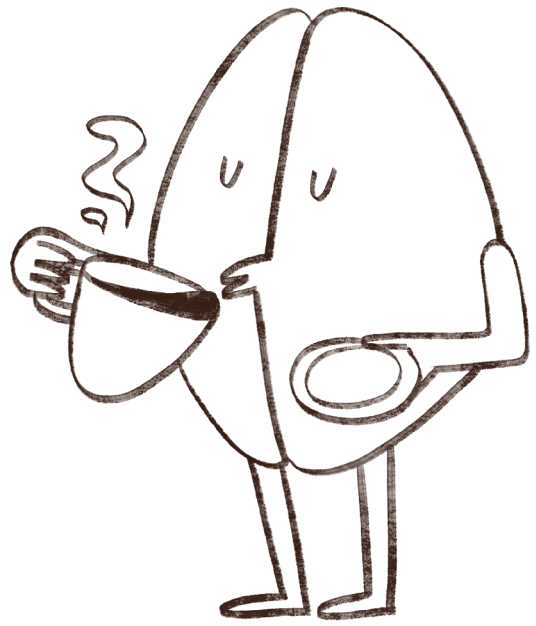
Two cups of coffee to improve text reading abilities, semantic association and to make activities more fun



Giovanna Puccio, Sandro Franceschini, Sara Bertoni, Francesca Fusina, Alessandro Angrilli & Andrea Facoetti

University of Padua, Italy
University of Bergamo, Italy

giovanna.puccio@studenti.unipd.it

INTRODUCTION

The psychostimulant effects of caffeine have been investigated through numerous studies that have shown improvements in:

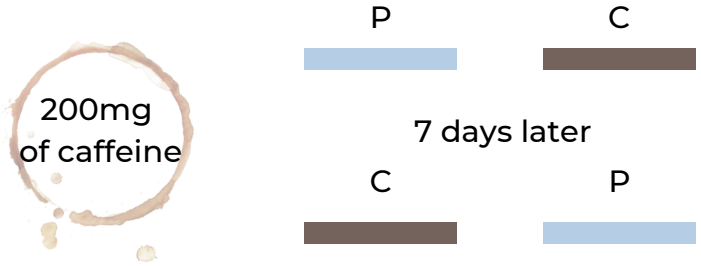
- Global perception of stimuli (Mahoney et al., 2011);
- Sensorimotor performance (Doherty and Smith, 2005; Ruxton, 2008);
- Rapid processing of information (Einöther and Giesbrecht, 2013; Nehlig, 2004);
- Working memory (McLellan et al., 2016);
- Text reading speed (Franceschini et al., 2020)

What are the psychophysiological effects of caffeine on cognition and emotions?

METHOD

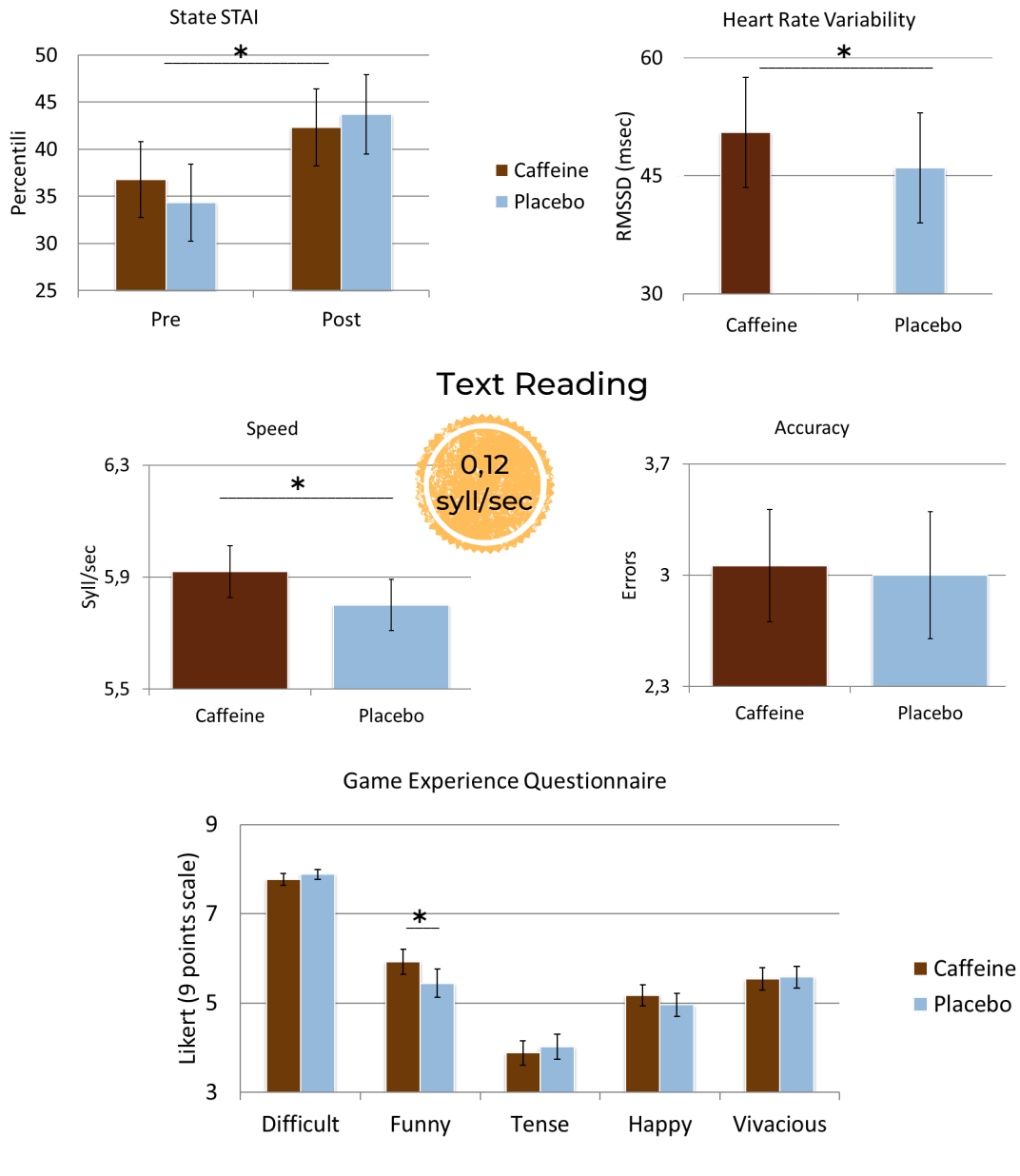
54 healthy young adults (average: 23,75 y.o.)

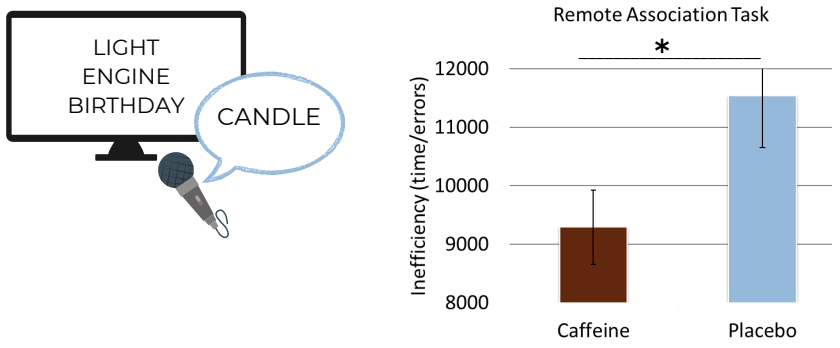
State STAI
Drink (caffeine C or placebo P)
Session Game
Game experience questionnaire
RAT
Text Reading
State STAI



crossover double-blind experiment

RESULTS





CONCLUSIONS

A single dose of caffeine induces an enhancement in:

- The ability to find semantic associations between words and in reading speed (more than after 2 months of spontaneous development!);
- Positive emotions during the same game activities;
- Heart Rate Variability (psychostimulant effect);

These effects are unrelated to sleep deprivation or other self-perceived psychophysiological activation.