CHAPTER ONE

Child Maltreatment and Developmental Outcome

INTRODUCTION TO THE SECOND EDITION

Despite considerable attention to child maltreatment since the publication of this book's first edition in 1997, thousands of children continue to be abused and neglected every year. Child maltreatment remains a serious legal, medical, and psychosocial problem with often grave consequences for its victims and society. A survey in Washington State assessed the mental health status of children ages 3–18 years who were recipients of protective services. Seventy-two percent were statistically indistinguishable from children in the state's most intensive mental health treatment programs (Trupin, Tarico, Low, Jemelka, & McClellan, 1993). More recent research suggests that, sadly, a significant proportion of maltreated youngsters do not receive appropriate intervention. Swenson, Brown, and Sheidow (2003) reported that services are not offered to the majority of physically abused youngsters who show clinical elevations on caregiver ratings of behavior problems. Besides the human costs associated with child maltreatment, vast financial resources are spent on professional treatment and social service programs.

This first chapter summarizes what is currently known about the impact of maltreatment on children's development, revised in accordance with the latest research. It would have been easier to write a book without reviewing this vast body of research. A book dealing exclusively with thera-

peutic strategies and techniques would probably be easier to read, too. Some readers may find the literature review dry and academic and begin to question its relevance for their daily clinical practice. Clinicians are often searching for creative and useful interventions, especially when confronted with children and families whose progress in therapy seems almost imperceptible and whose pain is all too apparent. Although we focus on practical interventions, we strongly believe that restricting the book's scope to technique alone would do our clients a real disservice. We refine our clinical skills and acumen by understanding and appreciating maltreatment's effects and the mechanisms and processes responsible for developmental sequelae. An awareness of the diverse array of outcomes of maltreatment alerts us to the need for comprehensive assessments that evaluate many domains of functioning. Literature, theory, and research guide clinical decision making, facilitate the selection and development of specific interventions, and eventually lead, we hope, to more rigorous evaluations of treatment techniques. Being a skilled clinician and being a good scholar should be synonymous.

THE IMPACT OF MALTREATMENT: A THEORETICAL OVERVIEW

In this section we examine the impact of maltreatment on the child's journey from infancy to early adolescence within the context of the model proposed by developmental psychopathology. Developmental psychopathology's basic tenets, especially the transactional model espoused by Cicchetti (Cicchetti, 2004; Cicchetti & Rizley, 1981) and elaborated by others (Sroufe, Carlson, Levy, & Egeland, 1999), offer researchers and clinicians a useful way to understand the heterogeneous effects of maltreatment. One hallmark of this approach is the attempt to integrate knowledge from different disciplines: clinical and experimental psychology and psychiatry, sociology, and the biological sciences, including genetics and the neurosciences. Developmental psychopathologists maintain that attempts to understand human development from the perspective of just one discipline do injustice to its complexity. Likewise, exclusive focus on one factor or variable to explain human behavior (e.g., attributing abusive behavior solely to a parent's own history of maltreatment) is simplistic and can result in an inaccurate picture. Considering development across a broad range of functioning and behavioral organization is an approach well suited to the study of child maltreatment's diverse effects.

According to Cicchetti and Rogosch (1994), developmental psychopathology "adopts an organizational view, conceptualizing development as a series of qualitative reorganizations among and within biologic and be-

havioral systems as growth of the individual proceeds" (p. 760). These various systems and processes include the biological, behavioral, and psychological, as well as broader systems such as the environment, society, and culture. They are in dynamic transaction (i.e., interaction) with one another throughout a person's lifespan. This concept of the primacy of interrelations among various systems for human development is antithetical to the notion of a direct, linear (i.e., main-effects) relationship between maltreatment and specific developmental sequelae first used to explain causes of child abuse. Theorists and clinicians had regarded one factor, a parental history of victimization, as the causative variable of abusive behavior (Steele & Pollock, 1968). There is now general agreement that abusive or neglectful parenting is determined by the interaction of many different variables. Belsky's (1980, 1993) ecological model of child maltreatment is typical of such an approach. He proposes that child maltreatment is more likely to occur when there is a confluence of factors at four different levels: the psychological characteristics of the parents, the family setting and its dynamics, the immediate social network of the family members, and the current state of society as it pertains to maltreatment (Figure 1.1).

Similarly, child maltreatment can be regarded as one of many variables that may contribute to specific developmental outcomes. Clinicians and researchers must remain cognizant of the complexity of the association between maltreatment and outcome; indeed, this is one of the guiding principles of this book. Given the influence of multiple variables, there are multiple pathways to adaptive and maladaptive developmental outcomes (Sroufe et al., 1999). Likewise, interventions may have to be directed at a

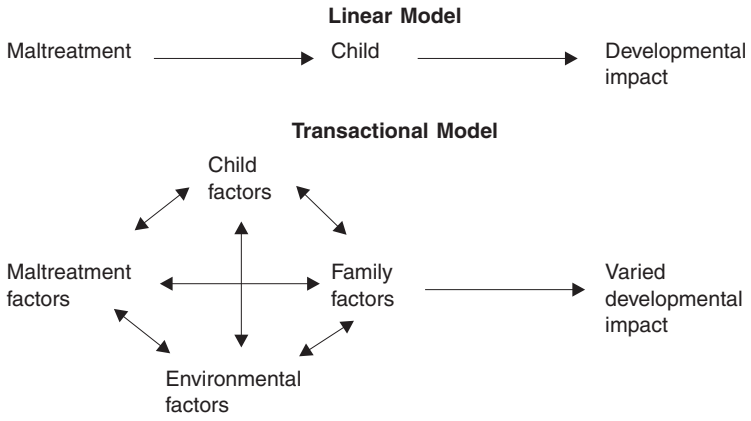

FIGURE 1.1. Linear/transactional models.

number of different targets or variables. A history of maltreatment, although a significant risk factor for many serious emotional, behavioral, and interpersonal problems, does not necessarily condemn individuals to such fates. Sroufe and colleagues' (1999) comment that "cause is probabilistic not deterministic" (p. 3) is similar to Cicchetti's (2004) notion that maltreatment has a number of possible outcomes (multifinality). In other words, a history of child maltreatment does not necessarily result in significant psychopathology.

The proposition that not every child succumbs to dire circumstances, including maltreatment, is well supported in the literature and central to the concept of resilience. According to Bonanno (2004), resilience "pertains to the ability of adults in otherwise normal circumstances who are exposed to an isolated and potentially highly disruptive event, such as the death of a close relation or a violent or life-threatening situation, to maintain relatively stable, healthy levels of psychological and physical functioning" (p. 20). Citing the adult literature, Bonnano contends that the vast majority of adults exposed to such events do not exhibit chronic symptoms. Likewise, studies of resilient children have shown that one-third of children in a sample who experienced perinatal stress, poverty, parental psychopathology, and family disruption developed into competent and well-adjusted young adults (Werner, 1989). Rutter (1985) estimated that one-half of children exposed to severe stress and adversity do not develop symptoms of psychopathology. Similarly, there are maltreated children who do not show evidence of major dysfunction. For example, estimates of the rates of asymptomatic sexually abused children in four studies range from 21 to 49% (Caffaro-Rouget, Lang, & van Santen, 1989 [49%]; Conte & Schuerman, 1987 [21%]; Mannarino & Cohen, 1986 [31%]; Tong, Gates, & McDowell, 1987 [36%]).

However, the research indicates that some asymptomatic children will subsequently develop problems. This is why we prefer the term "resilience" to "invulnerability." As Rutter (1993) points out, "invulnerability" seems to imply an absolute resistance to damage. Although abatement of symptoms has been shown in at least seven longitudinal studies of sexually abused children, with one-half to two-thirds of all children becoming less symptomatic (for a review, see Kendall-Tackett, Williams, & Finkelhor, 1993), studies have demonstrated that a sizable proportion (10–24%) of children get worse (Bentovim, van Elberg, & Boston, 1988 [10%]; Gomes-Schwartz, Horowitz, Cardarelli, & Sauzier, 1990 [24%]; Hewitt & Friedrich, 1991 [18%]; Runyan, Everson, Edelsohn, Hunter, & Coulter, 1988, [14%]). Some children whose condition subsequently deteriorated were asymptomatic at the time of the initial assessment (Gomes-Schwartz et al., 1990).

How do we explain the diversity of outcome associated with child maltreatment? We turn again to developmental psychopathology. A central focus in the study of resilience and developmental psychopathology has

been the attempt to identify moderator variables. Baron and Kenny (1986) define a moderator variable as a qualitative or quantitative variable that "affects the direction and/or strength of the relation between an independent or predictor variable and a dependent or criterion variable" (p. 1174). Cicchetti and Rizley (1981) and Cicchetti and Rogosch (1994) classify moderator variables into two broad categories: "potentiating factors" increase the probability of negative developmental outcomes, and "compensatory factors" decrease the risk of negative outcome. Within each of these broad classifications, Cicchetti and Olsen (1990) distinguish between "transient" factors, which are temporary and fluctuating influences, and "trait" factors, which represent more enduring conditions or characteristics. We can also classify moderator variables into four broad domains: (1) maltreatment factors, (2) individual child factors, (3) family factors, and (4) environmental factors (Malinosky-Rummell & Hansen, 1993).

We provide here a brief overview of these variables, a number of which we discuss in much more depth in subsequent chapters. Some of these have been found to moderate the impact of maltreatment. Although the relevance of some variables for maltreated children's developmental outcomes has received empirical support, others have not yet been investigated empirically. We should also avoid thinking of these variables in categorical ways. As Rutter (1993) points out, the same variable may be a risk factor in one situation and a protective factor in another. Table 1.1 supplements our narrative description.

Maltreatment Factors

Kendall-Tackett and colleagues (1993) reviewed the influence of characteristics of maltreatment on the outcomes of sexually abused children as documented in 25 studies. The following factors are associated with more symptoms: high frequency of sexual contact; longer duration; use of force; oral, anal, or vaginal penetration; and a close relationship between child and perpetrator. Factors such as frequency, duration, and the relationship between the child and the perpetrator have not been sufficiently explored in the literature pertaining to physically abused children, although severity of abuse, frequency of child protective services reports, and the interaction between frequency and severity were significant predictors of outcome in youngsters subjected to different types of maltreatment, including physical abuse and neglect (Manly, Cicchetti, & Barnett, 1994).

Individual Factors

The developmental level of children influences the impact of maltreatment in a variety of ways. Their interpretation and understanding of the mal-

TABLE 1.1. Known or Suspected Moderator Variables for Developmental Outcome of Maltreated Children

1. Maltreatment factors
   - Frequency
   - Duration
   - Relationship between child and perpetrator
   - Penetration (in child sexual abuse)/severity of the maltreatment
   - Use of force
   - Occurrence of other forms of maltreatment/frequency of child protective services reports
2. Individual factors
   - Child's age and stage of development
   - Gender of the child
   - Temperament
   - Medical, biological, or physical conditions
   - Premaltreatment adjustment (e.g., intelligence and cognitive skills, self-esteem)
   - Child's appraisals and attributions regarding the maltreatment
3. Family factors
   - Family's support of the child postmaltreatment
     - Acknowledgment of the maltreatment
     - Belief in the child
     - Emotional support
     - Ability to protect the child from further maltreatment
     - Securing appropriate services (e.g., medical examination, therapy)
     - Provision of adequate parenting postmaltreatment
   - Family functioning and parenting premaltreatment
     - Attachment between child and parents, including accurate perception of the child's needs and capacity to respond to them
     - Adequacy and health of marital relationship (e.g., communication, support, spousal abuse, discord, problem solving)
     - Individual functioning of parents (e.g., psychiatric illness, substance abuse, depression)
     - Poverty; stability of residence, income; social network and supports
     - Single parent
     - Discipline/parenting effectiveness and appropriateness
4. Environmental factors
   - Cultural–societal toleration of maltreatment/community's reaction to the child and family
   - Cultural and religious factors
   - Supportive social relationships for child and family
   - Provision of appropriate services for child and family (including continuing protection of the child)
   - Criminal justice involvement

treatment play a significant role in subsequent adjustment: maltreatment may have different meanings and significance for children at different developmental stages. Some very young children may not even recognize that they have been abused (e.g., sexual abuse), but become cognizant of the significance of what happened to them only as they become older and more

aware of the social prohibitions and sanctions attached to this behavior (Finkelhor, 1995).

A child's cognitive development may affect his or her responses to abuse or neglect in other ways. Children's thinking becomes "decentered" as they enter the concrete operational stage of thought. They recognize that other people may have both positive and negative traits, and they may harbor simultaneously positive and negative feelings toward others (Harter, 1977). The attainment of this developmental stage contributes to feelings of ambivalence toward a perpetrator, leading to even greater confusion and conflicted feelings.

Developmental level also affects the symptom pattern evidenced by maltreated children. For example, sexually maltreated adolescents may be more likely to engage in running away, substance abuse, or suicidal behavior when distressed, because these behaviors are within their repertoires. Younger children are much less likely to show these patterns and more likely to display behavior more common to their age group (e.g., disruptive behavior or sexualized behavior).

Clinicians often fail to consider the child's medical status and temperament as moderator variables when evaluating the developmental impact of maltreatment. For example, a 5-year-old with a difficult temperament may react differently to abuse or neglect than a same-age child with a placid, regular temperament. The former might become distressed, not only by the maltreatment but also by subsequent changes in family routine or structure, such as placement in foster care. In general, an easy temperament serves as a compensatory factor (Grizenko & Pawliuk, 1994). Besides eliciting more positive responses from their caregivers and being better equipped to cope with changing environmental circumstances, children with easy temperaments appear to have higher intelligence and more advanced problem-solving skills, cognitive/integrative abilities, social skills, and coping strategies (Mantzicopoulos & Morrison, 1994; Werner, 1993).

Medical, biological, or physical conditions (e.g., sensory deficits, such as blindness or hearing impairments, fetal alcohol spectrum disorders [FAS-D]) may mediate a child's adjustment to maltreatment. A number of children whom we have assessed and treated have had primary attention deficit disorders that significantly affected their social, behavioral, and academic functioning. Other diagnoses like FAS-D are associated with conditions (e.g., irritability and difficulties in behavioral regulation, failure to consider the consequences of one's actions, social/communicative difficulties, disrupted school experience, mental health diagnoses) (Streissguth, 1997) that in turn may moderate a child's response to maltreatment. For example, preexisting problems in behavioral and emotional self-regulation may seriously compromise a child's ability to cope adaptively with the anger elicited

by physical abuse. Of course, some problems may result from the maltreatment and in turn influence the child's subsequent adaptation to the trauma. In a fascinating series of early papers, Lewis and her colleagues (Lewis, 1992; Lewis, Lovely, Yeager, & Delia Femina, 1989; Lewis et al., 1988, 1991) reported that a constellation of neurological–neuropsychiatric vulnerabilities and a violent, abusive upbringing were closely associated with physical aggression. Lewis et al. (1989) described elements of a transactional model to account for this association. For example, family violence serves as a model of aggressive behavior and elicits intense feelings of rage. As well, it may result in those very neurological vulnerabilities that make it difficult for children to resist these aggressive models and control their anger. Lewis and colleagues (1989) also suggested that neuropsychiatrically impaired children, by virtue of their impulsivity, irritability, and hyperactivity, may be at higher risk for being abused. Chapter 2 reviews the more recent research on the neurobiological mechanisms of impact.

Clinicians must also evaluate children's precrisis adjustment and general level of functioning. For example, above-average IQ and positive experiences at school may serve as compensatory factors (Rutter, 1993). Success in these areas generates and strengthens feelings of self-esteem and self-efficacy that attenuate the impact of adverse events. Masten, Best, and Garmezy (1990) and Werner (1993) broaden these areas to include athletic, mechanical, and artistic pursuits as well as academic ones. Consequently, a child with such areas of strength may withstand more strongly the negative impact of being abused or neglected.

Family Factors

As we shall discuss in detail, sensitive care increases children's chances of establishing a secure attachment with parents, which in turn is a significant compensatory factor for those who are subsequently maltreated. A child whose relationships are characterized by basic trust may not be as seriously compromised by abuse, especially if it is time limited and committed by someone without a particularly close relationship to the child. Such children may regard the maltreatment as unfortunate incidents that speak more to the untrustworthiness or even dangerousness of a specific offender than evidence of the ubiquitous badness of people. Consequently, their subsequent relationships may not be deleteriously affected, although they may display some localized effects such as anxiety-related symptoms. Furthermore, a secure attachment organization increases chances that they will approach their caregivers for help and support because they expect them to respond in a sensitive and helpful manner. Parental support may attenuate their distress and increase the probability of a good outcome. We discuss

the importance of attributions, internal working models, and interpersonal schemas in subsequent chapters.

Other aspects of parenting and family support can also moderate the impact of maltreatment. Indeed, support from the family seems critical for children's adjustment to almost any kind of trauma. There may be many mechanisms that account for this association. Via the phenomenon of "social referencing," young children take their cues from their caretakers regarding how to respond to situations of potential or actual threat (Lewandowski & Baranoski, 1994). Parents can transmit their own anxiety about the trauma or maltreatment, thus escalating children's apprehension and distress. Maltreated children whose parents disbelieve their accounts or blame them for the abuse may feel even greater stigmatization, which contributes to a poorer outcome (Finkelhor & Browne, 1985). As well, children's adjustment is significantly dependent on the actual parenting they receive, especially when they display behavioral or emotional problems associated with maltreatment. Parents who cannot apply firm and consistent limits to their children's behavior and who cannot maintain a regular and consistent routine for their offspring may inadvertently contribute to their children's behavior problems. Deterioration in parenting may reflect a situational reaction to the child's disclosure or a chronic and long-standing pattern of parenting difficulties that predated the maltreatment. Many variables affect parenting, including the parents' own victimization history, psychiatric illness, and broader factors such as poverty and social isolation. Chapter 3 discusses the assessment of these family factors, especially the reactions of nonoffending parents and caregivers. Chapter 6 describes some interventions designed to increase the support parents or caregivers can offer to their victimized children.

Environmental Factors

Mental health professionals have tended to ignore environmental variables, despite their importance for a child's and the family's adjustment. Broad social factors such as poverty pose significant risk to developmental outcome in general (Duncan, Brooks-Gunn, & Klebanov, 1994; Lipman, Offord, & Boyle, 1994). Cultural and religious factors often have a significant impact on children's and families' response to maltreatment, as well as having important implications for how we conduct subsequent assessments and interventions. Other factors, such as the community's negative reaction to children's disclosure of maltreatment (e.g., peers and neighbors), exacerbate their sense of stigmatization. A criminal justice system that is unresponsive and insensitive to the idiosyncratic needs of child witnesses may compound feelings of powerlessness and stigmatization. For example, Kendall-Tackett

and colleagues (1993) reviewed studies pertaining to sexually abused children's court involvement. Children's adjustment deteriorated when cases were not resolved quickly or when children were compelled to testify on multiple occasions. Children who were frightened of the accused also fared poorly. Although these variables functioned as potentiating factors, the same variable (i.e., testifying in court) can be a compensatory factor under somewhat different circumstances. For example, Runyan and colleagues (1988) reported that children who testified in juvenile court proceedings recovered more quickly when cases were resolved with a conviction or a plea bargain.

We should not discount the influence of other social relationships as a compensatory, albeit indirect, factor for maltreated children. Egeland, Jacobvitz, and Sroufe (1988) demonstrated that high-risk mothers pose less risk to their children if they have been able to form a supportive relationship with another adult, such as a spouse, or if they had participated in psychotherapy.

Stage-Salient Developmental Issues

The concept of stage-salient developmental issues also contributes to our understanding of maltreatment's diverse impacts. At each developmental stage, the individual confronts specific developmental tasks that are central to that age (Cicchetti & Rogosch, 1994). Upon emergence, each remains critical to the child's continual adaptation, although decreasing in salience relative to newly emerging tasks. In optimal development, the child successfully negotiates the progression of stage-salient issues and moves through a course of increasing competence and adaptation. In other words, later competencies build on earlier competencies.

This notion of maltreatment's impact on children's progression through different developmental stages is consistent with one of the two major types of effects arising from child victimization proposed by Finkelhor (1995). *Developmental effects* "refer to deeper and generalized types of impact, more specific to children, that result when a victimization experience and its related trauma interfere with developmental tasks or dysfunctionally distort their course" (Finkelhor, 1995, p. 184). Possibly affected areas include attachment, behavioral and emotional self-regulation, development of the self, cognitive and academic functioning, and peer relations. These developmental outcomes in turn may significantly affect the attainment of future developmental tasks (Finklehor, 1995). In contrast, *localized effects* are "those specific to the trauma experience but without major developmental ramifications . . . these symptoms can be called localized not only in the sense that they are short-term, which they often are (Kendall-Tackett et

al., 1993), but also in the sense that they primarily affect behavior associated with the victimization experience and similar classes of experience" (Finkelhor, 1995, p. 184). Although localized effects can be pervasive and persistent, they do not interfere to a great extent with development. Among localized effects, Finkelhor includes nightmares and fears of being in the environment where victimization occurred. Developmental and localized effects are not mutually exclusive; maltreatment may produce a mixture of both types of effects.

We now turn to a description of the potential effects of maltreatment on child development.

ATTACHMENT

An Overview of Attachment Theory

The establishment of a secure attachment with a primary caregiver is the stage-salient task children confront between the ages of 6 and 12 months (Sroufe, 1979; Sroufe & Rutter, 1984). The attachment system refers to the organization of a diverse set of behaviors in the infant that maintains proximity to the caregiver when the child is distressed, in danger, or hurt. Attachment is not an issue for the first year of life alone. Once an attachment develops, it undergoes transformations and reintegrations with subsequent developmental accomplishments; it has importance for human development throughout the lifespan. We begin this section with a review of attachment theory's basic concepts and seminal research with infants and very young children, and then examine attachment in the school-age population. As we shall demonstrate, abuse and neglect often have a profound impact on the child's ability to form secure attachments to others, and that attachment insecurity is a significant risk factor for the development of psychopathology.

There are two individuals who dominated the early formative years of attachment theory and who were responsible for its core concepts: John Bowlby, a British child psychiatrist and psychoanalyst, and Mary Ainsworth, a Canadian-born psychologist who relocated to the United States, taught at several American universities, and trained many of the leading thinkers and researchers in the area. To understand the revolutionary nature of Bowlby's thinking and how it represented a radical departure from the traditional psychoanalytic model, a little history is in order (see Brisch [2002] and Karen [1994] for cogent reviews). In 1944, Bowlby published a paper describing his experiences with young thieves at the London Child Guidance Clinic. The paper, entitled "Forty-Four Juvenile Thieves: Their Characters and Home Life," was his attempt to demonstrate the influence

of children's environments, especially experiences of loss and separation, on the genesis of problematic behavior. This represented a profound change in thinking, as the psychoanalytic world at this time was dominated by the concept that children's fantasies, such as the Oedipus complex, were the primary forces responsible for personality formation and psychopathology. Actual experiences were relegated to a minor role.

In 1949 the World Health Organization asked Bowlby to prepare a report on the condition of children left homeless and orphaned by World War II. This stimulated his interest in attachment and a quest to develop a theory to explain the nature of the child's ties to the mother, which is reflected in the title of his 1958 article (Bowlby, 1958) wherein he maintained that attachment between a mother and child is biologically based. Drawing upon some concepts of ethology (the study of animal behavior), Bowlby (1973, 1980, 1982, 1988a, 1988b) and colleagues (Ainsworth, 1989; Ainsworth & Bowlby, 1991) proposed that attachment behavior keeps the infant close to one or a few principal caregivers through complementary caregiver and infant behavior. The infant is equipped at birth with species-characteristic behaviors (e.g., crying) that elicit certain behaviors in the caregiver, and these behaviors emerge when the child is stressed. The child is an active partner and not merely a passive recipient of the parent's ministrations. This is a central point: The attachment system is activated when the child is stressed. This includes situations in which the child is hurt, in pain, or separated from the caregiver. Harmonious play between a child and parent may be an important component of their relationship but does not reflect the attachment system. Caregiving behavior (e.g., feeding the child, protecting the child from harm) that sensitively and appropriately meets the child's needs helps ensure infant survival and that of the species, thereby conferring evolutionary value upon the attachment system. The caregiver's behavior generates a feeling of security in the child. At first, the infant's behaviors are not directed at a specific individual. Gradually, the child begins to discriminate among people and establishes an attachment to one or a few select individuals. Activation of the attachment system also suppresses exploration in the child. A distressed, frightened youngster with a secure attachment will seek proximity to his or her primary attachment figure rather than exploring the environment.

Mary Ainsworth began a series of observational field studies of infants and their mothers in Uganda and Baltimore. This work constituted the basis of Ainsworth's strange situation paradigm, a strategy designed to assess the security of mother–infant attachment (Ainsworth, Blehar, Waters, & Wall, 1978). In this 20-minute videotaped procedure, the infant is exposed to a series of increasingly stressful events that culminate in being left alone. Remember, the attachment system is activated when the child is under

stress; the strange situation's separation episodes stress the child and activate the system. The infant's reactions to separations, and especially to reunions, are believed to measure the degree to which the infant's perceptions and expectations of the mother provide feelings of security and trust.

Ainsworth and colleagues (1978) found that infants with a *secure attachment* (type B) greeted their mothers positively after being separated, actively sought proximity or interaction, and readily accepted comfort if distressed. They directed little, if any, negative behavior toward their mothers in the reunion and calmed down after several minutes. These mothers were responsive, accessible, and sensitive to their children's needs. Infants who manifested an *avoidant attachment* (type A) showed little stress when separated and, upon reunion, avoided their mothers by turning and looking away and ignoring them. These infants showed little preference for their mothers over a stranger and evidenced little affective interchange in the preseparation episodes. The mothers ignored or rejected their children's needs, avoided physical contact, and were intrusive in interactions with their infants. These interactions were also characterized by instances of covert hostility and rejection. Infants who demonstrated an *ambivalent–resistant attachment* (type C) exhibited a high level of distress upon separation. Upon reunion, they showed angry resistance and appeared ambivalent. They actively sought proximity but angrily pushed away from their mothers. Unlike avoidant children, these youngsters appear to have learned to overexaggerate the attachment system to maximize the chances that caregivers will respond to them. These mothers responded inconsistently and interacted in a very passive, withdrawn manner.

Main and Weston (1982) describe these three attachment patterns as coherent, organized strategies for achieving "felt security" and regulating distress. According to Main (1990) and Cassidy and Mohr (2001), infants achieve their goal of attaining proximity to attachment figures by developing a strategy tailored to the specifics of the caregiving relationship. Parents of securely attached infants react promptly to their infants' arousal, thereby reducing their distress and allowing them to attend to and explore the environment. As most parents know, it is very difficult for a baby screaming with hunger or fright to settle down and interact with others or explore the environment. The securely attached child readily seeks comfort in the strange situation because of an expectation that the attachment figure will respond sensitively and appropriately. Moreover, the child can freely explore the environment because of the expectation that the attachment figure is readily available if the child becomes distraught or anxious during these explorations.

The avoidantly attached child expects the parent to rebuff, reject, or become angry and hostile if he or she makes demands in stressful situa-

tions. Consequently, the child begins to avoid closeness or intimacy with the attachment figure (Crittenden, 1992a; Main, 1981). For these children, closeness, intimacy, and the expression of negative affects are fraught with danger. Others have learned that parents ignore their distress rather than reacting angrily or punitively. Parental neglect of the child who needs soothing or comfort leads to continued intense, emotional arousal, an exceedingly disorganizing effect. To cope, the child excludes feelings and thoughts that would normally arouse the attachment system and begins to suppress or falsify the expression of affects typically used to signal for appropriate parental response (Cassidy & Kobak, 1988; Crittenden, 1992b; Main, 1990). According to Cassidy and Mohr (2001), "insecure/avoidant babies have learned to suppress the expression of attachment behavior (i.e., learned to deactivate the attachment system) in order to maintain protective access to caregivers who are uncomfortable with closeness" (p. 277). The child dismisses the importance of the attachment relationship and the associated feelings and thoughts. This strategy also protects the child from further trauma if the parents have reacted in punitive, angry, or even abusive ways when the child was distressed. Although this strategy provides relief from intense, emotional arousal, ultimately it may lead to problems in perceiving, interpreting, and displaying feelings. It may preclude children from forming close interpersonal relationships that fulfill affectional needs. Instead, it encourages expectations that relationships are a source of danger and rejection. Main and Goldwyn (1984) also suggest that children with an avoidant attachment may idealize caregivers. They portray the rejecting, hostile parent as a wonderful caregiver, thereby attenuating troublesome feelings of anger, sadness, and anxiety associated with an accurate perception of the relationship.

The child with an ambivalent–resistant attachment attempts to provoke the attachment figure to meet his or her needs via angry and aggressive behavior. Unlike avoidant children, these youngsters learn to overexpress their feelings and needs to increase the chances that their inconsistent caregiver will respond to their distress or alarm. They become "hypervigilant and responsive to signals of maternal unavailability and also . . . intensify their signals" (Crittenden, 1992b, p. 581). Furthermore, with uncertainty about whether the mother will be available, responsive, or helpful, the child becomes dependent and clingy and manifests the kind of anger just described. The child's ability to explore the environment is restricted by this preoccupation with parental unavailability.

This description of these attachment patterns as organized strategies reflects one of Bowlby's (1969, 1973, 1980, 1982; Sroufe & Fleeson, 1986) most important theoretical concepts of attachment theory. The child's *internal working model* of attachment (mental representations of the self and

the parent) is inferred from the infant's responses and behavior in the structured separation and reunion episodes of the strange situation. Infants with a secure attachment organization who freely seek comfort, proximity, and contact in the reunion episode and then gradually explore the environment or return to play are inferred to have an expectation that parents can meet their needs for reassurance, comfort, and protection. Infants with an avoidant attachment organization actively avoid and ignore the parent in the reunion because of an expectation that their proximity-seeking advances will be rejected or ignored. Their mental representation of the relationship seems to be characterized by danger, rejection, or neglect. Infants with an ambivalent–resistant attachment expect that their parents cannot meet their needs consistently. This expectation is evidenced by their angry yet clingy and dependent behavior in the reunion episode, which seems designed to evoke an appropriate response from their parents.

Main and Solomon (1986, 1990) reviewed more than 200 videotapes of infants who had not been previously classified or did not fit the criteria of these three patterns. They identified criteria for an additional insecure pattern, *disorganized–disoriented attachment* (type D). When confronted with the mother's return, these infants displayed an array of diverse and contradictory behavior patterns: strong initial proximity seeking followed by strong avoidance; approaching but with head averted; undirected, misdirected, incomplete, and interrupted movements or expressions; odd movements and postures, asymmetrical movements, and mistimed movements; freezing, stilling, and slowed "underwater" movements and expressions; and expressions of fear and distress, dazed or disoriented facial expressions, and apprehension (Cassidy & Mohr, 2001).

Disorganized–disoriented behaviors do not represent a fourth organized strategy for maintaining access to an attachment figure (Main & Solomon, 1990). Rather, these behaviors make sense only if interpreted as reflecting fear and confusion about the caregiver and irresolvable (i.e., unorganized) conflict concerning whether or how to maintain access to the attachment figure in times of stress (Goldberg, 1991; Main & Solomon, 1990). Main and Hesse (1990) and Lyons-Ruth, Repacholi, McLeod, and Silva (1991) suggest that this pattern reflects a relationship in which the child suddenly experiences a previously positive and caring parent as threatening. Negative interactions with the caregiver activate the attachment system and motivate the child to turn to the caregiver as a source of comfort. However, the child is in a real bind; the attachment figure is both the source of the stress and the figure who might alleviate it, which in turn is reflected in the approach–avoidance behavior so characteristic of children with a disorganized attachment classification (e.g., approaching the mother by walking backward). This represents a breakdown of organized,

coherent attachment strategies or "the breakdown of an otherwise consistent and organized strategy of emotion regulation" (van IJzendoorn, Schuengel, & Bakermans-Kranenburg, 1999, p. 226).

If pervasive enough, this conflict impedes the infant's organization of a consistent attachment-oriented strategy. However, Main and Solomon (1990) propose that this conflict and disorganization might occur in the context of a strategy that was otherwise secure. Likewise, disorganization might exist in relation to the two other coherent strategies, avoidant and ambivalent. Consequently, Main and Solomon advise investigators to code the best-fitting classification according to the infant's underlying attachment strategy. Such best-fitting classifications are usually described as "forced" classifications. Lyons-Ruth and colleagues (1991) reviewed the disorganized forms of secure and insecure attachment behavior and their correlates. Disorganized behavior in infants with serious social risks (e.g., infants from low-income backgrounds or who have been maltreated) has been predominantly the forced–insecure and, especially, forced–avoidant types. Disorganized behavior in infants from low-risk, middle-class backgrounds has been predominantly of the forced–secure type.

Attachment Organizations of School-Age Children

As researchers began to consider the attachment organizations of school-age youngsters, they were confronted with several dilemmas: What constitutes attachment in older children and how can it be measured? An underlying assumption of the strange situation is that separations from the mother alarm the child, thereby activating the attachment system, as reflected in the child's behaviors that increase proximity to or maintain contact with a particular attachment figure. Although this works well for infants and young children, separations lose their power to induce alarm and distress by the time children begin attending elementary school. Most early school-age children have had considerable experience in separating from their parents, and they know their parents will return; they do not need the actual physical proximity that infants and toddlers require. Furthermore, school-age children's greater cognitive and linguistic abilities allow them to express attachment organization, including internal working models of attachment, through words or play behavior (representational level) (Solomon & George, 1999). One evaluation strategy developed to evaluate school-age children's attachment organization at the representational level involves presenting children with a story stem, using small dolls. The experimenter describes what has happened, such as the parents departing for a trip, and then asks the children to depict what happens next, using the dolls. The representational models of older children have direct analogues to qualita-

tive differences in infant–parent interaction. For example, Solomon and George (1999) reported that secure kindergarten children freely express separation anxiety in the doll play, but also confidence that these fears and anxieties will be resolved. This symbolic play is similar to their open and direct expression of emotions and attachment behavior in actual separations and reunions with their mothers. Chapter 4 describes representational measures of attachment and the variations in response exhibited by maltreated school-age children.

Attachment Organizations of Maltreated Children

The type of attachment depends on the quality of care the infant has received (Sroufe, 1988). Following Ainsworth's original investigations (Ainsworth et al., 1978), studies confirmed that mothers of secure infants were rated as more sensitive, responsive, accessible, and cooperative during the infants' first year than mothers of insecure infants (e.g., Belsky, Rovine, & Taylor, 1984). Results of early studies of the attachment patterns of maltreated children consistently showed that physically abused and neglected children are less likely to develop secure attachments, with 70–100% of maltreated infants exhibiting insecure attachment organizations (e.g., Cicchetti, 1989; Crittenden, 1988). The disorganized–disoriented category also has been found to characterize maltreated infants. Approximately 80% of maltreated infants were classified as disorganized–disoriented, as compared with less than 20% of a nonmaltreated comparison group (Carlson, Barnett, Braunwald, & Cicchetti, 1989).

Investigations of the attachment classifications of preschoolers (2–5 years of age) have shown that maltreated children continue to exhibit insecure attachments. Cicchetti and Barnett (1991) examined maltreated preschoolers' attachment relationships with their mothers at one or more of three ages: 30 months, 36 months, and 48 months. They evaluated children who were physically abused, neglected, emotionally maltreated, and a fourth group judged to have experienced multiple types of maltreatment. There were few statistically significant relations between the types of maltreatment and specific classifications of insecure attachment. However, a significantly greater proportion of maltreated youngsters were insecurely attached than nonmaltreated children in each age group. Moreover, a small number of maltreated children with secure attachments at 30 months were likely to be classified as insecure at later assessments.

More recent studies have demonstrated the association between maltreatment and insecure attachments, especially disorganized attachments. van IJzendoorn and colleagues (1999) conducted a meta-analysis of nearly 80 studies on disorganized attachment. They reported that the percentage

of disorganized infant attachment in "normal," middle-class, nonclinical groups in North America was 15%, which was identical to the percentage of older children. The percentage of children with disorganized attachment was significantly higher in low socioeconomic samples (25%) than in middle-class samples and markedly elevated in children of maltreating parents: 48% of these children were found to be disorganized, a rate three times higher than that found in nonclinical middle-class samples.

Maltreatment's importance as an antecedent of disorganized attachment is no surprise. Maltreating parents frighten their children through abusive actions, in turn activating the attachment system. But as we have seen, the parent is also the source of comfort, and the resulting "incompatible behaviors of proximity seeking and flight lead to a breakdown of organized attachment behavior" (van IJzendoorn et al. 1999, p. 227). van IJzendoorn and colleagues (1999) also point out that maltreatment is not the only antecedent to disorganized attachment. Parents may become frightened themselves when they remember a loss of an important attachment figure, and this unexpected display of parental fear frightens the child. Lyons-Ruth has identified a number of very specific caregiver behaviors associated with disorganized infant attachment, such as maternal disorientation (e.g., a "haunted" or frightened voice, disoriented facial expressions), which frighten the child (Bronfman, Parsons, & Lyons-Ruth, n.d). Owen and Cox (1997) speculate that children who witness serious marital discord, such as domestic violence, become frightened and are therefore more prone to developing a disorganized attachment.

Other types of maltreatment such as neglect are associated with insecure attachment organizations. Several research teams have investigated the impact of severe deprivation on the attachment organization of Eastern European children raised in large institutions and orphanages and then adopted in Canada and the United Kingdom. MacLean (2003) and Zeanah and colleagues (2003) have prepared excellent reviews of this work, which we briefly summarize here. A Canadian team conducted a longitudinal study of babies from Romanian orphanages adopted by Canadian families (Chisholm, 1998). They reported that 67% of children had either secure or typical insecure attachment patterns identical to those displayed by 95% of Canadian-born and early-adopted youngsters. Most children were still able to form an attachment with their adoptive parents, but one-third of the orphanage sample had established an atypical insecure attachment pattern, as compared with 7% of Canadian-born and 4% of early-adopted children.

O'Connor, Rutter, and the English and Romanian Adoptees Study Team (O'Connor, Bredenkamp, Rutter, and the English and Romanian Adoptees Study Team, 1999; O'Connor, Marvin, Rutter, Olrick, Britner, and the English and Romanian Adoptees Team, 2003; O'Connor, Rutter,

and the English and Romanian Adoptees Study Team, 2000) found that duration of deprivation was associated with the number of signs of attachment disturbance at 6 years; these signs included an indiscriminate style of relating, which was also reported by Chisholm (1998). However, approximately 70% of children exposed to severe deprivation did not exhibit marked or severe attachment disorder behaviors. According to O'Connor and colleagues (2000), "grossly pathogenic care is not a sufficient condition for attachment disorder behavior to result" (p. 710). This is consistent with the transactional model's emphasis on the interaction of an array of variables rather than the simple, linear effects model that characterized early theorizing regarding maltreatment's outcome.

Attachment and Child Development

At this point, readers may be wondering why we have spent considerable effort reviewing the basic concepts of attachment theory and the relevant research. We contend that attachment theory is not merely a construct confined to the academic lab or classroom. An extensive body of research demonstrates a significant association between attachment organization and children's functioning across a number of domains. Attachment insecurity, especially disorganized attachment, represents a potent risk factor for the development of psychopathology in children. Clinicians who assess and treat these youngsters need to be solidly grounded in this literature to understand, as comprehensively as possible, the impact of their young clients' attachments, the mechanisms underlying these effects, and the implications for clinical practice.

What follows is a brief summary of the literature describing the association between attachment organization and developmental outcome: to do it justice would be way beyond the scope of this book, although we do highlight the sequelae of disorganized attachments. We refer the reader to several sources for more detailed information (Cassidy & Mohr, 2001; Greenberg, 1999; Thompson, 1999; van IJzendoorn et al., 1999) and in the next chapter discuss the mechanisms through which attachment organization influences developmental outcome. The following summary is based on the reviews prepared by Greenberg (1999) and Thompson (1999).

- Children classified as securely attached to a caregiver during infancy later approach problem-solving tasks more positively and with greater persistence than insecurely attached children.
- Securely attached children are more likely to be more empathic, compliant, and generally competent in relationships with peers. Children with insecure attachment organizations have trouble relat-

ing to other people because their behavior is often distant or overdependent.

- The Minnesota Longitudinal Study demonstrated that, as compared with children who were insecurely attached to their mothers at 12 months, those with secure attachments at that age were more resilient, cooperative, happier, and more likely to be leaders at 3 and 6 years of age.
- Among children from low-income families, those who had been insecurely attached during infancy were, at ages 10–11 and 14–15 years, more dependent, less socially competent, and had lower self-esteem that those who had been securely attached.
- Mothers' prenatal attachment classification is a significant predictor of their infants' attachment.

Recent evidence suggests that the link between disorganized attachment and disturbed child functioning is significant (see Cassidy & Mohr, 2001, Lyons-Ruth & Jacobvitz, 1999, and van IJzendoorn et al., 1999, for comprehensive reviews). In their meta-analysis, van IJzendoorn and colleagues (1999) reported that disorganized attachment was associated with more externalizing behavior problems as assessed by parents, teachers, or observers. Furthermore, the association appeared stable, from infancy into the school-age period and even beyond. Similarly, disorganized children are more likely to exhibit social skill deficits. In adolescence they are at higher risk for exhibiting overall behavior problems, internalizing difficulties, and dissociative symptoms.

Although the association between insecure attachment, especially the disorganized classification, and the emergence of childhood psychopathology is well established, there are two important points to remember. First, this association is far from perfect. Lyons-Ruth, Easterbrooks, and Cibelli (1997) reported that only 25% of disorganized infants in a high-risk sample were rated as engaging in significant externalizing behavior at age 7. Moreover, other factors mediated this relationship. Children's mild cognitive delays combined with disorganization at 18 months increased the risk for externalizing behaviors. Maternal depression also interacted with children's disorganized attachment and was associated with higher rates of externalizing behaviors. Greenberg and colleagues examined attachments of children referred to a clinic for oppositional–defiant disorder (ODD) (reviewed in Greenberg, 1999). Approximately 80% of clinic children demonstrated insecure attachments as compared with 30% of the comparison children. The clinic children also showed a disproportionately higher rate of the disorganized–controlling classification. However, 15–20% of the clinic sample had secure attachments, leading Greenberg (1999) to suggest,

"Attachment may be a component of only some pathways leading to ODD" (p. 479). We strongly agree with Greenberg's assertion that attachment insecurity represents a nonspecific risk factor that increases the likelihood of future problems in combination with other factors, a notion consistent with the transactional model.

Second, given this perspective on attachment, we should not equate insecure attachment organization with psychopathology. Sroufe and colleagues (1999) expressed this concept in the following passage:

> In this perspective, early attachment variations generally are not viewed as pathology or even as directly causing pathology. Rather, varying patterns of attachment represent "initiating conditions" in systems terms. In this regard, they do play a dynamic role in pathological development because of the way in which environmental engagement is framed by established tendencies and expectations. (pp. 10–11)

However, there is another way of considering attachment's influence on development. Rather than regarding attachment organization as a risk factor for the emergence of psychopathology, we may consider atypical attachment patterns themselves as disorders (Greenberg, 1999). Probably the clearest example of this approach is reactive attachment disorder (RAD), a DSM-IV diagnosis (American Psychiatric Association, 1994). RAD's essential feature is markedly disturbed and developmentally inappropriate social relatedness that is associated with grossly pathological care. In the inhibited type, the youngster shows a pattern of excessively inhibited, hypervigilant, or highly ambivalent responses. Children with the disinhibited type exhibit indiscriminate sociability or a lack of selectivity in the choice of attachment figures. Zeanah and colleagues (2004) interviewed clinicians treating 94 maltreated toddlers in foster care regarding signs of RAD. Both types could be reliably diagnosed, and 17% of the sample were diagnosed with both types. To determine the effects of being reared in socially depriving caregiving environments, Zeanah and his colleagues investigated attachment disturbance in toddlers living in a large institution in Bucharest, Romania (Smyke, Dumitrescu, & Zeanah, 2002; Zeanah, Smyke, & Dumitrescu, 2002). Children residing in the large institution exhibited more signs of disordered attachment than youngsters living in the same institution in a unit designed to reduce the number of adults caring for each child, or than toddlers living at home. Children in the first group showed both the inhibited and disinhibited types. We discuss RAD in more depth in Chapter 4.

Our review demonstrates the contribution of attachment to child development, the risk maltreatment poses to the formation of a secure attach-

ment, and, in some cases, its association with particular disorders (e.g., RAD). Despite the significance of insecure attachments and attachment-disordered behavior, maltreated children present with a number of other significant problems that deserve our clinical attention.

EXTERNALIZING BEHAVIOR PROBLEMS

Physical Aggression and Antisocial Behavior

An important component of adaptive functioning in childhood and later life is the ability to regulate both emotions and behaviors. The successful negotiation of this stage-salient task in toddlerhood and early childhood increases chances of competency in later developmentally salient tasks (Shields, Cicchetti, & Ryan, 1994). For example, a child who has previously learned to regulate and modulate feelings may have a greater chance of making and keeping friends. The child is more likely to cope adaptively with classroom demands where students are expected to exert some self-control by sitting quietly and inhibiting the urge to yell out or hit someone. Maltreated children show numerous difficulties in their emotional and behavioral self-regulation, including externalizing behaviors, such as physical aggression directed toward others, and antisocial behavior.

The first edition's review of the earlier research revealed that maltreatment is a significant risk factor for the development of childhood physical aggression (see reviews by Cicchetti & Rogosch, 1994; Wolfe & Wolfe, 1988, for summaries of this work). Researchers had identified both physical and verbal abuse as antecedents of physical aggression in preschool and school-age children (e.g., Cicchetti, Lynch, Shonk, & Manley, 1992; Vissing, Straus, Gelles, & Harrop, 1991).

More recent literature reinforces these conclusions. Six- to 8-year-old physically abused children exhibited significantly more aggression as measured by caregiver reports on the Child Behavior Checklist (CBCL) than those not physically victimized (Johnson et al., 2002). Jaffee, Caspi, Moffitt, and Taylor (2004) reported that physical abuse prospectively predicted antisocial outcome in young school-age children and that physical maltreatment was followed by the emergence of new antisocial behaviors. Other studies have demonstrated that childhood physical abuse increases an individual's risk of engaging in violent, antisocial behavior in adolescence and adulthood (Lansford et al., 2002; Widom & Maxfield, 2001).

There are, of course, moderator variables that influence the association between physical abuse and aggressive and antisocial behavior. Earlier studies examined the impact of various aspects of maltreatment, such as its frequency, severity, and chronicity. Manly and colleagues (1994) showed

that severity of the maltreatment, frequency of child protective services reports, and the interaction between severity and frequency of maltreatment were significant predictors of functioning, including aggression. Other studies have confirmed this link between chronicity of physical abuse and aggressive behaviors (Bolger & Patterson, 2001; Ethier, Lemelin, & Lacharité, 2004). Jaffee and colleagues (2004) reported a dose–response association between physical maltreatment and children's antisocial behavior; at age 7, youngsters who definitely had been maltreated had more antisocial behavior problems than children who possibly had been maltreated.

Research has identified other moderator variables. Although maltreatment posed a risk for outcome in adolescence, the risk was even greater for children who experienced a greater number of caretaker transitions. The total number of caretaker changes significantly predicted delinquent behavior, alcohol use, drug use, status offenses, and high school dropout (Herrenkohl, Herrenkohl, & Egolf, 2003). Newton, Litrownick, and Landsverk (2000) also demonstrated that for foster children who did not evidence any externalizing behaviors at the initial assessment, number of foster home changes was a consistent predictor of externalizing, internalizing, and total behavior problems on the CBCL at a second assessment 18 months later. Moreover, for those children initially exhibiting some behavior problems, externalizing behaviors were significant predictors of subsequent placement changes. Foster parents may be less tolerant of aggressive or antisocial behavior in their homes and respond by requesting the children's removal. Interpreting the removal as yet another rejection may exacerbate children's feelings of anger and erode trust or confidence in relationships, thereby potentiating the likelihood of more acting-out and externalizing behaviors. These studies reinforce the need for clinicians to attend to a diverse array of moderator variables and appreciate the complexity of these interactions when attempting to understand children's responses to maltreatment.

This complexity becomes even more apparent when we consider recent research on the significance of the interplay between maltreatment and genetic vulnerabilities for antisocial behavior. Jaffee and colleagues (2005) reported that the experience of maltreatment was associated with a 2% increase in the probability of a conduct disorder diagnosis among children at low genetic risk for conduct disorder, but an increase of 24% among children at high genetic risk. Although this seems to be compelling evidence for the role of genetic variables in maltreated children's outcome, Jaffee and colleagues caution us to avoid making assumptions that genetic vulnerabilities code directly for aggression or conduct problems. Consistent with developmental psychopathology's transactional model, Jaffee and colleagues state, "This study and others . . . suggest that genes may not influence behavior disorders directly, but, in some complex disorders, genes may act to

influence people's susceptibility or resistance to stressful environmental experiences" (p. 79).

The last decade has seen many more investigations of the effects of witnessing violence on child outcome. This has been an important development, given the problem's high incidence rate. Finkelhor, Ormrod, Turner, and Hamby (2005) reported that 1 in 3 children 2–17 years of age (357 per 1,000) had been a witness to violence or experienced another form of indirect violence. This included youngsters who witnessed domestic violence (35/1,000), physical abuse of a sibling (11/1,000), and an assault with a weapon (138/1,000) and without a weapon (209/1,000).

Although these findings are alarming, the sequelae are just as concerning. Kitzmann, Gaylord, Holt, and Kenny (2003) conducted a meta-analytic examination of 118 studies of the psychosocial outcomes of children exposed to interparental (domestic) violence and reported that such exposure is significantly associated with externalizing problems; children exposed to domestic violence and who were physically abused did not show worse outcomes that those exposed only to domestic violence, "suggesting that violence anywhere in the family may be sufficient to disrupt child development" (Kitzmann et al., 2003, p. 346).

Despite mixed evidence on gender effects, Yates, Dodds, Sroufe, and Egeland (2003) confirmed the contribution of domestic violence to externalizing problems for boys but not girls, who exhibited more internalizing difficulties. They also showed that developmental status at the time of exposure to violence moderates impact. Behavior problems in boys in middle childhood were related to contemporaneous exposure, whereas behavior problems for both boys and girls at 16 years were significantly associated with exposure to domestic violence during their preschool years. While demonstrating that exposure to domestic violence predicted preschoolers' behavior problems, Lieberman, Van Horn, and Ozer (2005) presented evidence of the important role of their mothers' psychological responses as moderator variables. Children whose mothers evidenced higher levels of life stress had more behavior problems, but this association was moderated by mothers' individual functioning, particularly the presence of posttraumatic stress disorder (PTSD) and the quality of the parent–child relationship. These findings offer further support for the ecological–transactional model.

Earlier studies found evidence of behavioral dysregulation in sexually abused children (Dubowitz, Black, Harrington, & Verschoore, 1993; Tufts' New England Medical Center, 1984). However, Kendall-Tackett and colleagues (1993) demonstrated the importance of including appropriate comparison groups in order to draw valid conclusions. Of the 11 studies in which the frequency of aggression and antisocial behavior problems of sex-

ually abused children was compared with that of nonsexually abused, nonclinical children, 10 studies showed that sexually abused children were significantly more aggressive or antisocial. However, the comparison between sexually abused children and other clinical but nonabused children showed a different pattern. Of the 7 studies in which this design was used, 6 demonstrated that sexually abused children were less aggressive and antisocial than nonabused, clinical children. The other study revealed no differences.

Sexualized Behaviors and Sexual Behavior Problems

Although sexually abused children do not exhibit more physical aggression than clinical controls, they are at significant risk for exhibiting sexual behaviors in general and for developing sexual behavior problems (SBPs). Kendall-Tackett and colleagues' (1993) review demonstrated that sexually abused children showed significantly more sexual behavior than did the clinical comparison groups (six of eight studies). Sexual behavior was only one of two symptoms sexually abused children showed more consistently than nonabused clinical children; the other was PTSD. However, sexual behavior is still not shown by a majority of sexually abused children. Kendall-Tackett and colleagues calculated the percentage of victims manifesting inappropriate sexualized behavior in 13 studies as 28%.

Friedrich and his colleagues (Friedrich, Grambsch, Broughton, Kuiper, & Beilke, 1991; Friedrich et al., 1992) developed a rating scale for parents, the Child Sexual Behavior Inventory (CSBI), to assess children's specific sexual behaviors. A more recent study by Friedrich and colleagues (2001) confirmed earlier results: Sexually abused children exhibited a greater frequency of sexual behaviors than either normative or psychiatric outpatient samples. However, the psychiatric sample also exhibited more sexual behaviors relative to the normative sample, and Friedrich and colleagues suggested, "Sexual behavior was not unique to sexually abused children and may be present in other non-sexually abused samples, particularly boundary problems and heightened sexual knowledge" (p. 46). Variables such as penetration (oral, vaginal, or anal), the presence of medical evidence, abuse perpetrated by a family member or by more than one perpetrator, and abuse of greater frequency and longer duration were related to higher frequency of sexual behaviors (Friedrich et al., 2001).

Although we discuss assessment and intervention strategies for SBPs in subsequent chapters, we want to provide a brief description of what is meant by the term "sexual behavior problem" before we discuss the impact of maltreatment on the emergence of such difficulties and the influence of

moderator variables. A consensus seems to have emerged regarding the central characteristics of SBPs: similarity to adult sexual behavior versus normal childhood sexual behavior like genital exploration, greater frequency or duration than developmentally expected, often occurs between children of significantly divergent ages/developmental abilities and/or use of physical or psychological coercion, and often refractory to redirection or other typical parenting practices (Bonner & Silovsky, 2004; Hall, Mathews, Pearce, Sarlo-Garvey, & Gavin 1996; Pearce, 2001; Ryan, 2000).

Children exhibiting SPBs have an elevated history of sexual abuse (Bonner, Walker, & Berliner, 2000; Gray, Pithers, Busconi, & Houchens, 1999; Hall, Mathews, & Pearce, 1998; Johnson, 1988, 1989). Despite this significant association, the link is not perfect: not every child who presents with SBPs has a history of sexual abuse. Silovsky and Niec (2002) reported that 62% of preschoolers with SBPs did not have substantiated histories of sexual abuse. These findings and data presented by Kendall-Tackett and colleagues (1993) and Friedrich and colleagues (2001) indicate that sexual abuse does not invariably lead to sexual behaviors or SBPs, and that there must be other factors that influence their development.

For those children with histories of sexual abuse and SBPs, specific characteristics of the sexual abuse may serve as important moderators of impact. Hall and colleagues (1998) found sexual arousal of the child during sexual abuse and the perpetrator's use of sadism differentiated those 3- to 7-year-old children who exhibited developmentally inappropriate sexual behavior to others from those whose sexual behavior was self-directed (e.g., excessive masturbation). A typology of this sample revealed that the sexual abuse of those youngsters who exhibited planned, coercive, interpersonal sexual behavior was marked by discomfort, self-stimulation and arousal, and a high degree of participation by the child (Hall, Mathews, & Pearce, 2002).

Although Silovsky and Niec (2002) found that a majority of preschoolers with SBPs did not have a history of sexual abuse, a substantial number of children in their sample had been physically abused (47%) and/or had witnessed interparental violence (58%). These findings are consistent with those of other studies that have demonstrated that many children with SBPs have histories of physical abuse, neglect, and exposure to family violence (Bonner et al., 2000; Gray et al., 1999; Hall et al., 1998, 2002; Pithers, Gray, Busconi, & Houchens, 1998b). The impact of these adverse environmental events, including maltreatment, are mediated by other aspects of family functioning: impaired attachment between parent and child (Pithers, Gray, Busconi, & Houchens, 1998a; Pithers et al., 1998b), poor parental supervision and monitoring of child behavior (Wieckowski, Hartsoe, Mayer, & Shortz, 1998), higher rates of parental psychopathology, includ-

ing PTSD (Hall et al., 1998), parental and family histories of sexual and physical abuse and domestic violence (Bonner et al., 2000; Pithers et al., 1998a), economic stress (Pithers et al., 1998a), and fewer social supports for parents (Hall et al., 1998; Pithers et al., 1998a).

Children with SBPs also present with a number of comorbid conditions. Substantial proportions of school-age children with SBPs have learning and school behavior problems and higher rates of depression, anxiety, conduct disorders, and oppositional defiant disorders than controls (Bonner et al., 2000; Gray et al., 1999; Pithers et al., 1998b). Silovsky and Niec (2002) reported similar findings for preschoolers with SBPs; they scored in the clinical range on the CBCL Externalizing Scale and in the borderline range on the Internalizing Scale. Their verbal abilities were in the low average range. As we argue in the next chapter, some of these variables represent important moderators. For example, low verbal abilities may increase the probability that such children may be more prone to express feelings behaviorally rather than using words to articulate their emotions (Burke, Crenshaw, Greene, Schlosser, & Strocchia-Rivera, 1989). Clinicians may have to modify their interventions to accommodate children with receptive or expressive language difficulties.

INTERNALIZING PROBLEMS

Internalizing problems, including PTSD, other anxiety-related symptoms, and depression, are further manifestations of disturbances in self-regulation and are associated with various types of maltreatment.

PTSD and Other Anxiety Problems

The characteristics and etiology of PTSD have received considerable attention in the literature. Although initial work focused on adult survivors of traumatic events, there is now a significant body of work examining children with PTSD, including those who were maltreated. Furthermore, a significant portion of the treatment outcome literature in the area of child maltreatment has focused on PTSD. Clearly, it is a significant problem that clinicians are often asked to assess and treat.

We recommend that the reader consult with the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV; American Psychiatric Association, 1994) for a complete description of the PTSD diagnostic criteria. In summary, a diagnosis of PTSD requires the presence of three broad sets of criteria (adapted from American Psychiatric Association, 1994, pp. 427–428).

- The person experienced, witnessed, or was confronted with an event that involved actual or threatened death or serious injury, or a threat to the physical integrity of the self and others.
- The traumatic event is persistently *reexperienced* through a recurrent and intrusive distressing recollection of the event. Young children may express themes or aspects of the trauma through repetitive play. The event may also be reexperienced through distressing dreams, a sense of reliving the experience, illusions, hallucinations, and dissociative flashbacks, intense psychological distress through exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event, and physiological reactivity on exposure to internal or external cues.
- The individual engages in persistent *avoidance* of stimuli associated with the trauma and experiences a numbing of general responsiveness, such as efforts to avoid thoughts, feelings, activities, places, or people associated with the trauma. Individuals with PTSD also may be unable to recall important aspects of the trauma and exhibit a restricted range of affect.
- The individual experiences persistent symptoms of increased *arousal*, such as difficulty falling or staying asleep, irritability or outbursts of anger, difficulty in concentrating, hypervigilance, or an exaggerated startle reaction.

The literature consistently demonstrates that maltreated children are at significant risk for developing PTSD, although similar data pertaining to the association between maltreatment and externalizing behavior problems indicate that there is considerable diversity of outcome. Emery and Luamann-Billings (1998) reported that one-quarter to one-half of physically abused and sexually abused children have documented PTSD. Incidence rates may be higher in clinically referred samples of maltreated children: 42–90% in sexual abuse samples, 50–100% in child witnesses of domestic violence, and as high as 50% in physical abuse samples (see De Bellis, 2001, for a review). Rates are lower in nonclinical, nonreferred maltreated children: 39% in a nonreferred abuse or neglect sample and 36% in nonreferred sexually abused youngsters (De Bellis, 2001). Widom (1999) found childhood victims of physical and sexual abuse as well as neglect to be at increased risk for developing a lifetime history of PTSD when assessed prospectively in young adulthood.

The fact that a significant proportion of maltreated children do not develop PTSD leads us again to consider moderator factors. Pretrauma factors include previous psychiatric history, previous exposure to PTSD (especially child abuse), poor family functioning, a prior history of poor social

supports, familial genetic history of psychiatric disorders, and being female (Dalgleish, 2004; De Bellis, 2001). Regarding trauma factors, the risk for PTSD increases when physical abuse is more severe and chronic (Kiser, Heston, Millsap, & Pruitt, 1991) and when sexual abuse occurs in a close relationship (McLeer, Deblinger, Henry, & Orvaschel, 1992) or involves threats, coercion, or guilt on the part of the child (Wolfe, Sas, & Wekerle, 1994). Dalgleish (2004) and De Bellis (2001) have identified the following posttrauma factors that influence PTSD: type of support the survivor receives, continued life events such as a change of school, repeated threats and fear of the perpetrator, and survivors' interpretations of the trauma (e.g., attributions about their responsibility for the assaults and appraisals of the nature/severity of their symptoms). Attributions are especially important for child outcome, and we review this topic in detail in Chapter 2 when we discuss mechanisms of impact.

Two of the factors identified above deserve more attention. We mentioned that the risk for PTSD increases when sexual abuse occurs in the context of a close relationship. This has particular relevance to maltreated children. Unlike youngsters traumatized by a natural disaster or a terrorist attack, maltreated children are subjected to trauma with a significant interpersonal component, especially when the perpetrator is someone whom they know well or even love. Sexual or physical assault by a stranger is a very rare event. This interpersonal element is often responsible for the emergence of other psychopathology in addition to the PTSD symptoms, such as feelings of betrayal and loss. Parents or caregivers may also react to their traumatized, maltreated children based on their unique perceptions and feelings about the interpersonal assault, especially if they have similar histories or were responsible for or complicit with the maltreatment (Chapter 3 reviews this area). To put it very simply, maltreated children with PTSD may exhibit a more complex clinical presentation compared to children who have been exposed to noninterpersonal trauma (De Bellis, 2001; Feeny, Foa, Treadwell, & March, 2004). This is consistent with the finding that PTSD prevalence rates for interpersonal trauma in all age groups are greater than for noninterpersonal trauma and range from 30 to 50% (De Bellis, 2001).

We also noted that the incidence of PTSD increases when the trauma is experienced over a period of time. This variable has played a central role in Terr's (1991) differentiation of childhood trauma into two types, each associated with somewhat different outcomes. Type I disorders, which follow from unanticipated single events, are characterized by full, detailed memories of the event, "omens" or attempts to develop a reason for the trauma or how it could have been averted, and misperceptions. The last includes misidentifications, visual hallucinations, and peculiar time distortions after a single, intense, unexpected shock.

Type II disorders follow from long-standing or repeated exposure to extreme external events. One primary characteristic of type II disorders is the child's attempts to preserve and protect the self from painful feelings, memories, and experiences engendered by the trauma. Terr (1991) identified three major characteristics of type II disorders. First, rage is common. Second, denial and psychic numbing occur as an accommodation to extreme, long-standing, and repeated traumatic situations, including maltreatment. In an extreme form, denial and psychic numbing may be manifested in children who forget whole segments of their childhood. These defensive operations are reflected in a reluctance to talk about themselves, a failure to define or acknowledge feelings, and a hesitancy to say anything about their ordeals. Terr suggests that the child's relative indifference to pain and lack of empathy for others may be further examples of denial and psychic numbing. Third, children accommodate or cope with this repeated experience through self-hypnosis and dissociation, thereby allowing themselves to escape mentally, as reflected in bodily anesthesia, feelings of invisibility, and amnesia for certain childhood periods. In their extreme form, these behaviors may culminate in dissociative disorders.

Other manifestations of anxiety include somatoform disorders. Haugaard (2004c) offers the following definition of somatoform disorders:

> A somatoform disorder can be diagnosed when a child has a physical complaint and an appropriate medical examination reveals no organic basis for the complaint or when a child with an identified organically based disorder has symptoms that are much more severe than would be expected. (p. 169)

Higher rates of somatization problems are associated with severe forms of child sexual abuse (Garralda, 1996; Kinzl, Traweger, & Biebl, 1995). Haugaard (2004c) speculates that severely abused children may be more prone to express feelings through physical symptoms because of the link between emotional trauma and physical trauma and pain. Their physical complaints may have been reinforced because they might have been abused less frequently when they were sick. We also speculate that maltreated children quickly learn to avoid directly expressing strong feelings or distress (similar to children with an avoidant attachment organization) because of caregivers' abusive or neglectful reactions. Rather, they suppress their feelings, which are eventually expressed via somatic complaints.

Researchers have also examined the presence of other indicators of anxiety, although this work is not as extensive as the research on formal diagnostic categories. Rather than using diagnoses such as PTSD and somatoform disorders, these studies incorporated more general measures of anxiety,

such as the CBCL or the Trauma Symptom Checklist for Children (TSCC) (Briere, 1996). Despite these differences in measures, the same findings emerge: maltreated children exhibit more anxiety than nonmaltreated children. Ethier and colleagues (2004) reported that child victims of chronic maltreatment (physical abuse and neglect) had higher scores on the Anxious/Depressed scale of the CBCL. Witnessing violence was a significant predictor of anxiety as measured by the TSCC. Similar to the results they obtained for externalizing behavior, Newton and colleagues (2000) found that the number of changes in residence was associated with an increase in internalizing behaviors at an 18-month follow-up.

Depression

Maltreated children are also at risk for developing depressive disorders. Kendall-Tackett and colleagues (1993) calculated that across six studies, 28% of sexually abused children under 18 years of age showed evidence of depression. More recent research has borne out this association. Johnston and colleagues (2002) reported that direct physical abuse was a significant predictor of depression. Caregivers' level of depression moderated this relationship.

Maltreated children are also at risk for suicide. Of more than 1,000 8-year-old children identified as having been maltreated or being at risk for maltreatment, 9.9% reported suicidal ideation (Thompson et al., 2005). Maltreated children were about twice as likely to report suicidal ideation than those who were at risk. Severity of physical abuse, chronicity of maltreatment, and the presence of multiple types of maltreatment were also significantly associated with suicidal ideation. Other moderator variables included the level of the children's psychological distress, substance abuse, and poor problem solving. Witnessed violence was an especially strong risk factor for suicide (Thompson et al., 2005). Evans, Hawton, and Rodham (2005) found that physically and sexually abused adolescents are also more likely to experience suicidal thoughts and behaviors, with low self-esteem potentiating the risk for suicide.

DEVELOPMENT OF THE AUTONOMOUS SELF AND SELF-ESTEEM

Development of an autonomous self is another early stage-salient developmental issue confronting the young child. The child's experience of caretaking and subsequent development of attachment patterns have particular relevance for the emergence of the self. The young child who receives good care

internalizes these experiences and develops a sense of self as worthy, lovable, and deserving of this care and love (Bowlby, 1973). Caregiving that is sensitive to the child's idiosyncratic needs reinforces a greater awareness of self. Furthermore, the young child who is securely attached to a caregiver can use that person as a secure base from which to explore the environment. This potentiates feelings of autonomy and independence. In turn, these feelings lead to an even greater differentiation of self from others and to enhanced self-esteem and self-confidence.

Internal State Language

Internal state language has been regarded as one component of the autonomous self. Internal state words "refer primarily to those words that have explicit reference to internal states ("mad," "happy") rather than words that have implicit connotations of emotion, motivation, or intention" (Beeghly & Cicchetti, 1994, p. 6). Bretherton and Beeghly (1982) showed that by the age of 28 months, most middle-class children master verbal labels for perception (i.e., the five senses), physiological states, goals, intentions, and ability. More than half discuss basic feelings (e.g., anger, sadness), whereas only a few talk about their own thought processes. The use of this internal state language for themselves and others reflects a growing awareness of the self as distinct from others. Internal state language allows young children not only to verbally communicate their feelings but also to clarify misunderstandings with others. The ability to talk about internal states promotes behavioral and affective self-regulation in interpersonal situations: rather than hitting another child, a youngster can express anger or frustration through words.

Maltreated and nonmaltreated 30-month-old toddlers did not differ significantly in receptive vocabulary but differed in their internal state language (Cicchetti & Beegly, 1987). The former used proportionately fewer internal state words, showed less differentiation and attributional focus, and were more context bound in the use of internal state language. Maltreated children were less likely to talk about negative affects (e.g., hate) or physiological states (e.g., hunger, thirst). In contrast, the internal state language of nonmaltreated children from a lower socioeconomic status was very similar to that of middle-class nonmaltreated children. Beeghly and Cicchetti (1994) suggest that maltreated children who attempt to talk about their internal states, especially their negative feelings, may provoke maternal disapproval and considerable anger, thereby increasing the risk of further maltreatment. Consequently, they avoid these discussions to minimize abuse and attenuate their anxiety.

Development of the Autonomous Self and Self-Esteem

Crittenden and DiLalla (1988) described a pattern of "compulsive compliance" in insecurely attached/maltreated children who passively complied with their mothers and did not openly express negative feelings. This behavior may be accompanied by ambiguous affect, masked facial expressions, rote verbal responses, and verbal–nonverbal incongruence. Compulsive compliance is consistent with older psychoanalytic notions of the development of the "false self" (Winnicott, 1965). To reduce anticipated conflict with the caregiver, the child learns to cut off, repress, or falsify the expression of feelings, particularly negative ones. The child then begins to exhibit false positive feelings but experiences few feelings of authenticity in regard to the self. This tendency is also similar to the concept of "other-directedness" described by Briere (1989, 1992). The maltreated child or adult is hypervigilant regarding the abuser's emotional demeanor or behavior. Sustained attention may be advantageous, inasmuch as it allows the individual to either avoid or placate the abuser before maltreatment occurs, but it exacts a significant cost from the developing child. The child is unaware of personal needs, feelings, and motivations, and the growth of self is seriously compromised.

Findings regarding the association between maltreatment and self-esteem are somewhat mixed, especially for sexually abused children. Tong and colleagues (1987) reported that sexually abused girls had significantly lower scores on the Piers–Harris Children's Self-Concept Scale than control girls, but there was no difference between sexually abused and control boys on this measure. Other studies using self-report measures have not found differences in the self-esteem of sexually abused children (Cohen & Mannarino, 1988).

The relationship between maltreatment and self-report of self-esteem is moderated by a number of variables. Studies of physically abused, neglected, and sexually abused children suggest that developmental level may play an important role. Black, Dubowitz, and Harrington (1994) reported that preschool children had elevated scores on measures of perceived competence and social acceptance, whereas school-age children had depressed scores. Black and colleagues (1994) speculated that perceiving themselves as more competent than they actually are might be adaptive for younger maltreated children because it protects them from profound feelings of personal inadequacy. However, by later elementary school, children can better compare themselves with others, thus undermining early efforts to preserve positive self-esteem. Furthermore, children may reconceptualize the meaning of their abusive experiences over time, which may result in different

patterns of sequelae and adjustment as they grow older. Thus, self-esteem may suffer as they become more cognizant of the implications and meaning of their history of victimization.

Extreme Disturbances in Self-Definition: Dissociative Disorders

Maltreatment, especially severe abuse, is associated with extreme disturbances in self-definition and self-regulation, such as dissociative disorders. According to DSM-IV (American Psychiatric Association, 1994), the central feature of dissociative disorders is "a disruption in the usually integrated functions of consciousness, memory, identity, or perception of the environment" (p. 477). Types of dissociative disorders include dissociative amnesia—the inability to recall important personal information that cannot be attributed to normal forgetfulness—and dissociative identity disorder (DID, formerly multiple personality disorder), which involves the presence of two or more distinct personalities or identities, each of which take control over the person's behavior at different times (Haugaard, 2004a). Dissociation in children is manifested in disruptions in memory (e.g., having no memories of the trauma), disruptions in perception (e.g., confusion between reality and fantasy, "spacing out"), and disruptions in identity (e.g., DID) (MacFie, Cicchetti, & Toth, 2001).

Studies have shown consistently that maltreated children exhibit more dissociation than nonmaltreated children (see Haugaard, 2004a, and MacFie et al., 2001, for reviews). However, the relative contributions of physical abuse, sexual abuse, and neglect are somewhat unclear. Yeager and Lewis (1996) and MacFie and colleagues (2001) reported that neglect was less highly correlated with dissociation than physical and sexual abuse, whereas Ogawa, Sroufe, Weinfeld, Carlson, and Egeland (1997) found that neglect in infancy predicted dissociation in toddlers and preschoolers. Seventeen-year-old children who had disorganized attachments as infants and who experienced later trauma had the highest dissociation scores.

Haugaard (2004a) has identified the protective functions afforded by dissociation. Dissociation compartmentalizes and sequesters emotionally painful material out of conscious awareness and protects the child from overwhelming psychological and physical pain. The sense of self is altered so that a traumatic event is experienced as if "it's not really happening to me." In DID, the individual usually switches among a series of alter identities that personify specific capacities, functions, or experiences to protect against overwhelming trauma. Dissociation also interferes with memory encoding, resulting in no memory of the trauma. Frequent use of dissociation also interferes with other aspects of development. For example, dissociation in the classroom results in a failure to remember and integrate infor-

mation, thereby contributing to academic underachievement or even failure. Children may not learn social skills if they dissociate in social situations (Haugaard, 2004a).

This protective function has been examined in several studies. Stovall and Craig (1990) compared the responses of three groups of 7- to 12-year-old girls on the Thematic Apperception Test (TAT). They found that mental representations of the physically abused and sexually abused girls did not differ but were significantly different from those of nonabused girls who came from a "distressed home environment." The abused girls were more likely to have negative unconscious perceptions of themselves and others, but their conscious perceptions of others were more positive.

LANGUAGE DEVELOPMENT

Between the ages of 24 and 36 months, the use of language emerges and becomes more differentiated. The available research suggests that maltreatment poses a substantial risk to the development of language competency in children.

Receptive and Expressive Language

As we have already seen, maltreated children use less internal state language than nonmaltreated children. Studies have examined other aspects of language development in preschool-age and school-age children. Coster, Gersten, Beeghly, and Cicchetti (1989) investigated differences in two groups of 31-month-old maltreated and nonmaltreated toddlers. Although there were no differences in receptive language between the groups, maltreated toddlers had less well developed expressive language. They used syntactically less complex language, scored lower on measures of expressive vocabulary, and showed deficits in discourse abilities—for example, using fewer descriptive phrases and sentences. The maltreated children also talked less about their own activities. They made fewer requests for information and fewer references to persons or events outside the immediate context.

Burke and colleagues (1989) demonstrated an association between expressive language deficits and physical aggression. Expressive language deficits were significantly more prevalent in physically aggressive, physically abused school-age children than in physically abused children who were not physically aggressive. Although expressive language abilities differed, these groups did not show any significant difference in general verbal ability. Katz (1992) reviewed the deleterious effects of neglect on language

development. Both physically abused and neglected children evidenced language delays and disorders, but those of neglected children were more severe.

Play and Symbolic–Representational Development

Children's play can also reflect their symbolic and representational development. Play becomes more social and cognitively more symbolic over the preschool years, as evidenced by increasing dramatic play and games with rules. Alessandri (1991) compared the play behavior of 4- to 5-year-old maltreated children with that of nonmaltreated children of the same socioeconomic status. The maltreated group included children who had been physically abused, sexually abused, emotionally mistreated, and neglected. Maltreated children engaged in less play overall and more simple and repetitive play than nonmaltreated children. The former displayed a routine, stereotyped use of play materials, more frequently touched toys but did not directly manipulate them, and engaged in more pounding activities. Nonmaltreated children showed more frequent constructive play (learning to use materials, creating something), in which the play was sequentially organized and purposeful. Alessandri speculated that the more restricted and less elaborated play of maltreated children might be related to their insecure attachments, which undermine their use of the attachment relationship as a secure base from which to explore the environment, thereby contributing to developmental delays in their play. In a subsequent study, Alessandri (1992) found some indirect support for the presence of significant problems in the mother–child relationship. Maltreating mothers were more negative, less involved with their children, and used fewer physical and verbal strategies to direct their children's attention.

COGNITIVE DEVELOPMENT AND ADAPTATION TO SCHOOL

Intellectual and Academic Performance

In general, the literature indicates that maltreatment poses a risk to the child's cognitive development and academic performance. In early work, researchers investigated the cognitive functioning of physically abused children, especially its association with neurological damage. Martin, Beezley, Conway, and Kempe (1974) found that 40% of the physically abused children they studied were functioning within the range of mental retardation. The authors attributed these deficits to neurological impairments sustained in physical assaults by parents. Other earlier studies of physically abused and neglected children who were neurologically intact also reported signifi-

cant differences in IQ scores between maltreated children and controls (e.g., Barahal, Waterman, & Martin, 1981; Pezzot, 1978).

Investigations of the cognitive functioning of school-age children support the notion that maltreatment poses a risk to academic performance. Physically abused children exhibit serious academic and socioemotional problems. They perform poorly on standardized tests of language and mathematical skills, receive low performance assessments by parents, and are more likely than nonmaltreated peers to have repeated one or more grades. Neglected children score far below the control group on standardized tests of language, reading, and mathematics. In contrast to physically abused children, neglected children do not display significant behavior problems in the classroom and do not differ from controls on any of the socioemotional measures over time (Kurtz, Gaudin, Wodarski, & Mowing, 1993). Kurtz and colleagues (1993) speculated that the characteristics of physically abused children, such as anger, distractibility, anxiety, and lack of self-control, seriously compromise their learning ability. Neglect, which may include a lack of encouragement for learning, little language stimulation, and unresponsiveness to the child's achievements, undermines school success and poses a direct threat to academic performance.

Kendall-Tackett and Eckenrode (1996) confirmed the deleterious effect of neglect on academic achievement; in addition, their data indicated that neglect may also be associated with behavior problems in the classroom. Neglect alone was equally as detrimental to grades and number of suspensions as neglect in combination with physical or sexual abuse. The combination of neglect and abuse had a particularly strong effect on the number of disciplinary referrals and grade repetitions, with abused and neglected junior high school students having the highest number of grade repetitions. Academic performance in all subjects dropped in junior high; neglect and neglect in combination with abuse exacerbated this decline.

In regard to sexually abused children, Trickett, McBride-Chang, and Putnam (1994) compared the classroom academic performance and behavior of 6- to 16-year-old sexually abused girls with those of a nonabused group. Sexual abuse was related to lower classroom ratings of social competence, lower competent-learner ratings, and lower academic performance. Sexually abused girls scored lower on a test of cognitive ability (Peabody Picture Vocabulary Test). These girls showed higher levels of anxious depression, bizarre destructiveness, and dissociative hyperactivity, which in turn were predictive of academic performance, than nonabused girls. Thus, the relationship between sexual abuse and academic functioning is complex and probably mediated by a number of socioemotional variables.

Researchers are now examining the effects of other types of maltreat-

ment on cognitive development. Koenen, Moffitt, Caspi, Taylor, and Purcell (2003) reported a dose–response relationship between domestic violence and IQ: low domestic violence is associated with an average suppression of less than 1 IQ point, medium domestic violence with almost 5 points, and high domestic violence with 8 points. These effects were independent of the genetic effects on IQ and persisted even after they were controlled for direct maltreatment and children's emotional and behavior problems.

Nonorganic Failure-to-Thrive and Psychosocial Dwarfism

Other research has revealed the insidious effects of neglect, especially emotional neglect. Spitz (1945, 1946) reported an infant mortality rate of more than 33% in a sample of 91 institutionalized orphans, despite adequate physical care. The syndrome of nonorganic failure-to-thrive, in which children fail to grow and are apathetic and lethargic, has been described as a consequence of emotional neglect (Bullard, Glaser, Hagarty, & Pivchik, 1967; Garbarino, Guttman, & Seely, 1986). Besides showing compromised physical health and emotional and behavioral problems, many of these children evidence academic and intellectual delays. Oates, Peacock, and Forrest (1985) assessed 14 children who had been admitted to a hospital 12 years earlier and whose condition, in each case, had been diagnosed as failure-to-thrive. Their mean age was 13.4 years. As compared with a group of children matched for age, sex, social class, and ethnic group, the children with previous failure-to-thrive syndrome had significantly lower verbal IQ values on the Wechsler Intelligence Scale for Children—Revised (WISC-R) than the controls. Eight were more than 3 years behind their chronological age in reading ability, whereas only one control group member showed such a delay. Children who had suffered from failure-to-thrive also scored significantly lower on a verbal language development scale. In other follow-up studies, children with nonorganic failure-to-thrive syndrome have shown deficits in intellectual and academic functioning (e.g., Hufton & Gates, 1977). Polansky, Chalmers, Buttenwieser, and Williams (1981) also described the hostile, defiant behavior of young adolescents whose condition had been diagnosed as failure-to-thrive during infancy.

Other syndromes have been linked to severe neglect during childhood. Many years ago Powell and his colleagues (Powell, Brasel, & Blizzard, 1967; Powell, Brasel, Raiti, & Blizzard, 1967) published evidence linking abuse and neglect to psychosocial dwarfism, a syndrome characterized by short stature, intellectual deficits, and behavior problems. Money (1977; Money, Annecillo, & Kelly, 1983) described intellectual delays in such children. However, IQ level rises in those rescued from their abusive or neglect-

ful environment, and increases in IQ are also correlated with increases in height (Money et al., 1983). Money and Annecillo (1976) found that the length of time spent away from the abusive or neglectful environment was the primary variable associated with an increase in IQ scores. A return to the maltreating environment was associated with a decrease in IQ that paralleled a deceleration of the rate of statural growth and puberty onset. Gardner (1972) suggested that the recovery of these children, including their intellectual functioning, may not be complete and that they may continue to evidence deficits in personality structure and intellect.

PEER RELATIONS

Establishing peer relations during preschool-age and school-age years is an important stage-salient developmental task. The successful negotiation of this task depends, in part, on the successful resolution of earlier tasks, including establishment of a secure attachment relationship with the primary caregiver and development of effective emotional and behavioral self-regulation. Failure to establish adaptive relationships with peers and others may interfere significantly with a child's ability to negotiate developmental tasks successfully in later life, leading to continued incompetence and maladaptation. Poor interpersonal relationships are not only strongly associated with concurrent psychiatric disorders in children, but they have predictive validity for future interpersonal difficulties as well (e.g., Garmezy & Streitman, 1974).

We have already described the significant association between maltreatment and physical aggression, but a few more comments can round out our discussion of this topic. Howes (Howes, 1984; Howes & Eldredge, 1985; Howes & Espinosa, 1985) demonstrated the importance of context for maltreated children's physical aggression. When interacting with a familiar peer, maltreated and comparison children behaved similarly, and on some dimensions, maltreated children were more socially competent than comparison children. However, this similarity disappeared when investigators examined their interactions with unfamiliar peers. In a free-play situation, comparison children tended to ignore unfamiliar children, whereas maltreated children tended to become physically aggressive with them, thereby compromising their ability to establish new peer friendships. Maltreated children responded aggressively to peer aggression, whereas nonmaltreated children exhibited either distress or resistance. Furthermore, physically abused children became aggressive when peers became emotionally distressed, but nonmaltreated children responded with prosocial behaviors.

Heightened aggression in peer interactions is not the only reaction maltreated children display. Other studies have reported patterns of withdrawal and avoidance (Dodge, Pettit, & Bates, 1994; Kaufman & Cicchetti, 1989). This may be especially characteristic of the social interactions of neglected children (Hoffman-Plotkin & Twentyman, 1984; Howes & Espinosa, 1985). Results of other studies reveal that maltreated children are less popular and more disliked than their classmates, and their relationships with other children are less likely to be reciprocal. They are more frequently rejected by peers they consider their friends, even their best friends, and they are likely to be negative when interacting with peers (Salzinger, Feldman, Hammer, & Rosario, 1993).

There have been few investigations of sexually abused children's peer relations. Manly and colleagues (1994) assessed the social competence of abused children between the ages of 5 and 11 years. Sexually abused children were rated as more socially competent than physically abused and physically neglected children. As well, the sexually abused group did not differ in social competence from the nonmaltreated group. Conflicting results were obtained by Hibbard and Hartman (1992), who reported that CBCL subscale profiles tended to show withdrawal and impairments in social interaction. The sexually abused children who first joined the Minnesota Mother–Child Interaction Project at age 6 years were socially withdrawn and unpopular, and their dependence on adults was striking.

In summary, maltreated children are at significant risk for the development of a number of problems, including insecure attachments and attachment-disordered behavior, externalizing and internalizing problems, and a compromised sense of self. Maltreatment has also been associated with lower cognitive functioning, poorer adaptation to school, deficiencies in language, and poor peer relationships. Despite being at increased risk for psychological and behavioral problems, maltreated children do not demonstrate a uniform response or reaction to abuse or neglect. Furthermore, there is considerable overlap in the characteristics of children exposed to different subtypes of maltreatment, and some children subjected to abuse or neglect experience only transient effects and others display no symptoms. The outcomes of maltreatment do not fall neatly into one diagnostic category and do not constitute a homogeneous syndrome that we can call "the maltreated child."

This diversity of outcome argues against the notion of a simple or linear connection or pathway between maltreatment and sequelae. The transactional model offers a way of conceptualizing the impact of maltreatment on children. Abuse and neglect, although significant risk factors for many serious problems, interact with other variables, which in turn moderate the impact of maltreatment on the developing child. Furthermore, the

model contends that change is possible at many points in an individual's life, and that early toxic experiences do not invariably result in psychopathology. As we describe in Chapter 2, neuroscientists have also advocated such a position, arguing that critical periods in early childhood are atypical and exceptional (Thompson & Nelson, 2001). Indeed, it is on this basic premise of the possibility of change that this book is based. Although less complex conceptualizations are simpler to understand, we must move beyond them to attain a fuller and richer understanding of the lives and experiences of maltreated children. This increased knowledge can enhance our clinical work with these children and their families.

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