Addicted babies: an assessment protocol of development in children born and grown in a therapeutic community context

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Summary. Addicted babies refers to children born dependent on psychoactive substances, since their mothers are drug-addicted. The studies on the detrimental effects of substance-exposure on child development generally do not take into account that frequently these children were born and raised in therapeutic communities (TC) for drug-addicted mothers and children, that provides children with specific intervention tools. Therefore, this paper aims to present an protocol to assess and monitor the development of children born and raised in a residential TC. This approach will be explained through the presentation of a single case: the first assessment occurred when he was one year old and then repeated when he was two years old. The outcomes point out an increase in mother's sensitivity and responsivity in interacting with her child at the 12-month-follow-up. The importance of using early intervention approaches that are specific to the TC context for drug-exposed children will be discussed.

Key words: Addicted babies, Drug-addicted mothers, Therapeutic community, Mother-child intervention, Emotional Availability Scales.

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Addicted babies: definition and characteristics

The term addicted babies refers to those children born passively physically dependent on psychoactive substances, being children of drug-addicted mothers. Addicted babies constitute, since their birth, a population at risk due to the intrauterine exposure to drugs taken by the mother. The number of children with developmental impairments at birth due to maternal drug abuse is a phenomenon that has dramatically increased in recent years (Marwick, 2000). According to the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) research, in 2009 about 34% of opioid users in Europe were women (the vast majority was formed of women of a childbearing age) and, every year, between 6, 5% and 11% of women with substance abuse problems become pregnant or give birth to a baby (EMCDDA, 2009). That means that each year there are about 30,000 pregnant women who use opioids in Europe, and as a result, about 30,000 children a year are born in the context of drug addiction. Intrauterine drug-exposure is in itself a major risk factor for child development, both because of its biological implications and for the dysfunctional parenting attitudes and practices that drug-addicted mothers often exhibit towards their children.

As regards biological risk factors, a vast literature (Parolin, Simonelli & De Palo, submitted) has examined these topics, but exploring them goes beyond the aims of this study, which is oriented to investigate in depth the issues of the quality of care and early interactions between drug-addicted mothers and their children.

With regard to risk factors related to the quality of care, maternal deficits in interacting with the child occur early and in a plurality of relational domains, such as feeding, teaching and play. Drug-addicted mothers are described as poorly sensitive and supportive, unable to provide adequate stimulations, guidance and encouragement to the child and reluctant to establish a physical and visual contact with their offspring (Blackwell, Lockman, & Kaiser, 1999; LaGasse et al., 2003). They fail in providing the right support and comfort during situations highly stressful for the child, as the child's cry seems to evoke caregiving behaviors which are poorly active, involved and empathetic; besides that, these mothers tend to wait a long time before responding to their child and tend to console him in a quite passive way as well (Schuetze, Zeskind, & Eiden, 2003).

As regard the interactive style adopted by children born to substance-abusing mothers, it is well recognized that these children are highly passive; this characteristics preclude them from experiencing positive and rewarding interactions and contribute to the lack of reciprocity,

an interactive features that is essential for the construction of the emotional bond between parent and child (Tronick et al. 2005). The most affected aspects of mother-child interactions are those related to the expression of positive affects and pleasure, followed by moderate deficits regarding social initiative and eye contact, leading to a general passiveness in interaction (Burns, Chethik, Burns, & Clark, 1991).

Lower levels of happiness and visual engagement are reported in exposed offspring during play interactions between 8 and 12 months compared to the control groups (Burns, Chethik, Burns, & Clark, 1997). During free play episodes, 18-month-old drug-exposed children are less responsive and interested in the dyadic exchanges with the caregiver than the comparison group matched for risk factors, revealing themselves as passively involved and showing little positive participation. Nevertheless, no differences in the degree of play involvement and interest were found between the two groups during the alone-play session, confirming the hypothesis that being prenatally exposed to substances and raised in a high risk context mainly exerts its influence on the interactive domain (Molitor & Mayes, 2010). Similarly, another study on toddler offspring of addicted mothers (Metosky & Vondra, 1995) shows that during free play sessions these children are able to play at appropriate age levels less frequently and for shorter periods of time than children of a normative group, and exhibit more irritability during play than the non-drug-exposed group.

Finally, consistent with the previous findings, the distributions of attachment patterns in groups of children with maltreating, suffering from mental disorder, or drug addicted mothers differ significantly from the normative population and from groups of children with psychological problems as well, with a higher incidence of insecure and /or disorganized attachment patterns (Carlson, Cicchetti, Barnett, & Braunwald, 1989; Crittenden, 1985; Rodning, Beckwith, & Howard, 1989; Schneider-Rosen, Braunwald, Carlson, & Cicchetti, 1985).

Taking into consideration all the aforementioned data, it is reasonable to look at children of substance-abusing mothers as a group at extremely high risk as regards their development, requiring an appropriate model of assessment, monitoring and intervention that is specifically oriented to include both health and physical development, and the quality of care and attention provided by caregiving figures.

Mother-child therapeutic community: an environment that is therapeutic for substance-addicted women and protective for their children

In Italy, since 1995 the most widespread and well-estimated intervention method for drug-addiction has been the residential treatment in therapeutic communities for mothers and children. For substance-abusing mothers, entering treatment in a therapeutic community (TC) frequently occurs as an alternative to forced separation from their children consequently to social services' decision: pregnant drug-addicted women or mother of young children often choose the community treatment in order to avoid imprisonment and foster care (Parsec Association, 2004). The first goal, in this TC, is to foster motherhood as a possibility to solve the addiction problems, thanks to a process of empowerment and personal growth that the treatment promotes in relation to the child (Stevens, Arbiter, & Glider, 1989). The fundamental assumptions of the mother-child community treatment are to promote educational and therapeutic processes to struggle drug abuse, to provide the necessary support to build and strengthen the family and social network of the mother-child dyad and to foster knowledge and practical skills in parenting, all in an empowering and emotionally supportive context.

Until a few years ago, it was assumed that TC for drug-addicted mothers with children had to restrict its interventions to providing the necessary treatments to address substance abuse and addiction, allowing the subsequent re-introduction into society, while no specific treatment, either medical or psychological, was provided for children (which, in case, was carried out by social services outside the TC). In fact, many studies suggested that the main goal and outcome to obtain for residential mother-child treatments was reducing the use of substances, according to the belief that only after this milestone has been reached, the therapeutic process on parenting's attitudes and practices could take place (Grella, Joshi, & Hser, 2000; Killeen, & Brady, 2000). Nowadays, conversely, addressing the child health is considered an essential feature of the therapeutic treatment. Mother-child TC must be able to take care of both addicted women and their children, providing medical and psychosocial support (Hibell et al., 2004). Working with the mother-child dyad is probably the most effective intervention to improve the prognosis of the development of high-risk children. The treatment of maternal addiction, which, in the case of this kind of residential TCs, takes place in the same environment where the mother lives together with the child, it is demonstrated to greatly improve

the future development of the baby (Savonlahti, Pajulo, Helenius, Korvenranta, Tamminen, & Piha, 2005; Zeanah et al., 2001).

Proposal of a new protocol of assessment and treatment monitoring

On the basis of the above-mentioned considerations and according to the data provided by international studies, a specific protocol of assessment and monitoring for drug-addicted mothers and their young children is proposed[1]. It is about a multi-method assessment, aimed to plan and to monitor interventions with drug-addicted mothers and their children and with a special focus on parenting, in order to identify possible risk factors for the child development and/or the emergence of critical clinical symptoms. In this way, it permits to identify developmental risk factors and critical clinical aspects promptly, as soon as they emerge. For this purpose, in the first place the general structure of the protocol will be presented (describing the phases and the assessment tools that the protocol includes), secondly an illustrative case will be discussed. The evaluation protocol has been ideated with the purpose of realizing an assessment that could be specifically oriented to investigate in detail both the psychological functioning and psychopathological traits of the mother, the child development and his adjustment, and, eventually, the quality of mother-infant interactions and early relationship.

First of all, the evaluation process intends to provide a general overview of the clinical condition of the dyad, considering various aspects and levels of functioning, with the purpose of identifying the most appropriate interventions and the most suitable way to engage and treat the dyad (the mother, the child or their relationship).

Secondly, the proposed protocol aims to monitor longitudinally, during the time spent in the therapeutic community, both the impact that the intervention may have exerted on the mother and on her relationship with the child, and the spontaneous processes of child development in connection with the protective role played by the residential community. This second objective concerns two main purposes: (a) monitoring during a period of time the interventions provided by the therapeutic community, with the possibility of observing which kind of mechanisms and processes take place and the opportunity of identifying possible developmental disruptions and/or difficulties that might have emerged also concerning the treatment itself; (b) planning potential paths at the end of the residential community treatment, as regards the social re-integration in the every-day context of living, fostering work orientation and inclusion and supporting

child development and autonomy skills of the dyad. Overall, the idea of a longitudinal and specific protocol of assessment is based on the need of identifying those dyads that are especially dysfunctional or with extreme difficulties, to the point that these problems may constitute a serious risk for child development and wellbeing; these dyads do not only need supportive interventions, but child protective programs might be highly required, such as the separation from the mother and foster care placement or the implementation of models of intervention more specific than those already provided by the TC.

Structure and stages of the assessment protocol

According to the aforementioned considerations, in general all the mother-child dyads that are admitted to the residential therapeutic community will be involved in the project and will be evaluated with the assessment protocol, which is divided into four stages, each of them is established in accordance with the various phases of the therapeutic program. The first stage corresponds to the first six months of the program, when the dyad enters the therapeutic community, the central phase lasts from the 18th to the 24th month of treatment and concerns the residential treatment itself, while the third and last stage includes the last six months of the intervention, when the program focuses on strengthening the dyad's skills and autonomy and prepares the mother and the child to reintegrate into society.

The first stage of the project, performed within the first 6 months after admission to the community treatment, concerns the assessment of the mothers' psychological functioning. In particular, some areas that are considered essential for the performance of the parental roles are investigated (De Palo, Capra, Simonelli, Salcuni, & Di Riso, 2014), such as[2]:

1. the quality of the past attachment experiences and the current state of mind with respect to attachment, through the projective test Adult Attachment Projective (AAP; George, West, & Pettem, 1997) and the semi-structured interview Adult Attachment Interview (AAI, George, Kaplan, & Main, 1985);
2. the assessment of personality characteristics and structure with the projective Rorschach Test (Rorschach, 1921) and SCID-II interview (First, Gibbon, Spitzer, Williams, & Benjamin, 1997; Mazzi, Morosini, De Girolamo, & Guaraldi, 2003).

The second phase focuses on the assessment of child development, when children are approximatively 10 or 12 months old. In particular, the evaluation relies on indirect assessment techniques, which convey the mother's perception and educators' views of child development. Besides, a structure observation of the mother-child dyadic interaction is carried out. The indirect assessment of the child involves the administration of some tests to the mother and to two educators, focusing on three main developmental areas: the level of development as measured by the Child Behavior Checklist (CBCL, Achenbach & Rescorla, 2000; Frigerio & Montirosso, 2002), adaptive behaviors in everyday life, evaluated by the Vineland Adaptive Behavior Scales (VABS; Sparrow, Balla, & Cicchetti, 1984; Italian adaptation by Balboni & Pedrabissi, 2003) and the quality of attachment style investigated through the Attachment Q-Sort (AQS, Waters, 1987; Italian version by Cassibba & D'Odorico, 2000).

The methods adopted for the assessment of parent-child interactions are the Emotional Availability Scales (EAS, Biringen, Robinson, & Emde, 1998).

The third phase concerns the direct assessment of the child and adopts the above-mentioned method of investigation and assessment. This phase of the project, therefore, investigates the same areas of child functioning as the previous ones did, but it differentiates itself through the adoption of a direct perspective applying direct evaluation techniques. This is because not all children are involved in this phase of the project, but only those for whom the second phase of the assessment protocol has highlighted dysfunctional or pathological characteristics.

Finally, the fourth phase addresses the planning and the implementation of specific interventions with the child and the mother-child dyad (Table 1).

An illustrative case study

The following clinical case study reports Anna's and her son Marco's story, from their admission to the therapeutic community, when she was 26 years old and Marco was just a newborn who was 28 days old, until they concluded the three-year residential treatment program. After presenting a brief anamnesis of the mother and some retrospective data on pregnancy and childbirth, we will describe the different phases of the research project compared to the stages of the community program and the different interventions implemented according to the specific needs of the dyad (Table 1).

TABLE 1

The phases of the assessment protocol compared to the specific stages of the rehabilitation program, with the respective assessment and therapeutic tools

Program Phases	Project Phases	Assessment tools	Treatment methods
Admission and first 6 months	Psychological assessment of the mother	AAI (George, Kaplan, & Main, 1985); AAP (George, West, & Pettem, 1997); RORSCHACH (Rorschach, 1921); SCID-II (First, Gibbon, Spitzer, Williams, & Benjamin, 1997; Mazzi, Morosini, De Girolamo, & Guaraldi , 2003)	Individual and group psychotherapy for the mother * Observation and educational intervention on the mother-child relationship *
Two years of community treatment	Assessment of the child development: - Adaptive behavior - Structured observation of the relationship between the child and the mother	VABS (Sparrow, Balla & Cicchetti, 1984; Balboni & Pedrabissi, 2003) EAS (Biringen, Robinson, & Emde, 1998)	Psychomotor intervention for the child Mother-child psychotherapy*
Social Reintegration into society and discharge	Assessment of the child development	VABS (Sparrow, Balla & Cicchetti, 1984; Balboni & Pedrabissi, 2003); CBCL (Achenbach & Rescorla, 2000; Frigerio & Montirosso, 2002); AQS (Waters, 1987; Cassibba & D'Odorico, 2000)	Counseling on parenting for the mother *

Note. (*) This tool continues through all the treatment program.

Brief History of the dyad before entering the community

Anna was born in a northern Italian town; her father was a craftsman while her mother was a housewife. Two years after her birth, her parents had another child, another daughter. During her childhood, Anna's mother was often ill, suffering from depression and experiencing severe and frequent emotional outbursts, characterized by violent behavior, especially towards her daughters. What emerges is a dysfunctional family context, characterized by maladaptive, deeply inconsistent and potentially traumatic maternal parenting attitudes. As regards the father, he failed to protect her daughters and take care of his wife. The onset of the substance use occurred when Anna was 15 years old: first with soft drugs, then cocaine when she turned 18, and then heroin when she was 23 years old. The consumption of these drugs occurred mostly after work with her colleagues (Anna left early the school to start working as a shop-assistant). In relation to her romantic relationships, Anna had an important and long story with an older man, which ended because of her strong dependence on heroin. She dated another man, who would become the father of her child. When she found out she was expecting a baby, she initiated a methadone therapy and a residential treatment for her dependence. Unfortunately, she early dropped out of treatment and relapsed numerous times during pregnancy. Anna abused several psychotropic drugs (especially amphetamines, heroin and methadone) until the 9th month of pregnancy.

The baby was born at 39 weeks by Cesarean section and weighted 2.6 kg. The Apgar score had a value of 9 both at minute 1 and and 5. The head circumference was 34.2 cm and birth length was 49 cm. At birth, the baby tested positive for HIV and CMV and presented abnormal responses to acoustic stimuli, but he soon improved. For 10 days he remained under observation in hospital, Department of Neonatal Medicine, since he showed symptoms due to abstinence, namely: mild dispnea, irritability, tremors, and hypertonia. Fortunately, all symptoms quickly disappeared.

One month after childbirth, Anna ended the relationship with her child's father and entered "Casa Aurora" TC, according to a decree issued by the Court, which entrusted the child custody to the social service to control and to support his psychological and physical development and to insure an appropriate environment for the child to grow up.

The first stage of the rehabilitation program: admission into the community and the first 6 months of treatment

At the admission to the TC, Anna seemed very confused, probably due to the recent birth and to abstinence too. Indeed, she entered the TC experiencing a strong craving for drugs. With respect to relationships with other adults in the community, she showed immediately a great need for emotional dependency, trying to establish dependent relationships in which her own sense of self depends on others. Even though the relationship with her child was sufficiently good and overall adequate, especially for the practical child care aspects, she showed some separation-related problems towards the child. As regards Marco, the child was responsive and involved in the interactive exchanges with the mother, being adequately stimulated. He demonstrated a good capacity to integrate into the new environment and in the childcare facility as well, being able to face separations from the mother in an adequate way.

First stage of the assessment protocol: psychological assessment of the mother. The test administration to the mother (AAI, AAP, Rorschach Test, SCID-II) provide the following results:

- Good cognitive skills;
- Difficulties in management and control of aggressive feelings and depression;
- A poor relationship with her mother, with aspects of rejection, role reversal, and possible physical and psychological abuses;
- A disorganized attachment state of mind, resulting from traumatic experiences, that constitute memories difficult to elaborate and to reflect on, or, representations that can play a disorganizing effect on her mental, affective and behavioral state;
- A strong use of distancing defense mechanisms, that help the woman to reduce the impact of negative and distressing emotions, but that may interfere with her capacity to access and process her past traumatic experiences.

On the basis of what emerged from the assessment, the diagnostic hypothesis refers to Borderline Personality Disorder (BPD), in addition to a diagnosis of Substance Use Disorder (DSM IV TR, 2000).

From assessment to clinical treatment: psychotherapy intervention for the mother. Since the early days in the TC, as required by the intervention protocol, the patient could benefit from both individual and group psychotherapy, with weekly sessions for both of them.

The second stage of the rehabilitation program: a two-year TC program.

The patient showed a high compliance towards her treatment; for instance, Anna tried to establish and maintain good social relationships

both inside and outside the TC environment. The patient also demonstrated to be able to take care of her child with assiduity and attention, responding adequately to his primary care and psychological needs, even though it was not always easy to her. For example, as regards the domain of verbal interaction, Anna tried to follow educators' suggestions in helping the child to "give a name to things that happen in everyday life". Unfortunately, since she had herself severe difficulties in putting feelings into words and in emotional sharing, she still needed guidance and help in this process, in order to become able to do the same with her son.

Second stage of the assessment protocol: assessment of the child development. The first assessment of child development occurred when the child was 11 months old.

Testing adaptive behaviors. The VABS were administered to the mother and to two educators in order to measure the child's personal and social skills needed for everyday living. Results showed that Marco's level of development corresponded to less than one year and a half, thus his behaviors could be considered age-appropriate. Nevertheless, it was reported that the child presented some difficulties in the domain of Expression scale, since it seemed he had not acquired yet the basic skills of expression appropriate for his age, such as pre-linguistic sounds (eg. vocalizations, imitation of sounds) and pre-non-verbal language (eg. gestures to indicate "yes" and "no"). Besides, some other difficulties, even though not so problematic, emerged in getting involved in simple play interactions with others.

Mother-child structured observation. In order to monitor the child's development and the quality of his relationships with his mother, interactions in structured play setting were observed and video-recorded. Anna and Marco were observed for the first time when the child was 1 year and 7 months old and observations were repeated every three months thereafter , until the child was 2 years and 3 months old. The fourth and last observation of structured play session between the mother and the child points out the following interactive features:

- A partially adequate maternal sensitivity. The mother appeared to be able to pe
- rceive adequately the child's cues, but she could not respond sensitively in a consistent way. During the interaction, the woman showed unstable emotional states, with positive feelings alternating with a neutral affective state;
- The mother's ability to structure the interaction with the child is moderately adequate, adopting a multi-modal style: she could get

the child involved using different stimuli. Nevertheless, her capacity to set and manage limits appeared to be quite lacking;

- In the course of the interaction, the mother generally had a non-intrusive attitude towards the child; even though sometimes she was somehow interfering with the child's activity, she did it in an affectionate way.
- The mother's interactive style was comprehensively not hostile, but in some occasions she seemed quite impatient and bored, and she addressed the child in a sarcastic way too, overlooking the fact that children at that age cannot understand ironic statements, which make them feel puzzled and confused;
- The child's responsivity to maternal stimuli was sufficiently good. The child seemed to enjoy being involved in the interaction with his mother and tried to adjust and to follow her lead; his positive attitude allowed the interaction to continue, providing the necessary reciprocity.
- The child seemed to be able to involve the mother in the interaction, addressing her both with verbal and non-verbal cues.

From assessment to clinical treatment: interventions on the child. During the two-year TC program, two major interventions were provided specifically for the child:

- from 18 to 24 months, Marco attended a weekly group of psychomotor activities with his mother. This experience had the goal to help the dyad in the delicate process of separation through the sensory motor activity; in this way the child is offered the opportunity to experiment himself and to practice new abilities, encouraging his autonomy and his skills;
- from 24 months of age to the discharge from the community, the dyad took part in weekly meetings with a developmental psychologist. This intervention aimed to help the quality of the relational and interactive exchanges between the mother and the child, placing particular attention on supporting the mother in enhancing her responsivity towards the child.

Third stage of the rehabilitation program stage: Reintegration into the society and discharge from the therapeutic community

In the last phase of the TC program, Anna appeared more and more capable of maintaining good interpersonal relationships, first of all giving up the initial obliging attitude towards others. With regard to the work experience, she proved to be remarkably responsible in carrying out her

duties. The patient, despite numerous work commitments, did not leave aside her commitment to the clinical treatment, being present in the community and participating to its activities.

The third stage of the assessment protocol: assessing child development. The second phase of the assessment project occurred when the child was 2 years and 3 months old: VABS, CBCL and AQS were administered to the mother and to two educators in order to assess the level of the child's development.

According to the VABS scales, the child showed a level of development corresponding to 1 year and 10 months of age, thus slightly lower than its real age. Marco's problems referred mainly to the following domains: Communication, in particular to Reception and Expression sub-scales; Skill daily, specifically the Personal sub-scale; Socialization, especially Interpersonal Relations and Game sub-scales.

CBCL pointed out some problems, even though not at a clinical level, in the Anxiety-depression scale and in the Hyperactivity disorder and aggressive behavior scale. The internalizing and externalizing macro-scales had high scores, reaching the borderline range.

AQS indicated the presence of 'need of proximity' and 'contact' behaviors towards the mother, but at the same time the child demonstrated insecure-avoidant attachment behaviors, such as turning away from the mother or looking elsewhere.

From assessment to clinical treatment: intervention on parenting. In the final phase of the TC treatment, a strong need for a specific intervention on parenting skills emerged, considering that mothers at this stage of treatment face a delicate moment, dealing with the separation from the community and moving towards a "new motherhood". This intervention lasted six months and consisted of weekly sessions; it aimed to support the woman's parenting skills and representations and to discuss her feelings and attitudes towards being a mother, her child and the mother-child relationships. It was assumed that this intervention could be extremely useful to ease the delicate process of adjusting to normal life after such a long period in the community and to facilitate the transition to a new form of parenthood, without the practical, educational and psychological support that the community provides. With the purpose to get prepared to live autonomously outside the TC, Anna had the important chance to reflect on her difficulties and to discuss them with a developmental psychologist.

Discussion and Conclusions: can symptoms emerge after treatment?

One of the most important aspects highlighted by the psychological assessment on this mother-child dyad concerns the difficulties showed by the child, although the dyad undertook different kinds of interventions during the residential treatment program. Marco showed some problems in the domain of adaptive behavior and some other characteristics that, even though they did not reach a significant clinical level, were still problematic. The first and the second observations pointed out some problems in the communication and relational skill dimensions, besides some manifestations of aggressive and hyperactive behaviors. It must be taken into account that Marco was almost born in the TC and he and his mother benefitted from psychological and educational interventions that lasted all Marco's life and that covered all the individual, relational and social main domains.

Consequently, it is important to reflect on what else could have been done or done differently to prevent these problems that, even though not severe, might have played a role as precursors for future psychological disorders and/or social problems. The questions that this case study arises are: why do drug exposed children present developmental difficulties, despite all the interventions implemented and all the efforts made to take care of them (providing a protective environment for the child, offering clinical and psycho-educational treatments for the mother and for the child, etc.)? Are children born and raised in communities for drug-addicted mothers still at risk of developing psychological problems or full-blown disorders?

One of the most important considerations is about the biological risk that Marco, as well as all the children of drug-addicted mothers, was exposed to, since the intrauterine life: drug exposure while being in the uterus has short-term and long-term effects that are not always detectable and addressed. Indeed, the characteristics of these neonates and infants are not fully understood, and even less is known about the specific consequences for the physical, cognitive, affective and behavioral development that occur in their future life. It is possible to define them as "special kids", considering their early experience as characterized by multiple biological alterations that, even though are subtle and not always openly evident, must be taken into account when it comes to ideate and to implement assessment and treatment interventions. In addition, it is necessary to take into considerations also the maternal characteristics, not only in terms of consequences of drug abuse and addiction, but as inner

psychological functioning and relational patterns as well, not to mention the traumatic early experiences occurred in mothers' lives. Indeed, substance abusing mothers' parenting is often characterized by low levels of responsivity, the capacity to comprehend and to respond appropriately to the child's needs, and this likely leads to inadequate parenting attitudes and practices; consequently, poor responsivity must be specifically examined and addressed in order to support these women's motherhood. As Anna's case underlies, this kind of interventions on parenting might turn out to be difficult and distressing, since they activate the mother's own experience as a child, her past story and the opportunity to be a mother of a child that represents the future and a complicated past, difficult to elaborate, at the same time. Eventually, it is extremely important to recognize the role that the community plays in child development, being a complex environment: on one hand it provides children with protection and care, on the other it might be challenging for those children with problematic aspects, that cannot fully benefit from all the opportunities offered by the community setting. In this case, Marco's development might have been affected by a excessively stimulant environment that could result too much activating to him and might have interfered with the specific time and needs that an individual developmental pathway require, leading in the end to relational and communicative difficulties.

At the moment, there is still need to improve the knowledge of the consequences of intrauterine drug-exposure at a biological level and its implications for exposed children's psychological development and interpersonal functioning, especially when it comes to deal with a problematic parent. As a matter of fact, these parents had themselves complicated and negative experiences as children, characterized by maltreatment, deprivation, separation and abuse; moreover, they usually suffer from psychological symptoms and personality disorder, entailing interpersonal abilities that are inadequate to support their children's development. Furthermore, the role of the TC as an environment for the early development should be examined in depth, since beside the obvious protective roles it plays, it might imply some negative factors or elements of complexity as well, if compared to the more traditional contexts of living and growth. Not only the knowledge on these topics is lacking, but especially information on how all these aspects interact and influence each other is insufficient, to fully understand the development pathway for the addicted babies and the major factors of influence. In other words, the point is to understand better which are the most harmful risk factors and how they exert their influence, from the gestational age throughout the child development. In fact, reflecting on risk factors can help itself to identify

those elements that play a protective role, despite all the potential problems and threats of the biological and psychological domains, and that promote an adequate development pattern that may spontaneously occur.
Studying causes and effects is undoubtedly the first step to ideate and to implement treatments and to prove their efficacy: nowadays several methods for clinical intervention on children and on their primary relationships are available, even in early age, and the efficacy of some of them has been tested, but treatments that specifically address drug-exposed children who were born and raised in residential TC are at the moment extremely lacking.

As a matter of fact, researchers and clinicians are still applying methods and techniques which were originally developed to address other clinical conditions and they cannot rely on solid principles and methods to build specific treatment programs that fully meet the needs of this population.

All the interventions applied during the residential treatment are deeply integrated in the TC context. They literally take place in those environments where the mother-child dyads live and they are performed by social workers that are familiar to mothers and children too. This condition of familiarity can profoundly affect the approach to treatment, both from the educational and the therapeutic point of view, to such an extent that a new clinical setting emerges, whose assumptions, techniques and effects are extremely peculiar and differentiate themselves from the current knowledge. As a consequence, research outcomes should serve as an essential tool for planning and implementing new treatment models for substance-abusing mothers, their children and their relationship that are specifically conceived for the TC context. Only in this way, it will be possible to operate with a sufficient awareness about the physical and "mental" limits of the clinical intervention. Similarly, the assessment of the interventions, with its improvements, worsenings and stalls, could be realized on a more specific and appropriate basis, for instance being respectful of the peculiarities of those children that are involved in a unique relationship with a peculiar mother, in a specific family context, which is the TC.

Notes

1. The assessment and monitoring protocol was implemented in 2010, thanks to the collaboration between the University of Padova, Department of Developmental and Social Psychology, and the social cooperative

enterprise “Comunità di Venezia”, which manages two mother-child therapeutic communities, "Casa Aurora" and "Villa Emma " (Stocco, Simonelli, Capra, & De Palo, 2012).

2. Hereafter, the assessment methods applied in the research are briefly described:

- *Adult Attachment Interview* (AAI) devised by George, Kaplan and Main (1985) is a semi-structured interview that provides a standardized method to assess attachment style in adolescence and adult age, evaluating the inner representations of attachment. The interview consists of questions through which the participant is asked to recall and to reflect upon memories related to his/her attachment experiences with his/her caregivers during childhood. The AAI coding system leads to the categorization into 4 adult attachment categories: Attachment Free/Autonomous (F), Dismissing (Ds), Preoccupied/Entengled (E), Unresolved with respect to a Trauma and/or Loss (U).
- *Adult Attachment Projective* (AAP, George, West & Pettem, 1997) is an instrument for the evaluation of adult attachment representations, based on the analysis of their responses to a set of attachment-related drawings. During the procedure, the participant is presented with eight pictures and asked to make up a story for each of them.
- *Rorschach Test* (Rorschach, 1921) is a perception, projective, psycho-diagnostic instrument. It is composed of 10 standardized cards out of 23 (5 black and gray, 2 red and gray and 3 multi-colored), each of them shows a symmetric inkblot. With this test, it is possible to observe both stable personality traits as well as psychopathological or affective disorders. Moreover, this test provides valuable information about the subject’s intelligence and cognitive processes.
- *Structured Clinical Interview for DSM-III-R* (SCID-II; First, Gibbon, Spitzer, Williams, & Benjamin, 1997; Mazzi, Morosini, De Girolamo, & Guaraldi, 2003) allows diagnostic evaluations of personality disorders, such as the ones included on Axis II of DSM-IV, passive-aggressive and depressive disorders (Appendix B of DSM-IV) and unspecified personality disorder (UPD).
- *The Vineland Scales* (VABS; Sparrow, Balla, & Cicchetti, 1984; Balboni & Pedrabissi, 2003) are a test to measure a person's adaptive level of functioning, through a semi-structured interview, that investigates 4 main domains (scales), made up of 11 sub-dimensions each (subscales). The scales assess adaptive behavior in four domains: Communication, Daily Living Skills, Socialization, and Motor Skills. It also provides a composite score that summarizes the individual's performance across all four domains. The scales can find application in various clinical,

educational and research settings: they are particularly useful to observe adaptive behaviors and to investigate to what extent disabilities, if present, can have an impact on the subject's daily performances.
- *Emotional Availability Scales* (EAS; Biringen, Robison, & Emde, 1998) enables to observe and assess interactive adult-child video-recordings, according to six dimensions, with four on the adult side (sensitivity, structuring, non-intrusiveness, and non-hostility), and two on the child side (responsiveness to the adult and involvement of the adult).
- *Child Behavior Check List* (CBCL; Achenbach & Rescorla, 2000; Frigerio & Montirosso, 2002) consists of a report- questionnaire by which parents or other individuals who know the child well, such as teachers or educators, rate a child's problem behaviors and competencies. There are different versions that can be used for children aged 18 months - 18 years. The CBCL 1 ½ -5 version is used to assess the developmental level of children of preschool age. The first part contains 20 items that investigate the quality of the child's participation in various activities and the quality of its relationships with siblings, parents and peers. The second one contains 118 items and it is rated on a Likert scale with three levels, which relate to the severity of the child's problem behaviors.
- *Attachment Q-Sort* (AQS; Waters, 1987; Cassibba & D'Odorico, 2000) is an assessment instrument to evaluate the quality of attachment style in children. It utilizes a Q - sort methodology and it is based on a set period of observation of children aged 1 – 5 in a number of environments. It consists of nearly 100 items intended to cover the spectrum of attachment related behaviors including secure base and exploratory behaviors, affective response and social cognition. The observer sorts the cards corresponding to the degree to which the child exhibits the item, which is then scored. The overall score for each child will result in a variable ranging from +1.0 (i.e., very secure) to -1.0 (i.e., very insecure)

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