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Mental Health and Developmental Disorders in Infancy and Early Childhood: The PDM-2

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We provide a general introduction to the theoretical and empirical sources informing the development of the Infancy and Early Childhood Section (IEC) of the second edition of the Psychodynamic Diagnostic Manual (PDM-2). We offer a brief exploration of the evolution of developmental psychoanalysis and its applications to infant mental health, along with an example of applying the IEC framework to clinical and developmental data from a longitudinal study based on developmental and psychodynamic principles. This article illustrates the evolution of theory in the context of interdisciplinary integration and explores its implications for diagnosis and clinical formulation.

Keywords: infant mental health, development, assessment, PDM-2

Making diagnostic formulations about problems in infancy and early childhood is a serious challenge for clinicians. Symptoms often express a relationship disorder. Whether symptoms are based primarily in physiology or primarily in psychology, it is difficult to investigate the preverbal period, as symptoms change during the course of development. Moreover, the developmental dimension is interwoven with the complexity of individual functioning, often causing a fluidity and a consequent instability of diagnosis.

The importance of doing a systematic and multidimensional assessment of the personality at different stages of development has been generally accepted for many years. Yet this acceptance has not led to its broad use. Anna Freud (1965) highlighted this problem, stressing the value of looking at personality functioning through a developmental psychoanalytic lens in order to organize diverse aspects of complex clinical phenomena and permit their full meaning to emerge.

Contemporary clinical interest in early ego development and psychopathology in infancy and early childhood is built on a solid foundation. Spitz's report (Spitz & Wolf, 1946) on anaclitic depressions in institutionally reared infants, and Bowlby's monograph, *Maternal Care and Mental Health* (Bowlby, 1952), describing the now well-known "syndromes" of disturbed functioning in infancy, are examples of seminal work that inspired the contem-

porary focus on infant mental health. Interest in disturbances in infants, as indicated by the work of Anna Freud (1965), Klein (1952), Winnicott (1931), and Erikson (1963), among others, has resulted in amplifying the complexity or multidimensional nature of early problems.

In the 1970s and 1980s, a wealth of empirical infant research (e.g., Ainsworth, Blehar, Waters, & Wall, 1978; Emde, Gaensbauer, & Harmon, 1976; Sander, 1962; Sroufe, 1979) generated a range of useful developmental constructs. These foundations, together with the rapidly growing body of clinical experience with infants and their families (e.g., Fraiberg, 1980; Lieberman & Pawl, 1993; Provence, 1983), provided direction for a much-needed integrated approach encompassing multiple lines of development in the context of early adaptive and disordered functioning. Developmental psychopathology, relational psychoanalysis, and attachment theory made further contributions to understanding the importance of relationships in the development of personality and to conceptualizing the symptoms of infants and children as relational disorders (Sameroff & Emde, 1989).

Even in the aftermath of such pioneering work, it has remained a challenge to map the development of emotions and cognition, and their interrelationships, from infancy through early childhood. This project requires a truly comprehensive developmental approach to intervention, one that takes into account all aspects of the infant's life, including individual differences in processing experience, developmental abilities, interactive patterns, and caregiver, family, cultural, and community dynamics (Greenspan & Wieder, 2006). Such an integrative approach has benefitted from several advances in research and clinical findings, including the following:

- a) The influence of attachment theory as a perspective on how early relationships and caring shape social and emotional

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development (Eagle, 2013; Main, 1991; Slade, 2005; Steele & Steele, 2005; van IJzendoorn, 1995);

- b) The increasing influence of social neuroscience in understanding the impact of early relationships on neural development and on key domains such as emotion and stress regulation (Casey, Giedd, & Thomas, 2000; Schore, 2003; Tronick, 2007); and
- c) The emergence of developmental psychopathology in the early 1990s, a field dedicated to uncovering the maturational course of psychological disorders of childhood and adulthood, which has highlighted the role of intergenerational transmission of psychopathology and the value of early intervention (Cicchetti & Cohen, 2006; Lyden & Suchman, 2013; Rutter & Sroufe, 2000).

An example of this shift toward integration and its benefits can be found, for example, in the large body of psychoanalytic, psychiatric, and psychological literature on the consequences of maternal depression for the developing child. Whether depression is defined by clinician observation or self-report, we now have robust evidence that infants of depressed mothers are at risk for social, emotional, and cognitive difficulty (Gitlin & Pasnau, 1989; Murray & Cooper, 1997). Infants of depressed mothers show less positive affect, less optimal social and object engagement, and greater likelihood of insecure attachment than children of mothers without depression (Campbell & Cohn, 1991; Lyons-Ruth, Repacholi, McLeod, & Silva, 1991; Tronick, 1989). Compared to controls, depressed mothers and their infants spend more time in negative states and match negative states more than positive ones (Cohn, Campbell, Matias, & Hopkins, 1990; Tronick & Weinberg, 1997).

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Infants of depressed mothers have self-regulatory disturbances, such as perinatal complications, suggesting difficulty from birth; by 6 months, they have elevated heart rates and cortisol levels (Murray & Cooper, 1997). Longitudinal studies in offspring of depressed mothers show more cognitive, emotional, and social difficulties, along with elevated morning cortisol secretion, all predicting depressive symptomatology and poor academic performance in adolescence (Halligan, Herbert, Goodyer, & Murray, 2007; Murray, Arteche, et al., 2010; Murray, Halligan, Goodyer, & Herbert, 2010). These findings have profound implications for early prevention and clinical intervention.

The integrative findings of developmental psychoanalysis on newborn and infant learning, in the context of the relationship with primary caregivers, shed light on the epigenetic evolution of fundamental constructs such as cognition and affect in the relational sphere (Dodge & Rutter, 2011). Early formulations by Sandler and Rosenblatt (1962), expanded by Fonagy, Gergely, Jurist, and Target (2002), place feeling states and the notion of a feeling of safety at the center of the psychoanalytic theory of motivation. In this model, the affect state is seen as the key organizer of both interpersonal relationships and cognition in infancy throughout the developmental continuum. Psychopathology is no longer equated solely with disruptive experiences in infancy that lead to fixation at an earlier developmental stage, but instead is understood as a more complex interaction of early caring, biology, and endowment/genetic factors (Malberg & Mayes, 2015).

Mental Health and Developmental Disorders in Infancy and Early Childhood (IEC 0–3) in PDM-2

Informed by contemporary psychoanalytic developmental theory, the second edition of the *Psychodynamic Diagnostic Manual* (PDM-2, Lingiardi & McWilliams, 2017) strives to capture the complexity and interactive nature of the developing mind across the life span. As a unified system, it maintains theoretical and clinical continuity while differentiating between developmental phases. PDM-2 departs significantly from nosographic symptom-behavior-oriented approaches, instead offering a maturational, relational, contextual vision. It attempts to articulate a psychodynamically oriented diagnosis that both appreciates clinical complexity and reflects empirical and methodological validity (Lingiardi & McWilliams, 2015). The PDM-2 uses two diagnostic frameworks: (1) a special chapter on infants and young children, the Mental Health and Developmental Disorders in Infancy and Early Childhood (IEC 0–3), and (2) a chapter on Childhood (4–11), which considers Mental Functioning (MC Axis), Emerging Personality Patterns (PC Axis), and Symptom Patterns (SC Axis).

Because of the unique qualities of the first 3 years of life, the multiaxial approach for the IEC chapter differs from the PDM-2 sections on adulthood, adolescence, childhood, and later life. The IEC has a developmental, comprehensive, multiaxial approach that primarily covers functional emotional developmental capacities (Axis II), regulatory-sensory processing capacity (Axis III), relational patterns and disorders (Axis IV), and other medical and neurological diagnoses (Axis V) as determinant components of a multiaxial diagnosis for infant disorders (Axis I).

The second edition of the PDM puts greater emphasis on the contribution of the different axes to a diagnostic profile. This shift reflects the understanding that the assessment of a symptomatic pattern in childhood is not possible without an accurate evaluation of the child's sensory processing abilities; functional, emotional and developmental capacities; and prevalent interactive and relational patterns. The IEC section echoes the general PDM-2 position that a comprehensive assessment captures the unique qualities of each individual—in this case, each infant. Each axis helps the clinician not only to form an overall view of a child's functioning, but also to understand the role each area plays in pathogenesis. A feeding disorder, for example, could be influenced by a specific sensory processing problem (Axis III) that makes the child vulnerable to the introduction of new foods, it could be determined by a medical condition such as gastro-esophageal reflux (Axis V), or it could express a conflictual relational pattern between child and caregiver (Axis IV). Each dimension could be the primary factor, but the interweaving of all dimensions is critical.

To provide continuity between this section and others, its authors noted developmental pathways toward symptomatic patterns of older children and adolescents. Homotypic and heterotypic psychopathological continuity (i.e., the fact that one disorder predicts the same or another disorder at a later point; Costello & Angold, 1995; Costello, Mustillo, Erkanli, Keeler, & Angold, 2003) contradicts the currently popular characterization of disorders as discrete, static entities. It recognizes that despite phenomenological differences, the same maturational and psychopathological processes may underpin some disorders. Identifying developmental pathways of psychopathology, by considering mental functioning,

personality, and developmental dynamics, enables more accurate diagnostic predictions.

The infancy and early childhood section of the PDM-2 is based on Greenspan's (1992, 1996) developmental structuralist approach. From this perspective, at each phase of development there are certain characteristics that define the experiential organizational capacity; that is, the stability and contour of the stage. At the same time, there are certain age-expectable themes characterized by their complexity, richness, depth, and content. In focusing on levels and organizations of experience, this way of thinking alerts the clinician to look not only for what the infant or toddler is evidencing (e.g., psychopathology) but for what is not in evidence. For example, the 8-month-old who is calm, alert, and enjoyable, but who has no capacity for discrimination or reciprocal social interchanges, may be of vastly more concern than an irritable, negativistic, food-refusing, night-awakening 8-month-old with age-appropriate capacities for differentiation and reciprocal social interchanges. Each stage may thus be characterized according to "expected" organizational characteristics.

Advances in cognitive neuroscience and genetics have informed a progression toward a more flexible, integrative, and systemic developmental psychodynamic approach. In addition, the psychoanalytic focus on subjectivity and its emergence from early development has contributed to the understanding of individual differences in the quality of functioning of basic mental mechanisms and how they are affected by early adversity. Most important, developmental psychoanalysis and its conceptualization of the mind—as an immediate experience, a sensation, a motivation, an action, and perceptions rooted in the body and its developmental experiences (Klin & Jones, 2007)—bring further depth. Psychoanalytic developmental conceptualizations increase our understanding of processes such as resilience and the long-term sequelae of chronic stress. The clinical vignettes in this section illustrate how contemporary developmental psychoanalysis tells a story of a maturing mind in an interpersonal matrix as it is influenced by both internal and external variables.

A Comprehensive Approach to Clinical Evaluation

All clinicians develop their own ways of doing an evaluation. Any assessment of an infant or young child, however, should take a number of sessions to understand how the patient is functioning in each developmental area. Clinical evaluation requires consideration of a large number of contexts and assessment tools that can be summarized as follows:

- **Observation of infant or child functioning.** Level and quality of socioemotional, cognitive, linguistic, relational, sensory, and motor abilities can be investigated through observational techniques, ranging from free play to structured observations or tests.
- **Observation of caregiver-child interactive patterns.** Direct observation of family functioning, especially of the caregiver-child relationship; unstructured observations and/or standardized procedures can be used to assess the quality of interactions.
- **Clinical interviews with parents.** Evaluation of the child's developmental history, nature of the child's pattern of strength and difficulties, parental representations of the child and of themselves as caregivers, quality of parents'

reflective function. The clinician should attend to two levels of information: "objective" data, such as the child's medical history and evident symptoms, and "subjective" data such as inferred parental affective states and mental representations of themselves and of their child, along with the reported subjective experience of the caregiver and the quality of the relationship with the child.

In view of the wealth of observational data, clinical reports, and instruments emerging from attachment theory and research, a section on attachment has been added to PDM-2. Attachment is one of the most powerful predictors of a young child's later social and emotional outcome (Fonagy, Steele, & Steele, 1991; Main, Kaplan, & Cassidy, 1985). Extensive research has shown that attachment is associated with mental capacities such as affective regulation, mentalization/reflective functioning, defensive functioning, and resilience in both clinical and typical populations (Bowlby, 1969; Fonagy et al., 2002; Lyons-Ruth, Bronfman, & Parsons, 1999; Lyons-Ruth, Melnick, Bronfman, Sherry, & Llanas, 2003).

As a way to help clinicians systematically conduct observations in the domains of emotional developmental capacity (Axis II), regulatory sensory processing capacity (Axis III), and relational patterns (Axis IV), IEC introduced user-friendly assessment scales as well as a list of relevant assessment tools. These tools include questionnaires, rating scales, standardized observational procedures, and interviews that can be taken into consideration to support a developmentally based approach to the assessment and diagnosis.

An Illustrative Clinical Case

In the following pages, we apply the IEC axis to a child first described by Ernst Kris (1962) and then discussed by Sally Provence (1983). This is the case of Anne Adams, whose first three years of development was followed in Kris's longitudinal study conducted at the Child Study Center of Yale University. In exchange for their participation, parents having their first child were offered pediatric care, social work services, and attendance in nursery school when the child reached age 2.

Although there is a considerable amount of data on all of Anne's development, we begin with the most serious crisis, around 9–10 months. We attempt to reconstruct the previous developmental phases and the characteristics of the mother-child relationship, as if a clinician had assessed Anne and her family at the end of her first year of life. The observations were not gleaned during psychoanalytic or psychiatric treatment. They were gathered in interviews with the mother centered around development and care of the child and in numerous observations of the child at home and in a variety of settings offered by the Yale Child Study Center (pediatric office, well-baby clinics, nursery school).

At the age of 9 months, Anne looked like a very thin and sad little girl. Her birth weight (5 ½ lbs.) put her in the 25th percentile of normal infant girls. At 3 months, she had dropped to the 10th percentile, but in view of her appearance and other physical findings this did not seem alarming. She still maintained an adequate nutritional status at 6 months. Then the weight curve dropped below the 3rd percentile. At this point, Anne looked very thin. An unhappy facial expression, lack of vitality, and overall sadness were her most characteristic traits. Instances of lack of emotional connec-

tion between her and her mother were numerous and impressive. Anne's mother seemed unable to understand her baby's needs or to perceive her baby's cues.

The feeding situation exemplified this: Mrs. Adams would start to prepare the bottle not when Anne woke up, but only at the moment when she began to cry. She often felt upset and helpless when the baby's crying intensified; then she was apt to react strongly and in ways that did not alleviate the situation. Mrs. A. reported that when she was depressed, she was unaware of the time that had elapsed between feedings. At other times, she insisted upon rationed quantities of food unrelated to her infant's needs of the moment. Mrs. A. revealed that she was depressed, dissatisfied, lonely, bored, and angry at her husband. She had gained a great deal of weight, which intensified her feelings of depression. Anne showed an unhappy tension and had screaming spells of 10 or more minutes, which the mother reported were connected with her own moods, especially her "blue Mondays."

Personal Data, Family History, and Relationships With Family Members

Mr. Adams was described as a retiring young man, with a rare but friendly smile which could blossom into laughter when his infant daughter Anne would greet him enthusiastically. Mrs. Adams's appearance stood in marked contrast to that of her husband. Somewhat full in build, of medium height, she had a ready and outgoing smile. Simply but tastefully dressed, neat without obvious effort, there was also a tinge of artificiality about her.

Mrs. A. lost her parents as a child and was very attached to her 10-year-old half-brother. She had loved her father, but she was convinced he had wanted a boy. She was made to wear boys' clothes and haircut, and at 5 years of age she was started on a course of weightlifting and systematic exercise. She was to be "brave" and a "big" girl and was to overcome her fear of animals. In her schoolwork, if things did not come easily enough, she was tutored in order to shine. The demand for perfection was insistent and unrelenting.

The beginning of the relationship with her future husband was positive. Shortly after they had moved to New Haven, Mrs. A. discovered she was pregnant. Apparently, her anxieties during pregnancy were not particularly intense, but they revealed a profound denial of her conflicts: The couple expected the baby to be male, and they contemplated only names of boys. Moreover, she expressed preoccupation when she saw a Down's Syndrome baby: The thought of being pitied because of a defect in one's child seemed unbearable. The impending delivery itself seemed frightening; she was deeply afraid of the pain involved and described in detail her low tolerance for physical stress.

At Anne's birth, Mrs. A. denied being disappointed with her gender—but her criticisms were significant. She had a small perineal tear, and complained "the baby tore me apart." This was the first of many comments over the next 2 years in which she characterized Anne as aggressive and damaging to her, a statement that anticipated the battle ahead. Shortly after the birth, she reported finding the baby beautiful, but by the second day, she began to refer to her as unattractive and seemed jealous that her husband considered his daughter beautiful. She seemed rather detached from Anne during the lying-in period and was not perceptive of either her attractiveness or the discomfort expressed by her crying.

She had expressed a wish to breast-feed, but by the third day it was apparent that this involved too great a conflict for her, and she gratefully accepted the pediatrician's suggestion that she shift to bottle feeding. She was convinced she could not manage breast feeding when she went home; she also said she was afraid that her large breasts would smother the baby.

Anne's Development

In contrast to her mother's representation, Anne was an unusually pretty and well-formed new-born, who ate and slept well and was described as a well developing child. She was responsive in all sensory modalities and was especially alert visually. A moderately active infant, she nestled easily into the arms of an adult, and when restless, she was promptly quieted by being held and cuddled.

At 2 months Anne was alert and responsive, with an excellent balance of receptivity and reactivity and an unusual ability in perceptual discrimination. She smiled responsively to the adult faces and visually followed both persons and toys. She reacted to social stimulation by cooing and other vocalizations. She was especially responsive to her mother's voice and face. Her "language" was considerably in advance of her chronological age. By 2 months, however, Mrs. A.'s problems in holding and cuddling her baby already emerged: She reported that she did not pick up the infant frequently and was afraid of spoiling Anne. She gave her the bottle while holding her at a distance across her lap, minimizing body contact. In this feeding behavior she looked competent but not contact-seeking. Often Mrs. A. read as she fed her baby.

By 2 ½ months, Anne could get thumb to mouth easily when she was in prone position, and her mother put her in this position so that she would sleep through the night without a feeding. At this time, however, Anne cried lustily when hungry, clearly registering her need, and Mrs. A. reported that she kept Anne waiting for her feedings as long as half an hour since she rarely anticipated Anne's need and could not quickly prepare the bottle. In contrast, at 3 months Anne was sucking her thumb for as long as half an hour in the early morning, appearing contented. This observation, which became more meaningful in the light of later development, suggests that hunger (that is, the physiological need) was present, but the baby had made some kind of adaptation to the mother's habitual lack of promptness in feeding her. When she saw the bottle she would, according to Mrs. A., "suddenly become voracious" and take it hungrily.

It eventually became clear that Mrs. A. was unable to make any feeding fully satisfying and pleasant for her daughter. She could not mobilize herself to feed her at the first signs of hunger and would give the bottle only after Anne's crying was prolonged and intense. Her behavior placed too great a strain on the baby's capacity to tolerate tension. Mrs. A. revealed that the baby's crying upset her very much, and that she had been screaming back at her.

At 3 ½ months, while Anne's progress in discrimination and recognition of her mother was excellent (even if her mother failed to recognize it), the first slowing of language development and playful social reactions became apparent in her performance on the developmental tests. Moreover, Anne was not fully using her motor abilities as her maturation would have permitted; she was not as active in reaching out and changing position as she could have been. She also showed a relatively low investment of interest

in toys. And it appeared that the mother's screaming at her had an inhibiting influence on the baby's vocal expression.

At 4 ½ months, Anne was still well developed in some respects. She was appealing and adequately nourished. At the same time, she was irritable and anxious, and it was difficult for her mother to comfort her. There also was a change in the thumb-sucking behavior: Anne, who had previously sucked her thumb selectively and with apparent pleasure and relief of tension, was now sucking her whole fist instead.

Between age 5 and 8 months, Anne's decline became noticeable, although it did not reach its greatest depth until the end of the 10th month. Early in the 5th month, Mrs. A., disturbed by what she considered unnecessarily frequent feedings, asked permission to give more solids to lengthen the interval between feedings. During that same month, she confessed with some guilt that she was spanking Anne when her crying made her "feel wild inside." Mrs. A. was depressed. She could not enjoy feeding or caring for her baby, and she could not make the feeding experience (and undoubtedly also other experiences) gratifying for the baby.

At the 6-month visit by the pediatrician, a delay in motor development was visible but not dramatic: Anne was unable to maintain her trunk erect when placed in sitting position, and she did not roll, although she did make some efforts to change position and to reach out to others. She showed even less interest than before in play with toys; she reacted to the sound of a bell and to some other noises by closing her eyes, as though shutting out the stimuli. She was reported to be taking long daytime naps in addition to sleeping 12 hr at night, suggesting a diminished interest in the external world. She was amiable and responsive, however, both to the pediatrician and to her mother, and she seemed to find pleasure in social contact. Her use of language continued to be somewhat depressed, as reflected principally in her minimal use of vocalization in social interchanges.

Anne's decline in all aspects of development was rapid during the next 8 weeks, and by the time she was 7[3/4] months old, her misery and depression were prominent. In terms of developmental milestones, language showed the greatest lag; she was averaging 6 weeks below the norm for her age. Gross motor achievements were more delayed than before, and for the first time, muscle tone was described as poor. Movements were observed to be less skillfully modulated than in a healthy child of her age; they were either quick and poorly controlled or quite slow, and they were relatively less goal-directed than previously. She was less active in changing position to move toward a toy or person. Maturational patterns with respect to fine motor development had continued to evolve normally, but her characteristic behavior with the test materials was to approach, flick, grasp briefly, and release quickly. She showed more vigor in getting rid of objects than in obtaining them. She had an apparent preference for stimulation of low intensity and a tendency toward withdrawal.

A dramatic example of the disturbed relationship between mother and child, which dismayed all who observed her at her 7 ¾-month visit, was that Anne cried repeatedly at the approach of her mother but could be comforted better by the pediatrician, to whom she responded with more pleasure than to her mother.

Anne's hyperattentiveness to acoustic and visual stimuli, her increased anxiety, and particularly her distress at the approach of her mother suggested a heightened sense of the possibility of external dangers. An anxious apprehensiveness pervaded her be-

havior. She was quite fearful of strangers—a source of anxiety that was to stay with her for many months. This fearfulness was paralleled by a relative impairment of attachment, inferred from her tenuous contacts with her mother and from her relative incapacity to play.

The severity of her mother's problem in nurturing her infant was evident at 8 months. There were even fewer experiences that were mutually pleasurable. Anne's crying and the mother's loss of control and resort to spanking were more frequent. In contrast to the mother's feeling that her infant was unreasonably demanding, it appeared to observers that Anne had made considerable adaptations to the nongratifying and threatening environment: She accepted being alone for long periods without making strong demands.

Anne's performance on the developmental test at 9 months showed a greater decline in her rate of development. She was anxious and apprehensive but was somewhat more comfortable when on her mother's lap. Language was again her lowest area of functioning. She was able to get mild enjoyment from the peek-a-boo game but did not initiate it, nor did she respond to other social games such as pat-a-cake, so-big, and bye-bye. Her weight was below the 3rd percentile; her body was thin and her muscle tone poor. She embodied a failure to thrive. There were no other significant findings on the physical exam, which included a number of laboratory studies directed at her poor growth and developmental delay.

Clinical Evaluation Through the IEC Multiaxial Approach

In what way could PDM-2 have helped us to understand what happen to Anne and her mother? First, it advises clinicians to consider symptomatic behavior within a multiaxial approach, taking into account constitutional and maturational features; levels of emotional, cognitive and social functioning; family system functioning; adult-child relationships and patterns of interaction; and parental fantasies and representations. To conceptualize Anne's main symptoms, we now depict areas of functioning via the Psychodiagnostic Chart (PDC-IEC; [Figure 1](#)). PDC-IEC was developed on the basis of the adult PDC-2 ([Gordon & Bornstein, 2012](#); [Lingiardi & McWilliams, 2017](#)) as a user-friendly tool to guide clinicians in the assessment of infants and young children and in the systematic organization of the child's strengths and deficits in order to define a clinical diagnostic profile.

Axis II (Functional Emotional Developmental Capacity) describes the child's emotional and social functioning, including capacities for self-regulation, different levels of relating to others, emotional cuing and signaling evident of preverbal affective reciprocity and communication, up to the preschooler's symbolic thinking.

We know that Anne was a sane and competent baby, able from the beginning to regulate her internal states and at the same time to be responsive and socially oriented. But by the end of her first year, she could be described as an infant with serious difficulties in organizing the affective domains of joy, pleasure, and exploration as well as goal-directed movements (Significant deficit —2—in the "Shared attention and regulation" domain). The fluctuation of over- and understimulation from the caregiving context and the failure of mutual regulation ([Tronick & Weinberg, 1997](#)) delayed

Psychodiagnostic Chart for Infancy and Early Childhood (IEC)

Name: Anne A. Age: 10 months Gender: Female Ethnicity: Caucasian

Date of evaluation: 09/15/2017 Evaluator: AMS

Section I: Primary Diagnoses

List the main IEC primary diagnoses and rate the level of severity, using a 1-5 scale. If necessary, you may use the DC:0-3R, DC:0-5 or DSM diagnosis here.



Primary diagnosis: IEC02 - Feeding disorder _____ Level: 1-2

Other diagnosis: IEC06 – Depressive disorder _____ Level: 3

Other diagnosis: _____ Level: _____

Section II: Functional Emotional Developmental Capacity

Rate the child’s level of strengths or deficits on each of the 6 emotional functions below, on a scale from 1 to 5 (1 = Severe deficits; 5 = Healthy)

Level	Expected Emotional Function	Rating Scale				
		5	4	3	2	1
1	Shared Attention and Regulation				X	
2	Engagement and Relating				X	
3	Two-Way Purposeful Emotional Interactions			X		
4	Shared Social Problem Solving					
5	Creating Symbols and Ideas					
6	Building Logical Bridges Between Ideas: Logical Thinking					

Figure 1. Psychodiagnostic Chart for Infancy and Early Childhood (IEC).

the achievement of an age-appropriate level of functioning in this area. Signals of hunger, satiety, interest, or curiosity need to receive a contingent and appropriate response by the caregiver to become part of the child’s self-regulatory capacities. In Anne’s case, her ability to regulate her hunger stimulus through the thumb-sucking behavior became at the same time a dysfunctional hyper-regulation of her internal state and a signal for lack of communication with her mother (Lichtenberg, 1989).

Similarly, we can address Anne’s “Engagement and Relating” (Significant deficit—2). Dyadic reciprocity usually begins between 2 and 4 months, when the infant–caregiver dyad is charac-

terized by mutual gaze, vocalizations, and physical proximity. When interacting with caregivers, infants are sensitive to reciprocity: Experiences of reciprocal activity provide a sense of shared experience or intersubjectivity. Although at 2–3 months Anne smiled at adult faces and reacted to social stimulation appropriately, she became progressively withdrawn and lost interest in human interaction. She failed to show imitation behaviors and did not initiate or show enjoyment in social games (Field, Diego, & Hernandez-Reif, 2009).

Purposeful communication was inevitably compromised by a lack of reciprocal responses from her mother, who would either

Section III: Regulatory Sensory Processing Capacity

Axis III describes the regulatory sensory processing profile of the child. There are a number of constitutional/maturational differences in the way in which infants and young children respond to and comprehend sensory experiences and then plan actions. The different observed patterns exist on a continuum from relatively normal variations to disorders.

Rate the child’s level of Regulatory Sensory Processing Capacities on each of the categories below, on a scale from 1 to 4 (1 = Severe problem; 4 = no indication).

		CHALLENGE IN THIS AREA			
		4	3	2	1
Category	Subtest	NO INDICATION; NEVER OR RARELY A PROBLEM	MILD PROBLEM OR ONLY OCCASIONALLY A PROBLEM	MODERATE PROBLEM OR FREQUENTLY A PROBLEM	SEVERE PROBLEM OR ALMOST ALWAYS A PROBLEM
Sensory Modulation	Sensory Under-Responsive	X			
	Sensory Over-Responsive		X		
	Sensory Seeking	X			
Sensory Discrimination	Tactile		X		
	Auditory		X		
	Visual	X			
	Taste/Smell	X			
	Vestibular/Propriocep.	X			
Sensory-Based Motor Functioning	Postural Challenges		X		
	Dyspraxis Challenges	X			

Overall Regulatory Sensory Profile

Considering the ratings and your clinical judgment, circle the degree to which the regulatory sensory pattern represents normal variation versus disorder. For scores 1-2: consider a Regulatory Sensory Processing Disorder as a primary diagnosis; for scores 3-4 consider that the disordered regulatory sensory processing can be associated with other primary diagnoses.

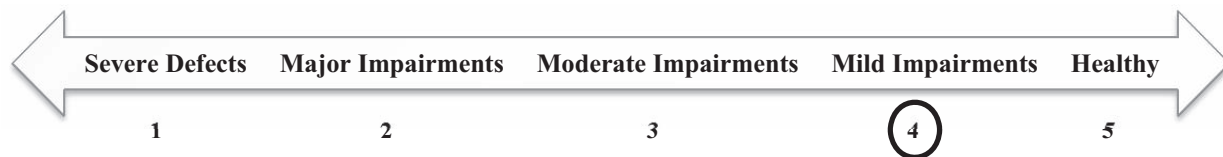


Figure 1. (Continued)

Section IV: Relational Patterns and Disorders

Each child’s relationship with a significant caregiver (mother, father, but if appropriate custodial parent, grandparents, etc.) should be evaluated in this section.

Rate the parent-child relationship on each of the 8 descriptions below, on a scale from 1 to 5 (1 = Severely impaired; 5 = Healthy). Then sum the 8 ratings for the degree to which the pattern represents healthy/adapted relationship versus relational disorder.

Caregiver 1: Mother (please, specify)

Infant/child and parent relationship	Rating scale				
<i>Quality and flexibility of parental representation of the child</i>	5	4	3	2	1
<i>Quality of the parent’s reflective functioning</i>	5	4	3	2	1
<i>Quality of parent and child’s non-verbal engagement</i>	5	4	3	2	1
<i>Quality of interactional patterns (reciprocity, synchrony, interactive repair)</i>	5	4	3	2	1
<i>Affective tone of the parent-infant relationship</i>	5	4	3	2	1
<i>Quality of parental behavior (sensitivity vs threatening and/or frightening behaviors)</i>	5	4	3	2	1
<i>Quality of caregiving patterns (comfort, stimulation, response to infant emotional signals, encouragement vs withdrawn, overly stimulation, controlling, insensitive)</i>	5	4	3	2	1
<i>Infant/child ability to engage and form a significant relationship (vs specific difficulties that impair this ability)</i>	5	4	3	2	1
TOTAL SCORE = ...18.....					

Overall level of relational pattern (caregiver 1)

[Healthy/Adapted Relational Patterns 36-40; Adapted Relational Patterns with Some Areas of Difficulty 29-35; Moderate Perturbation or Disturbance in Relational Patterns 22-28; **Significant Disturbance in Relational Patterns 15-21**; Major Impairments in Relational Pattern or Relational disorders 8-14]

Attachment pattern (caregiver 1)

Rate the parent-child relationship as regards attachment patterns on a scale from 1 (no correspondence) to 5 (high correspondence) for each of the four prototypes.

- Secure _ 1 _
- Insecure/Avoidant _ 2 _
- Insecure-Ambivalent/Resistant _ 1 _
- Disorganized/Disoriented _ 4 _

Figure 1. (Continued)

under- or overstimulate her, preventing Anne from fully developing this ability. As an example, she could clap her hands, but could not succeed in pat-a-cake, a game that involves communication between infant and “other” and requires social stimulation by an adult with a playful and reciprocal intent.

As Anne’s rate of development declined, signs of difficulty appeared in every area: motor development, speech, nonverbal problem-solving, and social behavior. Sleeping, eating, and physical growth were disturbed at one time or another, as was her interaction with her environment, both human and inanimate. She showed low interest in toys, delayed language, and intense visual preoccupation with adults—all behaviors common both to institutionalized infants under conditions of severe (social) deprivation and to infants of depressed mothers.

Axis III (Regulatory Sensory Processing Capacity) describes the child’s regulatory sensory processing profile. Anne’s profile reveals a mild impairment at the end of the first year. Even here, her good biological endowment has been derailed. As a result of low dyadic reciprocity, reduced physical contact, and maternal aggression, she developed a hyper-attentiveness to acoustic and visual stimuli and a significant delay in gross motor development that interfered with her developing the ability to comprehend and respond to sensory experiences and then plan actions.

The most compromised pattern was in the relational domain (Axis IV, Relational Patterns and Disorders—Total score = 18). In terms of representational quality and reflective functioning, Mrs. Adams oscillated between disappointment at not having had a son and competition with her daughter—an intergenerational issue, as her father had wanted her to be a boy. Both her avoidance of physical contact and her difficulty in understanding Anne’s needs suggest deeper ambivalent feelings that became focused on her infant. Mrs. Adams also had an eating disorder, low self-esteem, and a serious depression. Her disinvestment in parenthood and caregiving was linked to her anxiety, her need for social recognition, and her enduring need to be a baby herself and not be in the role of caring for a baby. This representational stance influenced problematic caregiving, characterized by low engagement, absence of reciprocity and synchrony, low affective tone, insensitivity, and eventually aggressive attack. Anne adapted to this maternal behavior: When her mother refused to give her more milk, even when she obviously wanted it, she became quiet and subdued. All these features suggest a significant disturbance in relational patterns (Anders, 1989).

Anne’s developmental delays can be traced to a specific set of elements in the care she received, where both physical and play connections between mother and child were limited. There was little or no free interaction or spontaneous emotional interplay between the two. In this area we see a marked lack of stimulation. Her poor nutritional status, frantic crying spells, and disabling fear of strangers were not due to lack of stimulation, however, but rather to a specific kind of provocative overstimulation that was bound to produce mounting tension in the child without offering needed relief and comfort. This seemingly contradictory caregiving behavior, characterized by understimulation, disengagement, and withdrawal, together with overstimulation, intrusion, and over-control, is often found in depressed mothers (Campbell, Cohn, & Meyers, 1995; Cohn & Tronick, 1989; Field, 1998). Consequent to failures of mutual regulation, the baby continually experiences negative emotions and a lack of connection with others. Her

self-regulation abilities serve a defensive function (Beebe & Lachmann, 1998).

From an attachment perspective, we hypothesize the development of a Disorganized attachment pattern (D). In her mother’s presence, Anne showed a mix of approach and avoidance behaviors, suggesting a collapse of attachment strategies. The sadistic practices of keeping the child waiting for a long time before preparing the bottle and of spanking the baby when her crying made Mrs. A. “feel wild inside” can be read as a frightening maternal behavior that set the child up to experience “fear without solution,” the potent three-word hallmark of the experience of the child who often gets classified as Disorganized (Main & Hesse, 1990). The description of Anne’s mother moves beyond maternal insensitivity, which predicts attachment insecurity, to one of the most pernicious behaviors associated with Disorganized attachment: maternal withdrawal (Beebe et al., 2010; Lyons-Ruth et al., 2003; Solomon & George, 2011).

Anne’s clinical condition suggests a primary diagnosis (Axis I) of feeding disorder, with depression as a secondary diagnosis. Unlike diagnostic systems that consider only symptoms, IEC focuses on the relational meaning of the disorder. In this case, we propose a diagnosis of *Feeding Disorder of Caregiver–Infant Reciprocity* (Chatoor, 2002, DC:0-3R; *Zero to Three*, 2005), characterized by lack of engagement between mother and infant, leading to inadequate food intake and growth failure of the infant. The main source of this condition seems to be the mother’s inability to connect with her baby.

Between 2 and 6 months, most of an infant’s interactions with caregivers occur around feeding. Regulation of food intake is closely linked to the baby’s emotional engagement with a primary parental figure. If infant and caregiver are not engaged in positive, mutually joyful interactions, feeding and growth will suffer, and the infant’s emotional and social development will be impaired. The mutually regulated process between mother and baby may not develop or may be derailed when caregivers are preoccupied with their own needs and unable to tune in to those of their infant. Parent and child may not develop a reciprocal relationship, and the infant may be at risk for a feeding disorder of failed reciprocity, as in the case of Anne.

Although feeding disorders may look similar from baby to baby, with failure to thrive and inability to take enough nutrition, it is clear that this clinical picture is different from that of infantile anorexia or sensory aversion of food. Understanding the different components of development, and using a multi-axial approach as suggested by IEC, makes sense of the clinical picture and allows the clinician to understand how to plan a patient-tailored intervention.

References

- Ainsworth, M. D. S., Blehar, M. C., Waters, E., & Wall, S. (1978). *Patterns of attachment: A psychological study of the Strange Situation*. Hillsdale, NJ: Erlbaum.
- Anders, T. F. (1989). Clinical syndromes, relationship disturbances and their assessment. In A. J. Sameroff & R. N. Emde (Eds.), *Relationship disturbances in early childhood* (pp. 125–144). New York, NY: Basic Books.
- Beebe, B., Jaffe, J., Markese, S., Buck, K., Chen, H., Cohen, P., . . . Feldstein, S. (2010). The origins of 12-month attachment: A microanal-

- ysis of 4-month mother-infant interaction. *Attachment & Human Development*, 12, 3–141. <http://dx.doi.org/10.1080/14616730903338985>
- Beebe, B., & Lachmann, F. M. (1998). Co-constructing inner and relational processes: Self- and mutual regulation in infant research and adult treatment. *Psychoanalytic Psychology*, 15, 480–516. <http://dx.doi.org/10.1037/0736-9735.15.4.480>
- Bowlby, J. (1952). *Maternal care and mental health*. Geneva, Switzerland: World Health Organization.
- Bowlby, J. (1969). *Attachment and loss: Vol. 1. Attachment*. New York, NY: Basic Books.
- Campbell, S. B., & Cohn, J. F. (1991). Prevalence and correlates of postpartum depression in first-time mothers. *Journal of Abnormal Psychology*, 100, 594–599. <http://dx.doi.org/10.1037/0021-843X.100.4.594>
- Campbell, S. B., Cohn, J. F., & Meyers, T. (1995). Depression in first-time mothers: Mother–infant interaction and depression chronicity. *Developmental Psychology*, 31, 349–357. <http://dx.doi.org/10.1037/0012-1649.31.3.349>
- Casey, B. J., Giedd, J. N., & Thomas, K. M. (2000). Structural and functional brain development and its relation to cognitive development. *Biological Psychology*, 54, 241–257. [http://dx.doi.org/10.1016/S0301-0511\(00\)00058-2](http://dx.doi.org/10.1016/S0301-0511(00)00058-2)
- Chatoor, I. (2002). Feeding disorders in infants and toddlers: Diagnosis and treatment. *Child and Adolescent Psychiatric Clinics of North America*, 11, 163–183. [http://dx.doi.org/10.1016/S1056-4993\(01\)00002-5](http://dx.doi.org/10.1016/S1056-4993(01)00002-5)
- Cicchetti, D., & Cohen, D. J. (Eds.). (2006). *Developmental psychopathology theory and method* (2nd ed., Vols. 1–3). Hoboken, NJ: Wiley.
- Cohn, J. F., Campbell, S. B., Matias, R., & Hopkins, J. (1990). Face-to-face interactions of postpartum depressed and nondepressed mother–infant pairs at 2 months. *Developmental Psychology*, 26, 15–23. <http://dx.doi.org/10.1037/0012-1649.26.1.15>
- Cohn, J. F., & Tronick, E. (1989). Specificity of infants' response to mothers' affective behavior. *Journal of the American Academy of Child & Adolescent Psychiatry*, 28, 242–248. <http://dx.doi.org/10.1097/00004583-198903000-00016>
- Costello, E. J., & Angold, A. C. (1995). Developmental epidemiology: A Framework for developmental psychopathology. In A. J. Sameroff, M. Lewis, & S. M. Miller (Eds.), *Handbook of developmental psychopathology* (pp. 57–73). New York, NY: Springer.
- Costello, E. J., Mustillo, S., Erkanli, A., Keeler, G., & Angold, A. (2003). Prevalence and development of psychiatric disorders in childhood and adolescence. *Archives of General Psychiatry*, 60, 837–844. <http://dx.doi.org/10.1001/archpsyc.60.8.837>
- Dodge, K. A., & Rutter, M. (2011). *Gene–environment interactions in developmental psychopathology*. New York, NY: Guilford Press.
- Eagle, M. (2013). *Attachment and psychoanalysis: Theory, research, and clinical implications*. New York, NY: Guilford Press.
- Emde, R. N., Gaensbauer, T. J., & Harmon, R. J. (1976). Emotional expression in infancy: A biobehavioral study. *Psychological Issues Monograph*, No. 37. New York, NY: International Universities Press.
- Erikson, E. H. (1963). *Childhood and society* (2nd ed.). New York, NY: Norton.
- Field, T. (1998). Maternal depression effects on infants and early interventions. *Preventive Medicine*, 27, 200–203. <http://dx.doi.org/10.1006/pmed.1998.0293>
- Field, T., Diego, M., & Hernandez-Reif, M. (2009). Depressed mothers' infants are less responsive to faces and voices. *Infant Behavior and Development*, 32, 239–244. <http://dx.doi.org/10.1016/j.infbeh.2009.03.005>
- Fonagy, P., Gergely, G., Jurist, E., & Target, M. (2002). *Affect regulation, mentalization, and the development of the self*. New York, NY: Other Press.
- Fonagy, P., Steele, H., & Steele, M. (1991). Maternal representations of attachment during pregnancy predict the organization of infant–mother attachment at one year of age. *Child Development*, 62, 891–905. <http://dx.doi.org/10.2307/1131141>
- Fraiberg, S. (1980). *Clinical studies in infant mental health*. New York, NY: Basic Books.
- Freud, A. (1965). *Normality and pathology in childhood: Assessments of development*. New York, NY: International Universities Press.
- Gitlin, M. J., & Pasnau, R. O. (1989). Psychiatric syndromes linked to reproductive function in women: A review of current knowledge. *The American Journal of Psychiatry*, 146, 1413–1422. <http://dx.doi.org/10.1176/ajp.146.11.1413>
- Gordon, R. M., & Bornstein, R. F. (2012). *The Psychodynamic Diagnostic Chart (PDC): A practical tool to integrate and operationalize the PDM with the ICD or DSM*. Retrieved from www.mmipi-info.com/pdm-blog/78/the-psychodiagnostic-chart-pdc-free-download
- Greenspan, S. I. (1992). *Infancy and early childhood: The practice of clinical assessment and intervention with emotional and developmental challenges*. Madison, CT: International Universities Press.
- Greenspan, S. I. (1996). Assessing the emotional and social functioning of infants and young children. In S. J. Meisels & E. Fenichel (Eds.), *New visions for the developmental assessment of infants and young children* (pp. 231–266). Washington, DC: Zero to Three.
- Greenspan, S. I., & Wieder, S. (2006). *Infant & early childhood mental health: A comprehensive developmental approach to assessment and intervention*. Washington, DC: American Psychiatric Publishing.
- Halligan, S. L., Herbert, J., Goodyer, I., & Murray, L. (2007). Disturbances in morning cortisol secretion in association with maternal postnatal depression predict subsequent depressive symptomatology in adolescents. *Biological Psychiatry*, 62, 40–46. <http://dx.doi.org/10.1016/j.biopsych.2006.09.011>
- Klein, M. (1952). Some theoretical conclusions regarding the emotional life of the infant. In *The writings of Melanie Klein* (pp. 61–94). London, England: Hogarth Press.
- Klin, A., & Jones, W. (2007). Embodied psychoanalysis? Or, on the confluence of psychodynamic theory and developmental science. In L. Mayes, P. Fonagy, & M. Target (Eds.), *Developmental science and psychoanalysis: Integration and innovation* (pp. 5–38). London, United Kingdom: Karnac Books.
- Kris, E. (1962). Decline and recovery in the life of a three-year-old or data in psychoanalytic perspective on the mother–child relationship. *The Psychoanalytic Study of the Child*, 17, 175–215. <http://dx.doi.org/10.1080/00797308.1962.11822845>
- Lichtenberg, J. D. (1989). *Psychoanalysis and motivation*. Hillsdale, NJ: The Analytic Press.
- Lieberman, A. F., & Pawl, J. H. (1993). Infant–parent psychotherapy. In C. H. Zeanah, Jr., (Ed.), *Handbook of infant mental health* (pp. 427–442). New York, NY: Guilford Press.
- Lingiardi, V., & McWilliams, N. (2015). *The psychodynamic diagnostic manual—2nd ed. (PDM-2)*. *World Psychiatry*, 14, 237–239.
- Lingiardi, V., & McWilliams, N. (Eds.). (2017). *Psychodynamic diagnostic manual – 2nd ed. (PDM-2)*. New York, NY: Guilford Press.
- Lyden, H. M., & Suchman, N. E. (2013). Transmission of parenting models at the level of representation: Implications for mother–child dyads affected by maternal substance abuse. In N. E. Suchman, M. Pajulo, & L. C. Mayes (Eds.), *Parenting and substance abuse: Developmental approaches to intervention* (pp. 100–125). New York, NY: Oxford University Press. <http://dx.doi.org/10.1093/med:psych/9780199743100.003.0006>
- Lyons-Ruth, K., Bronfman, E., & Parson, E. (1999). Maternal frightened, frightening or atypical behavior and disorganized infant attachment patterns. In J. Vondra, & D. Barnett (Eds.), *Atypical attachment in infancy and early childhood. Monographs of the Society for Research in Child Development*, 258, 67–96.
- Lyons-Ruth, K., Melnick, S., Bronfman, E., Sherry, S., & Llanas, L. (2003). Hostile-helpless relational models and disorganized attachment patterns between parents and their young children: Review of research

- and implications for clinical work. In L. Atkinson & K. Zucker (Eds.), *Attachment issues in psychopathology and intervention* (pp. 65–94). Mahwah, NJ: Erlbaum.
- Lyons-Ruth, K., Repacholi, B., McLeod, S., & Silva, E. (1991). Disorganized attachment behavior in infancy: Short-term stability, maternal and infant correlates, and risk-related subtypes. *Development and Psychopathology*, 3, 377–396. <http://dx.doi.org/10.1017/S0954579400007586>
- Main, M. (1991). Metacognitive knowledge, metacognitive monitoring, and singular (coherent) vs. multiple (incoherent) models of attachment: Some findings and some directions for future research. In P. Marris, J. Stevenson-Hinde, & C. Parkes (Eds.), *Attachment across the life cycle* (pp. 127–159). New York, NY: Routledge.
- Main, M., & Hesse, E. (1990). Parents' unresolved traumatic experiences are related to infant disorganized attachment status: Is frightened and/or frightening parental behaviour the linking mechanism? In M. T. Greenberg, D. Cicchetti, & E. Cummings (Eds.), *Attachment in the preschool years: Theory, research, and intervention* (pp. 161–182). Chicago, IL: University of Chicago Press.
- Main, M., Kaplan, N., & Cassidy, J. (1985). Security in infancy, childhood, and adulthood: A move to the level of representation. *Monographs of the Society for Research in Child Development*, 50, 66–104. <http://dx.doi.org/10.2307/3333827>
- Malberg, N. T., & Mayes, L. (2015). The developmental perspective. In P. Luyten, L. C. Mayes, P. Fonagy, M. Target, & S. Blatt (Eds.), *Handbook of psychodynamic approaches to psychopathology* (pp. 47–64). New York, NY: Guilford Press.
- Murray, L., Arceche, A., Fearon, P., Halligan, S., Croudace, T., & Cooper, P. (2010). The effects of maternal postnatal depression and child sex on academic performance at age 16 years: A developmental approach. *Journal of Child Psychology and Psychiatry*, 51, 1150–1159. <http://dx.doi.org/10.1111/j.1469-7610.2010.02259.x>
- Murray, L., & Cooper, P. (1997). Effects of postnatal depression on infant development. *Archives of Disease in Childhood*, 77, 99–101. <http://dx.doi.org/10.1136/adc.77.2.99>
- Murray, L., Halligan, S. L., Goodyer, I., & Herbert, J. (2010). Disturbances in early parenting of depressed mothers and cortisol secretion in offspring: A preliminary study. *Journal of Affective Disorders*, 122, 218–223. <http://dx.doi.org/10.1016/j.jad.2009.06.034>
- Provence, S. (1983). Struggling against deprivation and trauma. A longitudinal case study. *The Psychoanalytic Study of the Child*, 38, 233–256. <http://dx.doi.org/10.1080/00797308.1983.11823391>
- Rutter, M., & Sroufe, L. A. (2000). Developmental psychopathology: Concepts and challenges. *Development and Psychopathology*, 12, 265–296. <http://dx.doi.org/10.1017/S0954579400003023>
- Sameroff, A. J., & Emde, R. N. (Eds.). (1989). *Relationship disturbances in early childhood: A developmental approach*. New York, NY: Basic Books.
- Sander, L. (1962). Issues in early mother–child interaction. *Journal of the American Academy of Child Psychiatry*, 1, 141–166. [http://dx.doi.org/10.1016/S0002-7138\(09\)60013-3](http://dx.doi.org/10.1016/S0002-7138(09)60013-3)
- Sandler, J., & Rosenblatt, B. (1962). The concept of the representational world. *The Psychoanalytic Study of the Child*, 17, 128–145. <http://dx.doi.org/10.1080/00797308.1962.11822842>
- Schore, A. N. (2003). *Affect regulation and the repair of the self*. New York, NY: Norton.
- Slade, A. (2005). Parental reflective functioning: An introduction. *Attachment & Human Development*, 7, 269–281. <http://dx.doi.org/10.1080/14616730500245906>
- Solomon, J., & George, C. (Eds.). (2011). *Disorganized attachment and caregiving*. New York, NY: Guilford Press.
- Spitz, R. A., & Wolf, K. M. (1946). Anaclitic depression: An inquiry into the genesis of psychiatric conditions in early childhood, II. *The Psychoanalytic Study of the Child*, 2, 313–342. <http://dx.doi.org/10.1080/00797308.1946.11823551>
- Sroufe, L. A. (1979). The coherence of individual development: Early care, attachment and subsequent developmental issues. *American Psychologist*, 34, 834–841. <http://dx.doi.org/10.1037/0003-066X.34.10.834>
- Steele, H., & Steele, M. (2005). Understanding and resolving emotional conflict: The London-Parent Child Project. In K. Grossmann, K. Grossmann, & E. Waters (Eds.), *Attachment from infancy to adulthood: The major longitudinal studies* (pp. 137–164). New York, NY: Guilford Press.
- Tronick, E. Z. (1989). Emotions and emotional communication in infants. *American Psychologist*, 44, 112–119. <http://dx.doi.org/10.1037/0003-066X.44.2.112>
- Tronick, E. (2007). *The neurobehavioral and social emotional development of infants and children*. New York, NY: Norton.
- Tronick, E. Z., & Weinberg, M. K. (1997). Depressed mothers and infants: Failure to form dyadic states of consciousness. In L. Murray and P. J. Cooper, *Postpartum depression and child development* (pp. 54–81). New York, NY: Guilford Press.
- van IJzendoorn, M. H. (1995). Adult attachment representations, parental responsiveness, and infant attachment: A meta-analysis on the predictive validity of the Adult Attachment Interview. *Psychological Bulletin*, 117, 387–403. <http://dx.doi.org/10.1037/0033-2909.117.3.387>
- Winnicott, D. (1931). *Clinical notes on the disorders of childhood*. London, England: William Heinemann.
- Zero to Three. (2005). *Diagnostic classification of mental health and developmental disorders of infancy and early childhood* (Rev. ed.). Washington, DC: Author.

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