forming a barrier limiting testing uptake, we found no evidence of negative labeling of testers. STI-testing may in fact decrease negative labels associated with risky and promiscuous sexual behavior. Therefore, fears of being labeled negatively when testing for STI may be 'unrealistically pessimistic'.

# Self-regulation in health promotion and disease prevention

15:30 - 17:00

Theda Radtke

15:30 - 17:00

## Motivational and environmental contributors to incidental physical activity

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### Background:

Insufficient physical activity, and a more sedentary lifestyle, has resulted in an energy imbalance, contributing to the current obesity epidemic. Incidental physical activity is a major factor of energy expenditure and even a slight increase in daily activity can benefit health. This study investigated motivational and environmental factors as potential stimulators and/or inhibitors of incidental physical activity.

### Method:

In a correlational design, 132 community-dwelling participants (17-61 years) completed an online questionnaire measuring incidental physical activity (International Physical Activity Questionnaire), autonomous/controlled motivation for incidental physical activities (Perceived Locus of Causality Questionnaire) and environmental characteristics (Neighbourhood Environment Walkability Scale).

### Findings:

Hierarchical regression analysis showed that autonomous motivation and neighbourhood walkability each individually contributed to incidental physical activity, such that individuals with higher levels of autonomous motivation, and those who live in highly walkable neighbourhoods, engage in higher levels of daily activity. Motivation and neighbourhood walkability did not interact to predict incidental physical activity.

### Discussion:

Findings support Self-Determination Theory, which posits autonomous motivation as an important contributor to activity engagement. They also support Socio-Economic theories which propose that particular characteristics of the environment, such as neighbourhood walkability can positively influence physical activity behaviour.

At a practical level, the current findings offer potential scope for the development of interventions which target both environmental and motivational factors, such as nudging techniques, in order to increase daily activity levels

15:30 - 17:00

## Impact of negative mood on health goals' perception

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Negative mood is known to be related to poorer health behaviours (HBs; e.g., Hearon et al., 2013). We hypothesize that this relationship may be mediated by health goals (HG): bad mood may affect HGs' perception which in turn may influence HBs. In this study we explore the first part of this hypothesis: impact of mood on HGs' perception.

118 people (18 to 75 years old) participated in our on-line study. They were asked to write down one HG and three health-unrelated goals. Then, using the Personal Project Analysis they evaluated their HG on 17 dimensions (importance, difficulty, pleasure or stress related to the goal etc.) and the degree of conflict/facilitation of the HG with health-unrelated goals. Next, participants filled in the Positive and Negative Affect Scale as a measure of chronic mood state and a socio-demographic questionnaire.

We performed a multivariate regression which showed that negative mood predicted goal initiation ( $B=.028$ ,  $p<.05$ ), goal related stress ( $B=.157$ ,  $p<.05$ ), congruency between goal and participants' identity ( $B=-.109$ ,  $p<.05$ ), and congruency between goal and participants' values ( $B=-.077$ ,  $p<.05$ ). Goal's perception wasn't predicted by positive mood.

Our results showed that negative mood alters the HG perception. According to previous findings, congruency between the goal and one's values and identity is important for the goal adoption. Thus, low congruency between goals and values and goals and identity in people with chronic negative mood may negatively influence HGs' adoption and potentially affect their HBs. Higher stress may also diminish their motivation to work on their HGs.

15:30 - 17:00

## Determinants of (re)lapse in physical activity and dietary behaviors: a systematic review on prospective studies

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<sup>2</sup>Medical Library, Vrije Universiteit Amsterdam, Netherlands

**Background:** The majority of people who lose weight experience difficulties in maintaining their weight management behaviors -physical activity and dietary behaviors-, causing weight regain. To prevent these so-called relapses in weight management behaviors, insight into its determinants is needed. According to Marlatt's cognitive-behavioral model, risk of relapse occurs when individuals come into a so-called high-risk situation and lack effective coping responses. However this model was developed for relapse prevention in drug abstinence, and knowledge on determinants of relapses in weight management behaviors largely lacks. Hence we aim to systematically synthesize the literature on determinants of (re)lapse in dietary behavior and physical activity.

**Methods:** Studies are identified from searches in PubMed, PsycINFO, and CINAHL. We follow guidelines of the PRISMA statement and include prospective studies investigating personal, psychological and environmental determinants of (re)lapse in dietary and physical activity behaviors. We score included articles on their methodological quality and apply a best-evidence synthesis to summarize the results.

**Expected results:** A total of 10.642 articles were found. We expect to identify several personal, psychological and environmental predictors of (re)lapse. These predictors are expected to differ between dietary behavior and physical activity.

**Current stage of work:** We are completing the selection of articles that meet our inclusion criteria, followed by data extraction.

**Discussion:** We propose clear recommendations for preventing (re)lapses in dietary behavior and physical activity. Also, our study will contribute to current health behavior models and the development of a new framework regarding relapse prevention in weight loss maintenance.

15:30 - 17:00

## An affect phobia model explains emotional eating in obese people attending a weight management clinic

J. Egan<sup>1</sup>, S. Fox<sup>2</sup><sup>1</sup>NUI Galway, Ireland<sup>2</sup>National University of Ireland, Ireland

### Background

Finnegan, Egan & Gibbons (2014) reported how mindful awareness and attitude to emotional expression directly and indirectly affected emotional eating and BMI in a community sample. These findings have not been previously tested in a clinical setting.

### Objectives

To test whether an Affect Phobia Model developed with a community sample would be a useful model for accounting for emotional eating in a clinical sample of adults attending a weight management programme.

### Method

A cross-sectional sample of 97 overweight people attending a weight management clinic completed the emotional eating subscale of the Dutch Eating Behaviour Questionnaire (DEBQ-em), Attitude towards Emotional [removed]AEE) scale and the Observe subscale of the Kentucky Inventory of Mindfulness Skills scale and Clinical measures of body mass index (BMI).

Results Regression analyses revealed that AEE was a significant predictor of emotional eating ( $\beta = .59$ ,  $p = .000$ ). The AEE subscale, control ( $\beta = .39$ ,  $p = .026$ ) and the DEBQ-em subscale diffuse ( $\beta = .37$ ,  $p = .045$ ) were statistically significant predictors of BMI. Mediation analyses using Hayes (2015) process macro, revealed that observe skills had a significant indirect effect on the relationship between AEE and emotional eating.

Conclusions. AEE has a direct effect on emotional eating in a clinical sample. Mindful awareness mediates the relationship between a person's belief that they must control their expression of emotions and their level of emotional eating. These results further support an affect phobia model of emotional eating which may prove a useful adjunct to interventions for obesity.



# Adherence to treatment and self-management

15:30 - 17:00

Paula Repetto

15:30 - 17:00

## Adherence to antiretroviral medication in Romanian HIV patients: is it about taking or timing?

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<sup>4</sup>Health Services and Performance Research (HESPER), Claude Bernard Lyon 1 University, Lyon, France

**Background:** Antiretroviral treatment (ART) requires high adherence to achieve therapeutic benefits; patients need to administer all doses recommended per day (taking adherence) and do so at exact time intervals (timing adherence). These two elements have been previously measured through electronic monitoring (EM), which is less easily applicable to routine care. Developing a self-report questionnaire that targets taking and timing adherence would facilitate clinical assessment and intervention.

**Methods:** We developed the ProMAS-Rom-HIV based on ProMAS, a Dutch tool validated with item response theory methodology. Items were back-translated to Romanian, adapted to ART, and piloted via cognitive interviewing. One hundred and four HIV patients (63% women, mean age 31 +-7%, 20% with detectable viral load) completed the 12-item test version. Results of most recent viral load tests were collected from medical files. We examined ProMAS-Rom-HIV via Mokken Scaling, and performed Wilcoxon rank sum tests with viral load.

**Findings:** Eight items reflected two separate dimensions: timing and taking adherence (3 and 5 items), with good psychometric properties (e.g.  $H(se)=.74(.07)$  and  $.62(.08)$ ;  $\omega=.87$  and  $.75$ ). They were weakly associated with each other (Spearman's  $\rho=.23$ ). People with undetectable viral load were more likely to show high adherence for both timing ( $W=857$ ,  $p=.01$ ) and taking ( $W=777$ ,  $p=.04$ ).

**Discussion:** Using the ProMAS-Rom-HIV in clinical practice opens up new intervention possibilities. Both behaviours can be now measured via self-report, and specific barriers for timing and taking adherence identified and targeted with more precise interventions. The tool would further benefit from validation against EM data and other clinical contexts.

15:30 - 17:00

## Do adolescents with diabetes mellitus type 1 perceive barriers to active participation?

D. Husarova<sup>1</sup>, A. Madarasova Geckova<sup>1</sup>, M. Kosticova<sup>2</sup>, J.P. van Dijk<sup>3</sup>, S.A. Reijneveld<sup>3</sup>

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<sup>2</sup>Comenius University in Bratislava, Slovakia

<sup>3</sup>University Medical Center Groningen, Netherlands

**Background:** Living with a chronic condition, such as diabetes mellitus type 1 (DM-1), constitutes a major challenge for adolescents, especially regarding participation in their social environment. Therefore, the aim of this study was to assess among adolescents with DM-1 the associations of perceived parental and personal worries with diabetes-related limitations in social relationships, exercising, leisure time activities, and activities at school.

**Methods:** The sample consisted of 68 Slovak adolescents (aged 11 to 16 years, 48.5% boys) with DM-1 who regularly attended two diabetes outpatient settings. We collected data on adolescent-reported parental and own worries using the Diabetes Quality of Life for Youth questionnaire. Logistic regression models adjusted for gender were used.

**Findings:** Adolescents who perceived more parental worries also reported more diabetes-related limitations in social relationship (OR/CI: 1.03/1.00-1.07), leisure time activities (OR/CI: 1.03/1.00-1.06), and activities at school (OR/CI: 1.04/1.00-1.07). Their personal worries were associated only with limitations in social relationships (OR/CI: 1.04/1.00-1.08) and in exercising (OR/CI: 1.06/1.02-1.09).

**Discussion:** Adolescents with DM-1 perceive an influence of their condition and treatment on their life and participation in daily activities. Parental as well personal worries seem to be important factors associated with perceived limitations in particular activities, including social relationships, school activities, and exercising. Attention should thus be focused on supporting them in education in better disease management to prevent the negative side effects of DM-1.

15:30 - 17:00

## The health engagement of patients with Systemic Lupus Erythematosus

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<sup>2</sup>Lupus Europe, Belgium

<sup>3</sup>Lupus Europe, Finland

**Background:** Patient engagement is recognized as a crucial component of high-quality healthcare services. Among rheumatic diseases, Systemic Lupus Erythematosus (SLE) appears particularly challenging for the engagement of patients in their own care. According to the Patient Health Engagement (PHE) model, patient engagement is a dynamic phenomenon that proceeds through four experiential positions (blackout, arousal, adhesion, and eudaimonic project). The aim of the present study was to describe the engagement process from the point of view and the experiences of SLE patients.

**Methods:** Ten in-depth interviews and four focus groups were conducted with an international sample of SLE patients from different European countries. Transcripts were analysed through thematic content analysis.

**Findings:** Results showed that a fully engaged patient results from reframing emotional, cognitive, and behavioural dimensions. The advances along the process depends on how the patient succeeds in each position.

**Discussion:** In conclusion, PHE represents an appropriate model to understand the engagement process of SLE patients. In order to meet patients' needs, healthcare providers and patients support groups should consider the specific position of SLE patients, providing adequate and tailored support.

15:30 - 17:00

## Evacuation and medication use: are people prepared to evacuate with their meds?

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**Background:** Patients with medical conditions may not continue their medical treatment as a result of a disaster and particularly if they need to evacuate. This can be particularly challenging when the time between the warning and the evacuation is brief, and when people are not prepared. In the present study, we explored whether adults did evacuate with medications for chronic conditions and the role of different psychosocial factors.

**Methods:** Study was conducted between 2-3 months after the Pisagua Earthquake that hit the north of Chile on april, 2014. Participants were a representative sample of 701 adults (58.3% females, age 18-95, mean age= 40.59, 62.3% employed), living in Iquique or Alto Hospicio, who completed a survey applied by trained interviewers. For this study we included only those who evacuated (351) and evaluated the following variables: exposure to the event, worry, risk perception, secondary stressors, preparation to cope with these events, and if they evacuated with medication for a chronic condition.

**Findings:** 117 reported taking the required medication when they evacuated. Using a logistic regression analyses we found that they were: older (OR=1.025), those more prepared (OR=8.759), and who reported greater worries about their health as a consequence of being exposed to this event (OR= 1.32).

**Discussion:** Findings show the role of worry and preparation in taking medications when evacuating, and reveal the need to prepare individuals in order to take their medications with them. This is a key behavior that may prevent other health consequences associated with the exposure to disasters.

15:30 - 17:00

## Carrying on living: the challenges of type 1 diabetes for young adults

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For young persons living with type 1 diabetes, the condition adds to the task of shaping their identity around training, work and social life. We asked: What challenges do young adults face in terms of achieving best possible health and wellbeing when living with diabetes? How do they cope with selfcare and the attendant medical, psychological and social aspects of the condition in their everyday lives.

Adults (n=25; 16-24 yrs) took part in in-depth semi structured interviews which focused on the challenges of the living with type 1 diabetes and how diabetes and selfcare of diabetes fits into everyday life, relationships and environmental settings. Interviews lasted between 45-60 minutes, were transcribed and subjected to thematic analysis.

In terms of challenges, the young people talked of the difficulties of being defined by diabetes, something they fought against to retain their own sense of self and identity. They felt diabetes subsumed their hopes and presented them with frustrations of enjoying life in the same way as other young people, complicated by real fears about their mortality. The reality of embodied and contextual self care was a constant reminder to them of their difference, their own expertise relating to the condition and to the regulatory and relational influences of their social and environmental contexts. Connecting, sharing and learning from others, alongside taking personal responsibility were coping strategies many of the young people engaged in.

In conclusion, living with diabetes is as much about empowerment, relational and environmental influences as it is about medications.

# Psycho-oncology

15:30 - 17:00

Mariët Hagedoorn

15:30 - 17:00

## Psychometric properties of the Persian version of Brief Religious Coping Scale in breast cancer patients

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**Background:** Religious coping is a known predictor of health outcomes in cancer patients specially in religious cultures such as Iran. Validated scales are needed to assess religious coping in further studies. The aim of this study was to translate and validate the brief religious coping (brief RCOPE) scale among breast cancer patients.

**Methods:** The 'forward-backward' procedure was applied to translate the questionnaire from English into Persian. 224 breast cancer patients completed brief RCOPE and Facit-Sp (spiritual well-being Scale) since October 2014 to may 2015. Validity was assessed using face, content, convergent validity, and exploratory factor analysis. The Cronbach's alpha and inter-item correlations were used to assess reliability of the brief RCOPE.

**Findings:** The mean age of patients was 47.08 (SD=9.08) years. The results of factor analysis indicated a two-factor solution for the questionnaire that jointly accounted for 60.1% of the variance observed. Factor loadings of the positive subscale using varimax rotations ranged from .71 to .81 and the negative subscale ranged from .56 to .79, respectively. Further analyses with Facit-Sp scale showed that the two subscales had good convergent validity. All inter-item and item-to-total correlations for each subscale were above the recommended criteria of .30. The brief RCOPE and both the subscales, positive and negative, had Cronbach's alphas of .76, .85 and .81, indicating a good range of reliability.

**Discussion:** The findings indicated that the Persian Brief RCOPE scale is reliable and valid for measuring religious coping among breast cancer patients and could be used in further studies in Iran.



15:30 - 17:00

## Fear of recurrence in women with cancer

M. Westerkamp<sup>1</sup>, F. Lemétayer<sup>1</sup><sup>1</sup>Université de Lorraine, France

After surviving cancer, the announcement of the end of treatments is generally experienced as a relief. However, post-cancer period is not always lived as a harmoniously as hoped. This time is sometimes characterized by different disorders (e.g. depression) for which the patient still has to be under medical supervision. Concerns about the disease and its risks persist beyond the end of treatment, and increases significantly during control visits, with fear of a recurrence (Stanton et al., 2015). It is possible to evaluate these psychological difficulties induced by the oncological context, such as the fear of recurrence which, in its severest form presented by excessive and pervasive fear that the cancer may return taking into account the real risk (Savard, 2010). The main objective of this research project will be to examine the psychological impacts of fear of recidivism in women with cancer. More specifically, it will be necessary to verify whether this risk can be tolerated and endured, or if it is experienced as extremely painful and unbearable, at the point of generating generalized anxiety. Analyses will focus on the role of socio-demographic and medical variables, but also and above all on the role of the psychological variables responsible for maintaining positive or negative emotions in the regulation of the fear of recurrence.

The aim of this poster is to present the methodology and the statistical analyses envisaged in this thesis work. The analysis of the protective factors or predictors of a fear of recidivism will be conducted from multivariate regression models.

15:30 - 17:00

## A mixed methods investigation of the experience of being diagnosed with a brain tumour

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### Background:

Adjustment to a diagnosis of brain tumour poses unique challenges across physical, psychological, social and existential domains. The aim of the current research is to understand the role of social support and adult attachment style in mental adjustment to the illness. Furthermore, the study aims to explore how adults with a brain tumour diagnosis and their caregivers make sense of their experiences.

### Methods:

Adults diagnosed with a primary brain tumour will be recruited via charitable organisations and asked to complete a self-report survey online. Questionnaires include Experiences in Close Relationships-Revised measuring attachment style; Mini-Mental Adjustment to Cancer Scale; and Modified Medical Outcomes Study - Social Support Scale. Data will be analysed using regression analysis. It is expected that 150-200 participants will be recruited. As a follow-up study, 8-12 individuals diagnosed will participate in semi-structured, in-depth interviews. Separately, interviews will be conducted with 8-12 informal caregivers of brain tumour patients. Verbatim transcripts of interviews from both stages of qualitative study will be analysed using Interpretative Phenomenological Analysis (IPA).

### Expected results:

Results will provide insight into the relative contribution of adult attachment style and perceived social support in explaining the variance in adjustment outcomes. Analysis of qualitative data from patient and caregiver perspectives will contextualise and deepen understanding of those issues and shifts in relationship dynamics.

### Current stage of work:

Data is being currently collected.

### Discussion:

Current study will be of value to those offering supportive care to brain tumour patients and their caregivers, to help promote positive adjustment process.

15:30 - 17:00

## Positive changes in the aftermath of cancer experience

M. Oliveira<sup>1,2</sup>, S. Castro<sup>3</sup>, S. Moutinho<sup>3</sup><sup>1</sup>Hospital Cuf Porto, Portugal<sup>2</sup>Faculdade de Psicologia e Ciências da Educação, Universidade do Porto, Portugal<sup>3</sup>Instituto Português Oncologia, Porto, Portugal

### Background:

Literature shows that people struggling with cancer can undergo changes regarded as positive. This study aims to understand how meaning, positive affect and personal growth articulate with psychological suffering and quality of life.

Design: quantitative; transversal

Participants: 100 oncological patients

Measures: socio-demographic and clinical questionnaire, Distress Thermometer (DT), Subjective Perception of Suffering (IESSD), Positive and Negative Affect Schedule (PANAS), Stress-Related Growth Scale (SRGS), Meaning of Life (ML), FACIT (General and Spirituality).

### Analysis

#### Analysis revealed:

- DT and IESSD are: negatively correlated with the perception of positive changes (PPC), ML, positive affect (PA), FACIT and FACIT spirituality; positively associated with negative affect (NA). NA presents the same correlations excepting an unexpected negative correlation with AP.
- PA is: inversely correlated with DT, IESSD, and NA; positively associated with PPC, personal growth (SRGS), ML, FACIT and FACIT spirituality.
- PPC is: positively associated with PA, SRGS, FACIT and FACIT spirituality; negatively related with DT, NA and IESSD.
- Growth (SRGS) is positively associated with positive affect, perceived positive changes, FACIT and FACIT spirituality.
- ML is inversely related with DT, NA and IESSD; positively associated with AP, FACIT and FACIT spirituality (all dimensions).
- Accordingly to the DT cut point, the sample shows differences regarding growth (SRGS).

### Conclusion:

Are distress and growth two faces of the same reality?

Results demonstrate that the answer is yes. There is no doubt that when someone is facing a cancer, psychological suffering can coexist with the experience of PA and perception of personal growth.

15:30 - 17:00

## Well-being at work of couples facing return-to-work after cancer: resources and reciprocal adjustment

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<sup>1</sup>University of Lorraine, France

<sup>2</sup>Université de Lorraine, France

**Background:** Well-being at work is more and more examined in health psychology, but few research concern the context of returning to work after cancer. However, work is an important part of the quality of life of patients; it is both a source of income, victory over the disease and "return to a normal life" (Rolin et al, 2014). In the literature, it has been shown that the spouse has a protective role concerning the psychological distress among the other member of the couple during cancer. (Untas et al, 2012).

The main objective of this research is to identify what positively affects well-being at work, while considering the possible partner's influence in the context of returning to work after cancer.

**Method:** 200 couples (100 affected by a history of cancer and 100 without cancer experience) will respond to different questionnaires. Quantitative variables, which are protective of burnout on the one hand and predictive of well-being at work on the other, will be the subject of intra-dyadic analysis using the model APIM (Kenny & Cook, 1999).

**Expected results:** We expect identify and examine the variables that protect from burnout and those that positively affect the well-being of people at work after cancer through couple's resources.

**Current stage of work:** We are currently searching for more participants. We will start the analysis of reciprocal influences.

**Discussion:** This study should have implications for prevention and intervention programs that focus on individual and couple resources to support people to improve return-to-work process after cancer.

# Factors contributing to functional outcomes in pain and psychosomatic illness

15:30 - 17:00

Line Caes

15:30 - 17:00

## When and why pain-related social support for functional dependence leads to older adults' pain-related disability

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**Background:** Pain-related social support has been shown to be directly associated with pain-related disability, depending on whether it promotes functional autonomy or dependence. The temporal relationship between pain-related social support and disability and its behavioral and psychological mediating processes are understudied. Therefore, drawing on the fear-avoidance model of pain (Vlaeyen et al., 1995), the present study aimed at investigating longitudinally (1) the direct effects of pain-related social support for functional autonomy/dependence on pain-related disability, (2) the mediating role of physical functioning, pain-related self-efficacy and fear, and (3) whether pain intensity and pain duration moderate such mediating processes.

**Methods:** 170 older adults (67.6% women; Mage=78.3) participated in a prospective study, with three moments of measurement, with a 6-week lag in-between. Participants completed the Formal Social Support for Autonomy and Dependence in Pain Inventory, the Brief Pain Inventory, the 36-SF Health Survey, behavioral tasks from the Senior Fitness Test, the Pain Self-Efficacy Questionnaire and the Tampa Scale for Kinesiophobia.

**Results:** Longitudinal mediation and moderated mediation models were tested. Formal social support for functional dependence (T1) predicted an increase in pain-related disability (T3, B=.89). This effect was fully mediated by physical functioning (T2, B=.49) and by pain-related self-efficacy (T2, B=.52), but mainly at shorter pain duration and low/moderate pain intensity.

**Discussion:** Findings clarify the temporal relationship between social support for functional dependence and pain-related disability, uncovering some of its behavioral and psychological mediating processes. These results could inform the development of future training programs with formal caregivers.

15:30 - 17:00

## Posttraumatic growth and acceptance: two different pathways to cope with chronic pain?

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**Background:** A growing body of evidence suggest that mindfulness process could facilitate posttraumatic growth (PTG). This sort of meaning making is still understudied in the context of chronic pain. The aim of this cross-sectional study was a) to identify relevant factors of mindfulness processes related to pain b) to explore the association between these factors and PTG. **Method:** A sample of 913 participants completed online questionnaires assessing pain perception (7 components), depressive, anxiety and posttraumatic stress symptoms, dispositional mindfulness (5components), inflexibility and pain acceptance (4 components) and level of pain-related PTG. Socio-demographic data were also gathered. **Findings:** Using multiple regression analysis, the impact of the five confounded factors (i.e, PTSD, anxiety and depressive symptoms) was removed from the PTG score. An exploratory factor analysis on the potential PTG predictors (i.e, pain perception, dispositional mindfulness, inflexibility and pain acceptance) was conducted. A five-factor model was obtained with one pain factor; 2 mindfulness factors and 2 factors related to types of flexibility and acceptance. Except from the pain factor, all other factors explained a significant part of the variance of the PTG score. **Conclusions:** PTG and mindful acceptance of pain appears as two different meanings made through chronic pain. While they seem to depend on their own mechanisms, they could share some overarching meaning making processes. There is a need to explore the shattering effect of chronic pain that might lead to posttraumatic reactions. Future research is warranted to assist chronic pain patients in finding their own way to recover from pain.

15:30 - 17:00

## Psychosocial factors associated with pain in patients treated by haemodialysis: a 2-month follow-up protocol

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**Background:** Many patients treated by haemodialysis (HD) experience pain. The aim of this study is to assess the frequency of pain in patients undergoing HD and its association with various psychosocial factors over a 2-month period.

**Methods:** 100 patients having HD will complete standard measures of pain (BPI, QDSA), coping with pain (CSQ, CPCI), personality (BFI, LOT-R), depression and anxiety (HADS), relations with caregivers (4PAS) and quality of life (KDQOL-36) at inclusion and 2 month later. In between, patients will complete a short questionnaire during each dialysis session to assess their emotional state, pain and relationship with the nurse. Intra-individual and inter-individual changes in pain and emotional state during dialysis sessions will be explored using latent growth modelling, as well as to identify the profile of patients at risk of experiencing pain.

Semi-structured interviews will be proposed to 20 patients experiencing a significant level of pain during one dialysis session during the study, and their nurse. A thematic analysis will be performed.

**Expected results:** Results should show which are the most important psychosocial factors associated to pain occurrence, increase and decrease during HD.

**Current stage of the work:** 40 patients have been included, from whom 25 finished their participation.

**Discussion:** This study will provide a better understanding of the pain experienced by patients undergoing HD and determine the importance of several psychological factors and inter-personal relationships. The results should also provide knowledge about the psychological profile of patients at risk of experiencing pain.



15:30 - 17:00

## Beliefs about walking in fibromyalgia: the role of distress, fear of movement, pain and disability

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<sup>2</sup>Rey Juan Carlos University, Spain

**Background:** From Theory of Planned Behaviour (TPB), other different variables from the constructs included in TPB could have a role on behaviour through beliefs. Our aim is to identify the external variables relevant to beliefs about regular walking.

**Methods:** Self-reported measures of fear of movement, pain, disability, anxiety, depression and beliefs about walking behaviour were completed by 275 women with fibromyalgia. Correlation analyses were conducted.

**Findings:** Positive behavioural beliefs: “it will alleviate my pain”, “my health will improve”, “my mood will be better”, “I will feel more active and agile”, “I will feel more positive”, “I will be good to distract me”, “my circulation will improve”, “I will lose weight”, “it will strengthen my muscles”, “I will feel less contracted” were related to pain intensity, disability and distress ( $r = [-.17, -.31]$ ;  $p \leq .01$ ). Inhibitor control beliefs (“tiredness”, “being in pain”, “My mood” and “having a bad day”) were associated with pain intensity, disability, distress and fear of movement ( $r = [.17, .48]$ ;  $p \leq .01$ ).

**Discussion:** The main characteristics of the fibromyalgia syndrome, pain, disability and distress, support beliefs about negative consequences of walking. In addition, together with fear of movement, they could be an important suppressant of activity by increasing the strength of inhibitor control beliefs.

This study has been supported by MINECO (PSI2011-25152)

15:30 - 17:00

## ‘A triangulated double-blinded, prospective, cohort study on patients’ perceptions of pain following forefoot surgery’

L. Dismore<sup>1</sup>, A. van Wersch<sup>2</sup><sup>1</sup>North Tyneside Hospital, United Kingdom<sup>2</sup>Teesside University, United Kingdom

**Background:** Pain catastrophizing (PC) is defined as an exaggerated negative mental set brought to bear during actual or anticipated pain experience. It has been identified as a key predictor of post-operative pain intensity and increased pain severity in the pre-operative period along with other psychological impacts attributed to pain. Pain behaviours influence patient satisfaction and there are interactive dynamics between the patient and healthcare provider relationship.

**Methods:** A triangulated longitudinal assessment of psycho-social case profiles with 36 participants will be conducted using: (i) semi-structured interviews with life grids to capture beliefs and perceptions of the medical procedure and pain, and, (ii) quantitative validated scales to assess PC, personality, depression, anxiety, stress, coping, social support, self-efficacy, health behaviours and quality of life. A single case profile analysis will enable an in-depth personal exploration of how life events and personality profiles impact on the pain experience of individuals. The views of HCPs will be explored to gain an understanding of the decision-making process for fore-foot surgery; employing thematic-analysis.

**Expected results:** There is currently no prior research in those patients requiring fore-foot surgery. We are interested in understanding the impact of life events on the pain experience and expect to find patients with maladaptive behaviours pre-surgery will have poorer outcomes post-surgery.

**Current stage of work:** Submitted to IRAS with the aim commence study by May/April.

**Discussion:** We envisage the findings may identify whether patients with psychological risk factors may benefit from pre-interventional psychosocial and behavioural treatments to optimise post-surgical pain outcome.

# Interventions in Health psychology

15:30 - 17:00

Andrew Thompson

15:30 - 17:00

## An investigation of reconstruing in Existential Experimentation therapy with people suffering from anxiety and depression

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<sup>4</sup>University of Hertfordshire, United Kingdom

**Background:** The present longitudinal study is the first attempt to explore the applicability of Repertory Grid Technique (RGT) in a particular protocol of therapy as Existential Experimentation (EE) therapy is, and to understand the efficacy of EE therapy in a primary care setting with clients suffering from anxiety and depression.

**Methods:** Participants were 21 clients suffering from anxiety and depression and receiving brief Existential Experimentation therapy (six weeks) at a Primary Care Service in London (UK). Participants completed repertory grids, Patient Health Questionnaire-9 (PHQ-9), and Generalized Anxiety Disorder-7 (GAD-7) pre- and post-therapy.

**Findings:** Consistent with hypotheses clients not only showed significant decreases in symptom measures during therapy (GAD-7:  $t= 5.73$ ,  $p<.001$ ; PHQ-9:  $t= 4.37$ ,  $p<.001$ ) but came to view themselves as significantly more similar to their ideal selves ( $t= 4.17$ ,  $p<.001$ ), future self ( $t= 3.60$ ,  $p<.05$ ) and others ( $t=3.52$ ,  $p>.05$ ), and showed less superordinate ( $t=3.55$ ,  $p<.05$ ) and polarized construing ( $t=2.55$ ,  $p<.05$ ), which was less dominated by their symptoms. Significant correlations were also observed, as expected, between change on Self and PHQ-9 pre- ( $r=.503$ ,  $p<.05$ ) and post-therapy ( $r=.437$ ,  $p<.05$ ).

**Discussion:** The results provide a preliminary support for the use of RGT to detect change on EE therapy as a treatment for anxiety and depression in primary care service. Further controlled research is needed.

15:30 - 17:00

## A communication training for persons with rheumatic and musculoskeletal diseases – a formative evaluation

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**Background:** As persons with rheumatic and musculoskeletal diseases (RMDs) frequently experience problems in disease-related communication, we developed a training (“KOKOS-Rheuma”) to enhance their communication skills in various everyday situations. The aim of this study is to improve the intervention using results of a formative evaluation. The project is funded by the Deutsche Rheuma-Liga Bundesverband e.V.

**Methods:** KOKOS-Rheuma consists of two modules which were conducted as two half-days or one full-day course. It was intended that the trainers were trained lay persons in order to improve implementation. Some training courses were observed by a researcher. The participants, trainers and observers completed an evaluation sheet after each module or the full-day course. The evaluation is based on N = 114 participant evaluation sheets for Module 1, N=82 for Module 2 and N=36 for the full-day course.

**Findings:** The training program was positively evaluated by participants, trainers and observers. Participants who believed that the training will change their behaviour, most commonly stated that there will be an influence on their ‘preparation of conversations’, ‘saying No’, ‘arguing’ and ‘reflection of conversations’. In addition to suggestions to improve the training, the evaluation also illustrated a number of issues regarding trainer skills and their preparation.

**Discussion:** Based on the positive evaluation, the training can be recommended after some improvements. We will more clearly arrange the trainer manual, add advice for a good preparation and simplify some sections. This also addresses the comments of the participants that some parts of the training were too long and theoretical.

15:30 - 17:00

## Innovations in providing psychosocial support to people living with conditions affecting appearance

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<sup>1</sup>University of Sheffield, United Kingdom

<sup>2</sup>Changing Faces, United Kingdom

<sup>3</sup>Sheffield Children's Hospital, United Kingdom

**Background:** Changing Faces is the UK's leading charity supporting people living with an injury, mark, scar or condition that affects appearance. This evaluation is the first to examine the effectiveness of Changing Faces Practitioners (CFP's) delivering the Changing Faces psychosocial intervention package, FACES in three NHS hospitals (Great Ormond Street Children's hospital, Sheffield Children's hospital, and Salisbury Hospital).

**Method:** A case study approach involved systematic recording of activity undertaken and preparation of illustrative case studies across hospitals. Effectiveness of the CFP service was established by examining session by session outcome measures. Improvements in psychosocial distress were examined using The Reliable Change Index and clinically significant change in scores on individual measures of depression, anxiety, appearance concern or Child Outcomes Rating Scale. Satisfaction and impact on service provision was evaluated using questionnaires and interviews with clinicians and service users.

**Findings:** Clinical and/or reliably significant improvement in psychosocial distress was reported by children and adults attending two or more CFP sessions. Feedback questionnaires and interviews suggest that CFP services meet the needs of patients moderately to extremely well, and could be characterised into three main themes 1. Helpful strategies to manage appearance concerns, 2. Feeling listened to and 3. CFP input as a necessary adjunct to the MDT.

**Conclusions:** Having CFP's present in medical appointments to provide psychosocial support and signposting as part of an MDT approach was beneficial for service users and clinicians. There is a need for appropriate psychosocial support around appearance-related distress as an adjunct to medical care.

15:30 - 17:00

## Relapse prevention, attachment and equine-assisted psychotherapy

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<sup>1</sup>University of Lorraine, France

**Background:** This study takes place in longitudinally way to determine the cognitive, emotional and physiological processes associated with equine-assisted psychotherapy and to evaluate the efficacy of this therapy with people having addictive disorders. This intervention is based on an integrative psychotherapy inspired by sensorimotor therapy, "Brief attachment based psychotherapy" (BABI; Holmes, 2001) and the "Mindfulness based Relapse Prevention" model (MBRP, 2002, 2011).

**Method:** After a one-year exploratory study, longitudinal research will begin in March 2017 and will take place over 2 years. It will include overall 130 patients who will stay 5 to 13 weeks in a post-cure center (CSSRA). Each week throughout their stay, each patient of the group called "intervention group" will participate in 1 therapy session with the horse, per group of 4 participants for 2 hours. The second group of this research called "control group" follow the usual program of the post-cure center.

In order to determine the different processes involved in such therapy, we will carry out quantitative (quantitative scales) qualitative (clinical interview) and biological (cortisol and oxytocin measurements, heart-rate variability) assessments throughout the stay, for the 2 studied groups.

**Expected results:** With patients with multiple relapses, the equine-assisted psychotherapy could increase the emotional regulation capacities of patients having attachment disorders, thereby enhancing the beneficial effects of MBRP.

**Discussion:** This paper therefore questions the place of attachment theory in health psychology interventions and the value of equine-assisted therapy, particularly in relapse prevention programs.

15:30 - 17:00

## A supportive care « art-therapy » assessment in oncology

M. Lelievre<sup>1,2</sup>, J. SUDRES<sup>1,3</sup><sup>1</sup>Université Toulouse 2 Jean Jaurès, France<sup>2</sup>Research laboratory CERPPS, France<sup>3</sup>research laboratory CERPPS, France

Cancer treatment can have serious consequences for patients on a physical, psychological and social level. As a result of the progress in medical research, life spans are lengthening, but under what conditions? The french state is now focusing on improving quality of life for people with cancer. From the past ten years, French hospitals have been developing a coordinated cancer support care.

From past research, art-therapy has proved its worth in oncology out-patient services. Improvement has been seen in respect of quality of life (Monti et al., 2006), fatigue (Nainis et al., 2006) and the level of anxiety (Vella & Budd, 2011) following participation in art-therapy sessions.

We have created new workshops, in three clinics in France. Consisting of five sessions with a standard assessment protocol submitted to volunteers in test and re-test. Seven patients were include in the device, but two of them dropped of the program. This first multicentre and scoping study confirms improvement in quality of life (EORTC,  $p=.02$ ) and fatigue (FACT-F,  $p=.01$ ) when we have compared our five participants means (by SPSS). The NEO-PI-R results show a general openness of personality ( $d=0,30$ ), specially for fantasy, feelings and values dimensions. Also, we observed best emotional functioning (EORTC,  $d=0,57$ ) and emotional analysis (BVAQ,  $d=-0,31$ ). Finally, creativity seems to be more fluent (TTCT,  $d=0,30$ ) and more flexible (TTCT,  $d=0,41$ ).

Theses first results encourage us to continue the research with methodology readjustments. It also opens us to new avenues of research using new variable and establishing the correlation.



# Social and familial support in times of severe illness

15:30 - 17:00

Anita De-Longis

15:30 - 17:00

## Experience of distress and growth in family caregivers of oncological palliative care patients

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**Background:** This study aims to achieve a comprehensive approach to the experience of care, trying to understand the interface between distress and growth in caregivers of Palliative Care patients, and identify some possible mediating variables and outcomes of this relation.

**Design:** quantitative; transversal

**Participants:** 61 informal caregivers

**Measures:** socio-demographic and clinical questionnaire, Distress Thermometer (DT), Positive and Negative Affect Schedule (PANAS), Stress-Related Growth Scale (SRGS), Meaning of Life (ML), Informal Caregiver Burden Questionnaire (QASCI), FACIT (General / Spirituality).

**Analysis:**

- DT is: positively correlated with HADS; negatively associated with FACIT.
- HADS is: positively related with DT, negative affect (NA), and QASCI; inversely related with ML, FACIT, spirituality.
- Perception of Positive Changes (PPC) is positively related with positive affect (PA) and SRGS.
- PA is positively correlated with PPC, SRGS.
- NA is positively related with HADS and QASCI; negatively with ML, spirituality, and FACIT.
- QASCI is negatively correlated with ML, FACIT, spirituality; positively related with HADS and NA.
- Accordingly to DT scores data shows differences between groups in HADS (and subscales) and FACIT (2 dimensions).

**Conclusions:** Different measures of suffering showed similar results. Is important to note that PA seems to have an important role as mediator of PPC and growth. Otherwise, NA is associated with all suffering measures. This outcomes highlight the need of study the role of affectivity as mediator of distress and growth in cancer patient caregivers. Spirituality and ML shown to be also protective dimensions of suffering and low quality of life.

15:30 - 17:00

## The impact of glioblastoma on patient's affective, cognitive, social skills and caregiver's quality of life

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**Background:** Patients with gliomas generally present cognitive, neuropsychiatric and functional deficits, which may consequently deteriorate the quality of life of their caregiver. However, few studies have investigated patients' social cognition impairments and no study has to our knowledge focused on its impact on caregiver. Hence, this study aimed to better understand social cognition deficits in patients with glioma and to evaluate their impact on caregivers' outcomes.

**Method:** Three groups of participants had been recruited: 9 patients with gliomas, 11 caregivers and 6 control participants. Patients and control participants completed social cognition tasks (faux-pas detection, facial emotional expression recognition) and questionnaires (IRI, TEIQue), classic cognitive tasks as well as questionnaires about their affective distress. Caregivers completed questionnaires about their affective distress (HADS), quality of life (CarGOQoL), burden (CRA), as well as their perceptions of patients' social, cognitive and affective disorders since the illness.

**Findings:** Means comparisons revealed that compared to control participants, patients reported greater attribution of faux-pas in both faux-pas ( $p=.035$ ) and no faux-pas scenarios ( $p=.035$ ), reported lower trait emotional competencies ( $p=.043$ ), and had better recognition of fearful facial expressions ( $p=.05$ ). Among caregivers, their quality of life was positively correlated with their perceptions of patients' empathic concern ( $p<.05$ ) and negatively correlated with patients' acquired social deficits ( $p<.05$ ). Finally, caregivers' psychological distress was positively correlated with their own perception of patients' social deficits ( $p<.05$ ).

**Discussion:** These preliminary results highlight the importance of social cognition deficits in patients on their caregiver's quality of life and mental health.

15:30 - 17:00

## Post-stroke care after medical rehabilitation from the perspective of patients, their relatives and clinical experts

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**Background:** In Germany, a qualified and efficient post-stroke care after a medical rehabilitation has not been available so far, due to the strict separation of inpatient and outpatient treatments. This gap in the German health care system might cause a burden on caregivers, lead to readmission of the patient to inpatient care, or diminish sustainability of patient's acquired achievements during rehabilitation. Hence, more information is needed on the management and treatment of post-stroke patients after discharge from rehabilitation. Therefore, the aim of this study is to provide recommendations on follow-up care of stroke patients.

**Methods:** The proposed project will be carried out using a mixed method design. Starting out with conducting a 1) first literature review to identify the most recent evidence on current follow-up care in Germany, followed by a second review 2) comparing these findings to international concepts in the Netherlands and Sweden. Following on, primary data will be collected by using 3) questionnaires, and 4) guided interviews for stroke patients, their relatives, rehabilitation practitioners, general practitioners and physiotherapists. Findings of quantitative data will be described using descriptive statistics whereas qualitative findings will be analysed using a grounded theory approach.

**Conclusion:** In order to help closing the above mentioned gap, this dissertation project will develop recommendations to improve post-stroke support of patients and caregivers. Therefore, it will contribute to a topic in health care that is still underdeveloped in Germany.

15:30 - 17:00

## Patients' and their relatives' experience of Chronic Inflammatory Arthritis: a perspective for Therapeutic Patient Education

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**Background:** According to the WHO, Therapeutic Patient Education (TPE) should help both patients and their relatives. However, in rheumatology most programs are exclusively designed for patients and do not consider family. The aim of this study was to identify patients' and their relatives' reactions and difficulties facing the disease, as well as its impact on their relationship, in order to get more insight on how to integrate family in TPE.

**Methods:** 40 individual semi-structured interviews were conducted with 20 patients suffering from Chronic Inflammatory Arthritis (13 Rheumatoid-Arthritis; 7 Spondyloarthritis) and a relative in 7 French rheumatology departments. A thematic analysis following an inductive approach was conducted using the QDA-Miner Software (inter-coder agreement .7).

**Findings:** Both patients and relatives expressed their emotional reactions caused by the disease (e.g. anger or distress), their thoughts (e.g. patients' feelings of limitation or relatives' helplessness), relatives' attitude regarding the disease (e.g. adjustment and search for informations about the disease) and health issues. When they spoke about their relationship, difficulties emerged regarding communication about the disease as well as tensions or conflicts.

Even though patients and relatives agreed on most of these topics, some subjects were mostly addressed by patients (e.g. their concerns or impression of being a burden) whereas others were by relatives (e.g. their inability to understand the patient's reactions and difficulties).

**Discussion:** These results highlight the difficulties patients and relatives are confronted to regarding their relationship facing IA and generate new ideas about how to include relatives in TPE to improve patients' care.

15:30 - 17:00

## Well-being in couples undergoing infertility treatment: the impact of support exchange

A. Kroemeke<sup>1</sup><sup>1</sup>SWPS University of Social Sciences and Humanities, Poland

**Background:** The study investigated the effects of support receipt, provision, invisibility (the discrepancy between one partner's received and the other partner's provided support), and equity (the discrepancy between each partner's received and provided support) on the positive (life purpose) and the negative (depressive symptoms) indices of well-being in couples undergoing assisted reproductive technology (ART) treatment.

**Methods:** Depressive symptoms (CES-D), life purpose (PIL), and social support (BSSS) were assessed among 31 married couples (aged: 27–38 years) undergoing ART. Data were analyzed by applying the Actor-Partner-Interdependence Model using multilevel modeling.

**Findings:** Support receipt, and provision had beneficial effects. Gender-moderated effects were found. Women reported higher depression and lower life purpose but benefited more from support, and their well-being was more dependent on their own perception of support provision and receipt. The men have demonstrated higher adjustment to infertility but benefited less from support, and their well-being was mostly correlated with the supportive behaviors of their wives.

**Discussion:** Adjustment mechanisms of females and males vary considerably, being notably more direct in the former and more indirect in the latter, which ought to be taken into consideration in the practical approach and further research on mediators and moderators of the investigated relations. Future studies should also focus on the costs/benefits of visible and invisible support in infertility settings and gender differences in the invisible support.

15:30 - 17:00

## What is the role of relatives in treatment choice of patients with advanced chronic kidney-disease?

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**Background:** Treatment choice between transplantation, dialysis or conservative treatment is a stressful time for patients reaching end-stage kidney disease. It has been shown that family plays an important role during this process but little is known about it. The aim of this study is to explore the role of relatives in the treatment decision-making process in advanced chronic kidney disease (CKD).

**Methods:** Patients with advanced-stage CKD participating in the French cohort CKD-REIN (N=3000) will be proposed to include at least one relative. Two evaluation times are scheduled within a two-year interval.

**Quantitative part:** Participants' self-perceived quality of life, depression, anxiety, satisfaction with care, family relationships, assertiveness, relatives' influence on treatment decision and perception of CKD will be measured. Data will be analysed using the Actor-Partner Interdependence Model.

**Qualitative part:** 80 patients and 80 relatives will be interviewed according to several characteristics (age, family status, CKD stage). These individual semi-structured interviews will explore participants' experience of CKD, family communication regarding illness and involvement in decision-making. A lexicometric analysis will be performed.

**Expected results:** Results should show how patients' and relatives' adjustment are related and how relatives take part in the decision-making process according to their characteristics.

**Current stage of work:** Patients have been included in the cohort. Relatives' recruitment will begin in spring 2017.

**Discussion:** This study will allow us to better understand the factors explaining treatment choice. The results could lead to recommendations to healthcare professionals to better guide patients through this process and improve care in a family approach.

# School-based factors and interventions in health

15:30 - 17:00

Guillermo Julian Gonzalez-Perez



15:30 - 17:00

## Family and school factors associated to favourable attitudes toward firearms in Mexican adolescents

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**Background:** Currently, Mexico has high levels of violence; in particular, more than 20.000 young people under 25 years old have been killed by firearms in the last 5 years. This study aims to identify familiar and school factors associated to favourable attitudes towards firearms in adolescent students from Guadalajara, Mexico. **Methods:** This is a cross-sectional study; in September 2015, a questionnaire was administered to a random sample of students under 20 years old from University of Guadalajara, Mexico (n=717); using a Lickert scale –five items with five options each-, students with favourable attitudes toward firearms were identified. Multiple logistic regression analysis was used to determine the association between studied factors and favorable attitudes toward firearms. **Findings:** 17% (CI95% 14,3-19,9) of teenage students had favourable attitudes toward firearms (agree to carry weapons in the street, to be able to acquire them without restrictions, etc.). Factors like to prefer violent videogames (OR 1,8, CI95% 1,2-2,8), that relatives –and themselves- know shoot guns (OR 2,0, CI95% 1,3-3,1) and to study in public high school (OR 1,9, CI95% 1,0-3,5) were statistically associated to favourable attitudes toward firearms. **Discussion:** Firearms mortality is a social and public health problem for youth in Mexico; in a context where family and school factors seem to have an important responsibility in the positive attitude towards firearms of many adolescent students, the health psychology should play an essential role in the design of strategies to prevent their use, which must have family and school as priority objectives

15:30 - 17:00

## Effects of the introductory coaching workshop for preschool teachers

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**Background:** Japan faces a decline in birthrate and family size, resulting in young children having fewer opportunities to engage in personal relationships and socialization. Therefore, the need for the support of preschool teachers to prevent children's maladjustment has increased. Literature on professional development for preschool teachers indicates coaches can have a positive impact on helping preschool teachers address these challenges. Specifically, coaches can provide timely and focused feedback, enable teachers to develop skills to self-regulate their learning, and support teachers to become more mindful practitioners. Coaching can facilitate a shift in a teacher's practice paradigm enabling them to meet current expectations for teacher accountability. The purpose of this study was to examine the effects of the introductory coaching workshop for preschool teachers.

**Methods:** The coaching workshop was conducted at a preschool in Machida, Tokyo. 82 preschool teachers participated in the workshop. The coaching checklist was used for assessment. Ethical considerations were explained and 40 preschool teachers agreed to participate in the assessment. The workshop lasted 90 minutes consisting of guidance on parent coaching, modeling and paired exercises on listening, questioning and acknowledging.

**Results:** Self-efficacy (in listening, communicating approval, and watching children), self-motivation and coaching self-assessment were significantly higher than baseline skill levels. Teacher tenure has no impact on changes in self-efficacy.

**Discussion:** The study demonstrated the effects of a brief introductory coaching workshop on facilitating self-efficacy in preschool teachers' coaching skills. As participants were motivated at baseline, subsequent workshops should be designed to maintain motivation.

15:30 - 17:00

## Flexibility is better predictor of academic performance than endurance capacity in Japanese children

K. Yamatsu<sup>1</sup><sup>1</sup>Saga University, Japan

**Background:** Previous research suggested that higher physical fitness were associated with better academic performance (AP) in children and adolescents (Coe et al., 2006; Hillman et al., 2008). But it is unknown which fitness predict better AP. Therefore, the aim of this study was to examine the relationship between endurance capacity, flexibility and AP in Japanese children.

**Methods:** Participants were 140 (mean age: 13.0 $\pm$ 0.9, female: 49.3%, mean body mass index [BMI]: 19.7 $\pm$ 3.0) 1st to 3rd grade (7th to 9th grade in USA) students of public junior high schools near the Saga Prefecture. Moderate-to-vigorous physical activity (MVPA) was measured by the International Physical Activity Questionnaire. Physical fitness and AP (school grade) scores were received from school records. The endurance capacity was measured by 20-m shuttle run, and flexibility was evaluated by sit and reach. These fitness tests were authorized by Japanese Ministry of Education, Culture, Sports, Science and Technology. The sum total of the 7 subjects grades (Japanese, social studies, math, science, English, music, arts) were used as AP scores.

**Findings:** Using multiple regression analysis that controlled for several covariates (gender, MVPA, Cram school utilization), flexibility score (beta=0.235, p<0.01) was more significantly associated with AP than endurance capacity score (beta=0.172, p=0.056).

**Discussions:** More flexibility was more strongly influenced with better AP than endurance capacity among Japanese junior high school students.

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15:30 - 17:00

## Factors associated with dating violence in high school students from Guadalajara, Mexico

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<sup>1</sup>University of Guadalajara, Mexico

**Background:** Some studies show that a violent relationship maintained in courtship may influence subsequent behaviour with other couples. What makes the teen vulnerable to being harassed? The aim of the study is to analyse the prevalence of dating violence victims in high school' students and establish a statistical association between personal, scholar and boyfriend/girlfriend interaction factors.

**Methods:** Cross-sectional and analytical study. 585 students

**Findings:** 5,6 % of adolescents were victims of dating violence (CI 95% 4,0 – 7,9). Familial factors like schooling level of the father < 9 grades (OR 3,9, CI95% 1,3 – 12,0) and dating relationship such as the boyfriend/girlfriend asks her/his to miss school (OR 5,9, CI 95% 1,9 – 17,6) or return with the same boyfriend/girlfriend after to dislike the violent relationship (OR 3,1, CI 5% 1,1 – 8,9) were statistically associated to dating violence.

**Discussion:** The suffering of the victim does not seem to push towards the search for healthy affective bonds. It is necessary to take into account that the way to respond to a situation of life has a cognitive mediation composed of thoughts, beliefs, motivations, expectations evaluation of the self (Lazarus) that must be explored to better understand the partner violence phenomenon.

15:30 - 17:00

## Self-control, parental monitoring and risky behavior among Slovak pupils

M. Štefaňáková<sup>1</sup>, M. Kulanová<sup>2</sup>, M. Bacikova-Sleskova<sup>3</sup>, O. Orosova<sup>4</sup>

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### Background:

Substantial evidence exists for the protective effect that both self-control (SC) and parental monitoring (PM) have on risky behavior. However, it is less known which of these two types of control is more important.

### Objective

The aim of this study is to examine the relationship between SC and PM on smoking (SM) and alcohol use (AU) and the moderation effect of gender in these relationships.

### Methods:

The sample consisted of 821 pupils (M=13.09; 56.5% females). SM and AU were measured by single item measures assessing whether pupils had smoked or used alcohol during the last 30 days. The PM scale and a short version of the SC scale were used to measure PM and SC, respectively. Logistic regression with multiple steps was applied, controlling for gender and town size, to identify the factors influencing SM and AU, separately.

### Results:

SM was reported by 5.7% of pupils. A higher level of SC (OR=0.913) and PM (OR=0.862) decreased the probability of smoking. The final model explained about 16% of the variance.

AU was reported by 14.6% of pupils. A higher level of SC (OR=0.937) decreased the probability of drinking. However, a higher level of PM decreased the probability of drinking but only among females. The final model explained about 13.5% of variance.

### Conclusions:

The results show that SC decreases the probability of SM and AU regardless of gender. PM decrease the probability of SM among all, while in case of AU it plays a role only among girls.

# Determinants of well-being

15:30 - 17:00

15:30 - 17:00

## Dose-response relationship between physical activity and health-related quality of life in cardiac patients

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**Background:** Higher levels of health-related quality of life (HRQL) are associated with physical activity in healthy people as well as in patients with ischemic heart disease (IHD). The aim of this analysis was to determine if there is a dose-response relationship between physical activity and HRQL in patients with angina, myocardial infarction, or heart failure.

**Methods:** In this sub-study of the international HeartQoL project with cross-sectional and longitudinal phases, physical activity data were provided by 6143 patients with IHD (angina: N=2033; myocardial infarction: N=2266; ischemic heart failure: N=1844). One validated generic (SF-36) and three validated IHD-specific HRQL questionnaires (MacNew, MLHF, SAQ) were used to analyse differences in HRQL by physical activity in total (active vs. inactive) and level (not active vs. 1-2, 3-5, or >5 times/week active) with t-tests, analyses of variance and HRQL score difference calculations for dose-response effects.

**Findings:** Regular recreational physical activity or sport was associated with significantly better HRQL regardless of diagnosis, questionnaire, or if patients were categorised as being active, inactive or by physical activity level. However, a dose-response effect was observed in each diagnosis as patients who identified themselves as minimally physically active (1-2 times/week), achieved 85% of the largest HRQL difference between active and inactive patients.

**Conclusions:** Physically active patients with IHD, regardless of diagnosis or type of HRQL questionnaire, reported better HRQL which also is consistent with a dose-response relationship between physical activity and HRQL.

15:30 - 17:00

## Health and cognitive determinants of subjective quality of life

J. Erdeši<sup>1</sup>, G. Vuletic<sup>1</sup><sup>1</sup>University in Osijek, Faculty of Humanities and Social Sciences, Croatia

Prior research recognized the importance of health status in subjective quality of life. Also, it is believed that thought processes play a crucial role in psychological functioning and affect mental health, which underlie subjective quality of life. Automatic negative thoughts are result of a specific thinking pattern and represent negative statements concerning the self, the world and the future. The aim of this study was to examine the relationship between health, automatic negative thoughts and subjective quality of life and to evaluate whether health and automatic negative thoughts were predictive of quality of life and to what extent.

The sample consisted of 485 participants, 312 females and 173 males, aged between 17 and 85. Participants were administered Health Status Questionnaire SF-36, Personal Wellbeing Index and Automatic Thoughts Questionnaire.

Results revealed significant correlations between all dimensions of health, automatic negative thoughts and subjective quality of life. Hierarchical regression analysis indicates that health dimensions Mental Health and General Health Perception, and automatic negative thoughts were predictors of subjective quality of life, after controlling socio-demographic variables. Also, variable Automatic negative thoughts is the mediator between Role Limitation due to Emotional Problems and Energy and Vitality.

These findings point out the existence of high impact of health on subjective quality of life. It is also shown that cognitive aspects have a major influence on self-reported quality of life. Moreover, high frequency of automatic negative thoughts indicates lower health and quality of life. Eventually, intervention regarding change in cognitions will be discussed.



15:30 - 17:00

## Illusory beliefs about health and well-being, what relationship?

A.R. Donizzetti<sup>1</sup>, G. Petrillo<sup>1</sup>, V. Capone<sup>1</sup><sup>1</sup>University of Naples "Federico II", Italy

Paranormal beliefs are convictions relative to any phenomenon that in one or more ways exceeds the limits of what is deemed to be physically possible according to prevailing scientific assumptions. Although several studies have been conducted on this topic, a few reports addressed the role of illusory beliefs related to health and with controversial results.

The aim of this work was to analyze the role of illusory beliefs related to health as antecedents of well-being, as well as the relationship of those beliefs and external locus of control, optimism and coping .

They were involved 451 adults (75.7% females) with average age of 24.7 years (SD = 11.4). A self-report questionnaire was administered. Descriptive and correlational analyzes were performed.

The illusory beliefs related to health were associated with all the considered variables. Superstitious beliefs are positively associated with the external locus of control and transcendental coping; and negatively associated with dispositional optimism and emotional and psychological well-being. We will discuss the results in light of the literature to arrive at implications for health promotion and people well-being.

15:30 - 17:00

## Relation among character strengths, positive empathy, and subjective happiness

R. Oguni<sup>1</sup>, K. Otake<sup>1</sup><sup>1</sup>Kwansei Gakuin University, Japan

Character strengths have been a core topic of research in positive psychology. Character strengths can not only contribute to the individual outcome (e.g., well-being, subjective happiness) but also promote positive relationship with others. Similarly, empathy plays an important role in maintaining and improving human interactions. In particular, positive empathy (the empathy of positive emotions) is positively associated with prosocial behaviors and relationship satisfaction. However, little is known about the relationships between character strengths and positive empathy. This study examined the relation between character strengths and positive empathy. Furthermore, we considered the effects of strengths and positive empathy on subjective happiness. A total of 249 Japanese undergraduates (69.5% females; mean age = 19.4; standard deviation = 1.57) completed a questionnaire measuring strength knowledge, strength use, positive empathy, and subjective happiness. Strength knowledge and strength use were positively related to positive empathy and subjective happiness. Further a multiple regression analysis indicated that strength use and positive empathy could predict subjective happiness. Our results suggest that strength is related to positive empathy and that strength use and positive empathy have an impact on happiness. The implications of these findings for strengths and positive empathy will now be discussed.

15:30 - 17:00

## Life-satisfaction as a mediator of the relationships between perception of economic threat and emigration intention

M. Kulanová<sup>1</sup>, O. Orosova<sup>2</sup><sup>1</sup>P.J.Safarik university in Kosice, Slovakia<sup>2</sup>Pavol Jozef Šafárik University in Košice, Slovakia

**Background:** This study utilized the Health Belief Model (HBM) to study emigration behavior. Perceived threat of the situation was replaced by the perceived threat to financial living conditions (PT) and hypothesized to affect emigration intentions (EI). This relationship is believed to be complex, modifiable and mediated by other psychological factors. We consider life satisfaction (LS), i.e. global assessment of an individual's quality of life, as a potential intervening variable.

**Objectives:** to examine the role that LS plays in the relationship between PT and EI.

**Methods:** Data were collected in 2016 in 17 universities in Slovakia, via an online questionnaire directed at student's health-related behavior and e/migration intentions (n=375, 75.5% women, M=22.93, SD=3).

PT was measured by item assessing how students perceive their economic situation. LS was measured by the Satisfaction with Life Scale and EI were identified by the Intention to Emigrate Scale. Linear regressions were used for the analysis and Sobel test was applied to confirm the significance of the mediation.

**Findings:** PT was negatively associated with LS ( $\beta=-0.359$ ), and LS was negatively associated with EI ( $\beta=-0.199$ ). The direct relationship between PT and EI ( $\beta=0.115$ ) after adding LS to the model became insignificant. The Sobel test confirmed that LS has a significant mediational effect in the relationship between PT and IE ( $z=3.48$ ,  $p\alpha<0.001$ ).

**Conclusion:** PT affects EI directly as well as indirectly through the LS. HBM contributes to a better understanding and prediction of emigration intentions.

15:30 - 17:00

## The reciprocal relationships between satisfaction of basic psychological need and adolescents' subjective well-being

R. Garckija<sup>1</sup>, S. Raižienė<sup>1</sup>, I. Gabrielavičiūtė<sup>1</sup>

<sup>1</sup>Mykolas Romeris University, Lithuania

**Background.** Self-determination theory (SDT) suggests that, to the extent that social contexts support a person's basic psychological needs for autonomy, competence, and relatedness, they facilitate greater well-being. Subjective vitality has been conceptualized as the psychological experience of possessing enthusiasm, energy, and aliveness. To our knowledge, there is a shortage of information about the direction of the relationship between subjective well-being and satisfaction of basic psychological needs in SDT. This study aimed to evaluate the cross-lagged relationships between satisfaction of basic psychological needs and subjective well-being over six-month period in late adolescents.

**Methods.** The current study is a part of the ongoing longitudinal research project that aims to examine the dynamic interaction between and mechanisms of satisfaction of basic psychological needs and adolescents' adjustment. The analysis will be based on the data of wave 2 and wave 3. The participants are 781 students of 1st – 3rd grades of seven high school. The research instruments are Psychological Need Satisfaction and Frustration Scale children version, Subjective vitality scale.

**Expected results.** We expect to find that higher level of satisfaction of basic psychological needs at T2 will predict the subjective vitality level at T3, meaning that the positive outcomes of satisfying basic psychological needs will remain over six month period. There is a possibility that higher levels of subjective vitality at T2 will predict the satisfaction of basic psychological needs at T3, as having higher levels of energy and well-being might enable students to find more opportunities for needs satisfaction.

15:30 - 17:00

## Time perspective and the satisfaction with life of Polish and Spanish students

A. Trzcieniecka-Green<sup>1</sup>, N. Żmizdińska<sup>1</sup>

<sup>1</sup>Katowice School of Economics, Poland

**Objective:** To determine if Spanish and Polish students differ in life satisfaction and time perspective and to find if there is a correlation between life satisfaction and perception of time in tested groups.

**Method:** The study involved 160 students (80 of each nationality) aged 19-25. Time perspective was measured with the Zimbardo Time Perspective Inventory and life satisfaction was measured with the Satisfaction With Life Scale (Diener et al., 1985). We tested differences between groups and studied correlations between satisfaction with life and time perspective.

**Results:** Spanish students exhibited higher satisfaction with life than their Polish counterparts ( $t=5.7$ ;  $p=.000$ ). Polish students achieved higher results in present-hedonistic time perspective ( $t=2.2$ ;  $p<.05$ ). The past-negative time perspective correlated negatively with life satisfaction ( $R=-.44$ ;  $p=.000$ ) and future time perspective correlated positively with life satisfaction ( $R=.20$ ;  $p<.05$ ) in Polish students. In both Spanish and Polish groups past-positive time perspective correlated positively with life satisfaction ( $R=.20$ ;  $p<.05$  and  $R=.32$ ;  $p<.05$ , respectively).

**Conclusions:** In this study the differences between Polish and Spanish students in time perspective and the satisfaction with life has been confirmed.

15:30 - 17:00

## Associations between benefit finding and quality of life after hematopoietic stem cell transplantation

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**Background:** Cancer survivors' ability to find benefits in their cancer experience is an increasing focus of empirical investigation. This study sought to understand benefit finding (BF) among hematopoietic stem cell transplant (HSCT) patients and determine the relationship between BF and quality of life (QOL).

**Methods:** 669 adults completed a survey of BF (Benefit Finding Scale-17 item) and QOL (Functional Assessment of Cancer Therapy (FACT-BMT)) one year after HSCT. Correlation analyses tested BF and QOL associations, controlling for empirically-derived covariates. Participants were 18 – 78 years old (M = 55.21), 60.4% male, 80.1% married, 69.7% Caucasian. Most received autologous HSCT (79.9%).

**Findings:** BF was associated with better overall QOL ( $r = 0.120$ ,  $p = .002$ ), social/family well-being ( $r = 0.237$ ,  $p < .001$ ), emotional well-being ( $r = 0.100$ ,  $p = .010$ ), functional well-being ( $r = 0.157$ ,  $p < .001$ ), and fewer BMT-specific concerns ( $r = 0.086$ ,  $p = .026$ ) but not with physical well-being, fatigue, or pain. Controlling for gender, significant associations remained. Controlling for remission status, BF was no longer associated with BMT-specific concerns and marginally associated with emotional well-being.

**Discussion:** Survivors who find more benefits one year after HSCT report better social, emotional, functional, and overall QOL. Given cross-sectional analyses, it is possible experiencing better QOL allows for BF, or those who find more benefits perceive better QOL. BF was not related to physical well-being, fatigue, and pain in this sample. Future work should determine direction of causation of this relationship and investigate whether promoting BF could enhance QOL.

# Innovative concepts in health psychology

15:30 - 17:00

Aleksandra Luszczynska

15:30 - 17:00

## Cultural adaptation to promote and maintain healthy lifestyle

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Health behavior is currently a major concern addressed by scholars, practitioners and policy makers around the world. The understanding that improving health behavior on the individual level as well as on the societal level may contribute to improvement in health, wellbeing, quality of life and prolonged life expectancy led to proliferation of initiatives, programs, and interventions all aimed at achieving the aspired goal of health behavior change. However, despite the importance of such programs their effects are rather limited overall. Recent evaluations of programs to promote physical activity and healthy diet have found only small to medium effect sizes (e.g. Anderson et al., 2009; Eakin, Lawler, Vandelanotte, & Owen, 2007; Kroeze, Werkman, & Brug, 2006; Norman et al., 2007; van Sluijs, van Poppel, & van Mechelen, 2004). Thus, the "Why?" question is inevitable - Why is it that despite the massive efforts and spending involved, programs developed worldwide have not succeeded to bring about significant change in health behavior?

We suggest that current models tend to focus on the individual level while lacking thorough consideration of social and cultural attributes that influence people's health behavior.

In our paper we wish to present and discuss a conceptual model, based on the Health Action Process Approach (Schwartz, 1992), for culturally adapted lifestyle public policy and intervention programs. We believe it has the potential to promote success of efforts to increase healthy lifestyle adoption and preservation.



15:30 - 17:00

## Getting closer to your future to change the present: results from a year-long longitudinal study

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**Background:** Possible selves (PS) are mental representations of the self in the future. Interventions to influence them have been studied primarily in educational/developmental research. In this study we examine the efficacy of the most common PS interventions, in the context of health behavior in first year university students. The present study aimed: 1) to examine whether there is a difference between a text-based, graphic-based or combined intervention in participants' images of possible selves, and 2) whether the interventions affect health behavior in first-year students.

**Methods:** We used a longitudinal design with 7 measurements over the entire academic year. 214 students participated in the baseline measurement. Participants were randomized over 4 conditions (3 experimental + 1 control). For RQ1 we assessed clarity, connectedness, liking, similarity, and caring for PS, as well as frequency of PS-related thought. For RQ2, we measured alcohol consumption, smoking, marijuana use, fruit/vegetable intake, and physical activity. Data were analyzed using repeated measures ANOVA.

**Expected results:** We expect the combined text+graphic condition to be the most effective at influencing participants' image of PS, and that PS elicitation will lead to increased health behavior. We are currently collecting data (waves 5-7). **Discussion:** Possible selves offer an appealing and intuitive framework to motivate people to change their behavior in a manner that is congruent with their long-term goals. Our study will hopefully help to identify efficacious methods of influencing the perceived future self. In turn, we expect that this will facilitate health behavior change in a sustainable manner.

15:30 - 17:00

## What drives patient behavior change in perioperative interventions?: a systematic review of mechanisms of prehabilitation

A. Haase<sup>1</sup>, Y. Chavez<sup>1,2</sup>, C. Neck<sup>2,3</sup>, M. Pufelete<sup>1</sup>, S. Shah<sup>3</sup>

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**Background:** Physical activity prehabilitation interventions improve postoperative outcomes in surgical populations, but there is little evidence on behavior change mechanisms and techniques behind the success of interventions. This study aims to systematically identify mechanisms and techniques of behavior change and to review the effectiveness of these interventions.

**Method:** A search was conducted on Embase, Medline, PsycINFO, CINAHL and PubMed electronic databases following PRISMA guidelines. Data were extracted using the Cochrane Review methodology with the data extraction forms to identify relevant information from the eligible RCTs. An evaluation of risk of bias, reporting quality and the combined effect of behavior change techniques and physical activity intervention components was performed.

**Results:** Of 732 studies and after reviewing full text for 31, a total of seven studies met inclusion criteria. Two studies included explicit behavioral theories: Rogers' science of unitary human beings (constructs: hope, power) and Social Cognitive Theory (self-efficacy, outcome expectations). The remaining five used behavior change strategies without any particular theory as a framework. Of behavior change techniques, social support and self-regulation combined with low intensity aerobic training in a supervised setting were associated with improved length of hospital stay, anxiety, depression functional walking capacity and health related quality of life.

**Discussion:** Although most prehabilitation studies failed to report any theory-derived mechanisms of change or techniques, those that included theoretical models with relevant behavior change techniques improved delivery and receipt of physical activity interventions prior to elective surgery, with implications for more effective long term outcomes and permanent behavior change.

15:30 - 17:00

## An examination of STI testing influences for young people in primary care

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<sup>5</sup>University of Saskatchewan, Canada

**Background:** STI testing in general practice could help meet diagnostic demands for young people and reduce infection transmission. A theoretical framework of behaviour change within health psychology is the COM-B system, which theorises that behaviour, such as STI testing, is the result of an interaction between capability, opportunity and motivation for behaviour. The study aim is to identify factors associated with STI testing among young people using the COM-B and explore relationships between the factors.

**Methods:** An online questionnaire will target approximately 385 participants aged 16 to 24 years living in the UK. Participants will provide data on demographics, sexual experience, testing history and scale based measures such as stigma, self-efficacy, shame, and testing intention. Correlation and stepwise regression analyses will be used to identify which factors are associated with testing intention and past testing behaviour.

**Expected results:** Based on past findings, it is probable that injunctive norms, stigma and perceived susceptibility will emerge as the factors most strongly associated with STI testing. It is expected that at least some components of the COM-B will be significant predictors of testing intention and behaviour.

**Current stage of work:** Piloting questionnaire with public involvement representatives and sexual health experts, while establishing recruitment channels.

**Discussion:** Results will inform the development of an intervention to increase STI testing in routine general practice based on a framework of behaviour change. Results will also have relevance to policy-makers and commissioners in informing how health psychology can contribute to improving the sexual health of young people.

15:30 - 17:00

## Perceived posttraumatic growth after spinal cord injury: actual or illusory?

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**Background:** The objective of the current study is to examine whether retrospective reports of posttraumatic growth (PTG) of individuals with spinal cord injury (SCI) represent “actual” or “illusory” changes. To do so, we investigate whether 1) PTG (increased sense of personal strength, greater appreciation of life) coincides with longitudinally measured changes in the related domains self-efficacy (SE) and purpose in life (PIL) and 2) whether PTG and the changes in SE and PIL are differently associated with psychological adjustment (symptoms of depression, anxiety, life satisfaction).

**Methods:** We use data collected within the ongoing Swiss Spinal Cord Injury Cohort Study (SwiSCI). So far, 318 newly-injured patients of the 4 Swiss SCI rehabilitation centres participated. SE and PIL are assessed 1 month after injury diagnosis and at rehabilitation discharge. Structural equation modelling is used to calculate latent change scores for SE and PIL. These scores are then correlated with PTG and the adjustment indicators, each measured at rehabilitation discharge.

**Expected results:** We hypothesize that PTG shows a weak positive correlation with changes in SE and PIL. We expect PTG to be weakly and positively related to psychological adjustment, but anticipate stronger associations between increases in SE and PIL and better psychological adjustment.

**Current work stage:** Data analysis on-going.

**Discussion:** The results of the current study will contribute to the clinical understanding of PTG. Identifying whether PTG represents “actual” (i.e. longitudinally measured) changes and how it is associated with adjustment can inform health practitioners about its relevance as a potential intervention target.

# Interventions on ingestive behaviors

15:30 - 17:00

Oulmann Zerhouni

15:30 - 17:00

## Social norms: can we use them to promote healthy eating?

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**Background:** Social norms can be divided into descriptive norms (i.e., how other people behave) and injunctive norms (i.e., what other people approve of). This study examined if fruit consumption in students can be increased by exposing them to any or both types of norms that promote fruit intake. Furthermore, it was hypothesized that the effect of norm exposure would be moderated by gender, need to belong, and impulsivity.

**Methods:** A between-subjects experiment was conducted in which students were randomly exposed to a descriptive norm (n=59), injunctive norm (n=71), combination of both norms (n=65), or no norm (n=70). Need to belong was assessed with the Need to Belong Scale, and impulsivity with the Barratt Impulsiveness Scale. As outcome measure, participants had to choose between fruit or an unhealthy snack as reward for participation. Additionally, participants were invited to complete a fruit diary for three consecutive days (n=88). Logistic regression analysis was used to test for an effect on students' choice for reward (fruit vs. unhealthy snack), and analysis of covariance to test for an effect on subsequent fruit consumption.

**Findings:** The data showed no main effects of norm exposure, nor were the hypothesized interactions significant ( $p$ 's > .297).

**Discussion:** The use of social norms has been advertised as a powerful tool to use in behaviour change interventions. This study shows that its power may be reduced under circumstances with minimal self-presentation concerns. Future research should further address the necessary ingredients for effective social norm interventions.

15:30 - 17:00

## Moderator factors in diet priming intervention to reduce unhealthy snacking

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**Background:** Diet priming is one of the cueing interventions that change behavior unconsciously. However, diet priming is not always effective for everyone. The study examines the moderators of cueing intervention with diet priming for reduction of unhealthy eating snack.

**Methods:** 118 undergraduates participated in the web-based experiment. The experiment measured cognitive variables (diet intention, behavioral willingness, internal and external control), unhealthy snacking habit, and length of time from the supermarket. Then, participants were randomly assigned to conditions where they were either primed by an image of weight scale associated with dieting (priming condition) or were presented with an image of cat unrelated to dieting (control condition). One week after the priming manipulation, consumption of snacks and BMI were measured.

**Findings:** GLM analysis indicated that diet priming determined snacking. People primed with the dieting goal ate fewer snacks ( $M=2.72$ ,  $SD=1.51$ ) than people without priming ( $M=3.74$ ,  $SD=2.33$ ). And, behavioral willingness, external control, habit, and length of time from the supermarket had effects on unhealthy snacking. Moreover, priming  $\times$  internal control and priming  $\times$  BMI interactions were found. Simple slope analyses indicated that diet priming had an effect on unhealthy snacking for people with a lower level of internal control ( $\beta=-1.85$ ,  $p<.001$ ) and people with a lower BMI ( $\beta=-2.10$ ,  $p<.001$ ).

**Discussion:** Although diet priming reduced unhealthy snacking, the effect was moderated by internal control and BMI. Diet priming activates dieting goal pursuit extraneously. Thus, people who have weak self-control over eating and concern about their body condition might be susceptible to the effect.

15:30 - 17:00

## Disentangling motor inhibition from response training effects on unhealthy food choices and desire to eat

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Previous studies suggest that motor inhibition training (MIT) – associating appetitive stimuli with behaviour inhibition - can help change unhealthy eating behaviours (e.g., Jones et al., 2016). Yet, most studies use a control condition that associates appetitive foods with motor response. In theory, this motor response training (MRT) can promote unhealthy eating, precluding any conclusion about what is driving the effects of training.

We aimed to disentangle the effects of MIT from MRT by including a control training condition without presenting foods (no-food training). The study included 180 female adults randomly assigned to one of three training conditions: MIT, MRT or no-food training. After training, we measured participants' food choices, desire to eat and proposed moderators of training effects (e.g., hunger, dietary restraint). Linear models with training conditions as a between-subjects factor did not show an effect of training on trained food choices,  $F(2, 176) = .668$ ,  $p = .514$ , and desire to eat,  $F(2, 176) = 1.391$ ,  $p = .251$ . The average number of trained food choices was slightly lower for MIT ( $M = 1.69$ ,  $SD = 1.15$ ) than MRT ( $M = 1.87$ ,  $SD = .91$ ), but similar to the no-food training ( $M = 1.67$ ,  $SD = 1.00$ ). Moreover, the proposed moderators did not influence the effects of training.

These results suggest that the effects of previous studies might be driven by MRT and the effects of MIT can be overestimated. We conclude that to assess the effectiveness of MIT it is crucial to include an appropriate control condition.



15:30 - 17:00

## Effects of motor inhibition and response training on food choices and evaluations: a pre-registered study

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Recently, we used a new control condition (no-food training) to disentangle the effects of unhealthy food go/no-go training on food choices (submitted oral communication). Yet, we did not find an effect of training, suggesting that previous studies could have overestimated the effects. Building on that study, we present the details of a pre-registered study, to be submitted as a Registered Report, that aims to clarify what are the motor training conditions (i.e., go vs. no-go) that can influence food choices.

We test the following main hypotheses: 1) food go/no-go training influences unhealthy and healthy food choices and evaluations; 2) this influence results from a decrease in the desire to eat unhealthy foods (unhealthy foods-no-go) and/or from an increase in the desire to eat healthy foods (healthy foods-go). We also assess if these effects can generalise to untrained unhealthy and/or healthy foods in different training conditions.

This pre-registered study includes 4 training tasks (unhealthy food-go + healthy food-go vs. healthy food-go vs. unhealthy food-no-go vs. no-food go/no-go) manipulated between-subjects. We also manipulate within-subjects the type foods (trained vs. untrained). The primary dependent variables are 1) the differences in desire to eat between trained and untrained foods from pre- to post-training; and 2) the likelihood of choosing unhealthy/healthy foods in a forced-choice task.

This “work in progress” presentation aims to discuss 1) updates on this study (e.g., data collection and results); 2) how the results can inform us about optimal training conditions; and 3) opportunities and challenges of submitting a Registered Report.

15:30 - 17:00

## Eating themselves to death "Live": the effect of moderate/extreme Anorexia-related messages on young women

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The aim of this study was to examine which kind of Anorexia-related messages (moderate/extreme) are more common on television and how those messages affected young women. An empirical study was performed in two parts: 1. 21 Anorexia-related stories that were broadcast on TV news of commercial TV channels were categorized with a coding page. 2. A random sample was performed (by distributing questionnaires around different online social networks) on 291 women, aged 13-35. The study population was randomly divided into two groups. Every participant requested to complete one online questionnaire that differed in the video message attached to them: extreme/moderate Anorexia-related message. Each questionnaire comprised two parts: 1. "EAT 26" questionnaire includes statements that diagnose Eating Disorder Patterns (EDP). 2. A questionnaire that examines the participants' attitudes, reactions and feelings about the video message attached. Analysis of the stories from TV news broadcast revealed that 71.4% of them featured a young Anorexic woman suffered from extreme underweight. 24.9% of all participants were diagnosed with EDP. For them, both messages were not found significant as far as changing their attitudes ( $t(73)=0.45, P>0.05$ ) and counter arguing ( $t(74)=-1.09, P>0.005$ ). On the other hand, when women with no EDP viewed the extreme message, it was found that the counter arguing index was significantly higher ( $t(203)=2.54, P<0.05$ ) in this message ( $M=1.56, SD=0.06$ ) than in moderate message ( $M=1.34, SD=0.06$ ). In conclusion, it should be asked, before presenting a message involving Anorexia, whether the publicity, even when aiming to eradicate the disorder, is worth the risk involved.

15:30 - 17:00

## Internet-based brief interventions for behavioural change: results of a RCT on risky drinking

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**Background:** Brief interventions (BI) delivered in primary care are effective tools in reducing risky drinking, but implementation is limited. Facilitated access to a digital application offers a novel alternative to face-to-face intervention, but its effectiveness is unknown. A British alcohol reduction website was adapted to the Italian culture. The aim of this study was to determine whether BI delivered by a facilitated access to this website was non-inferior to face to face BI in reducing harmful drinking behaviour.

**Methods:** 58 general practitioners recruited 9080 patients. Those screening positive on AUDIT C participated to the trial. Baseline, 3 and 12 months assessments were carried out using AUDIT C as primary outcome measure. Brief motivational interview was administered in both conditions. 4529 (49.9%) logged on to the website and 3841 (84.8%) undertook online screening. 822 (21.4%) screened positive and 763 (19.9%) were recruited to the trial. 347 (45.5 %) were allocated to facilitated-access and 416 (54.5%) to face-to-face. 698 (91.5%) were followed up at 3 months and 620 (81.2%) at 12 months.

**Findings:** AUDIT C average scores were at Baseline, face-to-face = 5.50 (DS = 1,50), facilitated-access = 5,49 (DS = 1,49); at 3MFU, face-to-face = 4 (DS = 1,65), facilitated-access = 4,13 (DS = 1,79); at 12MFU face-to-face = 3,68 (DS = 1,71), facilitated-access = 3.94 (DS = 1,85). Non-inferiority of 10% for facilitated access was demonstrated at three months follow-up.

**Discussion:** Internet-based BI can be an important added value to the work of primary care professionals in behavioural change.

15:30 - 17:00

## Outcomes of a feasibility trial of a resilience-based alcohol education intervention

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**BACKGROUND:** Although many campaigns advise young people to drink responsibly, few clarify how to convert this advice into specific behavioural strategies. Resilience-based approaches argue that treating young non-drinkers and moderate drinkers as “experts” in responsible alcohol use may facilitate co-creation of acceptable interventions that focus on how to change behaviour. **METHODS:** Based on past research, we developed videos in which young people discussed their alcohol refusal strategies and produced a 2-lesson package of related activities. A feasibility trial was conducted in South-East England. 103 students in two intervention schools (who received the new lessons in addition to standard alcohol education) were compared to 174 students in two control schools (who received standard alcohol education). Data were collected pre-programme and at 3-month follow-up. Interviews were also conducted with students and teachers in intervention schools. **FINDINGS:** Interviews revealed that students and teachers were positive about the novel content of the package. Analyses adjusted for corresponding baseline measures indicated that the intervention was no more effective than standard alcohol education at reducing frequency of drinking, frequency of drunkenness, or reported importance of alcohol for socialising. There were also no intervention effects for DRSE or for the use of various drinking control strategies. Paradoxically, students in the intervention schools reported stronger intentions to drink in the next 3 months. **DISCUSSION:** A 2-lesson resilience-focused add-on to standard alcohol education was no more effective than standard education at reducing students’ actual or intended alcohol use. It was, however, received very favourably by teachers and students.

# Promoting healthy behavior

15:30 - 17:00

15:30 - 17:00

## Portion size: latest developments and interventions

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**Background:** Portion sizes have increased over the past decades. This contributes to an increased energy intake and consequently an increased prevalence of overweight and obesity. The aim of this overview is to provide an overview of 1) underlying mechanisms of the effect of portion size on energy intake, 2) external factors explaining the portion size effect and 3) interventions and measurements aimed at food portion size.

**Methods:** A literature overview of recent findings (last 5 years) is provided.

**Findings:** Previous studies have shown that portion sizes have increased in recent decades. Many experimental studies have been conducted to unravel the mechanisms underlying the portion-size effect on food intake (e.g. the appropriateness mechanism, the 'unit bias' mechanism, the 'previous experience/expectation' mechanism, the 'visual cue' mechanism and the 'bite size' mechanism). In addition, external factors have been found to drive food portion selection and consumption (e.g. value for money, mindless eating, levels of awareness, estimation bias). Research on several interventions (ranging from 'providing information' to 'eliminating choice') have been conducted, but remain scarce, especially intervention studies in which portion size is a key focus in weight loss. Moreover, only three new instruments with respect to portion control behavior have been developed.

**Discussion:** There is considerable evidence for the portion-size effect on energy intake. However, the work on interventions targeting portion size and measurements for portion control behavior are limited. Moreover, from the literature it is not yet clear what type of interventions work best, for whom and in what context.

15:30 - 17:00

## Does the hospital food environment support healthy snack choices?

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**Background:** Food retail units based within hospitals sell a wide range of snacks and drinks to patients, staff and visitors. It is likely that food choice and consumption within these settings will be strongly influenced by availability, and anecdotal evidence suggests that current provision may be skewed towards energy dense, high calorie options. The present study aims to investigate the relative healthiness (or unhealthiness) of snacks and drinks available for sale across multiple hospital sites.

**Methods:** All food retail units (n=70; retail stores, cafes/canteens and vending machines) operating in 11 different hospital sites across the city of Aberdeen, UK (serving approximately 500,000 people) will be visited between January and May 2017. Snacks and drinks available at each unit will be recorded and data on nutritional content, portion size, and relative availability will be descriptively summarised and linked to electronic purchasing data.

**Expected findings:** We expect that many snacks and drinks for sale within hospital settings will be high in calories/fat/sugar and will be from food categories not recommended for daily consumption. We also expect that snack and drink availability will be skewed towards more energy dense options, and that this increased availability will translate into increased sales of these products.

**Current stage of work:** The study is currently halfway through data collection (expected completion date end-March 2017).

**Discussion:** In order to fully support the health of patients, visitors and staff, the options available in food retail units within the hospital setting may need to be significantly modified.

15:30 - 17:00

## The impact of one nudge in a company restaurant on the experienced autonomy of employees

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Nudging is considered an innovative approach for public health promotion. However, nudging has been criticized for being too manipulative; steering people in directions they might not have chosen themselves. One of the biggest concerns about nudge interventions is that they threaten personal autonomy. In earlier research (systematic review of reasons) we identified three conceptualisations of autonomy that are used in discussions on the ethics of nudging; freedom of choice, agency and self-constitution. In this experiment we wanted to empirically investigate the effect of one nudge (effort) on these three conceptualisations of autonomy. We constructed a questionnaire inspired by existing and validated autonomy questionnaires that fitted best with our earlier identified conceptualisations of autonomy; the Self-Determination Scale, the Perceived Competence Scale and the Index of Autonomous Functioning Scale. A repeated measures experiment was conducted at a company restaurant. The experiment consisted of three phases (of 2 weeks each); 1) a control phase (N=218), where no changes to the restaurant were made 2) a nudge phase (N=240), where one nudge (changing the size of the spoon for the potato dishes) was implemented in the restaurant and 3) a nudge + awareness phase (N=257), where the use of the nudge continued with the addition of an information sign. After each phase the autonomy questionnaire was administered. We also assessed the effectiveness of the nudge with the help of cash register data and weight of the products. Very preliminary results show no significant effect of the nudge on the experienced autonomy of the employees.



15:30 - 17:00

## Tastier, healthier, better - but which? Exploring reasons for bottled and for tap water consumption

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Despite substantial price differences, environmental concerns and rigorously controlled tap water quality in most developed countries, bottled water consumption has been increasing substantially in the last years. Various factors related to this consumption shift have been discussed including quality and health concerns, organoleptics, but also risk perception and worry. In the presented study, we examined how health and risk related concerns as well as hedonic and convenience factors differ between consumer groups in Germany. Consumers of tap (N = 402) versus bottled water (N = 158) took part in an online survey. The two groups did not differ in demographic variables, nor did the pattern of consumption change depending on the situation people were in (home, work/ university, en route). However, both groups differed significantly in perceived risk and worry for bottled and tap water. In addition, paired t-tests showed that both groups rated practicability, price and environment protection in favour for consuming tap water. However, bottled water consumers rated taste, health, quality or hygiene aspects, smell and colour as reasons pointing for bottled water while tap water consumers rated these (except taste) as reasons for tap water. Results indicate marked differences in health-related beliefs and risk perception aside from differences in perceived benefits and disadvantages of the two water options. Addressing exaggerated health risk and quality concerns associated with tap water appear to be a promising leverage point for interventions targeting sustainable and healthy consumer choices.

15:30 - 17:00

## Personal and non-personal influences on smoking habits of Romanian adolescents

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**Introduction:** Tobacco control experts must concentrate their efforts to prevent smoking and to promote cessation before adolescents become addicted to nicotine. Our aim was to determine different factors associated with tobacco use among high school students.

**Methods:** Data were from the baseline, cross-sectional survey of an intervention study to assess the impact of a culturally- and linguistically-adapted ASPIRE computer-based tobacco prevention program. The survey was conducted among 1,835 9th grade students from Tirgu Mures, Romania. We assessed the association of personal and non-personal factors on tobacco experimentation and past 30-day use using bivariate analyses.

**Results:** More than half have tried smoking cigarettes at least once in their lifetime, 24.1% have smoked cigarettes during the last 30 days. Perceived peer experimentation was the strongest factor associated with ever smoking (OR=4.65) and smoking in the last 30 days (OR=7.94). Other personal factors associated with experimentation and past 30 day use included: having a brother (OR=3.17, OR=2.66), father (OR=2.07, OR=1.98), mother (OR=1.48, OR=1.68) or another person at home (OR=1.86, OR=2.37) who smokes. Non-personal factors included: being exposed to pro-smoking messages at the cinema (OR=2.36, OR=1.97), at sport events (OR=2.25, OR=2.06), in newspapers and magazines (OR=1.46, OR=1.80). Being exposed to pro-smoking messages on the internet, radio-TV, in shopping areas, outdoor displays were not significantly associated with ever trying cigarettes and past 30 day use.

**Conclusions:** Given the high rates of smoking among adolescents, policies and evidence-based tobacco prevention programs targeting adolescents, such as ASPIRE should be priority for public health in Romania.

15:30 - 17:00

## Measuring resistance towards health messages

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### Background

A major challenge that health advocates face when promoting health is resistance towards their message. Audiences often feel threatened when they encounter health messages and as a result they may try to resist them. Previous literature suggested different ways to counter this resistance but research on the type of strategies that audiences' actually use to resist health messages is lacking. This study fills this gap by 1) presenting an overview of different resistance strategies and 2) examining which of these strategies are used by audiences.

### Methods

Participants in this study (N=202) were exposed to a video about the dangers of binge drinking (fear vs. disgust vs. humour vs. informational), after which they were put into pairs to have a short dyad. These dyads were recorded by camera - for which consent was given afterwards - and transcribed. Based on the literature on resistance strategies, we developed a codebook to analyse the transcriptions on the presence of resistance strategies.

### Findings

The results demonstrate that audiences indeed resist health messages and often use multiple strategies. The most commonly used strategies were message derogation, denial (personal risk), and counter arguing. Moreover, the type of emotional frame used in the persuasive message influences whether and how participants resist the message.

### Discussion

The present study resulted in a codebook that can be used to measure the use of resistance strategies. Knowledge on the kind of resistance strategies that audiences adopt when confronted with health messages may assist in designing more effective communication.

15:30 - 17:00

## Comparison of physical conditions and lifestyles between adults and the elderly in suburbs of Laos

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Spread of Non-Communicable Diseases (NCDs) is a major problem not only in developed, but also in developing countries. The main cause encouraging NCDs, especially lifestyle diseases, is the urbanization of people's lifestyles. This study investigated lifestyles and health conditions of the elderly and adults living in the suburbs of Laos.

Participants were residents (n=513) in Vientiane, the capital of Laos. BMI and blood pressure were measured and a questionnaire on perceived health and lifestyles was conducted. Participants were classified into two groups: adults (less than 65 years) and the elderly (65 years and older). Then, questionnaire scores items were compared.

BMI and the obesity rate in adults were significantly higher than in the elderly. Blood pressure (BP) and the rate of people with hypertension was significantly higher in the elderly. Current perceived health was significantly higher in adults. Significant differences were not indicated in the frequency of exercise. Intake of rice and fish was significantly higher in the elderly, whereas that of eggs and meat was significantly higher in adults. Alcohol intake was significantly higher in adults, whereas no significant differences were shown in the smoking rate. The obesity rate in adults was higher than in the elderly. Because of the growing economic activities in urban areas, people have come to have a rich diet. Moreover, the amount of exercise and calorie consumption has decreased because of the spread of motorization. Though the elderly seems to have a healthier diet compared to adults, they are also affected by environmental changes.

15:30 - 17:00

## Verbal and physical aggression in youth football: the role of the social environment

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**Background:** Even though the number of reports of antisocial behaviour in football in the Netherlands has declined, physical and verbal aggression remain a matter of concern. Survey research into the determinants of aggression in football points to the importance of the social environment, particularly the role of the coach and team norms. However, to gain a more in-depth insight into social influences and dynamics, associated with physical and verbal aggression in youth football, a qualitative approach needs to be taken.

**Method:** For this purpose, semi-structured interviews with referees (n=3) and coaches (n=4) and six focus groups with young male football players (11-13 years old; n=35) were conducted. The focus groups were conducted with players to capture (part of) the team interactions and dynamics. Interview guides were developed to explore antecedents of and possible solutions for aggression and the role of the social environment (i.e., referee, parents, coach, players) in these processes, as well as (team) norms regarding different forms of aggression. Data will be analysed with ATLAS.ti, using a Grounded Theory approach.

**Expected results:** The results are expected to provide insight into how verbal and physical aggression may arise during a football match and the role that important social actors and team norms play in this.

**Discussion:** The current research will add to our understanding of social influences in aggression, particularly in the domain of youth sports. And provides a starting point for the development of an effective intervention.

# Health care delivery: perspectives of professionals and patients

15:30 - 17:00

Val Morrison

15:30 - 17:00

## Paediatric epilepsy services from the carer perspective- the contribution of Epilepsy Specialist Nurses (ESNs)

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**Background:** Epilepsy Specialist Nurses (ESNs) perform a range of duties including drug reviews, telephone advice, arranging school support and respite liaison. Although every child with epilepsy should have access to an ESN, almost a third of paediatric patients do not (Epilepsy12 Round 2 National Report, November 2014). There is a lack of published literature that evaluates ESN provision within paediatric services. This study aims to address this gap and evaluate the contribution of ESN support by comparing carer experiences of services with and without an ESN.

**Methods:** Carers of children with Epilepsy (N=58) took part in semi-structured interviews. Data will be analysed according to the method known as 'Grounded Theory'. This allows for development of a grounded understanding of how carers adapt to having a child with epilepsy and how this is shaped by a wide range of factors, such as interactions with services (ESN or non-ESN), issues of medication, social support and understanding of epilepsy.

**Expected results:** Based on the experiences of carers we hope to identify key features of services that are perceived as most effective and/or valuable, be it the provision of information, emotional support or responsiveness and how this relates to ESN provision.

**Current stage of work:** Data collection is complete and the current focus is data analysis.

**Discussion:** We aim to develop a theory of the informational, affective and social needs of carers of children with Epilepsy and how these are effectively met through particular services and where there may be scope for development.

15:30 - 17:00

## Self-stigma of seeking help in Lithuanian and US mental health care students and professionals

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<sup>2</sup>Lithuanian University of Health Sciences, Lithuania

<sup>3</sup>University of Nebraska Kearney, United States

**Background.** The aim of this study was to evaluate and to compare self-stigma of seeking help (SSSH) in Lithuanian and US students and professionals of mental health care related professions.

**Methods.** In total 1011 psychology, social work and counseling students (300 from US, 711 from Lithuania) and 335 professionals (98 from US, and 237 from Lithuania) participated in the study. Self-Stigma of Seeking Help Scale (Vogel, Wade, Haake, 2006) was used as a measure of negative attitudes towards psychological help seeking. Participants were also asked about their actual help-seeking behavior.

**Findings.** ANCOVA analysis in students' sample revealed that age, year of the studies and country of residence were significantly related to SSSH; with US students, younger students and undergraduate students reporting more negative attitudes towards psychological help-seeking. No effect of culture, gender or professional experience was observed in professionals' sample. However older age was related to higher SSSH in professionals. Logistic regressions revealed that SSSH was the strongest predictor of actual help seeking behavior both in students and professionals.

**Discussion.** SSSH is related to actual help-seeking behavior in psychology, social work and counseling students and professionals, with the potential to delay psychological help-seeking when it might be needed. Results of this study illustrate complex relationships between SSSH and demographic, professional and cultural variables. Thus, while developing programs for help-seeking stigma reduction in mental health professionals, age, professional experience and culture should be taken in to account; different strategies for students and professionals might be needed.



15:30 - 17:00

## Fatigue in patients with End Stage Renal Disease (ESRD): views and experiences of health professionals

W. van der Borg<sup>1</sup><sup>1</sup>VU University Medical Center, Netherlands

### Background

ESRD patients often report fatigue as a stressful and burdensome symptom that strongly impacts their daily life. So far, little is known about how health professionals perceive and address patient's fatigue in care practice. The aim of this study is to explore how health professionals perceive the severity, causal and perpetuating factors of fatigue in ESRD patients, how they assess needs and possibilities to alleviate fatigue complaints, and how they value a psychosocial intervention to reduce the burden of fatigue.

### Methods

Approximately 25 semi-structured interviews are held with health professionals from various disciplines (nephrologists, dialysis nurses, medical social workers). Participants are recruited from dialysis centers across The Netherlands. Interviews are audiotaped and transcribed verbatim (after consent). Data are subjected to thematic analysis.

### Expected results:

This study will shed light on the way health professionals signal and address fatigue symptoms in ESRD patients and whether experiences and views differ between disciplines. Gained insights contribute to our understanding of how health professionals value and perceive possibilities to support ESRD patients in alleviating fatigue.

### Current stage of work:

So far, 12 interviews were conducted. Additional interviews will be conducted until data saturation is reached. Data collection and analysis will be completed by June 2017.

### Discussion

Findings will inform the development of a psychosocial intervention to reduce the burden of fatigue in ESRD patients. Perceived barriers and facilitators for implementation in care practice will be discussed.

15:30 - 17:00

## Navigating identity conflicts within private optometry: New Zealand optometrists' reflections on a transforming industry

J. Handy<sup>1</sup>, L. Warren<sup>1</sup>, M. Hunt<sup>1</sup>, D. Gardner<sup>1</sup>

<sup>1</sup>Massey University, New Zealand

This research investigated the effects of recent changes in the market environment for optometry services and products on New Zealand optometrists' professional identity. It was designed to explore two inter-related issues. Firstly, how New Zealand optometrists understand and manage their dual identities as qualified healthcare professionals and specialist eye product retailers within a changing and increasingly competitive business environment. Secondly, how identity tensions function to oppose or strengthen the increasing dominance of large optometry chains.

Individual, semi-structured interviews were carried out with twelve male and fourteen female optometrists. Nineteen participants owned, or were employed by, independent optometrists. Seven owned, or worked at, large optometry chains. Six participants were recent graduates, the rest were experienced optometrists.

All participants recognised that practicing optometry within the private healthcare sector created the possibility of ethical conflicts between healthcare and business imperatives. All identified primarily as healthcare professionals rather than retailers. There were however considerable differences between participants in the ways this boundary was managed, with participants working within corporate optometry seeming more at ease with the business aspects of their profession.

All participants acknowledged that corporate optometry had created radical change in the business environment. There was considerable variation in participants' evaluation of these changes, often reflecting their location within either corporate or independent practices. Most participants felt that the business environment had reached a new equilibrium, with corporate dominating the lower end mass market and independents retaining their appeal for higher value clients with loyalty to particular practices.

15:30 - 17:00

## The perceived quality of health promotion partnerships

E. Cicognani<sup>1</sup>, C. Albanesi<sup>1</sup>, L. Valletta<sup>1</sup>

<sup>1</sup>University of Bologna, Italy

**Background:** The delivery of health promotion interventions through community coalitions or partnerships' has long been advocated in order to ensure the prerequisites for health (WHO, 1985) and has become a widespread feature of community-based health promotion approaches. A debated empirical question is how to assess the quality of partnerships working and the processes through which they sustain effective interventions (Aveling & Jovchelovitch, 2013). The aim of the present study was to develop a measure to assess the perceived quality of partnerships in the context of community based health promotion projects aimed to enhance healthy lifestyles in a Region in the North of Italy.

**Methods:** Participants included members of six partnerships created to implement community-based health promotion projects supported by the Region Emilia Romagna (North Italy) (2014-2016) and lead by the six major Local Health Services (LHS). The final sample included 198 participants, belonging to Local Administrations, School/educational institutions, community groups and associations, citizens involved in specific interventions. Participants filled an online questionnaire.

**Findings:** Results showed that the measure of perceived quality of the partnership is significantly associated with perceived quality of participation experience, sense of community, sense of community responsibility, perceived empowerment and satisfaction for the partnership.

**Discussion:** In conclusion, the measure developed in this study appears promising and can offer useful insights into the quality of the processes of participation of citizens involved in health promotion interventions.

# Measures and assessments in occupational health

15:30 - 17:00

Derek Johnston

15:30 - 17:00

## Socio-Emotional Skills scale to assess the effectiveness of coaching for Japanese workers and university students

R. Ishikawa<sup>1</sup>, Y. Matsuda-Chapman<sup>1</sup>, N. Kamba<sup>2</sup>, N. Okuta<sup>3</sup>, K. Mori<sup>4</sup>

<sup>1</sup>J. F. Oberlin University, Japan

<sup>2</sup>Kyoto Koka Women's University, Japan

<sup>3</sup>Yokohama YMCA collage of human services, Japan

<sup>4</sup>J. F. Oberlin University, Tokyo, Japan

**Purpose:** There is a growing interest in the application of coaching to a variety of domains such as business, education, and health care in Japan. Despite the expanding market and increased demand for coaching, little research is conducted on developing an assessment tool to measure the effectiveness of coaching interventions. The purpose of the present study is to develop a measurement of Socio-Emotional Skills (SES) to assess coaching intervention effectiveness.

**Methods:** 280 workers and 119 university students participated in the self-reported questionnaire survey. The student participants completed the questionnaire (1) assessing SES, KiSS-18 (Kikuchi's Scale of Social Skills), age, and sex. The worker participants also completed the questionnaire (1), and in addition, they were asked to answer the questionnaire (2) consisting of organization-based self-esteem (OBSE), occupation, job title, and employee tenure.

**Findings & Discussion:** The explanatory factor analysis yielded a 16-item four-factor solution termed 'Awareness of others' emotions', 'Awareness of one's own emotions', 'Application of one's strength', and 'Sense of togetherness with others'. Internal consistency indicated a sufficient reliability. SES showed a significant association with OBSE and KiSS-18, confirming concurrent validity. Further, significant differences in the SES scores were observed between students and workers, and among different job titles. This study indicates that socio-emotional skills are desirable to acquire for both workers and students who may be engaged in responsible roles, and enhancement of SES can lead to better adaptation and/or performance. The SES scale appears to be an adequate measure for coaching intervention effectiveness.

15:30 - 17:00

## Psychometric properties of the Italian version of teacher self efficacy scale

R. Pisanti<sup>1</sup>, C. Cardinali<sup>2</sup>, V. Rosati<sup>2</sup>, C. Violani<sup>3</sup>

<sup>1</sup>Niccolò Cusano University Rome, Italy

<sup>2</sup>Niccolò Cusano University, Rome, Italy

<sup>3</sup>Sapienza University of Rome, Italy

### Background:

Teacher self efficacy (TSE) beliefs regard the convictions that the teacher has about his/her ability to teach pupils efficiently and effectively. Previous studies have shown that TSE is a personal resource factor that may protect from the experience of job strain and burnout (e.g., Schwarzer and Hallum, 2008). The purpose of the study was to examine the validity and reliability of the Italian version of teacher self-efficacy scale (Schwarzer, Schmitz, & Daytner, 1999)

Methods: The sample consisted of 356 teachers (83% female, with a mean age of 43.2 years, SD=9.1). Participants completed the following measures: Teachers self efficacy scale, Maslach Burnout Inventory-Education Survey, and Utrecht Work Engagement Scale (short version). Teacher self-efficacy scale includes 10 item. Confirmatory factor analysis within the framework of structural equation modelling was used to examine factor structure of the teacher self-efficacy scale.

Findings: The confirmatory analysis results showed an adequate fit for the hypothesized one factor model ( $\chi^2 = 142,12$ ;  $df = 34$ ;  $p < .001$ ; GFI = .93; CFI = .92; RMSEA = .08 (.07-.09). Furthermore, correlations between the TSE dimension, burnout and engagement variables provided further support for the construct validity of the dimension. In line with a previous quantitative review (Shoji, et al., 2016), the largest association was found for the lack of personal accomplishment ( $R = -.59$ ;  $P < .000$ ). Reliability was supported by an acceptable Cronbach's alpha (.87)

Discussion: The results showed that the TSE scale has acceptable validity and reliability for measuring the teacher self-efficacy among Italian teachers.

15:30 - 17:00

## The perceived stress-at-work scale

F. Marcatto<sup>1</sup>, L. Di Blas<sup>1</sup>, O. Luis<sup>2</sup>, D. Ferrante<sup>1</sup><sup>1</sup>University of Trieste, Italy<sup>2</sup>Municipality of Trieste, Italy

**Background:** The aim of the present study was to investigate the psychometric properties of a new short scale (4 items) for assessing workers' perception of stress at work, which could be used along with organizational level questionnaires.

**Methods:** Public sector employees (N = 883), working in an Italian municipality, received a booklet containing the ERI-Q, the HSE-MS Indicator Tool, the Satisfaction with Life Scale and the new Perceived Stress-at-Work Scale.

**Findings:** Results showed good reliability of the Perceived Stress-at-Work Scale (Cronbach's alpha = .80) and strong correlations with two concurrent measures of individual-level work strain, the ERI-Q imbalance score ( $r = .63, p < .001$ ) and the ERI-Q overcommitment scale ( $r = .52, p < .001$ ). Structural equation modeling was used to investigate the relationships among organizational risk factors, measured by the HSE-MS Indicator Tool, perceived stress at work, and workers' life satisfaction. Three organizational dimensions (Demand, Relationships, and Role) resulted to be significantly associated with perceived stress at work, explaining about 45% of its variance. Moreover, the effect organizational risk factors on workers' life satisfaction turned out to be mediated by workers' perception of stress at work.

**Discussion:** The new perceived stress-at-work scale resulted to be a valid and reliable instrument, displaying good internal consistency and strong correlations with other individual-level measures of work strain. Moreover, the scale could be used to highlight the critical intervention targets for risk stress management strategies, when applied along with an organizational level questionnaire such as the HSE-MS Indicator Tool.

15:30 - 17:00

## Psychosocial hazards at work and alcohol abuse among Prison Service officers in Poland

K. Orlak<sup>1,2</sup><sup>1</sup>Stowarzyszenie Zdrowa Praca (Association for Occupational Health), Poland<sup>2</sup>Warszawskie Centrum Zdrowia (Warsaw Medical Centre), Poland

**Background:** Although there are many papers on prison officers' stress, they hardly refer to a specific work-related stress model or use screening instruments to assess adverse health effects. Purpose of this study was to examine which components of psychosocial work environment contribute to excessive drinking among Polish Prison Service officers.

**Material and method:** To explore health impact of occupational stress Demand-Control-Support model was applied. The data were collected from 455 prison officers from all over Poland. Psychosocial working environment was measured with Psychosocial Working Conditions and officers' drinking status was screened with Alcohol Use Disorder Identification Test (AUDIT). The health impact of job strain was estimated with logistic regression (based on the likelihood ratio for the model). The hypothesis was that prolonged exposure to hazardous psychosocial working environment contributes to excessive drinking.

**Results:** Correlations between AUDIT result, seniority, Control and Support were statistically important. The model predicted 5,5% of hazardous drinking and 7,3% of harmful drinking. The predictors of hazardous drinking were Control (OR 0,30 – 0,85; CI 95%), seniority on the job (OR 0,87-0,98; CI 95%) and seniority in Prison Service (OR 1,04-1,14; CI 95%). Harmful drinking was predicted by Control (OR 0,01 – 0,41; CI 95%) and job strain (interaction between Demands and Control).

**Conclusions:** Job strain may be a risk factor for alcohol abuse among prison officers and the time of exposure matters. Low Control group is at elevated risk. Job adaptation seems to be preventive. Other factors, i.e. temperament, shall be included in further studies.



15:30 - 17:00

## The effects of coaching-based communication skills training for managers

Y. Matsuda-Chapman<sup>1</sup>, R. Ishikawa<sup>1</sup>, F. Shiozawa<sup>2</sup>, K. Mori<sup>3</sup>

<sup>1</sup>J. F. Oberlin University, Japan

<sup>2</sup>Institute for Health Psychology and Welfare, J.F. Oberlin University, Japan

<sup>3</sup>J. F. Oberlin University, Tokyo, Japan

**Background:** There has been a growing interest in the concept of 'managerial coaching' and today's managers are increasingly being expected to serve as a coach and use coaching skills such as listening, effective questioning techniques, and giving performance feedback to facilitate employee learning and development (Ellinger et al., 2014). Yet, managers are often under-equipped with skills necessary to effectively coach their employees. The present study investigated the effects of a coaching skills training on Japanese managers' self-perception (i.e. coaching efficacy, emotional intelligence, and self-esteem).

**Design/Methods:** This study utilised a pre-post design. Eighteen middle managers (100% male) aged 28-46 years from 13 small-medium sized organizations participated in two days of coaching skills training, with a 4 week break between Day 1 and Day 2 to allow practice in their workplaces. The training included sessions on active listening, questioning, and providing recognition. Participants completed self-report measures of coaching skills efficacy (CSE), socio-emotional skills (SES), and organization-based self-esteem (OBSE) before and after the training programme.

**Findings:** Paired t-tests were conducted to examine the effects of the programme. Participants' scores on the CSE, OBSE significantly increased following the programme, whereas only one of the four subscales of SES, i.e. 'application of one's own strength' showed a significant increase.

**Discussion:** The present study adds to aggregate research on managerial coaching, and indicates that a short, intensive training may improve participants' efficacy in basic coaching skills and self-esteem in the workplace context. Future research needs to use pre/post-test with control group design and include objective measures.

# Psychophysiology of health and behaviour

15:30 - 17:00

Daryl O'Connor

15:30 - 17:00

## Is decision making in hypoxia affected by pre-acclimatisation? A randomized controlled trial

M. Niedermeier<sup>1</sup>, A. Weisleitner<sup>2</sup>, M. Kopp<sup>2</sup><sup>1</sup>Innsbruck, Austria<sup>2</sup>University of Innsbruck, Austria

### Background

Decision making is impaired in hypoxic environments, which may have serious or even lethal consequences for mountaineers. An acclimatisation period prior to high altitude exposures may help to overcome adverse effects of hypoxia.

Thus, we investigated possible effects of short-term pre-acclimatisation on decision making in hypoxia.

### Methods

In a randomized controlled study design, 52 healthy participants were allocated to a hypoxia group (HG: short-term pre-acclimatization by the use of intermittent hypoxia 7 x 1 hour at  $FiO_2 = 12.6\%$ , equivalent to 4500 m) or a control group (CG: sham pre-acclimatization 7 x 1 hour at  $FiO_2 = 20.9\%$ , equivalent to 600 m). The number of risky decisions was assessed using the Game of Dice Task at four time points during a 12-hours stay in hypoxia ( $FiO_2 = 12.6\%$ ).

### Findings

42 (HG: 27, CG: 25) participants completed the study. The number of risky decisions was significantly ( $p = .048$  as determined by 4x2 ANCOVA) reduced in the hypoxia group compared to the control group, partial  $\eta^2 = 0.11$ , when the age-effect on decision making was controlled. Self-reported positive affective valence prior to decision making was negatively related to the number of risky decisions,  $r < -.38$ .

### Discussion

Short-term pre-acclimatization might positively influence decision making in hypoxia and might be considered as a risk-reducing preparation method prior to exposures to hypoxic environments. Positive affective state seems to have a medium-sized protective effect against risky decision making.

15:30 - 17:00

## Characteristics of understanding of verbal and nonverbal stimuli by the students with mild mental retardation

O. Zashchirinskaia<sup>1</sup><sup>1</sup>St.-Petersburg University, Russia

The aim of this study was to investigate the understanding of the text and images by teenagers with different level of intelligence with the help of eye tracking. The objects of the comparative study were graduates of schools with a varying degree of the intelligence decline (F83 – mixed specific disorders of psychological development and F70 – mild mental retardation). 85 subjects were participants. There were 49% boys and 51% girls. The specific features of the perception and understanding of the texts and images of different degree of visual complexity by pupils with mild mental retardation compared to their peers with specific disorders of mental development were identified. Surveyed both groups bring their own life experience in interpreting the plot. Students with mild mental retardation are more focused on the emotional aspect in the analysis of texts and images, on notions of security events. They demonstrate a lower level of cognitive development and volitional activity when viewing a stimulus of a high degree of visual complexity. Cognitive landmarks of peers with mixed specific disorders of psychological development to a greater extent associated with the identification of the main characters of the story and their actions, the concept of security of heroes are not fundamental in interpretation of the story by pupils.

15:30 - 17:00

## Psychosocial predictors of Metabolic Syndrome in Chilean adults

M. Ortiz<sup>1,2</sup>, P. Repetto<sup>3</sup><sup>1</sup>Universidad de La Frontera, Chile<sup>2</sup>Laboratorio de Estrés y Salud, Chile<sup>3</sup>P. Universidad Catolica de Chile/CIGIDEN, Chile

**Background:** According to the Chilean National Health Survey (2010), the prevalence of Metabolic Syndrome (MetS) in adults was 35%, however how psychosocial factors contributes to its prevalence in Chilean population has been under-studied. Therefore, the aim of this study was to determine how psychosocial factors predicts MetS in a sample of adults.

**Methods:** A non-experimental study was designed to test the cross-sectional association between psychosocial factors and MetS, as defined by the ATP III criteria in a sample of 446 participants free of MetS. Measures of psychological variables including psychological stress, weight stigma, depressive symptoms, perceived discrimination, and fatalism, as well as health behaviors were self-reported. Inflammatory markers, and MetS components were obtained with standardized procedures.

**Findings:** Structural equation modeling revealed an indirect effect of psychological stress on MetS via non-healthy diet, and fatalism. Participants scoring high in psychological stress had greater fatalism, and poorer diet, which in turn predicted greater waist size circumference and MetS components.

**Discussion:** These findings suggest that psychological stress was indirectly related to MetS through health behaviors and fatalism, allowing us to identify mechanisms through which psychological stress is associated with MetS.

15:30 - 17:00

## Congruence between physiological and emotional reactivity to stressors of Type A individuals

A. Perminas<sup>1</sup>, G. Jarasiunaite<sup>1</sup><sup>1</sup>Vytautas Magnus University, Lithuania

One of the hypotheses why individuals with Type A behavior pattern are more prone to cardiovascular diseases is that they cannot recognize their emotional tension in stressful situations. So, the aim of this study was to assess the congruence between physiological (skin temperature) and emotional response to stressors of Type A individuals.

169 students (108 Type A's and 61 Type B's) aged between 18 and 24 participated in the study. They were selected on the basis of their scores on Adolescent/Adult Type A Behavior Scale-3 (Forgays et al., 1993). A total of 4 stressors (3 psychological and 1 physiological) was used to assess students response to stressors. An attention demanding task was used as a psychological stressor. One of psychological stressors was given with standard instructions, another with instructions to compete and on the third stressor students' performance was criticized. Students' emotional reactivity to stressors was measured by Emotional Assessment Scale (Carlson et al., 1989), while skin temperature reactivity to stressors was assessed using biofeedback device Nexus-10.

The results of the study showed that when being criticized and having higher skin temperature reactivity Type A individuals report feeling less anxious, less disgust and fear. When having higher skin temperature reactivity on physiological task they report feeling less fearful. Those incongruous emotional and skin temperature responses were not observed in Type B individuals.

15:30 - 17:00

## Occupational and psychological determinants of health-protective behavior: age aspect

M. Petrash<sup>1</sup><sup>1</sup>Saint-Petersburg State University, Russia

Health is the most important condition of active human life. The concept Health-related behaviors include diet, exercise, smoking, alcohol use, safety practices and participation in health screening examinations (Fishbein et al.). We conducted a study to explore the relationship between parameters of professional development, psychological factors and health-protective behavior of students and professionals.

Our aim was to study the parameters of professional development, psychological factors and health-protective behavior in different age groups.

We expected that in group of students there will be a greater number of predictors of health-protective behavior.

Participants: 140 persons were allocated into 2 groups: student (aged of 18 to 20 years) and professionals (aged of 23 to 48 years).

Methods: survey specifically designed for studying the health-protective behavior; questionnaire "Factors of professional development", "SF-36 Health Status Survey" (SF-36); Big five personality test.

Using regression analysis, we have shown that predictors of health-protective behavior among students were factors of professional activity: recover and self-control of behavior; psychological factors: conscientiousness and openness to experience; factors of quality of life: General Health, Physical Functioning, Social Functioning, Mental Health. Such characteristics as: recover; openness to experience and Mental Health were predictors of health-protective behavior of the professionals.

Our study proved that the parameters for professional and psychological determinants are manifested differently in the structure of health-protective behavior in different age groups. Supported by RFH project 16-06-00315a.

15:30 - 17:00

## Occupational factors, coping strategies and perceived stress among professionals with different resistance of nervous reaction

M. Petrash<sup>1</sup><sup>1</sup>Saint-Petersburg State University, Russia

Professional development includes such factors as satisfaction with professional activities, the successful adaptation in professional society, dedication, professional behavioral control, recovery, emotional stability. These factors closely connected with the personal qualities, including the functional characteristics of the nervous system. The aim of our study was to investigate the relationship of occupational factors and coping behavior with the level of perceived stress among professionals with different resistance nervous reaction.

We assume that professionals with different resistance nervous reaction will be the differences in the studied parameters. We also believe that the professional factors of perceived stress in groups provided by various coping strategies.

Participants: 150 adults were allocated to 2 groups: first group with the reduced nervous reaction and second group with the normal nervous reaction.

Methods: "Scale of perceived stress-10" Russian version, Coping Questionnaire, Questionnaire "The professional development factors", the technique for express diagnostics of person's functional state.

Our research showed that higher scores of professional factors noted in second group. The higher scores of coping strategies observed in first group.

Using regression analysis, we have shown that the factor "satisfaction with professional activity" reduces the level of perceived stress in the first group; and in the second group a factor "emotional stability". Active use strategies "seeking social support" promote the increase to the perceived stress in both groups.

Our study revealed differences in the situation of professional development, coping strategies in the groups with different levels of nervous reaction. Supported by RSF project 16-18-10088.



11:00 - 12:00

## Partner responses to emotional disclosures of pain-related distress: Thinking outside the operant box

Annmarie Cano

Professor of Psychology, Associate Dean of the Graduate School, Wayne State University



Health psychologists have long appreciated the effects of the social environment on health behaviors, coping with illness, and health outcomes. For instance, pain researchers have relied on operant theory to highlight the important role of significant others in reinforcing pain behaviors (i.e., illness behaviors associated with pain). Numerous studies have provided support for the operant model and behavioral treatments have been developed to teach significant others including spouses and parents to ignore pain behaviors and reinforce well behaviors in their loved ones. However, a new line of research has raised the questions about whether all pain behaviors should be extinguished to improve health and well-being.

After providing an overview of the operant model and related research support, Dr. Cano will introduce interpersonal relationships and empathy models as a way to “think outside the operant box” with respect to illness behaviors. In particular, she will consider whether some behaviors such as emotional disclosures about illness should in fact be reinforced. She will also discuss the research and clinical implications of this line of thinking and share her treatment development work based on mindfulness and acceptance strategies for couples facing chronic pain.

# Symposium: Maximising the value of qualitative methods in the development and evaluation of behaviour change interventions

9:00 - 10:30

Aula D

Jenny McSharry, Elaine Toomey

9:00 - 9:15

## Parental experiences and perceptions of infant complementary feeding: a qualitative evidence synthesis

K. Matvienko-Sikar<sup>1</sup>, C. Sinnott<sup>1</sup>, J. McSharry<sup>2</sup>, C. Kelly<sup>2</sup>, C. Houghton<sup>2,3</sup>, C. Heary<sup>2</sup>, E. Toomey<sup>4</sup>, M. Byrne<sup>5</sup>, P. Kearney<sup>1</sup>

<sup>1</sup>University College Cork, Ireland

<sup>2</sup>National University of Ireland, Galway, Ireland

<sup>3</sup>Qualitative Research in Trials Centre (QUESTS), Ireland

<sup>4</sup>National University of Ireland Galway, Ireland

<sup>5</sup>NUI Galway, Ireland

**Background:** Current childhood obesity interventions increasingly focus on infant feeding but often do so without considering parental perceptions and experiences. Qualitative research on infant feeding has yet to be systematically evaluated to inform intervention development. A qualitative evidence synthesis (QES) of the extant literature focusing on experiences, barriers and facilitators to healthy infant feeding and feeding guideline adherence is therefore crucial.

**Methods:** A QES of papers examining caregivers' experiences of complementary feeding and weaning of infants (< 2 years) was conducted. Twenty-three papers, comprising 1047 participants, were included in the QES. A 'Best Fit' Framework Synthesis approach, with the COM-B model as the analysis framework, was used. Themes emerging from the data that were not accounted for by the COM-B model were added to the coding framework.

**Results:** Beliefs about health and behavioural outcomes, and daily pressures and time constraints, are important considerations for parental feeding approaches. Infant feeding guidelines and advice are more likely valued and adhered to when they are consistent, from a trusted and experienced source, and are compatible with caregiver experiences. The role of 'maternal instinct' guides much infant feeding and often justifies lack of adherence to feeding guidelines.

**Discussion:** The key factors in infant feeding relate to presentation and trust in infant feeding advice. How guidelines correspond to feeding beliefs, experiences and beliefs about capabilities further influence parental engagement in healthy feeding practices. The findings of this review highlight key areas for intervention to help improve infant feeding for childhood overweight and obesity.

9:15 - 9:30

## Understanding the intervention context: exploring barriers and facilitators to attendance at diabetes structured education programmes

J. McSharry<sup>1</sup>, M. Humphreys<sup>2</sup>, S. Dinneen<sup>1,3</sup>, M. Byrne<sup>4</sup>

<sup>1</sup>National University of Ireland, Galway, Ireland

<sup>2</sup>Cork University Hospital, Cork, Ireland

<sup>3</sup>Galway University Hospitals, Galway, Ireland

<sup>4</sup>NUI Galway, Ireland

### Background:

A research prioritisation process conducted with people with diabetes, health professionals and policy makers, identified low attendance at structured education for Type 2 diabetes (T2DM) as a priority area for research in Ireland. The aim of this study was to explore barriers and facilitators to attendance at T2DM structured education programmes in Ireland.

### Methods:

People with T2DM who had attended, or been invited to attend, at one of the three structured education programmes (CODE, DESMOND and X-PERT) and educators from the three programmes took part in semi-structured telephone interviews. Interviews were audio-taped, transcribed and analysed using inductive thematic analysis.

### Findings:

15 people with T2DM and 14 educators were interviewed. People with T2DM described a lack of information at initial diagnosis but were overwhelmingly positive about their experience of structured education programmes. Reasons for non-attendance included not knowing programmes were available, not appreciating the potential benefits, and not wanting to admit to the reality of diabetes. Analysis also identified innovations to increase attendance developed by educators in different areas, and the key role of healthcare professionals in promoting structured education.

### Discussion:

People with T2DM see clear benefits of structured education after attending but need information and encouragement from their healthcare team to support attendance. The innovative strategies developed by educators across the country to promote structured education could be better communicated and standardised nationally. The findings of this study will be discussed in relation to the best use of qualitative research to understand the context for intervention development.

9:30 - 9:45

## Developing intervention content through qualitative research and stakeholder engagement: the D1 Now intervention

M. Byrne<sup>1</sup>, L. Hynes<sup>2</sup>, M.C. O Hara<sup>2</sup>, D. Casey<sup>2</sup>, K. Murphy<sup>2</sup>, S. Dinneen<sup>2</sup>

<sup>1</sup>NUI Galway, Ireland

<sup>2</sup>National University of Ireland, Galway, Ireland

**Background:** As part of intervention development, the aim of this study was to (1) engage key stakeholders and (2) explore perceptions of barriers and facilitators to self-management among young adults with Type 1 Diabetes (T1D) using the COM-B (Capability, Opportunity, Motivation – Behaviour) Model of behaviour change.

**Methods:** A Young Adult Panel (8 service-users aged between 18-25 years living with T1D) was formed, which guided the research process and informed the development of interview topic guides. Interviews were conducted with parents of young adults with T1D (n=10) and health service providers (n=15), and focus groups (n=3) were conducted with young adults, at 3 sites (Galway, Belfast and Dublin). Thematic analysis was used to analyse the data using the framework of the COM-B model to identify and categorise the determinants of T1D self-management among young adults.

**Findings:** Diabetes education and regular, informal access to diabetes-related information was considered vital to capability to engage in diabetes self-management. However, self-management behaviour appeared to be determined by external physical and social factors such as access to a supportive diabetes team. External factors may directly drive self-management behaviour, for example through a stable daily routine, or influence motivation, for example through beliefs about capability to engage in self-management. Resources such as diabetes devices and peer networks enhanced self-management. Young adult's identity as a person living with T1D was an important determinant of self-management behaviour.

**Discussion:** Interventions should target environmental factors to positively influence capability and motivation to engage in T1D self-management among young adults.

9:45 - 10:00

## Interventions to reduce antibiotic prescribing in general practice: a process evaluation of a randomised-controlled trial

S. Tonkin-Crine<sup>1</sup>, A. Schneider<sup>2</sup>, N. Herd<sup>2</sup>, S. Michie<sup>2</sup>, C. Butler<sup>1</sup>, A. Sallis<sup>3</sup>, T. Chadborn<sup>3</sup>

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<sup>3</sup>Public Health England, United Kingdom

**Background:** Interventions are needed to decrease unnecessary antibiotic prescribing by general practitioners (GPs) across Europe. A randomised-controlled trial cluster-randomised 212 general practices to receive usual care, one or two interventions: a commitment poster (to support GPs to prescribe prudently), or a commitment poster and an answerphone message (directing patients with minor infections to pharmacists). Here, we describe the qualitative process evaluation of the trial.

**Methods:** GPs from a purposive sample of practices were invited to participate in a semi-structured interview about implementing the interventions in practice. Interviews were audio-recorded, transcribed verbatim and analysed using thematic analysis.

**Findings:** Twenty-four GPs completed a telephone interview. GPs described making significant changes to their antibiotic prescribing prior to the start of the trial and many felt they were already “low prescribers”. Interviews revealed that GPs were divided about the value of the commitment poster; some thought it was a useful, additional tool, while most considered it ineffective for changing their prescribing. The majority had not acknowledged the “commitment” they were making when adding their signatures and photos to posters and many felt posters were aimed only at patients. Nearly all GPs felt the answerphone message was useful for patients, but some highlighted potential unintended consequences and patient safety concerns.

**Discussion:** The views of GPs suggested that key points in the implementation of interventions had been missed which led to differences in how GPs understood and used the interventions. The process evaluation helped to explain why interventions had not influenced prescribing rates.

# Symposium: Public health promotion in developing countries: recent findings, challenges, and opportunities for health psychology

9:00 - 10:30

Aula E

Jennifer Inauen

9:00 - 9:15

## Hand hygiene compliance during labour and delivery in maternity units in Zanzibar

G. Gon<sup>1</sup>, S. Ali<sup>2</sup>, O. Campbell<sup>1</sup>, M. de Barra<sup>3</sup>, W. J. Graham<sup>1</sup>, L. Penn-Kekana<sup>1</sup>, S. Virgo<sup>1</sup>, S. Woodd<sup>1</sup>, M. de Bruin<sup>3</sup>

<sup>1</sup>London School of Hygiene and Tropical Medicine, United Kingdom

<sup>2</sup>Pemba Health Laboratory – Ivo de Carneri Foundation, Tanzania

<sup>3</sup>University of Aberdeen, United Kingdom

**Background:** Hand hygiene is necessary during birth to prevent newborn and maternal infection. This study aimed to assess hand hygiene compliance and its determinants among birth attendants in the 10 high-volume maternity units in Zanzibar.

**Methods:** Data were collected on hand hygiene and its determinants between March and December 2016. In four facilities, we conducted unstructured observation and 54 qualitative interviews with health professionals. The quantitative phase included longitudinal observation of all birth attendants in situ in each of the 10 facilities and a questionnaire with each of them (N=107). We calculated the mean hand hygiene compliance using different definitions. We used thematic analysis to analyse the qualitative data, and multi-level logistic regression models to analyse the quantitative data.

**Findings:** Using the World Health Organisation definition of hand hygiene which includes avoiding unclean touches between handwashing/rubbing and a clinical procedure, the mean compliance before delivery was 11.6%; when allowing for unclean touches this rose to 30.1%. The relative importance of psychological and context variables in explaining compliance are different for the two hand hygiene definitions. Descriptive norms seem associated with the second definition (OR=1.12, CI:0.99-1.28, p-value=0.069), whilst not with the first (p-value=0.305). From the qualitative results, an efficient physical layout of the ward seems to explain poor compliance to the first but not the second definition.

**Discussion:** Compliance to hand hygiene during birth was low in this context. This study suggests that handwashing/rubbing and avoiding unclean touches are two distinct behaviours, and that both individual and environmental factors influence these behaviours.



9:15 - 9:30

## The role of social identity in reducing unhealthy sanitation practice: a cluster-randomized trial in Ghana

M. Harter<sup>1</sup>, J. Inauen<sup>1,2</sup>, H. Mosler<sup>1</sup>

<sup>1</sup>Eawag: Swiss Federal Institute of Aquatic Science & Technology, Environmental Social Sciences, Environmental and Health Psychology, Switzerland

<sup>2</sup>Columbia University, United States

**Background:** Worldwide 2.4 billion people practice open defecation (OD), which can lead to diarrheal diseases – a major cause of child mortality. To change this practice, behaviour change theories like the RANAS model suggest developing interventions based on psychosocial determinants, such as risk beliefs, attitudes, norms, ability beliefs and self-regulation. The theory of social identity furthermore proposes different dimensions (e.g. centrality) to explain why people act towards a common goal like a more hygienic environment for the whole community. This study aimed at testing the effectiveness of a behaviour change campaign on the reduction of OD, mediated by different factors from the RANAS model and moderated by social identity within communities.

**Methods:** A cluster-randomized trial was implemented comparing different randomly assigned intervention groups with one control group in rural Ghana. 3125 households in 132 communities were interviewed by structured questionnaires. OD frequencies and all variables of the RANAS model as well as social identity were assessed before and after the implementation of a behaviour change campaign.

**Findings:** Moderation analyses revealed, that people in the intervention communities reported significantly less OD behaviour (-53.2%) compared to the control group (-21.4%). The effect was moderated by social identity. Communities with higher levels of social identity showed larger decreases in OD than those with lower social identity.

**Discussion:** Results imply that campaigns focusing on OD should consider the social context and not be implemented as a one-for-all approach. Analysing pre-existing social conditions could improve the effect of this intervention.

9:30 - 9:45

## Promoting effective handwashing: a cluster-randomized controlled trial testing the effectiveness of theory-based interventions

M. Friedrich<sup>1</sup>, H. Mosler<sup>1</sup><sup>1</sup>Eawag, Switzerland

Consistent hand hygiene prevents diarrheal and respiratory diseases, but it is often not practiced in every-day life. The disease burden is highest in low-income settings. We tested if theory-based interventions using the risks attitudes, norms, abilities and self-regulation (RANAS) model can effectively promote domestic handwashing.

In this randomized, controlled trial (N=270), communities were randomized to a theory-based intervention or a control condition. Outcome measures were surveyed at baseline and six weeks' follow-up and included observed handwashing frequency, technique and faecal hand contamination before and after handwashing. In addition, mediation analyses were performed to reveal the changes in psychosocial factors underlying behaviour change.

The intervention resulted in handwashing with soap at 28% of critical handwashing times, while the corresponding figure for the non-intervention control was 5% (p=.004). Changes in handwashing frequency were mediated by changes in descriptive norms, action knowledge and remembering. Handwashing technique, measured as the number of correctly performed handwashing steps, increased to an average of 6.2, while the control averaged 5.2 steps (p<.001). Improvement in handwashing technique was mediated through changes in descriptive norms and action knowledge. No statistically significant group differences in faecal hand contamination were detected.

The results provide strong evidence that the intervention successfully improved both handwashing frequency and technique. It shows that theory-driven interventions, provide effective means to trigger substantial health behaviour change in every-day life. The fact that the microbial effectiveness of handwashing did not improve despite strong improvements in handwashing technique calls for critical evaluation of existing handwashing recommendations.

9:45 - 10:00

## Everything works? Bangladeshi patients' evaluation of informal medical care quality is independent of treatment quality

M. de Barra<sup>1</sup>, P. Strimling<sup>2</sup>, K. Eriksson<sup>2</sup>, Z. Hayat Mahmud<sup>3</sup>, M.R. Haque Hossainey<sup>4</sup>

<sup>1</sup>University of Aberdeen, United Kingdom

<sup>2</sup>Stockholm University, Sweden

<sup>3</sup>icddr,b, Bangladesh

<sup>4</sup>icddb,b, Bangladesh

### Background:

Medical overuse - the provision of ineffective or unnecessary medical care - is a globally important problem. In low income countries like Bangladesh where much primary care is administered by practitioners without formal training and is free from regulatory oversight, the problem may be particularly acute. The objective of this project was to examine the psychological processes which may shape medical overuse in rural Bangladesh. We hypothesise that feedback from patients to medical practitioners about treatment effectiveness is positively biased.

### Methods.

We conducted a cross-sectional study of 41 informal primary care practitioners and 241 of their patients. Exit questionnaires with patients assessed symptoms and the treatment administered. At follow-up 7 to 10 days later, the patient was interviewed again and self-reported recovery, satisfaction with care, and feedback to practitioner were measured. A medical doctor assessed each drug for appropriateness using established guidelines.

### Results.

Of the 550 drugs administered, 50.00% were judged to be inappropriate yet most patients (89.76%) were satisfied or very satisfied with the treatment. An ordinal logistic regression suggested that satisfaction with treatment at follow-up was predicted by patient recovery (OR: 3.07, 95% CI: 2.01 to 4.85) but not by treatment appropriateness (OR: 0.88, 95% CI: 0.58 to 1.34).

### Conclusion

Medical overuse is common in this setting. Results are consistent with the suggestion this is driven in part by the misattribution of recovery to the treatment rather than to regression to mean / natural recovery. This attribution error may perpetuate medical overuse.

10:00 - 10:15

## Identifying psychosocial factors to explain Ebola preventive behaviours in Guinea-Bissau

A.E. Gamma<sup>1</sup>, H. Mosler<sup>1</sup>, J. Slekiene<sup>1</sup><sup>1</sup>EAWAG, Switzerland

**Background:** The Ebola virus disease is a severe illness with a mortality rate of up to 90%. Human-to-human transmission occurs via several pathways, e.g. touching infected persons. This study aimed at identifying the psychosocial factors of the RANAS model (risks, attitudes, norms, abilities, and self-regulation) to explain intentions to perform Ebola preventive behaviours in Guinea-Bissau.

**Methods:** A quantitative survey with 1369 households was conducted by structured face-to-face interviews. The questionnaire assessed Ebola preventive behaviours (not touching affected people, reporting suspected cases to the Ebola hotline), and the RANAS model factors. Data were analysed by multiple linear regression.

**Findings:** For the intention not to touch infected persons, the most important predictors were risk perception ( $\beta = .210$ ;  $p \leq .001$ ), health knowledge ( $\beta = .132$ ;  $p \leq .001$ ), and self-efficacy ( $\beta = .132$ ;  $p \leq .001$ ). The most important predictors for the intention to call the Ebola hotline were personal norm ( $\beta = .204$ ;  $p \leq .001$ ), injunctive norm ( $\beta = .137$ ;  $p \leq .001$ ), response belief ( $\beta = .137$ ;  $p \leq .001$ ), and commitment ( $\beta = .137$ ;  $p \leq .001$ ).

**Discussion:** Interventions to increase the intention not to touch infected persons should focus on increasing knowledge by presenting scenarios about the possibilities of contracting Ebola and on increasing risk perception by informing people about personal risk. Calling the Ebola hotline might be increase by normative behaviour change techniques, e.g. by an influential local celebrity. This research is relevant to other disease outbreaks (e.g. Zika), and public health interventions during emergencies.

# Symposium: Tailored eHealth methods: innovations and cost-effectiveness

9:00 - 10:30

Aula F

Hein de Vries

9:00 - 9:15

## Integrating principles of recommender systems into mHealth for smoking cessation in patients

S. Hors-Fraile<sup>1,2</sup>, L. Fernandez-Luque<sup>3,4</sup>, F. Schneider<sup>1</sup>, H. de Vries<sup>1</sup>

<sup>1</sup>Maastricht University, Netherlands

<sup>2</sup>University of Seville, Spain

<sup>3</sup>Salumedia Tecnologías, Spain

<sup>4</sup>Qatar Computing Research Institute HBKU, Qatar

### Introduction:

Health recommender systems (HRS) can predict on the basis of previously acquired knowledge which items (for instance, messages) each user prefers to receive in the future. Using this system will lead to a better matching of user needs and thus to more satisfaction and less drop-out.

### Methods:

Smoking patients are randomly assigned to the usual care or experimental condition. Smoking patients from the experimental condition received the HRS – using the trans-theoretical behavioural change model and previous studies of smoking cessation messages. Messages were sent via a mobile app, as part of a pharmacologic and behavioural change treatment in a hospital smoking cessation unit. We measure the quality of the recommender system, and the user engagement.

### Results:

After an initial 3-month period, a total of 283 messages have been sent to the 30 recruited participants. They have rated 278 messages as positive (matching their interests), 4 as negative, and 1 as neutral. The results of an in-depth analysis comparing those who were satisfied versus those who were less satisfied will be discussed in detail as well as comparisons between the experimental and control condition.

### Discussion:

The early results showed positive findings. Further work is needed to analyse the complete data set when the intervention finishes, to see how we can improve the algorithm

### Conclusion:

HRS grounded in psychology theories to support behavioural change and increase engagement in smoking cessation is still in its infancy. Yet, early results from this study are promising for future applications.

9:15 - 9:30

## Cultural adaptation and feasibility assessment of a web-based-computer-tailoring programme for binge-drinking prevention in Spanish adolescents

J.M. Martínez-Montilla<sup>1</sup>, M. Llma-Serrano<sup>1</sup>, L. Mercken<sup>2</sup>, H. de Vries<sup>3</sup>

<sup>1</sup>University of Sevilla, Spain

<sup>2</sup>University of Maastricht, Netherlands

<sup>3</sup>Maastricht University, Netherlands

**Objectives:** To assess the feasibility of ALERTA ALCOHOL, a web-based-computer-tailoring programme for binge-drinking prevention in adolescents from 16 to 18 years-old.

**Method:** Firstly, we developed a cultural adaptation of the programme ALCOHOL ALERT, which was previously designed and evaluated in The Netherlands. The rationality of the Spanish version was assessed in a Delphi Panel. Secondly, a pilot study was carried out to assess de feasibility of the programme, in which were enrolled 187 secondary students from 16 to 18 years-old between November and December 2016, in Seville, Spain. We evaluated the adaptability, viability and satisfaction with the program, using a self-administered Likert questionnaire.

**Results:** 101 were male students with a mean of 16.81 years and a SD=2.66. 69.8% found that different sessions of the programme were understandable but 47.1% found that they were long. 64.4% found that the e-health messages were trustworthy, 63.6 that were interesting. 57.3% liked the design, the 39.1%, would use it again, 55.1% would recommend the programme and 57.8% was satisfied or satisfied a lot with the programme.

**Conclusions:** With this study we expect to prevent from the binge-drinking between Spanish adolescents, being the first web-based-computer-tailoring programme in Spain. The pilot study shows moderate results regarding its feasibility. The follow phase of the study consists in implementing and evaluating the programme in CRTIC. In the programme proves its effectiveness, it could be disseminate in Spain as a public health policy.

9:30 - 9:45

## AcceptME: Evaluation of a digital gamified prevention program based on Acceptance and Commitment Therapy

M. Karekla<sup>1</sup>, P. Nicolao<sup>1</sup><sup>1</sup>University of Cyprus, Cyprus

**Background:** Eating Disorders (ED) constitute a serious public health issue that affects predominantly women and appears typically in adolescence or early adulthood. EDs are associated with significant adverse medical and psychological consequences, and developing successful prevention programs is vital. Prevention programs to date have not shown great effectiveness and thus new approaches (both theoretically and technologically innovative) are needed so as to reach individuals early in the ED trajectory. This paper presents the development of a gamified prevention program (AcceptME ) based on Acceptance and Commitment Therapy.

**Method:** The study used an experimental design and investigated acceptability and effectiveness compared to a wait-list control group among high-risk for EDs young women (N= 88; Mage = 15 years). The prevention group (N= 58) completed 6 internet-based sessions targeting behavior change via helping (using ACT taught principles) a digital character in the game to overcome difficulties.

**Results:** Findings showed that the AcceptME program was perceived as helpful for dealing with body related thoughts and worries and participants particularly liked and found helpful the values and acceptance components of the program. The game storyline was reported to be engaging and aid in learning from the game experience. Repeated measures analyses of variance indicated that the AcceptME prevention program effectively reduced weight and shape concerns, with large resulting effect sizes (Cohen's  $d=.91$ ) compared to wait-list controls.

**Conclusions:** The results suggest that the gamified AcceptME prevention program holds promise for the prevention of EDs among young women and is ready for large scale implementation.



9:45 - 10:00

## Two tailored eHealth programs for alcohol control

H. de Vries<sup>1</sup>, C. Hoving<sup>1</sup>, R. Crutzen<sup>1</sup>, L. Mercken<sup>1</sup><sup>1</sup>Maastricht University, Netherlands

**Background:** We assessed the potential of computer tailored eHealth interventions to stimulate pregnant women not to drink alcohol and compared the results to conditions providing health counselling or usual care(Study 1), and to prevent binge drinking in adolescents using gamification principles (Study 2).

**Methods:** In study 1 60 Dutch midwifery practices were randomly assigned to the: 1. tailored eHealth condition (N= 135 pregnant women); 2. The health counseling condition (N=135) and the usual care condition (N= 142) with follow-ups after 3 and 6 months. Study 2 used a cluster randomized controlled trial among 34 Dutch schools. Schools were randomized into the experimental (n=1622) or the control (n=1027) condition. Follow-up assessment of alcohol use took place 4 months after baseline.

**Results:** The results for Study 1 showed that respondents in the eHealth tailored condition had stopped drinking alcohol more often compared to usual care respondents 6 months after baseline. Health counseling did not reduce alcohol consumption, and results also revealed problems with the implementation. Study 2 results showed that the intervention was effective in reducing binge drinking among adolescents aged 15 years and those aged 16 years when they participated in at least 2 intervention sessions.

**Discussion:** Although midwives liked the health counselling program, its implementation in practice resulted in problems, thus favouring the effect and potential impact of computer tailoring. Adding gamification to eHealth programs for adolescents is promising; yet usage of these programs still need further attention.

10:00 - 10:15

## Overview and cost-effectiveness of internet-based interventions for smoking cessation in the Netherlands

K.L. Cheung<sup>1</sup>, B. Wijnen<sup>1</sup>, M. Hiligsmann<sup>1</sup>, S. Evers<sup>2</sup>, H. de Vries<sup>1</sup>

<sup>1</sup>Maastricht University, Netherlands

<sup>2</sup>Maastricht University and Trimbos Institute, Netherlands Institute of Mental Health and Addiction, Utrecht, The Netherlands, Netherlands

**Background:** Internet-based smoking cessation interventions have been shown to be effective in enhancing smoking cessation. Yet, it is not clear to what extent these interventions are cost-effective in the Netherlands. This study therefore aimed to (1) provide an overview of internet-based smoking cessation interventions in the Netherlands, and (2) evaluate the cost-effectiveness of adding internet-based interventions to the current practice for smoking cessation.

**Methods:** A mixed-method approach was used to identify the interventions, using scientific literature and grey literature search; and Expert input. A meta-analysis was then performed to determine the effectiveness of a pooled intervention. The EQUIPT return on investment tool was used to calculate the incremental cost-utility ratios (expressed in cost per quality-adjusted life years (QALYs) gained) for different time horizons comparing the current practice with the alternative package (which includes the internet-based intervention).

**Findings:** Many interventions were offered without providing data on the effectiveness, except four six interventions that were included in trials. Four of them, were shown to be effective and cost-effective. The alternative package was dominant in all time horizons (i.e. two years, five years, ten years, and lifetime), with QALYs gained and reduced healthcare costs.

**Discussion:** To our knowledge, this is the first study modelling internet-based smoking cessation interventions in the Netherlands; illustrating cost-effectiveness if added to the current provision of services. However, due to the many internet-based interventions, the smoker is left in bewilderment concerning their efficacy, as most of these data are not available nor offered to the smokers.

# Contextual influences and interventions around children's well-being and healthy habits

9:00 - 10:30

Aula A

Laura Belmon

9:00 - 9:15

## Is adolescent's perceived activity-friendly environment associated with more physical activity and fewer screen-based activities?

J. Kopcakova<sup>1</sup>, Z. Dankulincova Veselska<sup>2</sup>, A. Madarasova Geckova<sup>3,4</sup>, J. Bucksch<sup>5</sup>, H. Nalecz<sup>6</sup>, D. Sigmundova<sup>4</sup>, J.P. van Dijk<sup>4,7</sup>, S.A. Reijneveld<sup>7</sup>

<sup>1</sup>P J Safarik University, Kosice, Slovakia, Slovakia

<sup>2</sup>PJ Safarik University in Kosice, Slovakia

<sup>3</sup>P J Safarik University in Kosice, Slovakia

<sup>4</sup>Palacky University Olomouc, Czech Republic

<sup>5</sup>Bielefeld University, Germany

<sup>6</sup>The Jozef Pilsudski University of Physical Education, Poland

<sup>7</sup>University of Groningen, Netherlands

**Objectives:** An environment perceived as activity-friendly may affect physical activity and screen-based activities in both, positive and negative way, but the mechanisms are not clear. The aim of this study is to explore if perception of activity-friendly environment is associated with more physical activity and less screen-based activities among adolescents.

**Methods:** We collected self-reported data in 2014 within the cross-sectional study Health Behaviour in School-aged Children in the Czech Republic, Slovakia, Poland and Germany (n=13,800, mean age =14.4, 49.4% boys). We explored the association between perceived environment (e.g. "There are other children nearby home to go out and play with."; "There are playgrounds or parks close to my home where I can play."; "It is safe to walk or play alone in my neighbourhood during the day.") with physical activity and screen-based activities using a binary logistic regression model adjusted for age, gender, family affluence and country.

**Results:** We found that a perception of the environment as more activity-friendly was significantly associated with a higher probability that adolescents meet the recommendations for physical activity in the four European countries. Furthermore, we found this perception associated with a lower probability of adolescent's excessive screen-based activities in these countries.

**Conclusions:** Perceived environment is associated with adolescents' physical activity and screen-based behaviour. Investments in an activity-friendly environment might help to promote an active life style in adolescence.

9:15 - 9:30

## Determinants of children's sleep behavior: a systematic review of longitudinal studies

L.S. Belmon<sup>1</sup>, M.M. van Stralen<sup>2</sup>, V. Busch<sup>3</sup>, I.A. Harmsen<sup>3</sup>, M.J.M. Chinapaw<sup>1</sup>

<sup>1</sup>Department of Public and Occupational Health, Amsterdam Public Health research institute, VU University Medical Center, Netherlands

<sup>2</sup>Department of Health Sciences, Faculty of Earth & Life Sciences, Vrije Universiteit Amsterdam, Amsterdam Public Health research institute, Netherlands

<sup>3</sup>Department of Epidemiology & Health Promotion, Section Youth, Municipal Health Service Amsterdam, Netherlands

**Background:** Healthy sleep behavior (i.e. adequate sleep duration, good sleep quality and healthy bedtime routines) is of significant importance for numerous health outcomes in children, such as psychosocial health, obesity and social development. To develop evidence-based interventions targeting healthy sleep behavior, insight in the determinants of child sleep behavior is urgently needed. Hence, our objective is to systematically review the literature on determinants of sleep behavior in children 4-12 years of age.

**Methods:** Studies were identified from searches in PubMed, PsycINFO, and Web of Science, until January 2017. We included longitudinal studies investigating the association between healthy sleep behavior and its determinants in healthy children aged 4-12 years. In total 10,892 articles were identified and 52 full text articles were included. Included articles were scored on their methodological quality and the results were summarized with a best-evidence synthesis. The guidelines of the PRISMA statement were followed.

**Findings:** Several demographic (i.e. age, gender, socioeconomic status), biological (i.e. BMI, puberty), social (i.e. marital conflict, parent-child relationships, parental practices), and environmental factors (i.e. media exposure) were identified as determinants of children's sleep behavior.

**Discussion:** Interventions that promote healthy child sleep behavior should take into account the identified demographic, social and environmental determinants.

9:30 - 9:45

## Nail-Patella syndrome : impacts of psychological suffering generated by a genetic disease on children development

L. Geerts<sup>1,2</sup>, P. Antoine<sup>2</sup>, E. Brugallé<sup>2</sup>, F. Frénois<sup>3</sup>, S. Manouvrier-Hanu<sup>3</sup>, C. Fantini-Hauwel<sup>4</sup>

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<sup>3</sup>Université de Lille, CHU Lille, EA 7364 - RADEME - Maladies RAres du Développement embryonnaire et du Métabolisme : du phénotype au génotype et à la Fonction, F-59000 Lille, France

<sup>4</sup>Université Libre de Bruxelles, Research center of Clinical Psychology, Psychopathology and Psychosomatic, Brussels, Belgium

**Background :** Nail-Patella syndrome is a genetic disease affecting approximately one birth on 50.000. It is caused by a mutation in the LMX1B gene and it is characterized by skeletal malformations including nails, knees and elbow abnormalities.

The aim of the present research was to deeply understand the subjective experience of patients affected by this syndrome and the consequences of symptoms on the personal identity construction. In this way, this research will allow to propose interventions in order to improve the patients' experience and to address these potential difficulties as part of genetic counseling.

**Method:** Nine semi-structured interviews were conducted and analyzed with the Interpretative phenomenological analysis.

**Findings:** The results allowed to bring to light a childhood characterized by physical disabilities impacting social and school activities. The participants developed their identity considering themselves as being different from the others; a difference underlying a heightened sensitivity of others' critical eye, self-acceptation difficulties and a social withdrawal. Throughout their self-development, the patients learned to implement some coping strategies in order to limit interpersonal consequences. At the adult age, the participants show a pseudo acceptance of their physical symptoms but the physical and psychological suffering persist over time.

**Discussion:** The research highlighted the maladjustment of school activities and a need of assistance to improve the social insertion of these children at school. Moreover, a psychological assistance should be proposed to all members of families affected by Nail-patella syndrome given the important influence of self-acceptation difficulties and social withdrawal on children development.

9:45 - 10:00

## Ecological predictors of health-related quality of life among children from low-income families in South Korea

J. Park<sup>1</sup>, S. Baek<sup>1</sup><sup>1</sup>Inje University, South Korea

**Background:** Previous studies on children's HRQoL have focused on children with certain diseases or conditions. Additionally, the factors that influence children's HRQoL that were investigated in previous studies were limited to intrapersonal and interpersonal factors. Therefore, the present study attempts to identify the factors that influence HRQoL among children from low-income families using a multifaceted approach that includes organizational aspects as well as intrapersonal and interpersonal aspects by applying the ecological model.

**Methods:** This study employed a descriptive, correlational, non-experimental research design. The convenience sample included 141 school-age children from low-income families using a community child care center. Data were collected using a structured self-report survey, and HRQoL was measured by PedsQL 4.0 generic core scales. Hierarchical multiple regression analysis was employed.

**Findings:** The mean score of the children's HRQoL was 77.35 out of 100. The predictors that influenced the HRQoL of the children were health perception, health-promoting behaviors at the intrapersonal level, peer support at the interpersonal level, and the daily time use at the center at the organizational level. These variables accounted for 48.2% of the variance in HRQoL.

**Discussion:** The HRQoL of children from low-income families was influenced not only by intrapersonal factors but also by environmental factors. Therefore, it is necessary to provide multi-level interventions to improve these children's HRQoL.

10:00 - 10:15

## Evaluation of a community-based, family-focused healthy weights initiative using the RE-AIM framework

M. Jung<sup>1</sup>, J. Bourne<sup>1</sup>, A. Anand<sup>2</sup>, M. Hopkins<sup>2</sup>

<sup>1</sup>University of British Columbia, Canada

<sup>2</sup>The Bridge Youth and Family Services, Canada

**Background:** Community-based interventions have the potential to reach caregivers and children at risk for overweight and obesity. The overall impact of these programs is rarely assessed. This study evaluated a physical activity and healthy eating family program (Healthy Together; HT) using RE-AIM.

**Methods:** Ten centres implemented the 5-week program. Thirty-nine staff members and 277 program participants (126 caregivers [Mage=35.6] and 151 children/youth [Mage=13]) participated in the evaluation. Each RE-AIM dimension was assessed independently using a mixed-methods approach. Sources of data included archival records, interviews, open-ended surveys and questionnaires. Effectiveness outcome variables were assessed at pre-, post-intervention and 6-month follow-up.

**Findings:** Reach: HT participants were almost entirely recruited from existing programs within community centres. Effectiveness: Caregivers' nutrition related efficacy beliefs increased following HT ( $p's < .03$ ). Participation in HT was not associated with significant changes in physical activity or nutrition behaviour or perceived social support ( $p's > .05$ ). Knowledge surrounding healthy diets and physical activity increased in children and caregivers ( $p's < .05$ ). Adoption: Thirty-five percent of centres approached to implement HT expressed interest. The 10 centres recruited existing staff members to implement HT. Implementation: Program objectives were met 72.8% of the time and 71 adaptations were made. HT was finance- and time-dependent. Maintenance: Two centres fully implemented HT in the follow-up year and 5 centers incorporated aspects of HT into other programs.

**Discussion:** Working alongside organizations that develop community programs to conduct comprehensive, unbiased evaluations can systematically highlight areas of success and challenges. As a result of this evaluation, modifications are currently being implemented to HT.



10:15 - 10:30

## School-based mental health promoting programs enhance neurocognitive skills: examining working memory and mindfulness practice

M. Lassander<sup>1,2</sup>, M. Hintsanen<sup>3</sup>, S. Mullola<sup>1</sup>, Å. Fagerlund<sup>4</sup>, S. Suominen<sup>5</sup>, S. Volanen<sup>1</sup>

<sup>1</sup>University of Helsinki, Finland

<sup>2</sup>Finnish Mental Health Association, Finland

<sup>3</sup>University of Oulu, Finland

<sup>4</sup>Folkhälsan Research Center, Finland

<sup>5</sup>University of Turku, Finland

The presentation will focus on data from larger research project 'Healthy Learning Mind - cluster randomized controlled trial'. The study examines the effects of mindfulness intervention vs relaxation training on neurocognitive measures of executive functioning. Research has emphasized the importance of executive functioning in enhancing learning, social-emotional skills and adaptive behaviour.

A total of 131 students between ages 12 and 15 participated from four schools. Schools were randomized to intervention and control group: mindfulness or relaxation based 9-week "Skills for Wellbeing" course. Participants completed a test-package aimed to measure cognitive skills that are relevant for executive functioning (EF) at baseline/pre-intervention, post-intervention at 9 weeks and follow-up at 6 months.

Both groups improved significantly on majority of measures: response inhibition (RI), cognitive flexibility (CF) and verbal fluency (VF). The results were linked to personal practice.

The results suggest that mindfulness and relaxation training yield mostly common effects to neurocognitive functioning but some unique effects are observable in terms of WMC. All effects can be observed after a short training period and demonstrate the potential of wellbeing enhancing interventions for youth, which have the potential of buffering stress and empowering the learning experience.

# Predictors of adherence and behavioural change

9:00 - 10:30

Aula B

Madelynn A. Arden

9:00 - 9:15

## Can the theory of planned behaviour help explain follow-up attendance of childhood cancer survivors?

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**Background:** Childhood cancer survivors are at high risk for late effects. Regular attendance to long-term follow-up care is crucial and helps monitoring survivors' health. The Theory of Planned Behaviour (TPB) was developed to predict a diverse range of health behaviours. We investigated whether the TPB helps explain attendance to follow-up care in Swiss survivors. We aimed to i) identify TPB-related predictors for the intention to attend follow-up, and ii) examine associations between intention and actual attendance.

**Methods:** We sent a questionnaire to 716 eligible Swiss childhood cancer survivors (diagnosed with cancer aged

**Findings:** Of 299 responders (41.8%; 166 females (55.5%)), 145 (48.5%) reported attending follow-up care. We found that subjective norm (Coef.0.89,  $p < 0.001$ ) predicted the intention to attend follow-up, while attitude and perceived control did not. Perceived control (OR=1.3, 95%CI:1.03–1.71) and the intention to attend follow-up (OR=2.0, 95%CI:1.70–2.32) were positively associated with attendance.

**Discussion:** Interventions to promote positive subjective norm and enhance perceived control are needed to increase attendance to follow-up care. Educating survivors on different models for follow-up care may enhance perceived control. Parents, friends, and health care professionals should be advised on the importance of their support regarding survivors' attendance.

9:15 - 9:30

## Psychosocial predictors of adherence after bariatric surgery: a 6 month follow-up study

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**Background:** Bariatric surgery is among the most effective treatments for obesity. However, poor adherence to post-operative instructions is common and results in suboptimal health outcomes. The present study sought to identify psychosocial factors in the early post-operative stage that predict adherence and surgical outcomes 6 months after bariatric surgery.

**Methods:** 62 bariatric surgery patients completed surveys at baseline (2-6 weeks post-operation) and 6-month follow-up including measures of surgical outcomes (BMI and quality of life), post-operative adherence, and psychosocial factors (depression, anxiety, eating behaviours, self-stigma and experienced stigma, obesity-specific distress, attitudes towards post-operative adherence, and self-monitoring).

**Findings:** Correlational analyses revealed that higher self-efficacy regarding adherence, more positive beliefs about the benefits of adherence, and more frequent self-monitoring of weight at baseline predicted better adherence 6 months after surgery. Lower levels of self-reported depression and maladaptive eating behaviours at follow-up were also associated with better adherence. There was a significant positive correlation between adherence and quality of life at follow-up (even when controlling for weight change); however, there was no significant relationship between adherence and BMI. Participants also experienced improvements in anxiety, eating behaviours, self-stigma and experienced stigma, and distress at 6-month follow-up.

**Discussion:** This study identified psychosocial factors in the early post-operative stage that may be predictive of later adherence, specifically self-efficacy, beliefs about the benefits of adherence, and weight self-monitoring. Adherence was, in turn, associated with better quality of life at follow-up. These findings may inform psychological management of patients to improve adherence and health outcomes after bariatric surgery.

9:30 - 9:45

## Changing multiple health behaviours prior to major surgery: surgery as a teachable moment

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### Background

There is compelling evidence showing that unhealthy behaviours such as physical inactivity, smoking, poor diet, and excess alcohol consumption are associated with an increased risk of post-surgical complications in patients undergoing major surgery. Changing unhealthy behaviours before surgery to reduce the risk of short-term post-operative complications might be more motivating to patients than the prospect of permanent behaviour change to promote longer-term health benefits. This study aimed to explore patient attitudes towards changing health behaviours before surgery.

### Methods

150 patients attending pre-surgical assessment at two hospital sites were recruited. Participants answered a questionnaire exploring motivation, confidence and priority in relation to changing their health behaviours. The questionnaire specifically compared attitudes towards changing individual and multiple health behaviours in the short-term versus the long-term. Responses were analysed using t-tests.

### Findings

Patients were more motivated, confident and placed higher priority on increasing their physical activity and reducing alcohol intake when these changes were considered for short-term (i.e. post-surgical) versus long-term benefits. There was no significant difference in patients' views for maintaining a healthy weight and smoking cessation. In addition, patients were more motivated, confident and placed higher priority on changing multiple behaviours for short-term versus long-term benefits.

### Discussion

Patients are willing to make changes to multiple health behaviours prior to major surgery. Therefore, the pre-surgical period may represent a 'teachable moment' which can be used to promote both short-term (post-surgical) and long-term health benefits. Future research should explore the feasibility and acceptability of interventions targeting multiple behaviours in the pre-surgical context.

9:45 - 10:00

## Understanding nebuliser adherence in adults with Cystic Fibrosis: comparing high, medium and low adherers

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### Background:

Cystic Fibrosis (CF) is a genetic condition that causes lung damage. Nebulised medication is prescribed but adherence is poor. Understanding the differences between people who adhere to their treatment and those who do not is essential to enable us to develop effective interventions. This study used objective measures of adherence to compare high ( $\geq 80\%$ ), medium (50-79%) and low adherers ( $< 50\%$ ) on a range of measures.

### Methods:

Sixty-four participants completed questionnaires: Beliefs about Medicines questionnaire (BMQ-specific), intention, confidence, treatment burden (CFQ-R), life chaos (CHAOS), habit (SRBAI), and subjective adherence (%). Each was provided with an eTrack nebuliser (PARI) which collected objective data about the number of treatments taken over the following 14 day period.

### Results:

High adherers had stronger necessity beliefs and intentions to adhere than low adherers ( $ps < 0.05$ ). Low adherers reported more life chaos than medium and high adherers ( $ps < 0.05$ ) and were less confident that they could adhere ( $ps < 0.01$ ). Habits were stronger in high adherers than medium and low adherers ( $ps < 0.05$ ). Low adherers reported optimistic subjective adherence compared to high adherers who were more pessimistic ( $p < 0.001$ ). There were no group differences for concern beliefs or perceived treatment burden.

### Conclusion:

Results from this exploratory study indicated that interventions to increase nebuliser adherence might usefully focus on the development of realistic assessments of adherence (feedback), beliefs about the necessity of treatment, motivation and confidence, and the development of habits. This work has fed into the development of the CFHealthHub adherence intervention.

10:00 - 10:15

## Differences in vaccination patterns: applying the diffusion of innovation theory

K. Eritsyanyan<sup>1</sup>, N. Antonova<sup>1</sup><sup>1</sup>Herzen State Pedagogical University of Russia, Russia

**Background:** The diffusion of innovations theory (Rogers, 1995) currently in empirical studies of vaccination behavior is being applied primarily for studying the new vaccines uptake. However this theory might be applicable to the issue of vaccination refusal which might be considered a behavioral innovation.

**Methods:** A telephone survey of a representative sample of the population of St. Petersburg (Russia) (N = 1175) was used to test hypotheses about the influence of vaccine refusal strategy visibility on vaccination decisions. Study was funded by Saint Petersburg State University (#8.38.289.2014). Respondents were asked about their vaccination patterns, awareness of anti-vaccination ideas and acquaintance with people who refuse vaccination. Hypothetic scenario of new vaccine intention was also presented and respondents were asked to make a decision about its use for themselves and their children.

**Findings:** Among St. Petersburg parents 4.2% (CI 95% 1.8% - 6.7%) didn't vaccinate their child with any vaccine despite absence of medical contraindications. 15.4% of parents said that their younger child is incompletely vaccinated. Those people could be considered as innovators or early accepters. Majority of respondents (68.6%) are familiar with anti-vaccination ideas and 51.3% personally know people who refuse vaccination. Familiarity with anti-vaccination ideas wasn't connected with vaccination behavior and vaccination decision. However knowing personally the people who refuse vaccination decrease intention to have vaccination in hypothetic scenario (AOR=0.58; p≤0.001) as well as vaccinate a hypothetic child (AOR=0.33; p≤0.01).

**Discussion:** Diffusion of innovation theory is highly applicable for studying the vaccination refusals.

# Systematic reviews and new approaches: which health behavior change interventions work?

9:00 - 10:30

Aula C

Martin S. Hagger



9:00 - 9:45

## The Human Behaviour Change Project: harnessing computer science to advance behavioural science

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Behaviour change is essential if major health problems such as obesity and cancer are to be tackled. Evidence is needed by researchers, policy-makers and practitioners about intervention effectiveness across contexts, and about mechanisms of action. Such evidence is currently produced on a vast but fragmented scale and more rapidly than humans can synthesise and access. Computers have the capacity and speed to do this task but lack the organisational structure to do this successfully. Progress in this area requires a collaboration between computer and behavioural scientists to develop a knowledge structure ('ontology') and apply it to the evidence, and information science to support the curation and access of evidence.

The Human Behaviour Change Project brings together behavioural, computer and information scientists to build an Artificial Intelligence system to continually scan the world literature on behaviour change, extract key information and use this to build and update the scientific understanding of human behaviour to answer variants of the 'big question': 'What works, compared with what, how well, for whom, in what settings, for what behaviours and why?'

The project involves an iterative process including: 1. Develop an ontology (structure for organising knowledge) of features of behaviour change intervention evaluations using a consensus process with international experts to, 2. Annotate published literature using the ontology, 3. Build an automated feature extraction system, 4. Build a Machine Learning and Reasoning system to synthesise the evidence, 5. Develop an interactive user interface to interrogate and update the knowledge system created.

The project builds on taxonomies of behaviour change already developed, and existing ontologies (e.g. the Cochrane PICO ontology) and feature extraction systems (e.g. EPPI-Reviewer). It will focus initially on the use-case of smoking cessation but the project team will make available resources, products and findings throughout the life of the project to encourage collaboration.

9:45 - 10:00

## Cochrane review and meta-analysis of trials of action and/or coping planning for health behaviour change

J. Presseau<sup>1,2</sup>, J. Squires<sup>1,2</sup>, A. Patey<sup>2</sup>, J. Francis<sup>3</sup>, S. Asad<sup>2</sup>, S. Simard<sup>2</sup>, B. Vachon<sup>4</sup>, C. Bond<sup>5</sup>, C. Fraser<sup>5</sup>, J. Grimshaw<sup>1,2</sup>

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<sup>5</sup>University of Aberdeen, United Kingdom

**Background:** Action Planning and Coping Planning (Implementation Intentions) are well-tested techniques for changing health behaviour. **Aims:** conduct a Cochrane review of trials of interventions involving action and/or coping planning across health behaviours in adults, and identify effect modifiers (type of plan, outcome measure, follow-up length).

**Methods:** We searched Cochrane, MEDLINE, Embase, CINAHL, PsycINFO, and trial registers up to January 2014. We included randomized trials of interventions involving action and/or coping planning reporting health behaviour outcomes. Random effects meta-analyses were conducted on trials with sufficient data and which delivered action planning only, coping planning only, or both; objectively-assessed or self-reported behaviour; and follow-up length (

**Findings:** We included 119 trials involving 34,252 participants. Meta-analysis results (96 trials); for objectively-measured continuous outcomes were: Action Planning:

**Discussion:** In this largest review to date, spanning all health behaviours, Action and/or Coping Planning had a small-to-medium effect on objectively-assessed behaviour, and medium effect on self-reported behaviour. There remains considerable unexplained heterogeneity and a need for more trials using objective outcomes and longer-term follow-up.

10:00 - 10:15

## Imagery interventions in health behaviour: a meta-analysis

D. Conroy<sup>1</sup>, M. Hagger<sup>2,3</sup><sup>1</sup>Birkbeck University of London, United Kingdom<sup>2</sup>Curtin University, Australia<sup>3</sup>University of Jyväskylä, Finland

**Background:** Imagery-based interventions represent an inexpensive, potentially effective technique for changing health behaviour yet have shown considerable variability in effects across studies. The present review provided a quantitative synthesis of the effectiveness of mental imagery interventions in health behaviour and tested key moderator effects. **Methods:** A systematic database search for studies adopting imagery interventions in health behaviour and related outcomes was conducted with additional manual searches and direct author contact for unpublished studies. Data were extracted for imagery intervention effects on behavioural, psychological, and physiological outcomes, and for candidate moderators. **Findings:** Twenty-six studies of mental imagery intervention effects comprising 33 independent data sets met eligibility criteria for review inclusion. Mental imagery interventions led to non-trivial, small averaged corrected effect sizes on post-intervention behaviour ( $d+ = 0.23$ ), intention ( $d+ = 0.19$ ), perceived control ( $d+ = 0.08$ ), and attitude ( $d+ = 0.12$ ), and a small-to-medium sized effect of imagery interventions on post-intervention physiological measures ( $d+ = 0.29$ ). The substantive heterogeneity in the effects meant that a search for moderators was warranted. Moderator analyses indicated stronger effects for imagery interventions on health behaviours in studies on older samples, when detailed instructions were provided, in studies with higher methodological quality scores, and in studies of longer duration. Effect sizes for imagery on behavioural and physiological outcomes were larger than effects on psychological outcomes. **Discussion:** Results support effects of mental imagery interventions on health behaviours, identifies the conditions where they may be more effective, and points to how future imagery interventions might be optimized.

10:15 - 10:30

## Mental contrasting as a health behaviour change technique: a systematic review and meta-analysis

A. Cross<sup>1</sup>, D. Sheffield<sup>1</sup><sup>1</sup>University of Derby, United Kingdom

**Background:** Mental contrasting is a self-regulation strategy required for strong goal commitment. Mental contrasting involves: (1) imagining a desired future health goal (2) contrasting the goal with the reality preceding the goal state, which after reflection is viewed as an obstacle (Oettingen et al., 2000). Recent research has also used implementation intentions (MCII), which is hypothesised to strengthen the effects.

**Methods:** A systematic review (PROSPERO reference: CRD42016034202) was conducted to evaluate the effectiveness of mental contrasting for improving health-related behaviours in adult populations, compared with control/active control groups.

**Findings:** Searches identified eleven studies (1384 participants) reporting mental contrasting techniques for promoting healthy behaviours (e.g. increasing physical activity or fruit and vegetable intake) and reducing unhealthy behaviours (e.g. smoking, unhealthy snacking) across clinical, student and general populations. A meta-analysis using random effects modelling found a main effect of mental contrasting on health outcomes, adjusted Hedges'  $g = 0.28$  (standard error .07) CI (0.12-0.43  $p < 0.001$ ) at up to four weeks, and 0.32, CI (0.18-0.47),  $p < 0.001$  at over 3 months ( $n=4$ ). MCII ( $n=5$ ) showed a similar effect,  $g = 0.27$ , CI (0.12-0.43),  $p < 0.001$ , to mental contrasting.

### Discussion

Mental contrasting shows promise as a brief behaviour change technique with significant small to moderate-sized effect on changing health behaviour in the short term. The benefits of mental contrasting appear to be sustained over time. Analysis on a small subset of studies suggested that the addition of implementation intentions (MCII) did not strengthen the effects of mental contrasting on health behaviours, although additional studies are needed.

# Psychological functioning after surgery/transplantation

9:00 - 10:30

Aula G

Marijke Melles

9:00 - 9:15

## Living with a kidney transplant: a phenomenological study

O. Petre<sup>1</sup>, A. Baban<sup>2</sup><sup>1</sup>Babes -Boyai University, Romania<sup>2</sup>Babes-Bolyai University, Romania

**Background:** Kidney transplantation is considered the most desirable treatment option for patients with end-stage renal disease. However, a transplant brings new medical and psychological issues for recipients. This study aims to explore the challenges experienced by patients throughout the transplant process, as well as the strategies they used to adapt.

**Method:** A purposive sample of 7 kidney transplant recipients (aged 29- 65, 4 women) was selected for the study. In-depth interviews were conducted, transcribed verbatim and analyzed using Interpretative Phenomenological Analysis (IPA).

**Findings:** Based on the participant's experiences one superordinate theme emerged: "Struggle to find a new normal". The findings suggest that the transplant experience is a continuous effort to attain a sense of control over one's life, to attain normality. Seven themes arose from the data: "the day of transplantation", "the adaptation with transplant", "the self-care", "honoring the donor", "the others", "the others like me" and "integrating illness into identity". An attitude of gratitude and motivation to cope with the challenges of chronic illness was found among the stories. Each participant mentioned the faith in God enables them to go on. The recipients declared that they went through a process of personal growth.

**Discussion:** For improving the quality of life and care of kidney transplant patients is required to know, beyond medical aspects, also the psychosocial issues that patients may experience after transplantation. The results of this study enable health care professionals to provide the appropriate support for recipients and patients on the waiting list for a kidney transplantation.

9:15 - 9:30

## Effects of daily coping on mood in couples dealing with hematopoietic stem cell transplantation

A. Kroemeke<sup>1</sup>, Z. Kwissa-Gajewska<sup>1</sup>, M. Sobczyk-Kruszelnicka<sup>2</sup>

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<sup>2</sup>Maria Skłodowska-Curie Memorial Cancer Center–Institute of Oncology, Gliwice Branch, Poland

**Background:** Coping is viewed as an important determinant of psychological adjustment in couples coping with illness. However, few studies have examined coping processes within the context of the everyday life of couples' illness and treatment experience so far. Therefore, this study examines the effects of daily coping on the emotional state in patients with hematopoietic stem cell transplantation (HSCT) experience and their partners using the actor-partner interdependence model.

**Methods:** One hundred sixty-one patients (after first autologous or allogeneic HSCT) and their partners (spouse or another relative) independently completed measures of positive reframing, venting, positive affect (PA), and negative affect (NA) for 28 consecutive evenings after patients' hospital discharge.

**Findings:** Multilevel analyses indicated that patients' daily PA was connected with own's and partner's higher daily positive reframing and own's lower daily venting, whereas a patient's daily NA was unrelated to daily coping (own's or partner's). Partner's PA was associated with own's and patient's higher daily positive reframing and lower daily venting. Partner's NA was predicted by their lower positive reframing and higher venting, but also patient's higher venting.

**Discussion:** Findings suggest given daily positive reframing had beneficial effect on both patient and nonpatient partner, daily venting was found to be detrimental for both members of the dyad, especially nonpatient partners, whose well-being were affected also by patients' coping behaviors. Results support previously reported crossover effect in couples coping and adjustment to illness.

9:30 - 9:45

## Early recovery trajectories after total hip replacement: the role of patient characteristics

J. Porsius<sup>1</sup>, N. Mathijssen<sup>2</sup>, L. Klapwijk-van Heijningen<sup>2</sup>, J. van Egmond<sup>2</sup>, M. Melles<sup>1</sup>, S. Vehmeijer<sup>2</sup>

<sup>1</sup>Delft University of Technology, Netherlands

<sup>2</sup>Reinier de Graaf Groep, Netherlands

**Background:** Total hip replacement (THR) is considered to be a successful treatment for end-stage hip osteoarthritis. However, not all patients experience the same amount of improvement after surgery. The aim of the present study is to characterise subgroups of patients based on their recovery experience after THR.

**Methods:** Patients (n = 94) from a single hospital participated in a diary study. For 6 weeks, patients weekly recorded their severity of hip problems (Oxford Hip Score, OHS) after THR. Latent class growth modelling (LCGM) was used to identify patients with the same hip function trajectory and to compare these subgroups on pre- and post-operative patient characteristics.

**Findings:** LCGM revealed a fast (n = 17, 18.1%), average (n = 53, 56.4%) and slow (n = 24, 25.5%) recovery subgroup. Subgroups differed not on baseline OHS, but on the estimated weekly growth rate during the first 2 weeks (fast: 9.52; average: 5.30; slow: 2.68), with less differences between groups in the last 4 weeks (fast: 0.90; average: 2.02; slow: 1.73). Patients in the slow recovery group could be characterised as women of older age (mean age = 69) who rated their health as lower pre-operatively, needed more assistance during recovery, and were less satisfied with the outcomes of the surgery.

**Discussion:** We identified distinct recovery trajectories in the first 6 weeks after THR which were associated with patient characteristics. Our findings suggest that care pathways for THR may need to be tailored to cater to the needs of specific subgroups.



9:45 - 10:00

## Psychological functioning in patients referred to in-hospital cardiac rehabilitation after cardiac surgery

E. Callus<sup>1</sup>, E. Quadri<sup>1</sup>, S. Pagliuca<sup>1</sup>, E.G. Bertoldo<sup>1</sup>, G. Frigerio<sup>1</sup>, C. de Vincentiis<sup>1</sup>, L. Menicanti<sup>1</sup>, S. Castelvechio<sup>1</sup>, L. Maresca<sup>1</sup>, R. Tramarin<sup>1</sup>

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**Background:** Psychosocial variables play an important role in the wellbeing of cardiac patients, and many studies indicate them as risk factors affecting their health. The prolongation of hospital stay after cardiac surgery for an intensive cardiac rehabilitation (CR) programme is often critical in the patients' lives and therefore these items should be closely monitored.

**Method:** 236 cardiac patients (145 men, 91 women) admitted to our CR Unit after cardiac surgery were evaluated by acquiring data about their psychological status, lifestyle, quality of life, health perception (EuroQoL), anxiety and depression (Hospital Anxiety and Depression Scale).

Psycho-social variables were evaluated with anxiety and depression together with quality of life, health perception and risk of non-adherence to the treatment before surgery (t0), at CR admission (t1) and at discharge (t2).

**Findings:** Average anxiety and depression levels were in the normal range all times. An improvement was observed in the average health perception (t0 64, 39, t1 66,54 and t2 78,13/100). Women develop more frequently anxiety in the pre-surgery phase ( $p = 0.008$ ). Anxiety ( $p = 0.006$ ) and depression levels ( $p = 0.001$ ) tend to decrease towards normal levels after the surgical phase. A solid relationship ( $p = 0.004$ ), social support ( $p = 0.000$ ) and quality of life

( $p = 0.000$ ) represent protective factors towards anxiety and depression.

**Discussion:** The prolongation of hospitalization for an intensive CR program does not seem to be a critical issue if there is the presence of social support and a solid relationship.

# Social support and health

9:00 - 10:30

Aula I

Ewa Gruszczyńska

9:00 - 9:15

## Social support, stress and affect among people with HIV/AIDS: a diary study of buffering hypothesis

E. Gruszczynska<sup>1</sup>, M. Rzeszutek<sup>2</sup>, E. Firląg-Burkacka<sup>3</sup>

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<sup>2</sup>University of Warsaw, Poland

<sup>3</sup>Warsaw's Hospital of Infectious Diseases, Poland

**Background:** The aim of the study was to examine a buffering role of time-varying provided and received support in relationship between stress and the end-of-day mood among people living with HIV/AIDS.

**Methods:** Participants were 118 patients with a confirmed HIV+ diagnosis (86% men, aged 40±10.6 years, 60% in relationship). For five consecutive days, in online diary they rated each night their positive (PA) and negative (NA) state affect, stress related to central hassles and provided as well as received social support.

**Findings:** Multilevel analysis revealed that effect of daily stress on state affect was moderated by daily provided, but not received social support. Specifically, positive association between daily stress and NA was weaker when accompanied by higher support provision. Also, being in relationship additionally weakened this association. There were no such effects for PA. On the contrary, at between-person level only higher received support was related to both lower NA and higher PA. The results were controlled for gender, age, CD4 level and AIDS diagnosis.

**Discussion:** Observed effects of social support depend on analysis level (within- or between-person), direction of social exchange and outcome valence (positive or negative affect). Self-reported support provision buffered the same-day stress effect on NA, more strongly for participants in a close relationship. It suggests that on daily basis people living with HIV/AIDS may benefit more from self-perception of caring for someone than from being carried by, especially if they have a stable partner. However, these findings need further examination in a dyadic approach.

9:15 - 9:30

## The influence of peers on diabetes management in adolescents and emerging adults: a longitudinal study

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<sup>4</sup>Free University Brussels, Belgium

**Background.** Whereas qualitative research has acknowledged the importance of peers toward adolescents' and emerging adults' diabetes management, quantitative studies have failed to consistently replicate these findings. These inconsistencies might be explained due to (1) the lack of longitudinal designs linking peer variables with diabetes outcomes and (2) the lack of focus on negative peer influences. Hence, the present study related both positive and negative peer variables with diabetes outcomes over a time interval of one year.

**Methods.** A total of 476 adolescents (14-17 years) and emerging adults (18-25 years) with type 1 diabetes completed questionnaires at baseline and one year later. Questionnaires tapped into generic emotional support provided by peers, extreme peer orientation, diabetes-related problems, and treatment adherence. As a measure of glycemic control, HbA1c-values were obtained from patients' treating physicians. Cross-lagged analyses from a structural equation modelling approach were performed to analyze the data.

**Findings.** Emotional support from peers negatively predicted diabetes-related problems over time. Extreme peer orientation positively predicted treatment problems over time. Treatment adherence negatively predicted extreme peer orientation and treatment problems over time. For emerging adults specifically, there was a reciprocal reinforcing relationship between HbA1c-values and extreme peer orientation.

**Discussion.** Being one of the few studies linking peer influences with diabetes outcomes over time, we found that peers may impact, both positively and negatively, the functioning of youth with type 1 diabetes. Emerging adults' health might be especially vulnerable to peer influences, as we found a reciprocal reinforcing relationship between HbA1c-values and extreme peer orientation.

9:30 - 9:45

## Family members of persons with chronic illnesses – Burden and social support

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**Background:** Living together with a chronically ill family member often is accompanied by an enormous burden for relatives. Studies found higher rates of psychological and physiological impairment within family members of problematic substance users as well as within caregivers of people with dementia. However, to date it is unclear whether relatives of substance users are affected more strongly due to special characteristics of problematic substance use (e.g. stigmatizing of addiction, feelings of guilt) than those with non-stigmatized illnesses e.g. caregivers of people with dementia.

**Methods:** N=221 relatives of problematic substance user and N=322 caregivers of people with dementia were analyzed. Depression, anxiety, physiological symptoms, quality of life and satisfaction with social support were assessed in both groups. Mean values were compared by multivariate ANOVAs and the mediating role of satisfaction with social support was explored.

**Findings:** Compared to caregivers of people with dementia, relatives of problematic substance users showed higher rates of depression ( $p = .005$ ), anxiety ( $p = .038$ ), stomach discomfort ( $p < .001$ ), fatigue ( $p < .001$ ), and a lower quality of life ( $p < .001$ ). Furthermore, they were less satisfied with the perceived professional ( $p < .001$ ) and private social support ( $p < .001$ ), which both mediated the group-impairment relation (all  $p \leq .029$ ).

**Discussion:** Family members of problematic substance might be more affected by their relative illness due to the stigmatization of problematic substance users and their families (e.g. co-addiction). This could result in more difficulties in searching as well as receiving of social support.

9:45 - 10:00

## Self-management goals and response to social support: a qualitative study of patients with Xeroderma Pigmentosum

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**Background:** Social support is known to be important in the self-management of chronic illness but there are questions of the processes involved and why responses vary. This study explored these issues among patients with Xeroderma Pigmentosum (XP) that requires a range of photoprotection measures to reduce cancer risks.

**Methods:** Individual semi-structured interviews conducted with 25 adults with XP. Data were analysed using an inductive thematic analysis. Results were triangulated with clinical staff discussion groups.

**Findings:** Support from family and friends included photoprotection assistance (e.g., reminders to wear hats; monitoring UV risk) and adjustment of daily activities to take account of the needs of XP. Response to this support differed. For some it facilitated their photoprotection, for others it was annoying and inappropriate. Congruency between support provided and the self-management goal of the participant underpinned this difference in response. For those whose priority was to maintain normality and avoid an XP identity, receiving support to facilitate photoprotection was at odds with this goal. Open disclosure about XP was a feature of the support process where self-management goals were aligned and these participants also felt emotionally supported. Disclosure was absent from those finding support unhelpful, as to disclose would be contrary to the goal of not being different.

**Discussion:** Lack of congruence between the personal self-management goals of participants and the support provided, contributed to negative responses. Exploration of these goals and the role of disclosure could facilitate the use of informal support and improve self-management.

10:00 - 10:15

## Decision-making in dementia care from the viewpoint of affected relatives: a qualitative study

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**Background:** This study investigates how the relatives of dementia patients experience the process of making decisions on behalf of cognitively impaired family members, the extent to which they involve patients in that decision-making process and how they justify their approaches to the role.

**Methods:** We conducted three focus group sessions with in total 20 Germany-based family members recruited using purposive sampling strategies. Each focus group was audiotaped, transcribed and analysed using structured qualitative content analysis.

**Findings:** Relatives described the transition in their decision-making roles when required to supersede patients' decisions as difficult to reconcile with their self-image and thus unsettling and stressful. The findings reveal that during this adjustment process relatives reinterpret their relationship to patients as similar to that between parents and children. This change tends to be accompanied by (a) the negation of any decision-making ability on the patient's part, (b) the comprehensive assumption of all decision-making responsibility by relatives, (c) the reduction of patient involvement to little more than pseudo self-determination and (d) the perception of a moral justification for restricting patient self-determination as a necessary condition for the provision of care.

**Discussion:** The shift from the adult to the 'child' paradigm appears to reduce dissonance experienced by relatives in connection with the restriction of patient self-determination and to facilitate the stabilization of self-integrity. This psychological mechanism is inimical to a nuanced understanding of patient decision-making ability and the prospect of a shared decision-making process.

10:15 - 10:30

## Which domains of social support better predict quality of life of breast cancer patients?

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**Background:** Quality of life (QoL) in breast cancer patients is affected by some psychosocial factors. Some studies investigated the relation between social support and QoL; but few studies compared predicting role of different social support types and domains. This study aimed to examining the specific role of Social Support types in predicting QoL of Iranian breast cancer women.

**Methods:** From October 2014 to May 2015, 224 breast cancer patients completed measures of Social Support (MOS-SSS), FACT-B, FACT-G, and three additive questions comprising Social Integration, Social Participation, and Community Participation as "structural support". Data were analyzed via Pearson correlation and multiple regression.

**Findings:** The mean of total social support and total QOL were  $77.10 \pm 18.88$  and  $105.02 \pm 22.76$ , respectively. The association of four subscales of social support and QOL subscales were found to be statistically significant ( $p < 0.05$ ) excepting tangible subscale of social support and physical well-being ( $r = 0.114$ ;  $p = 0.122$ ). Social integration (number of close relatives) had significant correlation with QOL subscales. A stepwise regression analysis revealed that positive social interaction domain of social support, social integration (number of close relatives) and social participation associated with better QOL scores ( $R^2 = 0.267$ ,  $\beta = 0.51$ ,  $P = 0.000$ ).

**Discussion:** It was found that from four domains of social support, only "perceived positive social interactions" could significantly predict quality of life. In addition, some aspects of structural social support as high number of close relatives and more social participations associated with higher QOL. It seems that different social support types should be considered in different conditions (diseases) and cultures.



# End of Abstracts

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