

Theoretical and Empirical Foundations for Early Relationship Assessment in Evaluating Infant and Toddler Mental Health 

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Abstract and Keywords

This chapter reviews the theoretical foundations and empirical support for employing a relational perspective when assessing the mental health of an infant or toddler. A review of specific measures widely used in assessing the quality of affect and behavior in parent-child interactions, relationship quality, and parenting capacities (see Clark, Tluczek, Moore, & Evenson, 2019, Chapter 3) illustrates the importance of utilizing a parent-child relationship paradigm in the assessment of the mental health and social and emotional functioning of infants and young children. Although the term *parent* is used throughout the chapter, another significant caregiver who holds a parenting or primary caregiving role may be substituted as needed, such as a grandparent or foster parent.

Keywords: parent-child assessment, attachment theory, parent-child relationship paradigm, young child mental health, infant assessment, caregiving assessment, early relationship context, caregiving context

(p. 29) Rationale for Assessing Relationships

The parent-child relationship provides the primary context for the development of the child's sense of self and self in relation to others (Biseo, 2012; D. Stern, 1985, 2008; Weatherston & Fitzgerald, 2010; Winnicott, 1965), that is, the child's internal working model or beliefs about what can be expected in relationships (Bowlby, 1982; Bretherton, 1985; Fonagy, Gergely, & Target, 2007; Main, Kaplan, & Cassidy, 1985). The quality and consistency of the parent's behavior and affective involvement significantly impact the young child's capacity to grow in his or her abilities, in emotional regulation, and in relational competence (R. Clark, 1985, 1999, 2015). Lieberman and van Horn (2008) emphasized the immense power that the parent-child relationship has to nurture and protect the child, particularly in high-risk situations. However, the parents' own history of being parented, current stressors, and mental health issues may challenge their parenting capacities and thereby influence the quality of the parent-child relationship. The parent's

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ability to notice, acknowledge, and respond sensitively to their infant or young child's distress, communications, and/or developmental needs can buffer or amplify risk to the infant or young child. The centrality of parents in promoting healthy development underscores the importance of early identification of relational disturbances and the need for preventive and early intervention. The importance of the nature of early family relationships from the time of the child's infancy suggests the salience of stress and protective factors prior to the child showing any signs of impairment or dysfunction (Lyons-Ruth, Zeanah, Benoit, Madigan, & Mills-Koonce, 2014). Lieberman and Zeanah (1995) describe the significance of the early mother-infant relationship as having "the power to promote mental health or serve as the genesis of psychopathology in the young child" (p. 571). Understanding the quality of the parent-infant relationship within which the infant or young child is developing plays a key role in the assessment of social and emotional functioning and in formulating a diagnostic profile for infants and young children. Cicchetti (1987) asserted that "disorders in infancy are best conceptualized as (p. 30) relational psychopathologies, that is, as consequences of dysfunction in the parent-child environment system" (p. 837). The Committee on the Family of the Group for the Advancement of Psychiatry (1995) argued that, in general, important and common relationship conditions can exist independent of severe individual psychopathology and that these conditions should be described in relational terms, with specific diagnostic criteria. Furthermore, the Practice Parameters for the Psychiatric Assessment of Infants and Toddlers developed by the Thomas et al. (1997) recommended a "developmental, relational, and multidimensional" approach to the assessment of psychiatric disturbances in infants and toddlers. When the *Diagnostic and Statistical Manual of Mental Disorders*, fifth edition (American Psychiatric Association, 2013), was being developed, a proposed research agenda called for a three-part approach to assessing relationship disorders including:

- (1) standardized procedures for evoking and observing interactions within the dyad;
 - (2) questionnaires for each member to delineate his or her individual perceptions of the relationship; and
 - (3) a structured clinical interview to supplement questionnaires and observations and integrate additional clinical information.
- (First et al., 2002, p. 171)

In the field of infant mental health, the parent-infant relationship is often the focus of therapeutic work (R. Clark, Paulson, & Conlin, 1993; Fraiberg, Adelson, & Shapiro, 1980; Lieberman, 1985; Lieberman, Ippen, & van Horn, 2015). Thus, it is important to focus on primary relationships as the units to be assessed and, when indicated, diagnosed. Including the parent-child relationship as part of the evaluation process can inform and focus intervention approaches (Sameroff & Emde, 1989).

The parent and child each contributes perceptions, attitudes, behaviors, and affect that can lead to a range of parent-child interactions on a continuum of healthy to distressed to disturbed. If disturbances in the parent-child relationship occur, they can interfere with the functioning of the child, the parent, or both. If a relational disturbance is present and is of long duration and/or high intensity, the disturbance may not only occur in behavior or affect but also be evidenced in the parents' perceptions of the child, including the

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meaning they ascribe to their child or their child's behavior (Godoy, Carter, & Clark, 2008).

An assessment of the parent-child interaction quality can reveal meaningful relationship strengths as well as difficulties. Individual or dyadic competencies identified can be incorporated into interventions to promote resilience and mitigate disturbances. There has been a paradigm shift from deficit models toward resilience frameworks that include assessment of assets as well as risk factors associated with child outcomes (Masten, 2001, 2014a, 2014b).

In the context of normal development, the parent-child relationship plays a critical role in the infant's emergent behavioral and emotional regulation (Beeghly & Tronick, 2011; Bernier, Carlson, & Whipple, 2010; Cohn & Tronick, 1989; Field, 1997; Robinson, Emde, & Korfmacher, 1997; Sameroff & Emde, 1989; Schore, 2001; Tronick, 2007). Research integrating neurobiology and attachment suggests that the infant brain develops in response to regulating social interactions with a caregiver, engaging in a circular feedback system of increasingly complex interactions (Schore, 2001). These developing regulatory processes are influential in the infant's developing attachment (Cassidy & Berlin, 1994; George & Solomon, 1996), subsequent sense of self, and social competence outside the parent-child relationship.

An early caregiving environment that is nurturing and provides scaffolding to the child's development is characterized by physical safety, satisfaction of physiological needs, sensitive and empathic responsiveness, mutual enjoyment, learning opportunities, and age-appropriate limit setting, which helps the child develop a consolidated sense of self and prepares him or her for future social interactions (Sameroff & Emde, 1989). A supportive parent-child relationship can serve as a buffer for children living in stressful urban environments (Kilmer, Cowen, & Wyman, 2001; Shonkoff et al., 2012; Shonkoff & Phillips, 2000). A parent-child relationship that fails to meet the child's needs may place the child at risk for developmental delays, emotional dysregulation, behavior problems, and psychopathology later in life. For example, Carlson (1998) found that disturbances in early parent-child relationships, specifically disorganized attachment behavior identified in infants ages 12 or 18 months, were associated with behavior problems and psychopathology during middle childhood and the adolescent years. Lyons-Ruth, Easterbrooks, and Cibelli (1997) reported that infants who demonstrated disorganized insecure attachment behaviors at 18 months had elevated externalizing behavior problems at age 7 years relative to secure infants, while infants with avoidant insecure attachment behaviors with their mothers showed elevated internalizing behaviors at age 7 years relative to secure infants. Several recent (p. 31) meta-analyses suggested that avoidant attachment in infancy is associated with internalizing behaviors later in life and disorganized attachment is associated with externalizing behaviors (Groh, Roisman, van IJzendoorn, Bakersmans-Kranenburg, & Fearon, 2012; Madigan, Atkinson, Laurin, & Benoit, 2013; Madigan, Brumariu, Villani, Atkinson, & Lyons-Ruth, 2016).

Conceptual and Theoretical Foundations

Using a relational approach to assessment integrates the theoretical application of developmental psychological and psychiatric disciplines (Clark, Tluczek, & Gallagher, 2004; Sameroff & Emde, 1989; Sameroff, McDonough, & Rosenblum, 2004). Assessing a young child's mental health in the context of the parent-child relationship is supported by several theoretical paradigms that share the prioritization of the early experience. Foundational contributions of the following perspectives are reviewed: psychodynamic/object relations theory, attachment/ethological theory, social learning theory, family systems theory, multiple systems theories, including bioecological and transactional approaches, epigenetics, and resilience models.

Psychodynamic/Object Relations Theory

Anna Freud (1970) described the quality of the early mother-infant relationship as paramount to the child's subsequent psychological development. When a mother consistently reads her infant's cues and sensitively responds to her child's physical and emotional needs, providing an *auxiliary ego* for the young child, the infant feels satisfied and grows in trust. With the infant's needs gratified, the infant turns his or her emotional interests from the self to the proximal environment, which includes the mother. When the infant initiates expressions of affection toward the mother and she responds in kind, the pair form an emotional bond. These early relational patterns, characterized by emotional reciprocity, become the template for the young child's future relationships and are likely to foster a healthy progression along developmental lines through subsequent developmental stages (Freud, 1963). In contrast, the *rejecting mother*, described as being incapable of or unwilling to identify with and respond to her infant's needs, has been associated with subsequent developmental psychopathology in the child. According to Anna Freud (1974), psychodynamic theory provides a perspective for understanding how an individual's developmental trajectory, including personality structure, may be shaped by the quality of the early parent-child relationships one experiences, resulting in internalization of unresolved conflicts, anxiety, and guilt.

Spitz (1965), Mahler (1975), Winnicott (1968), and others have suggested that the capacities of the child to establish healthy social relations are acquired early in the mother-infant relationship. Winnicott (1965) described the parent-infant relationship as a psychological "holding environment" for the developing child. The assumption is made that if this relationship is disturbed, the child will lack the adaptive abilities necessary to effectively interact with the social environment. A sense of effectance and competence in interactions is the result of the ongoing experiences with an empathic, consistent, and contingently responsive caregiver who helps the child to understand and structure his or her world.

Object relations theory represents a more contemporary view of psychodynamic theory. The *object* of the infant's desire is the mother (or primary caregiver). This early relationship becomes the template for future relationships. Mahler (1968) described the infant or

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young child's separation/individuation process based on her extensive observations of infants, toddlers, and mothers. She outlined stages of early development in which the relationship between the infant and the mother progresses from a postulated undifferentiated state in the infant during the first few weeks of life to a close symbiotic relationship from 1 to 5 months of age, to attempts at separation and rapprochement that include exploration of the environment and returning to touch base with the parent for *emotional refueling*. Mahler suggested that by 3 years of age, the child has attained a psychological state capable of individuation. According to this theoretical model, the parent's feelings of rejection with the child moving away result in ambivalence toward the child and an inability to help the toddler to complete early developmental tasks. Winnicott (1970) emphasized the importance of *mutuality* in the early parent-infant relationship as "setting the emotional tone of interpersonal experiences and their intrapsychic coloring throughout life" (p. 245) and suggested that the child who experiences inconsistent or unpredictable care becomes "a reaction to impingements from the environment." The child's protective adaptation to the parent's ambivalence and unpredictable care may contribute to anxiety or, in extreme cases, development of a defensive structure consistent with a narcissistic or borderline personality organization, in which the child continues later in life to lack a consolidated sense of self as separate from others.

(p. 32) Attachment/Ethological Theory

John Bowlby (1982) conceptualized the parent-child relationship as an *attachment behavioral system* that represents the foundations of the child's psychological development. Bowlby (1970) observed that infants who did not form securely attached, intimate relationships with a primary caregiver often developed psychological and behavioral problems. Drawing on ethological theory, Bowlby (1982) posited that infants produce behaviors to elicit protective and sustaining behavior from caregivers. Infants cry when hungry and coo to attract attention. Later, babies maintain proximity to their parents and turn to parents frequently for assistance and approval, as well as for confirmation of safety. When a parent responds quickly and contingently to the child's cues, the child learns to rely on the support of the parent. The *secure attachment* that develops allows the child to develop a sense of safety and efficacy in exploring the world.

According to attachment theory, the child constructs "internal working models," (Bretherton, 1985) or mental and emotional representations of these early parent-child interactions. The child projects qualities of the parent-child relationship onto other relationships. Beliefs about the self, about what can be expected in relationships, and about the world are categorized, much as other cognitive and emotional data might be. For example, the child may internalize "I am lovable" or conversely "I am not lovable" as a result of early parent-child interactions. These internalizations have been linked with developing social cognition and social competence (Sroufe, 1979, 1988). Indicators of relationship quality are found in the behavior of the child, the caregiver, and the dyad and in narratives describing these relationships (Hesse, 1999; Oppenheim, Emde, & Warren, 1997).

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Fraiberg, Adelson, and Shapiro (1975) proposed the concept of “ghosts in the nursery,” which describes how parents may unconsciously, or in an unaware manner, bring distressing or traumatic experiences from their early attachment relationships with caregivers forward to their relationships with their infant or young child. These internal working models of what can be expected in relationships and the associated negative attributions may be projected onto their own infant or young child and are often characterized by feelings of rejection and ineffectiveness in interactions. Fraiberg et al. (1975) proposed that without an emotional awareness of what they suffered in early relationships with their parents, they may interact with their own children similarly. Negative interactional styles often contribute to intergenerational transmission of maltreatment. More recently, Lieberman, Padron, van Horn, and Harris (2005) proposed the complimentary concept of “angels in the nursery,” which describes the power of early positive caregiver-child relationships. They propose that a warm, sensitive caregiver-child relationship can influence the child’s future relationship with his or her own infant, thus breaking the cycle of maltreatment and protecting caregiver-child dyads from the effects of trauma.

In a meta-analysis, Verhage et al. (2016) examined the intergenerational transmission of attachment security and proposed a conceptual model of intergenerational transmission of attachment as an attempt to narrow the “transmission gap.” While caregiver sensitivity has been known to partially explain the intergenerational transmission of attachment, Verhage et al. proposed that risk status and biological relatedness of the parent and child, and potentially family functioning, couple relationship, and support, also partially explain the intergenerational transmission of attachment security.

Social Learning Theory

Bandura (1977) theorized that social behaviors are learned either through direct experience with subsequent reinforcement of those behaviors or through observing others modeling behaviors that are rewarded. Behaviors that are contingently rewarded are likely to continue and increase, while behaviors that are ignored cease to be performed. In early development, the parent-child relationship becomes the primary environmental influence shaping the child’s behavior. Thus, for example, a toddler whose parents tend to respond to him primarily when he is hitting his younger brother is likely to continue this negative behavior. Although the parent’s reprimands may seem like a negative consequence, for the child this is still experienced as parental attention, which may be more rewarding than being ignored.

Bandura (1989) later incorporated the concept of self-efficacy as a motivational factor in the development of behavioral patterns. A child’s sense of efficacy may be derived from previous experience in which the behaviors have been reinforced by parental encouragement or a history of successfully accomplished tasks.

Based on the tenets of social learning theory, Patterson (1982) elucidated a pattern of “coercive” parent-child interactions that lead to the development of conduct disorders in children and antisocial behavior in adulthood. This model conceptualizes a **(p. 33)** pattern

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of escalating negative interactional cycles between the child and parent associated with the parent's attempt to set limits, a particularly salient issue during toddlerhood. For example, a parent gives the child a directive to do or not to do something; the child attempts to avoid the directive by engaging in negative behavior such as noncompliance or tantrums; the parent responds with criticism or threats; the child returns with an increase in the negative behavior; the parent increases the threats. This interaction often ends in the child receiving physical punishment. The parent in this scenario unintentionally reinforces the child's negative behavior. By contrast, when a child observes parent behaviors that convey supportive presence, acceptance, positive affect, sensitivity, and responsiveness to the child's needs, the child emulates these actions. If continually reinforced for doing so, the child incorporates the prosocial interactions into his or her own behavioral repertoires.

Baumrind (1966) conceptualized and researched three prototypes of parenting: permissive, authoritarian, and authoritative. A permissive parent is accepting of the child's actions and attitudes and demands very little of the child. In contrast, an authoritarian parent controls and evaluates the child's actions and attitudes through a standard of conduct, use of punishment, and restriction of the child's autonomy to promote adherence to these standards. An authoritative parent verbalizes and rationalizes expectations to the child. The child is given autonomy, yet the parent also teaches the child prosocial behaviors. The parent shares his or her beliefs and perspectives while also recognizing the child's own interests and thoughts. Authoritative parenting strikes a balance between freedom and control, and the effect of such parenting will be well-socialized, deliberate, and independent behavior. These three parenting patterns were found in Baumrind's (1967) research when studying parents' need for control, expectations for the child to act at a mature level, quality of communication, and nurturance. Baumrind (1967) found that firm, demanding, loving, and understanding parenting behaviors were associated with mature and competent preschool children.

Gottman, Declaire, and Goleman (1998) also categorized parenting into different styles: the dismissing parent, the disapproving parent, the laissez-faire parent, and the parent who is an emotion coach. A dismissing parent does not value the child's emotions, often ignoring the child's emotional expressions, making light of the child's feelings, or distracting the child when he or she is expressing emotions. In addition, a dismissing parent may fear that negative emotions will become uncontrollable. A disapproving parent criticizes the child's emotions and punishes the child for expressing emotions. Children of both dismissing and disapproving parents may learn that emotions are inherently wrong and may have difficulty with emotion regulation. A laissez-faire parent permits all emotional expression and offers comfort. However, a laissez-faire parent does not teach or help a child in dealing with his or her emotions. These children then have difficulty regulating their emotions, concentrating, and making friends. The fourth parenting style is the emotion coach. When a negative emotion is expressed by the child, an emotion coaching parent will listen, soothe, help the child articulate the emotion being felt, teach the child about emotion regulation, teach appropriate emotional expression, and teach the child problem-solving skills. Children of emotion coaches will then be able to regulate their

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emotions, solve problems, and trust their emotions. Children of parents who use emotion coaching will have healthier social interactions, learn well, and have high self-esteem. When parents act as emotion coaches for their 5-year-old children, the children have been found to be more aware of their own emotions, better able to self-regulate, and better at handling emotionally difficult situations at age 8 (Gottman, Katz, & Hooven, 1996).

Family Systems Theory

Family systems theories, such as structural family therapy (Minuchin, 1974; Minuchin & Fishman, 1981), offer a framework for assessing parent-child interactions. According to this theory, a family consists of parental and child subsystems that function interdependently as a single unit. Within a functional system, parents establish family rules and behavioral expectations that maintain clear boundaries between the parental and child subsystems in a way that meets the socioemotional needs of all members. Pathology occurs when there is a disturbance in the family system. For example, when a parent's capacity to meet the needs of the children is compromised by physical or mental illness, one of the children, usually the oldest child, may assume parental responsibilities, which may result in ambiguous boundaries or cross-generational alliances, as well as conflicts within and/or across subsystems. Parentification can be observed as early as 2 or 3 years of age, when children become focused on their parents' emotional states and attempt to help them. Thus, observations of the whole family interacting during an evaluation (p. 34) offer valuable information about patterns of interactions that preclude the optimal functioning of the family system and normative child socioemotional development.

In more recent research, James McHale's term *co-parenting* has been used to describe the multiple adults who collaborate and share responsibility for caring for a child (McHale, 2007; McHale, Kuersten-Hogan, & Rao, 2004). Instead of only looking at dyadic relationships between an infant and his or her caregivers, co-parenting looks at the relationships between all adults who have roles in raising the child. Co-parenting does not require cohabitation or marriage; it is simply composed of the adults who coordinate to provide care for a child (McHale & Kuersten-Hogan, 2004). Caregiving styles and capacities may look quite different, so this larger system of adults sharing responsibility for the child must be taken into consideration and evaluated. The members of this co-parenting alliance must support one another, as well as the child. The co-parenting alliance is most effective when there is consistency and unity, especially in communication with the child, in setting rules and expectations, and in providing a safe home (McHale, 2007). This is especially relevant in postdivorce or separated families. Children of parents who have separated, who have inconsistent rules, and miscommunication within co-parenting alliances, may have more difficulties with adjustment than children of post-divorce families that remain in communication and share rules (McHale & Kuersten-Hogan, 2004). The infant or young child's temperament and needs also add to co-parenting and the family patterns and must be taken into consideration during assessment and intervention planning (McHale, 2007).

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Multiple Systems Theories

Contemporary theories have extended consideration of the child's developmental milieu to include multiple synergistic systems. Transactional systems theory (Sameroff, 1975) and bioecological systems theory (Bronfenbrenner & Ceci, 1994) are two complementary models that support a relational approach to clinical assessment and treatment in infant and early child mental health. In transactional theory, development depends on the complex interdependent interactions of the child, parent, and environment over time. Development is dynamic. Children's mental and emotional health depends on multiple factors, such as nutrition, responsive caregiving, parental mental health, safety of neighborhoods, and quality schooling (Sameroff, 1975).

Similarly, Bronfenbrenner's bioecological systems theory conceptualizes the individual child within multiple environmental systems. In bioecological systems theory, nested hierarchical systems both influence and are influenced by the developing child. However, it is the proximal processes, or the daily interactions of life, that bear the greatest influence on development. Bronfenbrenner and Morris (1998) contended that the quality of these proximal processes matters more than any individual contribution of the child (e.g., temperament, medical condition) or parent (e.g., pathology, education) alone. The degree to which the infant and parent can contribute to and participate in high-quality proximal processes predicts the adjustment of the child.

The Role of Genes

The quality of the early parent-child relationship can amplify or dampen the child's genetic expression; this interaction of genes and environment is called epigenetics. More specifically, epigenetics is "a functional modification of the DNA that does not involve an alteration of sequence" (Meaney, 2010, p. 57), meaning that although an individual's genetic code is static, the way that it functions, or the genes that are expressed, is dynamic. Thus, DNA is dynamic and can be remodeled by signals from cells that are set off by events in the environment. Scientists are studying the nature of early parent-child interactions to see how the parenting environment can shape a child's genetic expression. When working with rats in minimal stress environments, Meaney (2010) found that babies of mothers who licked and groomed their offspring more frequently had more plasticity in the hippocampus, which promotes cognitive development, memory, and learning. In contrast, baby rat pups who received less licking and grooming from their mothers had less hippocampal plasticity. He suggests that these findings show that parental care does influence the offspring's phenotype. However, when placed in stressful environments, baby rat pups whose mothers licked and groomed them less often had more synaptic plasticity in their hippocampi. He also suggests that these findings indicate that there is no single ideal way to parent given the various environmental factors that impact the dyad and the child. This study, along with other rodent and primate studies, also points to the potentially large impact early parenting can have on a child's development and genetic expression (Meaney, 2010).

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Meaney's current study, the Maternal Adversity, Vulnerability, and Neurodevelopment Project, (p. 35) examines the various pre- and postnatal influences that impact both the women's mental health and the child's development (O'Donnell et al., 2014). One of the project's goals is to examine the women's genes and analyze them alongside the available phenotypic information through other measures. One early finding was that infancy and early childhood dysregulation (from 3 to 36 months old) is associated with the interaction between prenatal maternal depression and the child's 5-HTTLPR genotype (Babineau et al., 2015). This finding encourages researchers to continue examining gene by environment interactions and for clinicians to screen and treat women for prenatal depression.

Belsky's differential susceptibility framework has introduced a biological-evolutionary model for understanding individual differences in negative and positive parenting contexts. Belsky and Pluess (2009) described differential susceptibility as "some people being not just more vulnerable than others to negative effects of adversity [...], but also disproportionately susceptible to the beneficial effects of supportive and enriching experiences" (p. 885). Evidence points to differing plasticity levels in alleles as a reason for individuals' varying susceptibilities to supportive and nonsupportive parenting environments. This research has the potential to explain the differences between contributions of various child-rearing environments to children's long-term outcomes (Belsky & Pluess, 2009).

Resilience

Resilience has been defined as "good outcomes in spite of serious threats to adaptation or development" (Masten, 2001, p. 228); resilience "is not in the person or the context but in their connection and relation to each other" (Masten, 2014a, p. 1018). Favorable developmental outcomes refer to attainment of psychosocial milestones, absence of psychopathology, and physical well-being. Threats or risks factors can be specific (e.g., parent mental illness) or broad (e.g., poverty), a single life event (e.g., natural disaster) or cumulative (e.g., chronic health problem coupled with family dysfunction). Assets focus on protective factors and aspects of resource-rich environments. Masten (2001, 2014a, 2014b) described two perspectives about resilience. Variable-focused models assess relationships between risk factors and outcomes, whereas person-focused models compare the personal characteristics of children deemed resilient with the characteristics of children who fair less well in the face of adversity. Within both models, research shows the quality of parenting can serve as a key asset to buffer adversity and mediate favorable child outcomes. Masten (2001) recognized the dynamic and bidirectional nature of these parent-child interactions. Children's personalities and behavior can influence parenting behavior, thus supporting the need to consider both members of the parent-child relationship for assessment and intervention. Resilience-based interventions generally focus on increasing assets, bolstering protective factors, and reducing risks.

Contributions of the Parent

Optimal Parenting

Empirical studies of parenting and attachment theory underscore the importance of examining the relational context within which the child is developing when evaluating the young child's mental health. The quality of the parent-child relationship or *optimal parental care* provides for the infant's physical and emotional safety and attachment security as well as sensorimotor stimulation, cognitive and social development, and emotional regulation (Ainsworth, 1969; Clarke-Stewart, 1973). The mother's ability to demonstrate affection and attunement has been linked to enhanced infant development and involvement with the mother and other caregivers (Stern, Caldwell, Hersher, Lipton, & Richmond, 1969). Maternal contingent reinforcement of an infant's signals has been found to be important to the development of the infant's sense of effectance and competence (Ainsworth & Bell, 1975). From her study of infant-mother interaction in the home, Clarke-Stewart (1973) described quality maternal care, which results in optimal, secure attachment, as socially responsive and affectionate but not necessarily excessively physical. Apparently, although holding and physical contact can be very important in the early months of life, this type of contact can become restrictive as the child matures (Clarke-Stewart, 1973). Maternal attention must be paid to the infant's changing developmental needs, such as readiness and need for autonomy. Sander (1962) suggested that the manner in which these developmental issues are negotiated is extremely important in determining the continuing nature of the relationship.

From her observations in the home and experimental studies in the lab, Ainsworth (1969) suggested the following five variables as most important to a high-quality parent-infant relationship: (a) responding sensitively and empathically to the infant's signals; (b) providing frequent physical contact; (c) allowing the infant freedom to explore; (p. 36) (d) helping the infant derive a sense of consequence of his or her actions; and (e) engaging in mutually enjoyable and reciprocal activities. Through these early interactions, not only does the mother teach the child about the self and the self in relation to others, but also the quality of this early interaction allows for optimal development in capacities for organization (Sroufe, 1979), linguistic and problem-solving skills (Bruner, 1974; Epstein & Evans, 1979; Vygotsky, 1978), and cognitive abilities (Clarke-Stewart, 1973).

In addition to the mother's provision of nurturant, responsive care, developmental psychologists such as Bruner (1974) and Vygotsky (1978) viewed the adult's role as important for communicating and translating the culture for the young child. The adult's provision of structure, modeling, and focused joint attention with the child allows the child to first observe and then internalize the adult's approaches, communication, and problem-solving strategies. This process of *scaffolding* leads to the growth and development of higher mental processes and attentional abilities. Through focusing, encouraging, and providing a quality of assistance, parents provide a *zone of proximal development* in

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which young children can do more than is possible independently, thus helping them learn what they are capable of (Vygotsky, 1978).

Synchrony, “the temporal coordination of micro-level social behavior,” between the parent and infant has been observed and researched since the 1960s (Beebe & Lachmann, 1988; Feldman, 2007a, p. 340; Wolff, 1967). Synchrony between parents and infants entails primarily nonverbal behaviors, including “gaze, affect, vocalizations, body movements, and arousal indicators” (p. 340). Feldman (2007b) found that early parent-infant synchrony is positively associated with higher verbal IQ and fewer behavior problems in early childhood and empathic expression in childhood and adolescence.

Maladaptive Parenting

The grave effects of maternal deprivation, distressed, or disturbed parenting on a child’s emerging personality and cognition have been well documented (Bowlby, 1951; Goodman & Gotlib, 1999; Goodman et al., 2011; Rutter, 1974; Spitz, 1965). Several factors that may influence a parent’s contribution to the quality of the early parent-child relationship are the parent’s expectations, values, and attitudes toward the infant’s or child’s needs, the parent’s own history of being cared for, and perception of the self as a parent (Sameroff, 1975; Siegel & Hartzell, 2003). These are further influenced by the parent’s personality and level of cognitive development. If a mother is under pressure of urgent and unsatisfied needs of her own, she will tend to behave inconsistently, being influenced by fluctuating moods or needs (Bromwich, 1976). A mother who is functioning at a lower cognitive level, as a result of genetic endowment, environmental deprivation, or psychotic delusions, may not be able to perceive her child as a separate individual (Sameroff, 1975). She is not able to attribute a level of complexity to the child’s behavior. Sameroff (1975) speculated that “the cognitive level from which the mother viewed the child was another complicating factor in the manner in which early differences get translated into later deviancies” (p. 289). Beckwith and colleagues (Beckwith, Cohen, Kopp, Parmelee, & Marcy, 1976) suggested that if the mother’s needs for success or effectance are not met, either because the infant is not alert as a result of prematurity or a medical condition or because the infant has a challenging temperament and is difficult to comfort, the mother may become distant and negativistic. Because she may feel rejected, she may then reject her child. This process has been implicated in nonorganic failure to thrive and child neglect and abuse.

The mother’s personality also plays a large role in parenting (Bornstein, Hahn, & Haynes, 2011). When assessing mothers’ personality through the Five-Factor model of personality (Openness, Neuroticism, Extraversion, Agreeableness, and Conscientiousness), assessing their parenting cognitions, and observing the mothers interacting with their 20-month-old infants, Bornstein et al. (2011) found correlations between personality traits, cognitions, and parenting techniques. While more desirable and positive findings were associated with Openness, Extraversion, Agreeableness, and Conscientiousness (e.g., stronger parenting self-efficacy, more warmth and sensitivity in relation to their infant, and greater use of language and symbolic play), those who scored higher on the Neuroticism scale

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were less warm and sensitive and were more likely to be intrusive and assertive when interacting with their infants. They also reported feeling less competent and less satisfied in parenting, yet more invested in their parenting.

Numerous studies have documented adverse effects of maternal depression on mother–infant interactions (Feldman et al., 2009; Goodman & Gotlib, 1999; Murray, Fearon, & Cooper, 2015; Stein et al., 2014; Tronick & Weinberg, 1997). Women who are depressed have been characterized as either withdrawn or intrusive in their handling (p. 37) and care of their infants (Field, 1997). Depressed mothers have been found to more often mirror the negative affective expressions or behaviors of their infants than their positive affective states (Field, Healy, Goldstein, & Guthertz, 1990). Some mothers suffering from depression may be less sensitive with their infants and less likely to socially engage their children (Feldman et al., 2009; Murray et al., 2015). Because only some women experiencing postpartum depression exhibit insensitive parenting behaviors, Goodman and colleagues studied risk factors that may be associated with insensitive parenting (Goodman, Bakeman, McCallum, Rouse, & Thompson, 2017). When looking at first-time mothers who had at least one major depressive episode prior to their pregnancy, Goodman et al. (2017) found that reoccurring depressive episodes, maternal anxiety, low maternal social support, poor relationship quality with partner, high perceived stress, low income, and infant temperament all contribute to mothers' risk for insensitive parenting behaviors. Clark, Evenson, Klein, and Atwood (2016) found that it is the heterogeneity of depression in the postpartum period, including comorbid anxiety, personality disorders, and relational trauma history, that translates into relational profiles with one's infant and may hold more explanatory value regarding the complex contribution of depression and other factors to the withdrawn or intrusive behavior.

When women who are experiencing depression interact with their babies, they are more likely to view their babies more negatively and display more anger toward their infants compared to mothers without depression (Weinberg & Tronick, 1998). Maternal depression disrupts the process of mutual regulation, including mother–infant interaction and intersubjective experiences that contribute to the child's social-emotional and internal working models, thereby leaving the child vulnerable to emotional and behavioral dysregulation (Tronick & Weinberg, 1997).

Infants of depressed mothers have been found to exhibit more dysregulated behavior and to be more difficult to read (Field, 1997). Cohn and Tronick (1989) noted that infants as young as 3 months exhibited heightened distress levels, increased protests, and gaze aversion in response to observations of their mother's still-faced simulated depression. In a recent review on the impact of perinatal mental disorders on the fetus and child, Stein et al. (2014) found that infants and young children of mothers with depression may have challenges with emotional regulation, social behavior, externalizing behavior problems, insecure attachment, and lower cognitive development. In a meta-analysis of 193 studies from 1982 to 2009, Goodman and colleagues (Goodman et al., 2011) examined the impact of maternal depression across childhood (ages 9 days old to 20 years old). Children's negative affect, internalizing problems, externalizing problems, and general psychopathology

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all had significant associations with maternal depression (Goodman et al., 2011). Maternal depression has also been associated with cognitive-linguistic delays and behavioral difficulties in preschool children (NICHD Early Child Care Research Network, 1999), as well as depressive mood and behavioral problems in young children (Radke-Yarrow, Nottelmann, Martinez, Fox, & Belmont, 1992). However, the quality of mother-child interactions, specifically maternal sensitivity, was found to mediate the association between the chronicity of maternal depressive symptoms and child outcomes (NICHD Early Child Care Research Network, 1999).

A meta-analysis of six studies examining the effects of maternal depression on infant-mother attachment concluded that maternal depression was significantly associated with insecure infant-mother attachment (Martins & Gaffan, 2000). Lyons-Ruth and colleagues (Lyons-Ruth, Zoll, Connel, & Grunebaum, 1986) found maternal depression to be associated with insecure attachments in 1-year-old infants, and in a later paper (Lyons-Ruth, Lyubchik, Wolfe, & Bronfman, 2002) they identified two specific patterns of behavior among depressed mothers interacting with their infants that seem to be associated with disorganized attachment behaviors in infant-mother interactions. Some mothers display “hostile, self-referential” interactions characterized by rough or intrusive handling of the infant, while other mothers show a “helpless, fearful” pattern marked by withdrawn or less involved interactions with their infants. In a more recent study, infants of mothers with antenatal depression were found to be more likely to form disorganized attachment; however, when these infants were exposed to warm and positive parenting, they were more likely to form secure attachment (Hayes, Goodman, & Carlson, 2013). Secure attachment reduces the negative outcomes of the infants, and this study speaks to the importance of relational assessment and early intervention with mothers suffering from depression and their infants.

Environmental factors also play a large role in the impact of maternal depression on young children. For example, when working with reservation-based American Indian mothers, Frankel et al. (2014) (p. 38) found that toddlers of mothers with depressed mood, stressful parenting, and social isolation were found to have more externalizing behavior problems. Similarly, toddlers with mothers with depressed affect and social isolation were also more likely to have internalizing problems (Frankel et al., 2014).

Maternal depression and anxiety are often comorbid. Maternal anxiety, even prenatal anxiety, can contribute to the mother-infant relationship and influence the child’s development. When examining mothers’ prenatal and postpartum anxiety, Agrati and colleagues (Agrati et al., 2015) found that anxiety is generally high during pregnancy, decreases at a couple months postpartum, and then rises again at 2 years postpartum. They found that these changes in maternal anxiety are affected by the mother’s childhood trauma and the child’s temperament (Agrati et al., 2015).

Caregivers who have trauma histories or suffer from posttraumatic stress disorder (PTSD) also fall into the category of vulnerable or distressed parents. Mothers with elevated PTSD symptoms at 6 months postpartum are more likely to have an insecure moth-

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er-infant attachment relationship at 13 months, especially disorganized/disoriented insecure attachment (Bosquet Enlow, Egeland, Carlson, Blood, & Wright, 2014). It is noteworthy that over half of these reported traumatic experiences occurred during the mother's own childhood. These insecure attachments may have lasting effects on the child. Infants with insecure-avoidant or insecure-resistant attachments at 12 and 18 months of age are at a higher risk for developing PTSD themselves after being exposed to trauma in childhood or adolescence. Insecure-disorganized attachment was not associated with a higher risk for developing PTSD; however, infants with insecure-disorganized attachment were more likely to develop more severe PTSD symptoms at age 17½ years (Bosquet Enlow et al., 2014). These findings suggest that the mother-infant relationship is a contributor to the intergenerational transmission of PTSD. In a study comparing mothers with PTSD who experienced childhood abuse and neglect with mothers without PTSD, significant associations were made between maternal depression, PTSD, and mother-infant bonding impairment (Muzik et al., 2013). Again, the early assessment of postpartum psychopathologies and relational quality is necessary.

In some instances, maladaptive parenting may lead to a court-mandated evaluation of the parents' capacity to care for their young child. To determine parenting capacity, the history and current state of the parent-child relationship must be assessed (Budd, 2001; Schmidt, Cuttress, Lang, Lewandowski, & Rawana, 2007; Steinhauer, 1983). Several of the parent-child relationship assessments covered in this Chapter 3 have been appraised as strong empirically based tools for assessing the parent-child relationship and parenting capacity in Child Protective Services cases (Schmidt et al., 2007).

Contributions of the Infant or Child to Parent-Child Relationships at Risk

Temperament

Thomas, Chess, and Birch (1968) suggested that constitutional variability in children has tremendous influence on parents' attitudes and caretaking styles. Infants' arousal level, rhythm, response threshold, capacities, and weaknesses play important roles in shaping parents' perceptions about and feelings toward their infant. The parent and the child influence each other's ability or desire to relate. Therefore, problems in the early parent-infant relationship may develop when there is a mismatch in the goodness of fit between parent and child. For example, an active infant with a high need for stimulation may become frustrated and irritable in the care of a parent whose rhythm or tempo is much slower. The infant's temperament has been found to be a relatively stable construct, with Rothbart's (1986) study of infant temperament finding relative stability of positive reactivity in infants and less stability of negative reactivity across time. Bates, Maslin, and Frankel (1985) found infant temperament did not predict secure attachment to the mother; however, an infant's temperament, specifically mood, emotional reactivity, and behavioral regulation, has been found to impact the quality of the child's participation in the

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parent-child relationship (Crockenberg, 1981). The term *difficult* was coined by Thomas et al. (1968) to describe a cluster of child temperament characteristics that challenged caregivers. Infants who exhibit these challenging behaviors were more likely to (a) elicit less sensitive parenting and (b) require more sophisticated parenting skills (Chess & Thomas, 1990). Therefore, infants requiring the most skilled parenting may, in fact, elicit parenting that fails to meet their greater needs.

The interaction of child temperament and parenting style has been examined in studies of parental limit setting. Kochanska (1997) reported that fearful toddlers tended to develop better socialization over time when mothers used gentle discipline (psychological and deemphasizing power) compared with children whose mothers used negative discipline (p. 39) (coercive and/or angry); in later studies, Kochanska, Aksan, and Joy (2007) found that positive mother-child relationships with toddlers who are less fearful predicted more positive receptivity and compliance in the child. In another study, Kochanska and her colleagues found that mothers with low levels of perspective taking (empathy) whose children displayed high levels of negative emotionality used more power-assertive parenting strategies (Clark, Kochanska, & Ready, 2000). Arcus (2001), in her work with Kagan, found that inhibited children had more favorable outcomes when parents used stronger forms of limit setting. However, Kochanska et al. (2007) found that power assertion in father-child dyads with fearful children predicted poorer socialization outcomes. Shaw and colleagues also found that rejecting parenting in toddlerhood increased the risk of conduct problems later (Shaw, Gilliom, Ingoldsby, & Nagin, 2003). Thus, domains of parenting behavior that may link parental personality, child temperament, goodness of fit, and the bidirectionality of these contributors to parent-child relationship quality and child outcomes are important aspects of the relationship to assess.

Gender

The child's gender may affect his or her response to the parent. In a study by David and Lyons-Ruth (2005), when mothers presented frightening behavior, female infants were more likely to display approaching behaviors than male infants. When the mother withdrew, both female and male infants were likely to seek comfort (i.e., approaching behaviors). However, for both withdrawing and frightening behaviors, when the mother's behaviors became poorer, male infants were more likely to show distress or anger than female infants.

Six-month-old boys have been found to be more emotionally reactive (expressing both more positive and more negative affect) when interacting with their mothers than girls. Girls tend to show more curiosity and capacity for self-soothing than boys (Weinberg & Tronick, 1992), and in other studies, mothers have been found to display more sensitive interactions with daughters (Bornstein et al., 2008; Schoppe-Sullivan et al., 2006). However, in an earlier study, mother-son dyadic interactions were found to be more organized than mother-daughter interactions (Tronick & Cohn, 1989). In a review of gender differences in the context of maternal depression, Tronick and Weinberg (2000) suggested that because girls are less dependent on their mothers for emotion regulation, mothers may

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sometimes find themselves withdrawing emotionally from their young daughters. In contrast, they described studies that found that mothers may express more anger and neutral emotions toward sons. In summary, mother–infant relationships may be of more concern when the infant is male, especially in the context of maternal depression (Gerardin et al., 2011; Tronick & Weinberg, 2000).

Medical Conditions

Several systematic reviews have implicated chronic illness as a potential risk factor for parent–child relationship disturbances and subsequent emotional and behavioral problems in childhood. Ernst, Johnson, and Stark (2010) noted that children with cystic fibrosis are no more likely to have disturbances in attachment with their parents than other infant–parent dyads and, therefore, are an example of resilience. However, when insecure-avoidant attachment behaviors were observed in preschool children with cystic fibrosis, the children were found to be poorly nourished and had low body mass indexes (Simmons, Goldberg, Washington, Fischer-Fay, & Maclusky, 1995). Other researchers (Carson & Schauer, 1992) showed that mothers of children with asthma tended to view their children as more demanding, less reinforcing, and less acceptable than mothers who had healthy children. The mothers of children with asthma also reported higher levels of parenting stress and tended to demonstrate more rejecting, overprotective, or overindulgent parenting styles compared with mothers in the control sample, underscoring the potential risk to the parent–child relationship when a serious illness is diagnosed. A metasynthesis of qualitative studies found that many parents of chronically ill children suffer from exhaustion, worry, depression, and suicidality from the constant burden of caring for their children (Coffey, 2006). Such symptoms were worst at critical junctures, such as time of diagnosis or developmental transitions.

Another review found that preterm birth posed a risk to the quality of parent–child relationships (Anderson, Riesch, Pridham, Lutz, & Becker, 2010; Leve, Scaramella, & Fagot, 2001). Several pathways accounting for these relational problems have been proposed. Maternal depression and lack of attunement to the infant were associated with task-oriented feeding of their preterm infants (Pridham, Schroeder, Brown, & Clark, 2001) and with young children with cystic fibrosis (Tluczek, Clark, McKechnie, Orland, & Brown, 2010). Multiple risk factors (e.g., health problems and (p. 40) negative emotionality) may increase the likelihood that an infant will experience lower quality parent–child interactions (Fiese, Poehlmann, Irwin, Gordon, & Curry-Bleggi, 2001). In their longitudinal study of preterm infants, Poehlmann, Burnson, and Weymouth (2014) reported that less intrusive parenting predicted more secure attachment, more effortful control skills, and fewer early behavior problems. However, in another sample of preterm infants, the mother’s representation of her infant was found to be more predictive of infant secure attachment than the infant’s health history (Cox, Hopkins, & Hans, 2000).

Conclusion

Assessing a young child's mental health in the context of the parent-child relationship is supported by several theoretical paradigms that share the prioritization of the early experience. Foundational contributions of psychodynamic/object relations theory, attachment/ethological theory, social learning theory, family systems theory, and multiple systems theories illustrate the importance of incorporating a parent-child relationship paradigm in the assessment of the mental health and social and emotional functioning of infants and young children. As identified by First and his colleagues (2002), there is a need for universally accepted procedures for assessing relationships across the life span. Future research efforts should establish the validity and reliability of these methods in differentiating normative relationship patterns from pathological relationship patterns as well as categorizing symptomatology and behavioral observations to define various syndromes of relationship disturbances (Lyons-Ruth, 1995). As Zeanah and Lieberman (2016) noted, more research is needed to establish reliability and validity regarding aspects of individual, relational, and family functioning that may contribute to relationship disturbances.

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