“Addiction Babies”:
Research, prevention and intervention

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MOTHER-INFANT THERAPEUTIC COMMUNITY
From 1995 onwards

EQUIPE
1 PSYCHOTHERAPIST–DIRECTOR
2 PSYCHOTHERAPISTS
1 PSYCHIATRIST
1 PSYCHOLOGIST-RESEARCHER
12 EDUCATORS
2 PAEDIATRICIANS
2 VOLUNTEERS

CASA AURORA

Today

VILLA EMMA
“Research and intervention on children in a drug-addicted mother-infant therapeutic community: from parenting at risk to infant well-being” a joint project developed by the Department of Developmental and Social Psychology of Padua University and our Community Educators guide moms through continuous and daily actions: guidance, observation and intervention are connected. Their task: to observe a specific mother, her child and that very dyad with no pre-established pattern in mind.

**Level-one evaluation:**
- psychological situation
- medical situation
- social environment

**Specialized interventions:**
- psychotherapies (individual or in group)
- psycho-educational (individual or in group)
- Return to work
“ADDICTION BABIES”
-THEORY-
During gestation, there are constant chemical exchanges between mother and embryo/foetus. Any substance taken by the mother can have a direct effect/impact on the baby-to-be which can lead to a variety of complications during both prenatal life as well as after the baby’s birth (Bona & Fuller, 2003; Bolnick & Rayburn, 2003).

The main consequences of drug intake during pregnancy can be: placental detachment, miscarriage (spontaneous abortion), preterm birth, and various forms of fetal distress, including intracranial hemorrhage as well as sudden infant death syndrome (Bona & Zaffaroni, 2003; Bandstra, Morrow, Anthony, Churchill, et al., 2001; Bolnick & Rayburn, 2003; Frank, Augustyn, Knight, Pell, & Zuckerman, 2001; Schiller & Allen, 2005).
Children are exposed to transmission of infectious diseases such as hepatitis, cytomegalovirus and sexually transmitted diseases including HIV (Storm & Wells, 1993).

High prematurity rates (approx. 39% of all cases) – especially when no appropriate prenatal care has been offered – are a major risk factor in many developmental domains (Walton-Moss, McIntosh, Conrad, & Kiefer, 2009).

A high incidence of intrauterine growth retardation, which is found in 27.5% of cases (Walton-Moss, et al., 2009) accounts for lower weight, lower length and lower head circumference at birth (Allen & Schiller, 2005, Frank et al., 2001; Piersel & Shriver, 1994).

If the mother has made extensive use of drugs like alcohol, hypnotics or heroin which are considered "unexciting" drugs for the nervous system, the infant shows breathing problems immediately after birth (Johnson, Kate, 2000).
Physical growth deficit at birth: there is a recovery in height and weight between 6 and 12 months of age. However, reduced head circumference, a risk factor for adverse developmental effects (Ackerman, et al., 2010), is found up to 2 years (Ackerman, Riggins, & Black, 2010; D’Apolito, 1998; Shriver & Piersel, 1994) and 3 years (Griffith, Azuma, & Chasnoff, 1994). During school-age, significant differences in physical development are largely absent or minor (Ackerman et al., 2010).

At neurophysiological level: up to 13 months of age, we observe altered EEG patterns during sleep, cardiac responses to social stimuli, breathing patterns and high values of cortisol at rest (Frank, et al., 2001).

Neonatal Abstinence Syndrome (NAS) is found in 50-90% of children of heroin-addicted mothers and in 75-90% of infants born to cocaine-addicted mothers (Bona & Buchanan, 2003). At birth, these children show tremors, hyperactivity, hypotonia, abnormal reflexes, abnormal sleep-wake rhythms, sucking problems and feeding difficulties, frequent weeping and are difficult to console (Beeghly & Tronick, 1994; Charter, et al., 1994).
COGNITIVE DEVELOPMENT

✓ Impairments in visual recognition and attention abilities are found as early as in the neonatal period. They persist even at 6 and 12 months of age (Singer, et al., 2005).

✓ Intrauterine drug exposure can exert a direct effect on the long-term cognitive function even at 3 years of age (Azuma & Chasnoff, 1993; Griffith, et al., 1994).

✓ At 12 years, significant differences in the cognitive development and function are reported only in few cases. They are mostly due to environmental factors (Ackerman, et al., 2010).

LANGUAGE SKILLS

✓ Both receptive and expressive language deficits are found from 2 years of age onwards (although not all authors agree on this point, Schiller & Allen, 2005; Rivers & Hendrick, 1992). They seem to persist until school age, regardless of possible environmental co-variables (Ackerman, et al., 2010; Bandstra, et al., 2002).

✓ Meta-analytic studies (Lester, Lagasse, & Seifer, 1998) and reviews (Frank, et al., 2001) show that exposure to substances has a direct, albeit minor effect on long-term intellectual abilities, mainly affecting receptive and expressive language skills.
**MOTOR SKILLS**

- Opioids seem to have greater adverse neurological effects: they can cause an increase in muscle tension, problems with coordination and balance between 4 and 18 months of age and delays in motor development at 2 years (Bernstein, Jeruchimowicz, Hans & Marcus, 1984, Rosen & Johnson, 1982).
- Exposure to cocaine can cause hypertonia at 6 months: however, this disorder is no longer evident at 24 months (Chiribonga, et al., 1995). Motor development is often slightly impaired between 4 and 7 months, but standard development is reached again at 15 months (Fetters & Tronick, 1996).

**BEHAVIOUR**

- Numerous studies report a behavioral profile characterized by aggressiveness, impulsivity, and destructiveness (Griffith, et al., 1994). Children of addicted mothers seem to be more at risk of developing problems with both internalizing and externalizing symptoms from 3 to 7 years (Bada et al., 2007; Borelli, Luthar, et al., 2010; Delaney-Black, et al., 1998).
- Externalizing problems seem to persist at school age (Ackerman et al., 2010).
In the neonatal period, children of drug-addicted women show greater physiological lability, abnormal sleep and more frequent weeping (DiPietro, Suess, Wheeler, Smouse, & Newlin, 1995; Regalado, Schechtman, Del Angel, & Bean, 1995). They also have difficulties in responding to stimuli up to 3 months of age, with negative affective responses as a result of new or stressful stimuli (Bendersky & Lewis, 1998a; DiPietro et al., 1995; Mayes, Bornstein, Chawarska, & Granger, 1995).

Early studies report a predominance of negative affects from 4 months onwards (Bendersky & Lewis, 1998a), fewer facial expressions of interest, amusement, anger, and sadness between 4 and 8 months (Alessandri, Sullivan, Imaizumi, & Lewis, 1993) and fewer emotional expressions of anger, sadness and stress at 18 months (Roumell, Will, Abramson, & Delaney, 1997).

Difficulties in adjustment persist up to 12 months (Scher, Richardson, & Day, 2000), and during the second year of life, with impairments in the areas of responsiveness to new stimuli, visual recognition, impulse control, task persistence and higher levels of emotional lability and behavioral disorganization (Azuma & Chasnoff, 1993; Bendersky & Lewis, 1998b; Griffith, et al., 1994; Mayes, 2002; Mayes, Grillon, Granger, & Schottenfeld, 1998; Metosky & Vondra, 1995).
RESEARCH
RESEARCH AND INTERVENTION ON CHILDREN IN DRUG ADDICTED MOTHER-INFANT THERAPEUTIC COMMUNITY: FROM PARENTING AT RISK TO INFANT WELL-BEING

MULTI-METHOD ASSESSMENT
Risk factors for the development of clinical symptoms are identified to plan and monitor interventions on parenting and the development of children living in the community

LONIGTUDINAL PROJECT

FOCUS OF THE ASSESSMENT

Assessment of the mother’s psychic functioning (personality and individual characteristics) through interviews and dynamic questionnaires or tests

Assessment of mother’s and possibly father’s parenting competences through observation of mother-father-infant interaction reproducing daily tasks in a structured setting

Assessment of the child’s development and adaptation through specific developmental tools to come to a developmental diagnosis based on the indications of the current 0-3 classification
1st PHASE: ASSESSMENT OF THE MOTHER’S PARENTING COMPETENCES

AIM
To assess personality characteristics and to investigate attachment history as indicators of parenting competences.

OBSERVED AREAS
Personality  Pathology self-perception  Attachment

**RORSCHACH TEST** Projective Test assessing a subject’s personality
**SCID II** (Structured Clinical Interview for DSM-IV) The SCID-II is a structured clinical interview for making DSM-IV Axis II: Personality Disorder diagnoses.
**AAI** (Adult Attachment Interview) semi-structured interview assessing an individual’s state of mind in relation to attachment relationships experienced during infancy.
2nd PHASE: A- INFANT INDIRECT ASSESSMENT (MOTHERS AND EDUCATORS)

AIM

1) To assess infant developmental competences and infant psychopathological traits.
2) To allow the mother to compare and share her point of view on her child with the educators’, in order to build a common/shared language on themes referring to the infant.

OBSERVED AREAS

Development  Symptomatology  Attachment relationships

TOOLS

VABS (Vineland Adaptive Behaviour Scales) are a valid and reliable test to measure a person's adaptive level of functioning. They can be used to help diagnose and classify mental retardation and other disorders such as autism, Asperger syndrome and developmental delays.

CBCL (Child Behaviour Checklist) is a checklist parents complete to detect emotional and behaviour problems in children and adolescents.

AQS (Attachment Q-Sort) is a test assessing the mother security perception on infant attachment relationships.
**2nd PHASE : B- ASSESSMENT OF MOTHER-INFANT RELATIONSHIP**

**AIM**

1) To observe and assess the mother-infant (and, if possible, father-infant) dyadic relationship and to compare them with the educator-infant dyadic relationship

2) If possible, to observe and assess mother-father-infant triadic relationship

**OBSERVED RELATIONSHIPS**

Mother-Infant  Educator-Infant  Father-Infant

**TOOLS**

LTP (Lausanne Trilogue Play) mother-father-infant interactive triadic observation in order to assess family cooperation and parents’ ability to distinguish the couple axis from the parental axis.
3rd PHASE: DIRECT ASSESSMENT OF THE INFANT

AIM
The observation and the assessment of a child’s developmental features, symptomatic aspects and relational characteristics allow a more detailed diagnostic assessment.

STUDIED AREAS
Symptomatology development

TOOLS
VABS (see 2nd phase)
Rorschach Test (see 1st phase)
CBCL (see 2nd phase)
Düss Stories Projective test assessing the developmental stage/level of the infant’s psychic development (normal or pathological) through presentation of 10 stories that the infant is asked to tell the end of.
N.B. If CBCL results highlight cognitive problems, we use WISC-R/ WPPSI e BSID
4th PHASE: THE INTERVENTION

AIM
According to the infant’s age and needs, the caretaking intervention can develop as follows:

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<thead>
<tr>
<th>CARE TAKING</th>
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<tbody>
<tr>
<td>Individual</td>
</tr>
<tr>
<td>Psychotherapy</td>
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</tbody>
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A CLINICAL CASE REPORT
PUTTING OUR INTERVENTION MODEL INTO PRACTICE

MOTHER
- Age: 41 years old
- Drug addiction onset age: 23 years old
- Profession: secretary

FATHER
- Age: 39 years old
- Profession: worker

INFANT
- Age: 25 months old
- Community entrance age: since birth

Living in the community

Not living in the community
1st PHASE: ASSESSMENT OF MOTHER’S PARENTING COMPETENCES

CONGITIVE PROCESSES ENDANGERED BY AN EMERGING DISRUPTIVE AFFECTIVITY

- Primary defenses
- Weakness self in affective regulation
- The distortion of information to explain events causality

DEFICIT IN META-COGNITIVE FUNCTIONS, WITH DISSOCIATIVE/DISORGANIZED EPISODES

- Difficulty in recognizing self and others states of mind
- Different and incoherent self and others representation

ENTANGLED ATTACHMENT PATTERN (E)

BORDERLINE PERSONALITY DISORDER
2nd PHASE: A- INFANT’S INDIRECT ASSESSMENT (MOTHERS AND EDUCATORS)

VINELAND Scales:
Development below age-appropriate level

- Compromised relational area;
- High/harsh difficulty in verbal expression.

Developmental delay increasing with age

- L. characteristics don’t change in assessment after two months
Difficulties in expressing emotions
- Attentive focus deficit
- Isolation behaviours
- Aggressive behaviours

CBCL/C-TRF:
Multi-faceted symptomatology

2nd PHASE: A-INFANT’S INDIRECT ASSESSMENT (MOTHERS AND EDUCATORS)
Mother: black-out in thoughts (at times)
Child: growth deficit

Mother: if reassured, she is able to look after the child
Father: good interacting abilities with the child
Grandparents (father’s side): offering good support to the family.

Intervention on relational exchanges
✓ strengthening functional interactions
✓ working on “extended” parenting

LTP
Fivaz-Depeursinge, & Corboz-Warnery, 1999)
Video-recorded sessions
Video feedback

1 LTP: Mother-father-infant

1 Video feedback

After one month

2 LTP: Mother-father-infant

2 Video feedback

After one month

3 LTP: Mother-father-infant

3 Video feedback

After one month

4 LTP
Grandparents-Mother/Father-infant

4 Video feedback

After one month

1 LTP: Mother-father-infant

- Mother finds it difficult to attune on the child’s needs
- Prevalence of verbal communication
- During interaction with the mother, child looks for the father.
- Father invites child to play with the mother thus supporting his spouse

1 Video feedback

**Mum:** "...I realize I find it difficult to get him involved in a play... maybe because he is just a baby, and maybe, as soon as he gets a bit older, I will succeed in having him play with me... for the time being, it is difficult for him to understand the meaning of a story...«

**Mum:** «...Sometime I wonder why he should not want to play with me?»
Parents find it difficult to attune play rhythm and characteristics to the infant’s capacities.
Parents show different playing styles
There is a time when play co-construction is shared between the three of them
Co-parenting support to answer infant’s requests

**Mum:** «I always try to impose something on him... Ivan, on the contrary, allows him to do what he wishes to do»

**Dad:** «Only rarely can I spend time with him: when this happens, I try to play with him as much as I can... he does the same with me»

**Mum:** «I would feel calmer here. I thought about what you told me last time, that is, that it was normal for him to be an exuberant baby. I put my heart at rest, because then it was as if I could understand what was going on in his head»
### 3 LTP: Mother-father-infant

- Parents find it difficult to understand infant’s needs and to offer him and adequate answer.
- Dad is able to set limits to the child and to follow play rules
- Mother is able to adequately put forward proposals to the child.

### 4 LTP: Grandparets-Mother/ Father-infant

- Infant finds it difficult not to avert interaction.
- Mother and grandfather cooperate to engage child.
- Grandfather adequately encourages child to join play.
- Grandmother finds it difficult to encourage child.
- Child finds it difficult to join play.
- Father tries to cooperate and help when grandmother and child play together
THANK YOU FOR YOUR ATTENTION