

## **Perinatal Clinical Psychology: Parent-Child Interaction in Primary Care**

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**Abstract:** Perinatal clinical psychology deals with infant mental development, primary parent-child relationships, and problems related to nurturing and parenting activities of the woman and the couple during the prenatal and neonatal period. Its aims are promoting positive influences and preventing risk elements for the child's development and for the parents raising the child, thus providing support to primary relationships. Perinatal clinical psychology studies intra-psychic, interpersonal, and trans-generational mental processes. In this paper, we present a short synthesis of the origin and development over time of the main concepts that are used in perinatal clinical psychology interventions and research.

**Keywords:** primary relationships, emotional regulation, attachment theory, affect attunement, reflective function, affect regulation, Neuroscience, fetal mind, Protomental Theory.

### **Mother-Child Interactions In Primary Care: Convergence Of Research**

Pre and perinatal psychiatric literature has produced research concerning mental illness in pregnancy and postpartum problems (depression, puerperal psychosis, psychiatric syndromes). Psychoanalytic and psychological literature specifically refer to the child's primary care, introducing the concept of "maternal care" and "maternal careless" (when care is inadequate, causing abnormal or pathological syndromes in children). This concept of "maternal care" has changed in different ways as theories have changed (Imbasciati, 2008). Over time we can find a convergence of the studies about maternal care and the influence on primary infant mental

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development (Imbasciati, Dabrassi, & Cena, 2007).

Psychoanalysis, in particular infant psychoanalysis, first with the research of Anna Freud (1949, 1957) by means of the children's observation method, and continuing with Melanie Klein's studies (1932) considering abnormal or pathological syndromes in children related to inadequate maternal care (maternal carelessness).

Ferenczi (1927, 1929, 1932) was the first psychoanalyst to focus on the emotional investment of parents in their children, shifting the attention from the psychological study of the individual to the influence of the relationship between individuals and, in particular, the therapeutic value of affective relationship.

Rene Spitz studied, through observation, abandoned and orphaned children (after WWII in particular) and emphasized that infants subjected to relationship deprivation fall into a pathological condition of psychological and physical disorder, which he called anaclytical depression (1946). Thanks to the studies of Spitz, an important series of research studies (which we will address in this paper) concerning primary mother-child interactions and maternal care deprivation began (1965).

In the United States, where many psychoanalysts from Vienna and Berlin lived (having emigrated prior to or during World War II), Ego Psychoanalytic Psychology developed (Hartman, 1939) and interest within psychology moved to ego adaptive processes related to the environment and the first phases of the child's development that characterize environment-ego interactions.

Kris (1950), through direct child observation, studied parent-child relationship problems, exploring the conflicts that the parents transmit to their child. He also identified a mechanism to explain the parents' transfer of their own infant experiences to their children. Later Fraiberg (Fraiberg, Adelsen, & Shapiro, 1975) called this psychological process the parents' "ghosts" in the nursery.

Winnicott (1945) analyzed the quality of the first mother-child interactions and the emotional environment in which the child matures (1960) as the central element of the child's psychological development. Winnicott (1958) mainly set child psychoanalysis in developmental contexts. In addition, he developed his own theory about the observation of mother-child from childbirth. He said that it is not enough to think of an individual child separate from its mother in the very early stages of development, but that the mother-child *dyad* as "one unit" should be considered. In 1958 Winnicott introduced the concept of "holding," referring to the psycho-physiological system of care and maternal holding. Winnicott (1965) also emphasized the

importance of the “quality” of maternal care that the baby needs, i.e., maternal care should be “good enough.”

Mother–child psychoanalytic studies emphasized not only mother and/or child characteristics but also, simultaneously, their relationship characteristics. The child and the caregivers are not examined separately, but together in interaction.

Later, Manzano, Palacio-Espasa, and Zilkha (1999) referred to the parental function in the book called *Les scénarios narcissiques des la parentalité (Narcissistic Scenarios of Childhood)* noting that relationships are different depending on each child and parent’s age. Before becoming manifest, parenting function is within the “mind” of the future mother and father and it is progressively processed along through the raising and the behavioral development of their child.

To fulfil the parental role, the mother and the father have to give affective and emotional meaning to their child through preconscious and unconscious representations. The baby receives projections of its parents’ childhood images, which includes pathological or positive development of the primary relationship related to the parents’ childhood.

After the 1950s, the majority of studies mainly focused on maternal careless (lack of adequate care). Bowlby moved away from the classical psychoanalysis and continued these studies from another point of view, which he termed attachment theory. This theory has its origins in the psychoanalytic approach and integrates concepts derived from ethological, cognitive, and evolutionary theory. Bowlby (1969; 1973; 1980) describes the specific tendency of those children who try to maintain attachment behavior with their caregivers (usually their mother and/or father) with the term “attachment.”

The World Health Organization (WHO) asked him to write a report on the mental health of homeless children in post-war Europe. Bowlby emphasized that inadequate maternal care causes social, emotional, and cognitive disorders. He also said that maternal affective care in infancy and childhood is as important for mental health as are “vitamins and proteins for physical health.” In his report “*Maternal Care and Mental Health*” (Bowlby, 1951) describes how the child, if unable to establish a healthy affective relationship with the mother, can show psychological disorders of various kinds and in particular an inability to establish appropriate relationships with the others. He describes these children, who have been deprived of a healthy affective relationship with their mother through separation and loss, especially when prolonged, multiple, or traumatic, as suffering from a psychological and physical disorder he called *anaclitical depression*,

which also has adverse social relationship impact, as previous addressed (Bowlby, 1973).

Maternal care should not be taken only in a material sense: it is its quality that determines positive or negative development. The type of psychic and affective communication that is transmitted from mother and assimilated by the child determines the quality of the care. Perfect physical care may be affectively inappropriate and produce negative effects. These discoveries led to the view that children deprived of maternal care or exposed to inadequate maternal care are subject to increased risks of social delinquent behavior in the future.

Bowlby highlighted that the attachment bond is not only with the mother but also with the father. Bowlby also emphasized that, in the field of children's mental health devoted to prevention, we must begin by supporting the parents. A society that takes care of children begins by taking care of their parents.

Along with the evolution of child psychoanalytic theories the quality of early interactions and the emotional environment in which the child's psychological growth takes place was increasingly the central element in research and clinical assessment and interventions, which became more oriented to the mother-child relationships.

Bion, exploring early development of the mind, introduced the concept of "rêverie" (Bion, 1962): "rêverie" is a maternal ability, which is expressed through a mental activity similar to that of dreaming (rêves). The mother must be able to "dream" what the child is "dreaming," so the mother understands the affective mental processes of the child within the relationship. The mother changes (translates) this process to another level: she tunes to the mental functioning of the child, relieves his anxiety and destructiveness, sending him good thoughts, understanding, and acceptance, thus the child learns to think.

Bion developed (1962, 1967) the concept of mother as a matrix of "thought" for the child. If the mother is unable to function as a "system of thought" for her baby and she is unable to activate her rêverie ability, the mind and body of the child aren't sufficiently differentiated and thinking remains anchored to the (concrete) senses.

These new perspectives of psychoanalytic studies met Infant Research, another important special scientific research field of developmental psychological science (Sander, 1962; Trevarthen, 1977; Tronik, 1981; Stern, 1974, 1977, 1983, 1985a; Fogel, 1982; Meltzoff, & Moore, 1983; Sameroff, & Emde, 1989; Beebe, Lackmann, & Jaffe, 1997, are the most significative authors). Infant mental development is now investigated through experimental methods, one of them is the

video observation of mother-child interactions.

In infant research studies we can find many fundamental new concepts: "emotional regulation," "fetal mind," "affect attunement," and the new perspective of the attachment theory with the concept of maternal "responsive sensitivity."

In infant research studies attention has been focused on the origin, formation, and evolution of dyadic mother-child interactions. Brazelton and Cramer (1990) explored the concept that the birth of thought has its origins in primary relationships in their book, *"The Earliest Relationships."*

Trevarthen (1979, 1993) introduced the hypothesis of primary (0-6 months) and secondary (6-9 months) periods of inter-subjectivity in the child, which need activation by the mother. Beebe and Lackmann founded the concepts of "interactive regulation" (Beebe, Lackmann, & Jaffe, 1997), in which the mother tunes the emotional processes of the child and the child learns the self-regulation.

All of the above concepts are concerned with the mother's emotional functioning and ability to use them adequately. Therefore, mother's ability to understand her own emotions has a fundamental influence on the processes of emotional regulation of her child (Sander, 1987). This maternal function is essential for infant emotional and communicative development (Sroufe, 1995). Relational and emotional development of the child is connected to the progressive emotional skills that he learned from his mother during the first year of life. "Emotional regulation" is an ability to perceive and modulate the intensity of one's positive and negative emotions (Tronik, 2008). The baby learns this ability during the first year and this ability is regulated by his mother's sensitivity to perceive and regulate her own emotions. Tronik shows that self-regulatory behavior in the infant must be modulated by the mother's own self-regulatory function. The mother helps her baby to change negative emotions into positive ones.

This maternal function regulates the infant emotions and helps the baby in its own emotional expressions. During the first two years of life, a dyadic emotional-regulation is based on reciprocal tuning and, also, reparations that the mother imparts.

In this way of research, other studies regarding the "fetal mind" have been developed. Researchers, such as Graber (1924), Minkowski (1928), then Spelt (1948), had already studied the vicissitudes of the fetal development; we now turn attention to the primary psychic life (Imbasciati & Cena, 1992) beginning at the end of the fourth month. Thanks to technology, you can observe real time prenatal life and fetal reactions to many different stimuli. Ultrasound technology has

provided revolutionary contributions and has been used not only to see the physiological development of the fetus but also long videos are used to analyze how the fetus responds to stimuli introduced in experimental research. Longitudinal studies on individual cases, by echography, show relationships between gestational age, the complex features of fetal activity, and mother-fetus interactions (Piontelli, 1992; Negri, Guareschi-Cazzulo, Mariani, & Roncaglia, 1990).

The precocity and completeness of fetal sensory and perceptual skills, and the complexity of fetal activity, drew attention to the experiences that the baby lives in the prenatal period and how these experiences may be the core of the child's mental and emotional structures, which provide the basis for subsequent development.

After the 1970s, several studies, in different fields of research, investigated aspects of the fetal learning and newborn mental development. Rascovsky (1977), Laing (1978), Chamberlain (1988), De Casper and Fifer (1980), Ianniruberto & Tajiani (1981), Milani Comparetti (1981), Mancina (1980, 1981), and Imbasciati (1998) have investigated mental development and shown the importance of primary maternal-fetal relationships for the healthy development of baby's mental structures. Fetal mental life is considered, as well as fetal-maternal relationships before the child's birth.

Experimental research, as well as clinical observation, has shown how maternal emotions can influence the fetal neuro-behavioral development. Maternal depression during pregnancy can cause less motor activity and fetal irritability (Field, 1995; Dipiero, 1996).

The primary mother-child relationship, that begins through exchange of biochemical materials from the mother to the child as pregnancy progresses, contributes to psychological communication through mother-fetus sensorial exchanges. Among them, the most important are those that are transmitted through the mother's tactile-proprioceptive sensorial movements and mother's sound communication to the fetus (Manfredi & Imbasciati, 2004).

Studies of maternal "affect attunement" began with Daniel Stern (1985b). The mother, from the second month of pregnancy, can be tuned into her baby, returning to the baby emotions and feelings in different forms. For the development of the fetus' and newborn's mental structures, the tuning of non-verbal communication between mother and child is most important. The communication between them has already begun in early pregnancy.

Through the use of video observations in the first year of the child's life, research (Schaffer, 1977) has shown cases of how non-tuning, disorganization, and confusion in the affective dialogue of a mother

with her child may transmit to the child pathogenic effects. This has origins in the mother's past experiences (Stern, 1991, 1995) that have been repressed, but emerge in interacting with her child (Tronik, Als, Wise, & Brazelton, 1978; Tronik, & Cohn, 1987; Murray, 1992; Murray, & Trevarthen, 1985).

New developmental studies of attachment theory came from Bowlby's school (Ainsworth, Bell, & Stayton, 1974, Ainsworth, Blehar, Waters & Wall, 1978; Main & Weston, 1982; Crittenden 1994, 1995, 1997). Important contributions also came from the construction of instruments for assessing child attachment, as it may be detected at the age of one year with the Strange Situation (Ainsworth et al., 1974). The Adult Attachment Interview (George, Kaplan, & Main, 1986; Crittenden, 1999, 2008) evaluates the attachment that the adult had in childhood with his parents.

In particular, Mary Ainsworth (1979) focused on maternal "responsive sensitivity," which refers to maternal ability to satisfy physical and affective needs of the child with appropriate modalities and timing.

Patricia Crittenden (2004) identified attachment forerunners very early in child development (before the first year) and also identified dyadic sensitivity through maternal/paternal sensitivity and child cooperative behaviour. She developed the CARE-Index, a video observation instrument oriented to analyze in details the dyadic caregiver-child interactions (0-15 month). These configurations of dyadic interactions can be related to one-year-old children with attachment patterns identified by the Strange Situation.

In the first year of life, the child begins to internalize the context of relationships and this experience is transformed into a cognitive schema, which is called the "Internal Working Model." This refers to the internal representations of the child's self, related to his parents (Bowlby, 1988a). Internal representations are also based on the quality of the interactions between the child and his parents (Bretherton, 1990).

The attachment bond usually persists throughout the individual's life and the internal working model works as a guide for subsequent relations and generates relational modalities similar to those internalized by the child during primary experiences.

"Alexithymia" dimension studies have developed important contributions referred to as emotional pathologies. Alexithymia means "having no words for emotions," a term coined by John Nemiah and Peter Sifneos (Sifneos, Apfel-Savitz, & Frankel, 1977) that defines alexithymia as an emotional deficit, an inability of understanding,

recognizing, and describing verbally our own and others' emotional states.

Alexithymia is manifested as difficulties in identifying and describing feelings and distinguishing emotional states based on physiological signals. An alexithymia mother, who is not able to feel her emotions, is unable to activate the appropriate regulatory action for the emotional development of her baby, forcing her baby to use extended self-regulative behaviors.

Alexithymia is not intended to be perceived as pathology, or as an all-or-nothing dichotomy (alexithymia -not alexithymia), but as a continuous dimension, that may change from one time to another. It is a way of describing the capacity of understanding feelings and emotions in oneself and in others. This ability to "feel" our own emotions and affectivity, if not just unconscious, at least semi-conscious and, simultaneously, the ability to understand the feelings of others, are key elements for developing the ability to establish relationships.

Studies of the alexithymia dimension also coincide with studies of consciousness, also no longer understood as all-nothing, but as the "ability" of consciousness that every individual has in a different mode and that in the same individual varies with interpersonal context.

In an integrated approach to theories of attachment, infant research, and psychoanalysis (Stern & Ammaniti, 1992; Fonagy, 2001) the parent-child relationship is the basis of infant mental development. In the early relationship the baby becomes aware of itself through the parent affective investment. After that, the infant, through the emotional parent investment and the parent consideration of the infant as a "thinking being" (Fonagy, Steele, Moran, Steele, & Higgitt, 1991), learns symbolic functioning and structures its primary mental representational functions.

Fonagy and Target (1997) say that the genesis of basic mind structures involve the formation of "reflective function." This is a capacity of each individual, some more-some less, to represent his/her own and the other's mental processes.

In the last decade, the psychoanalytic studies of the Fonagy school (Fonagy, Steele, Moran, Steele, & Higgitt, 1992) led to decisive contributions in connection with attachment studies and trans-generational transmission of basic mental characteristics (personality structure) conveyed in the events related to attachment.

Neuroscience has led to interesting contributions in the study of child's development, particularly with respect to the concept of "neurological maturation." Only a few decades ago neurological



maturation was considered as deriving only from genetic programming and, consequently, it was through that program that the first months of development depended on cerebral, genetically defined, physiology.

Today the concept of neurological maturation has been reframed. The genetic program gives the hardware base to the brain, but the development takes place through learning and depends upon the child's experiences (Bion, 1962; Imbasciati, 2005). Neurosciences have highlighted that experience generates the neural system, the synaptic connections, the selection of neuronal populations, and, therefore, the type of functionality that would be specific to "that" brain and the mental development of "that" individual. The genetic base only deals with cerebral macro-morphology. Micro-morphology and functioning are related to neural maturation and depends on mental development as it results from experience. The experience is obtained through relational learning. Mother-child interaction and affect attunement suggest the processing of this experience. Therefore, no individual has a "mind" like another, because experiences always are different.

Mental and neuro-biological development are the result of learning that occurs in mother-child interactions. Siegel highlighted that the human species acquired a mind that develops itself in relationship (Siegel, 1999). This relationship is structured primarily through non-verbal communication. It manages with messages and meanings that produce the quality of the learning. This relationship will be, therefore, more efficient if there is non-verbal emotionally responsive communication.

The human mind develops itself through functional acquisitions by learning that derives from a relational matrix. The earliest learning is fundamental for any further acquisition and for the whole evolutionary process. In fact, this earliest learning facilitates later ability to learn from experience. Our own early learning determines what we can learn from any successive experiences. In this way, the first learning is the foundation of each individual as a person and his/her adult future. The first original relational matrix will form the basis for the individual's lifestyle, the basis of the relationships the individual will have in the future.

The origin of the mind begins in primary relationships and the neuro-mental structure depends on:

- 1) The mental structure of the caregiver
- 2) The communication that the caregiver has transmitted to the baby and from which the baby has learned. The quality of parent-child communication raises the quality of the neural

structures developed in the baby.

“Relational mental function” exercised by caregivers as the “matrix of child development” is considered of central importance not only in clinical psychology studies but also in perinatal psychology: it is caring parents, who care for their children.

In psychological experimental studies and in psychoanalytic schools, infant primary psychological life is generally considered as an affective dynamic. We refer initially to primary affectivity, then to unconscious processes, and then to conscious processes. These are the bases of the primary modality through which the mother communicates with her baby and the baby processes what it receives from her. Unconscious affective processes structure the development of the future individual, depending on the modality in which these affective processes are transmitted, modulated, changed, and assimilated by both the mother and the baby. The manifestation and physiological modulation of primary affectivity is investigated not only by psychology but also by neurosciences through the study of emotional regulation.

Neurobiological research (Fox, 1994; Siegel, 1999, 2001) highlights the concept that emotional regulation has its origins in primary mother-infant interactions. Primary mother regulation is first focused on physiological processes, i.e. regulation of sleep-wake cycles, thermo-regulation, and feeding the baby, in other words, on that which makes him feel good physically. Hofer (1994) studied what happens in small rats separated early from their mother. When the maternal organizing and regulating function failed, the rats had significant disturbances in sleep-wake cycles, hormone production, and attentive functions.

Siegel (2004) investigated affect regulation development related to mind development. Affective-emotional experiences that the baby has during the first two years are processed by an unconscious level of implicit memory (Schacter, 1992). This processing involves primitive brain structures, i.e., the amygdala, limbic regions, the basal ganglia, motor and expression cortex, and generally the right brain. Implicit memory is the primary memory underlying unconscious processes and regulates the processing of early infant learning transmitted by his caregiver. This memory is unconscious and never may be consciously recalled. The earliest level of memory is implicit memory (Siegel, 1999, 2001). It is formed by sensorial systems like proprioception, tactile perception, vision, hearing, touch, and smell. This memory is different from the representational memory that is connected to language and to declarative memory.

Siegel highlights that implicit memory is previous to the sense of continuity of self (Siegel, 1999, 2004) which develops from the 18th month, when through maturation of brain areas, such as the medial temporal lobe, the hippocampus, and orbital frontal cortex, experiences begin to be processed by the subsequent explicit, semantic, autobiographical, and episodic types of memory.

Psychoanalysis meets neurosciences: recognition, expression, and affect regulation are processed by the right cerebral hemisphere, which is referred to as dominant in the first three years of the child life (Fox, 1994; Schore, 1994, Siegel, 2001). Schore (1994) emphasized the importance of an “affect regulation” by the caregiver. The mother develops a regulatory and modulating psychobiological function and “affect regulation is the origin of the child self” (Schore, 1994). Inadequacy, neglect, or lack of maternal care represents the main empirical evidence of what has been termed “maternal carelessness.” Non-accessibility of maternal affectivity, alexithymia, or depressive illness of the mother, for example, may cause alterations in the development of infant brain areas, which is manifested in “affect dysregulation and disorder of the self” (Schore, 2003a). “Affect regulation and the repair of the self” (Schore, 2003b) is achieved when the mother-child right cerebral hemispheres communicate.

As the child grows, the activity of the right hemisphere is integrated with the left cerebral hemisphere, although the right hemisphere is still dominant in understanding and in manifestation of emotional processes.

Goleman (1995) highlighted that the right hemisphere is considered the area of the “emotional intelligence.” A few years ago intelligence was considered as conscious, today we also refer to emotional intelligence, essentially not conscious.

Through PET (Positron Emission Technique) we can see how the right brain of the mother works with a corresponding task of the right brain of the child; affectivity is a form of intelligence. It is the basis of all subsequent intelligences, it is an unconscious intelligence. This intelligence has neurobiological correspondence in the maturation of the right brain.

### In Primary Care: Constructing A Mind

The theory of the “Protomentality” (Imbasciati & Calorio, 1981, Imbasciati, 1998, 2006a), developed in the last twenty years, helps us understand the concept of “constructing a mind” (Imbasciati, 2006 b). This theory posits that psychological development is a result of

progressive learning, each step affects the quality of the next, starting from fetal-neonatal development. This theory incorporates psychological and physiological components. Its aim is to describe and explain how the first sensorial afferences in the infant, and before that in the fetus, can be organized into the first mental structures which, in turn, can read and organize the subsequent afferences, changing them into memory marks, so they can allow the organization of the subsequent experiences. This is the transition from neuro-sensory connections to psychological events, what Bion (1962) says is “learning from experience.” In this theory it is emphasized that the protomental processes, which refer to events that psychoanalytic studies have demonstrated in early newborn and infant life, have been validated through physiological clinical evidence. Thanks to this theory, you can describe these processes in cognitive terms as the processing of memory marks for the construction of subsequent experiences. This description promotes understanding of the first mental processes emphasized by the psychoanalytic theory. These mental processes are now explained by current neuroscience modalities.

The theory of the Protomental proposes a cognitive model to understand what happens in baby’s mind during the first months of life using data provided by psychoanalysis. Post-Kleinian psychoanalytic and infant-observational studies develop our understanding of the first “processes” of the human mind. These first mind processes are described in their primary cognitive function: mental basis structures are built on these processes, which then suggest the dynamics of the unconscious adult mind.

This theory explains what it is meant by “relational learning,” in which the resulting memory trace is not a simple recording of sensory input, but a set of reciprocal messages processed subsequently in a relationship.

This “relational learning” includes:

- a) the quality of the message and how it is encoded
- b) the significance of the message
- c) how this message is received and encoded: how it is “understood”

This also implies:

- d) tuned or misattuned communication and, consequently,
- e) the ability previously developed by the receiver.

This last one depends on how much the receiver has learned from previous communications. Consequently, communication depends also on how the receiver has received and encoded messages and given a response. These are non-verbal messages, external from anything involving intention and consciousness. What has been called "affective communication" is not a secondary communication, as thought in the past, but this is primary communication, which structures the infant brain, as recent research has verified.

In primary relationships there are both protective and risk factors for the mental development of the child:

- 1) Maternal/paternal modalities by which the maternal/paternal non-verbal communication is transmitted to the child through different senses and psychosomatic ways: the mother's body can produce some metabolites rather than others, which are transmitted through biochemical processes to the fetus and later to the baby, for example through breastfeeding, which is one of the most direct forms of such transmission postnatally.
- 2) Contents of the maternal/paternal communication that the parent's mental structure produces.
- 3) Modality with which the communication is processed by the primary child structure.

Maternal/paternal caring is transmitted from the mother/father to the child. These all are meanings, which are modulated from the maternal/paternal primary mental structure, through the parent's ability to tune, to rêverie, which become the child's primary mental structure. The "goodness" of parental caring is not the continuous presence of the parents, not only the physical caring, not the excessive diligence through which the mother/father shows devotion. Sometimes excessive diligence can have a disturbing effect on the child development. There are mothers/fathers who are worried about not being competent to ensure the care of the child. This sense of incompetence sometimes leads them to over-stimulate the child and this has an intrusive effect, which is disorganising for the development of the baby.

All of these concepts explain the transmission of interactions modulated by the mental structure of the parents (mother and father), through the vehicles of sensory, motor skills, touch, and sound. The skin is the first sensory organ, active in fetal life and in the early months of infant life. The baby's skin and contact with the mother's skin, give a great intimacy to the relationship (Bick, 1968). Baby's

motor skills rely on handling and holding and how the child is touched by his/her mother/father. These are instruments of tuning: touch, motor, and sound messages, that form messages from the core of dyadic relationships.

Protective factors for the child development are not only parental diligence, but are the maternal/paternal responsive sensitivity, affect attunement, rêverie process, affect regulation, and the parents ability to send suitable messages to their baby and at the right time, so that their baby can “understand” and assimilate them.

The different scientific contributions and various guidelines explain how mental development happens and contributes to relational learning through interactions. In the fetal and neonatal periods the mother and father’s responsive sensitivity, their rêverie, their non-alexithymic mental function, emotional regulation, and affect attunement in communications, determine the quality of parent-child relationships (Imbasciati, & Cena, 2010; Cena, Imbasciati, & Baldoni, 2010).

This quality can be perceived through observation of non-verbal relationships, such as the manner in which the mother/father hold their child, how they communicate with the child, the tone and the sound of their voice, which in prenatal period the fetus records from the fourth month of pregnancy and learns to distinguish from all other sounds. The parents transmit a set of meanings, which are enabled by ‘significants’ (modulation of physical channels). (Imbasciati, 2008).

Another important aspect of mind development is the trans-generational process. The schools that derived from Bowlby have brought a key contribution to understanding the trans-generational process (Bowlby, 1969, 1973, 1980, 1988a, 1988b; Ainsworth et al, 1978; Main, & Salomon, 1990). Attachment styles not only regulate the child’s mental functioning, but they transmit modes of maternal/paternal mental functioning – the ‘internal working models’ – and determine the future functioning of the individual’s mind.

According to the “Theory of the Protomenta” (Imbasciati & Calorio, 1981, Imbasciati 1998, 2006a, 2006b) the baby’s parents, from the first days of the baby’s life, model a language which builds in the baby primary functional structures, and the basis of mental functioning modes. It is a non-verbal language (or languages), conveyed through physical channels and received by senses of the newborn, i.e., hearing, smell, touch, proprioceptiveness, and motor efferences, later also sight. The parental modulation is able to produce learning in the baby. This will be successful if parental communication is coherent and can be incorporated by the newborn when his mind is

able to give them meanings (Imbasciati, Dabrassi, & Cena, 2007). These conditions occur according to the parental rêverie ability (Bion, 1962).

We can, therefore, suppose that the transmission of trans-generational processes lie in non-verbal messages, in special communication units, and reading units, through which specific concepts are received and transmitted, with its memory imprints, which then become the primary functional mental modes of that individual. On this basis subsequent functional structure will be built.

Parental caring transmits the basic structure of parent's mind, but not passively, it must be processed and modulated. What is assimilated depends on the parental responsive sensitivity, parental affect attunement and rêverie abilities, and from non-alexithymic parental mental structure. All this depends on how the parent-child communication evolves. If the child responds and the parent does not respond properly, the baby's attention will be disorganized and his/her mind will be disorientated rather than organized.

*How and when do the parents acquire this ability to communicate with the child?*

The parents acquire this ability from the relation that they have had with their mother and father; the parents transmit with a trans-generational process what they have assimilated from their own parents in their primary infancy.

Mental structures that produce good parental abilities also will be able to produce corresponding good abilities in the children; the children also will be able to transmit these abilities again to their children. There is not only one transmission from one generation to another but to more generations.

Imperfections or lacks in the affect regulation, parental non-alexithymic abilities, lack of responsive sensitivity, or obsessive caring, will be the origin of disorganization and a corresponding deficit in the children, that will be transmitted to their children.

Maternal/paternal caring is a mental asset that is transmitted, not only from one generation to another, but in a trans-generational process.

Figure 1 shows a schema which recaps the most important concepts that we have considered in this paper and their convergence in research over time.

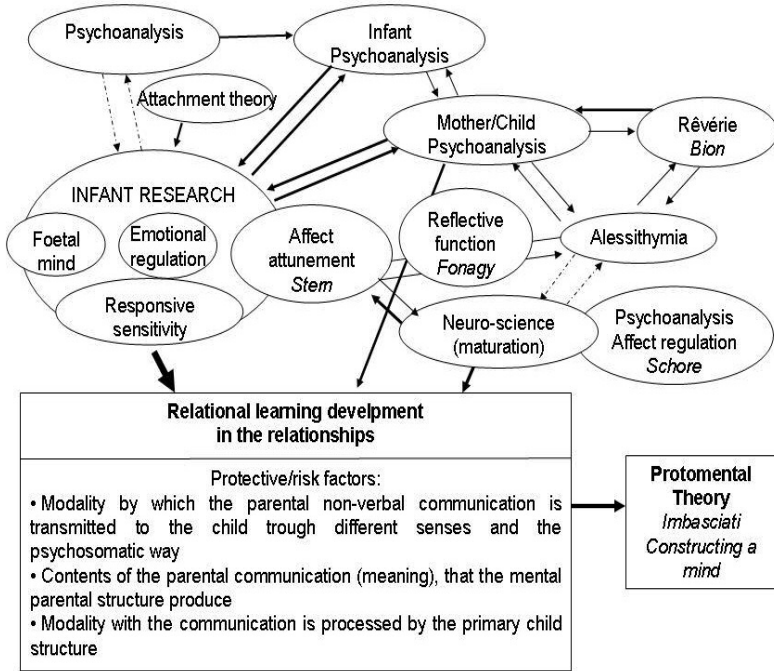


Figure 1. Parent-child relationships in primary ‘care’: convergence of research.

Perinatal Clinical Psychology:  
Training, Psychotherapy, Research

Obstetric, gynecologic, neonatal, and pediatric staff can take care of the woman during her pregnancy, in childbirth, puerperium, and during the first years of the child’s life. The mother may have material assistance but the mother also needs to be supported and assisted in a psychological way, so that she can increase her positive maternal abilities, in order to activate a trans-positive circuit and avoid the danger, which unfortunately occurs, of subsequent harmful depression. So obstetric, gynecologic, neonatal, and pediatric staff absolutely needs to include psychological practitioners and psychology specialists.



These are the perinatal clinical psychologists.

Perinatal Clinical Psychology can operate in three different ways, as in the theoretical model of reference shown before:

- 1) Training of counsellors and social service practitioners through all medical and psychological university based training and on-going training in their professional careers. Perinatal Clinical Psychology needs to be taught in obstetrics and neonatology degree courses (including child-welfare and pediatricians) and can give these professionals permanent support in their work through modules of Balint groups (A Balint group is a group of clinicians who meet regularly in a leader-facilitated group to present and discuss clinical cases in order to better understand and utilize the clinician-patient relationship in a therapeutic, professional way).
- 2) Taking care directly of parents and children through psycho-pedagogical interventions and psychotherapy. Clinical psychological interventions and psychotherapy include psychological assessments, meetings for observers' to discuss psycho-pedagogic interventions based on the observed behavioral and communication modalities with the child. In psychological consultations (Imbasciati & Cena 2010) it is possible to use video-observations of the mother or caregiver interaction with the child; it is possible to see again the aspects of those dyadic communications that might be incoherent and not in tune with the child's needs. It is also possible, in the psychotherapeutic context, to use video-feedback interventions to help parents understand their non-verbal communication with their baby. Parents reflective functions can be encouraged by a perinatal clinical psychologist who will help them modulate their communicative abilities with the child through non-verbal communication. When the parents have more complicated psychological problems, there will be a necessity of more meetings and, perhaps, therapeutic intervention. (Cramer, & Stern, 1988; Manzano, Palacio-Espasa, & Zilkha, 1999; Vallino, 2009).
- 3) Research projects that study the parent-child interactions and infant mental development (similar to our past Ministerial Inter-university Research PRIN 2007 in the University of Brescia, Boulogne, Florence, and Milan).

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