Second Herzliya Symposium on Personality and Social Psychology: Understanding and Reducing Aggression, Violence, and their Consequences

Influence of Violence and Aggression on Children’s Psychological Development:

Trauma, Attachment, and Memory

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The focus of this conference--the consequences of violence and aggression--is particularly relevant for children’s psychosocial development and long-term outcomes. As we explain in this chapter, the consequences of violence and aggression on psychosocial development also have implications for children’s memory. Decades of research have demonstrated unequivocally that children traumatized by violence and aggression within their own families, including by sexual abuse, physical abuse, and/or emotional abuse, are at heightened risk for poor or altered outcomes. Only more recently have the implications for children’s memory been the focus of study. Understanding the effects of child maltreatment and the essential psychological mechanisms involved for psychosocial and cognitive development provides critical insight for developmental theory. Moreover, the relevance of such understanding for clinical, legal, and social policy decisions for maltreated children is apparent, making research on child maltreatment particularly compelling (Toth & Cicchetti, 1993). As Zigler (1998) advocated over a decade ago, it is critical that researchers recognize their obligations to the populations that they study to inform policy and practice. Given children’s vulnerability and the enduring consequences of child maltreatment, this advice is particularly on point.

In the current chapter, we review how violence can affect children’s socioemotional development and how the latter can then influence children’s memory. Rather than attempting a comprehensive review, we direct our attention to investigations guided by a developmental psychopathology perspective. In doing so, we provide an overview of sequelae of child maltreatment in relation to emotion regulation, attachment, and psychopathology. We then describe how these psychosocial domains provide an important lens through which to understand maltreated individuals’ memories for emotional or traumatic events, an issue of critical
importance not only for developmental psychology but also for the legal system. We conclude by examining methodological considerations that arise in the conduct of research with this vulnerable population.

Pathogenic Relational Environments and Child Maltreatment

Child maltreatment, in the form of the commission of violence and aggression towards children, represents one of the most profound failures of the environment to present opportunities to foster normal developmental processes. Maltreating families do not provide many of the expectable experiences that the extant theories of normal development posit are necessary for facilitating positive adaptation. Thus, child maltreatment exemplifies a pathogenic relational environment that poses substantial risk for undermining biological and psychological development across a broad range of domains of functioning.

In contrast to what is anticipated in response to an average expectable environment, the social, biological, and psychological sequelae that are associated with maltreatment initiate a path for maltreated children that is characterized by an increased likelihood of failure and disruption in the successful resolution of major stage-salient issues of development. Given the hierarchical nature of development, these perturbations possess significant implications for functioning across the life span. As such, repeated developmental disruptions create a profile of relatively enduring vulnerability factors that increase the likelihood of the emergence of maladaptation and psychopathology as negative transactions between the child and the environment continue. Despite this seemingly dire portrayal, it is important to note that a history of maltreatment does not deterministically doom all children to negative outcomes. In fact, resilience can exist even in seemingly overwhelming circumstances. Such resilience is especially
promoted when children experienced at least one positive and secure attachment relationship, that is, one person who believed in them and offered support when needed (Werner, 1993).

The Sequelae of Child Maltreatment

Emotion Regulation and Child Maltreatment

An early stage-salient developmental issue of infancy involves the ability to regulate and differentiate affective experience. Emotion regulation is defined as the intra- and extra-organismic factors by which emotional arousal is redirected, controlled, modulated, and modified so that an individual can function adaptively in emotionally challenging situations (Cicchetti, Ganiban, & Barnett, 1991). Emotion regulation evolves within the context of early parent-child interactions (Maughan & Cicchetti, 2002; Thompson, 1990, 1994).

Child maltreatment represents a significant threat to the optimal development of affective processing abilities. Although important individual differences exist, overall, maltreated children evidence numerous deficits in the recognition, expression, and understanding of emotions. Even in the early months of life, distortions in affect differentiation can be noted in children with a history of maltreatment (Gaensbauer & Hiatt, 1984; Gaensbauer, Mrazek, & Harmon, 1981). Specifically, either excessive amounts of negative affect or blunted patterns of affect are observed long before they occur in normal development.

The early maladaptive processing of stimuli that contributes to affective regulatory problems may lay the foundation for future difficulties in modulating affect. For example, in one study, physically abused preschool boys who witnessed an angry simulated interaction directed at their mothers evinced greater aggressiveness and more coping directed toward the alleviation of maternal distress than did non-abused boys (Cummings, Hennessy, Rabideau, & Cicchetti, 1994). In a related investigation, physically abused compared to non-abused boys who viewed
videotaped vignettes of angry and friendly interactions reported experiencing more distress in response to interadult hostility. Physically abused boys also reported more fear in response to angry interactions between adults, especially when the interactions were unresolved (Hennessy, Rabideau, Cicchetti, & Cummings, 1994). Finally, in an investigation of 4- to 6-year-old children, approximately 80% of maltreated preschoolers exhibited patterns of emotion dysregulation in response to witnessing interadult anger (Maughan & Cicchetti, 2002). Findings such as these support a sensitization model whereby repeated exposure to anger and familial violence results in greater emotional reactivity.

Difficulties in mentally representing and processing affective social information are also observed in children with histories of maltreatment. Overall, physically abused children demonstrate a response bias to angry emotional expressions (Pollak, Cicchetti, Hornung, & Reed, 2000). Pollak and Sinha (2002) reported that physically abused children required less sensory input than comparison children to accurately identify facial displays of anger (see also Pollak & Kistler, 2002). In an investigation of the attentional mechanisms underlying the finding that physically abused children over attend to angry expressions, Pollak and Tolley-Schell (2003) discovered that children who had experienced physical abuse demonstrated delayed disengagement and increased attention to angry-face informational cues. These results suggest that early adverse experiences influence maltreated children’s selective attention to threat-related signals.

Deviations in understanding negative affect and in affective processing are also identifiable in maltreated children who have experienced subtypes of abuse other than physical, including neglect, sexual abuse, and emotional maltreatment. These difficulties have been shown to relate to undercontrolled and aggressive behavior in the school setting (Rogosch, Cicchetti, &
Aber, 1995). In an investigation of attributional processes, Toth, Cicchetti, and Kim (2002) found that attributional style moderated externalizing behavior problems and that perceptions of mothers mediated both internalizing and externalizing symptoms.

Drawing upon models of social information processing, Dodge and his colleagues (Dodge, Pettit, Bates, & Valente, 1995; see also Dodge, this volume) reported that children who had been physically abused during the first five years of life were later defensively hypervigilant to hostile cues and failed to attend adequately to relevant non-hostile cues. The abused children attributed hostility to others in situations where most people would not make such attributions. In addition, physically abused children acquired large repertoires of highly accessible aggressive responses to interpersonal problems so that, when provoked, aggressive retaliatory responses were likely.

A number of cross-sectional investigations also have elucidated associations between affect-regulatory problems and behavioral dysregulation among maltreated children. Maltreated preschool and school-age children exhibit a range of dysregulated behaviors that are often characterized by disruptive and aggressive actions. Maltreated toddlers also tend to react to peer distress with poorly regulated and situationally inappropriate affect and behavior, including anger, fear, and aggression, as opposed to the more normatively expected response of empathy and concern (Klimes-Dougan & Kistner, 1990). Shields and Cicchetti (1998) found that maltreated children were more likely than nonmaltreated children to be aggressive, with physically abused children at heightened risk for reactive aggression. Maltreated children also evidenced attention deficits, and subclinical or nonpathological dissociation was more likely among children with histories of physical or sexual abuse. A history of abuse also predicted emotion dysregulation, affective lability/negativity, and socially inappropriate emotion
expressions, and emotion dysregulation was found to be a mechanism whereby maltreatment resulted in reactive aggression.

Overall, the effects of maltreatment on emotion regulation processes are profound for socioemotional development. As we describe later, the resulting emotion regulation tendencies that develop may also have profound effects on memories of trauma.

Attachment and Child Maltreatment

The establishment of a secure attachment relationship between an infant and his or her caregiver represents a major stage-salient task during the first year of life (Sroufe, 1979). Attachment theorists have posited that, as development proceeds, a secure attachment relationship provides a secure base from which to explore and, ultimately, contributes to the integration of cognitive, affective, and behavioral capacities that influence ongoing and future relationships, as well as the understanding of the self (Bowlby, 1969/1982, 1973, 1980; Sroufe, 1979). Not surprisingly, maltreated children are at heightened risk for the development of insecure attachment relationships. Investigations have found that maltreated children are highly likely to evidence insecure attachment, with rates of insecurity found to be as high as 95% (Cicchetti, Rogosch, & Toth, 2006; Crittenden, 1988; Lyons-Ruth, Connell, Zoll, & Stahl, 1987). Furthermore, in both cross-sectional and longitudinal studies, maltreated infants and toddlers have been shown to have elevated rates of disorganized/disoriented (Type D) attachment, an atypical type of attachment organization characterized in infancy by behavioral freezing, dazing, stilling, and apprehension of the caregiver, and later by increased likelihood of mental health problems (Barnett, Ganiban, & Cicchetti, 1999; Carlson, Cicchetti, Barnett, & Braunwald, 1989; Cicchetti et al., 2006; Lyons-Ruth, Connell, Zoll, & Stahl, 1987).
Although particularly salient during infancy and toddlerhood, attachment continues to be important across the life course as internal working models are carried forward. Maltreated children are more likely than nonmaltreated children to exhibit insecure attachments throughout the preschool years (Cicchetti & Barnett, 1991a; Crittenden, 1988). Moreover, insecure attachment has been found to be present in school-age children when self-report measures have been utilized (Lynch & Cicchetti, 1991).

It is believed that parent-child attachment helps lay the foundation for later “coherence of mind” as well as emotion regulation strategies relevant to attachment issues (Mikulincer & Shaver, 2008). As such, children’s attachment security is likely also to affect memory.

Psychopathology and Child Maltreatment

Although not all maltreated children will develop maladaptively, disruptions in psychological development during the early years of life may contribute to the emergence of psychopathology. In general, the literature on maltreated children reveals a greater preponderance of psychiatric symptoms and diagnoses in these youngsters than in nonmaltreated children. Maltreated children evidence elevated levels of disturbance across a wide range of areas. Physical abuse and neglect are linked with higher levels of child depressive symptomatology (Cicchetti & Rogosch, 2001; Kaufman, 1991; Manly, Kim, Rogosch, & Cicchetti, 2001; Toth & Cicchetti, 1996; Toth, Manly, & Cicchetti, 1992). In addition, children who are maltreated in childhood have an increased risk of developing depression in adulthood (Widom, DuMont, & Czaja, 2007). Moreover, the risk for adult depression has been shown to increase if children were maltreated in the first five years of life (Kaplow & Widom, 2007), as well as with conduct disorder and delinquency (Smith & Thornberry, 1995). Higher rates of attention deficit hyperactivity disorder, oppositional disorder, and posttraumatic stress disorder
(PTSD) also have been reported in maltreated children (Famularo, Kinscherff, & Fenton, 1992). Childhood maltreatment also is associated with personality disorders, substance abuse, suicidal and self-injurious behavior, somatization, anxiety, and dissociation (Johnson, Cohen, Brown, Smailes, & Berstein, 1999; Luntz & Widom, 1994; Macfie, Cicchetti, & Toth, 2001a, 2001b; Malinosky-Rummell & Hansen, 1993; McLeer, Callaghan, Henry, & Wallen, 1994; Yates, Carlson, & Egeland, 2008).

Of the various types of psychopathology that can develop subsequent to child maltreatment, PTSD is of special interest to memory researchers. PTSD has been termed a disorder of memory. However, researchers have recently begun to reconceptualize PTSD from the perspective of normal memory for trauma (Berntsen, Rubin, & Bohni, 2008). We turn next to a discussion of memory for trauma in child maltreatment victims.

Memory and Child Maltreatment

Increasing evidence suggests that experiencing maltreatment not only affects emotional regulation, attachment, and mental health, but psychological processes in cognitive domains as well (Harris, 2008), in particular, memory. In fact, we show here how, within the cognitive domain, emotional regulation, attachment, psychopathology, and maltreatment come together to influence memory processes.

Research reviewed earlier in this chapter, in the context of emotion regulation, indicates that maltreatment victims often overattend to trauma-related information, for example, as when children with physical abuse histories have trouble disengaging their attention from anger cues and experience heightened arousal and emotional dysregulation as a result. Perhaps at least in part, one consequence is that many maltreatment victims, especially if they suffer from the trauma-related psychopathology of PTSD, show particularly accurate memory for their
childhood traumas (Alexander et al., 2005). This oversensitization to trauma cues, alluded to earlier, may make trauma memories particularly robust and enduring. However, of importance, a subset of maltreatment victims try to avoid memories and reminders of their trauma experiences. Such avoidance may be due to these individuals’ need to regulate the strong emotion involved in order to cope, thus pointing to the important role of emotion regulation in affecting memory processes. It is our contention that individual differences in trauma memory result.

Fortunately, attachment theory provides a powerful platform for understanding individual differences in how violence and aggression towards children can influence memory, especially memory for traumatic childhood experiences such as maltreatment (e.g., Alexander, Quas, & Goodman, 2002; Goodman, Quas, Batterman-Faunce, Kuhn, & Riddlesberger, 1996). According to Bowlby (1980; see also Main, 1990), insecurely avoidant children, whose bids for care have been rejected or belittled, are theorized to develop a nonconscious strategy, called “defensive exclusion,” which limits processing of stressful information, with the goal of preventing activation of the attachment system, such as the negative affect associated with reminders of attachment-related loss or extended separations (Chae et al., in press). Such limits on processing have implications for memory.

Relations among attachment style and memory are evident in maltreated samples, specifically where participants have been asked to recall their own abusive experiences. These relations confirm important individual differences in trauma memory, as predicted by attachment theory. Goodman et al. (1992) first examined the psychosocial effects of testifying against assailants in criminal court cases in a sample of 217 victims of CSA (Goodman et al., 1992). An average 13 years after the start of the prosecutions, these victims’ memories for their abusive experiences were examined (Edelstein et al., 2005; Goodman et al., 2003). Results revealed that
victims with avoidant attachment orientations showed worse memory for more versus less severe assaults, likely reflecting defensive exclusion. In sharp contrast, victims with less avoidant attachment orientations were more accurate about more severe abuse experiences.

Coping style, which is likely affected by child maltreatment and reflects habitual emotion regulation strategies, may at least in part underlie the connection between avoidance and memory. In a recent study of autobiographical memory, adults and adolescents with or without child sexual abuse histories were asked to recount childhood events (Harris et al., 2008). These accounts were scored for the degree of specificity of the memories (e.g., specificity as to time and place of the incidents described; see Williams, 1996). Consistent with Bowlby’s (1980) proposal of defensive avoidance, it was predicted that survivors of child sexual abuse would adopt a nonspecific memory retrieval style as a coping mechanism to avoid unpleasant and intrusive memories (e.g., Hermans, Defranc, Raes, Williams, & Eelen, 2005). Results show that distancing coping processes (i.e., cognitive efforts to detach oneself and to minimize the significance of the situation, as measured by the Ways of Coping Questionnaire [WCQ; Folkman & Lazarus, 1988]), which is associated with attachment avoidance (Hazan & Shaver, 1987), significantly predicted autobiographical memory nonspecificity (Harris et al., 2008). The relation between distancing coping style and autobiographical memory nonspecificity was robust: The results held even when such measures as PTSD or general psychopathology were included in regression models. These findings appear to support Bowlby’s theory of defensive avoidance.

Overall evidence suggests that attachment orientation, emotion regulation and resulting coping styles, and psychopathology may result in important individual differences that need to be examined when assessing memories in individuals with maltreatment histories. In some individuals, such as those who suffer from PTSD and overattend to trauma cues, memory for
trauma may be especially robust and accurate. In other individuals, such as those who have more avoidant attachment and avoidant emotion regulation and coping styles, memory for trauma may be dampened and as a result, less robust and potentially less accurate.

Methodological Considerations

Now that research on child maltreatment has been presented, we direct our attention toward methodological considerations in the design and conduct of this work. Specifically, we examine issues related to the definition of child maltreatment, inclusion/exclusion criteria, and internal validity.

*Definitional Considerations*

How does the investigator operationalize the independent variable, in this case child maltreatment? Historically, research on child maltreatment has been hampered by the lack of clearly articulated approaches to defining child maltreatment (Barnett, Manly, & Cicchetti, 1993; National Research Council, 1993). Definitional issues are exacerbated by an extensive history of disagreement among researchers, lawmakers, and clinicians on what constitutes child maltreatment and on how best to define it (Aber & Zigler, 1981; Barnett et al., 1993). In the research arena, many have maintained that the definition of maltreatment should focus on specific acts that endanger the child (Barnett et al., 1993; Cicchetti & Barnett, 1991b; Zuravin, 1991). This approach to definition allows researchers to focus on identifiable maladaptive parenting behaviors that may compromise a child’s well-being. However, even when focusing exclusively on maltreatment definitions of relevance to the research community, complexities abound. To begin, because maltreatment is largely determined by legal considerations, it is identified by social service systems. Moreover, there is not a clear consensus regarding acceptable disciplinary practices and child maltreatment (Black & Dubowitz, 1999; Cicchetti &
Lynch, 1995), and there is a lack of agreement on whether child maltreatment should be defined based on the actions of the perpetrator, the effects on the child, or a combination of the two (Barnett et al., 1993). This situation is further complicated by debate on whether parental intent should be considered when identifying an act as maltreating. For example, if a child is accidentally injured during an episode of domestic violence, has maltreatment occurred? Issues such as these raise thorny methodological concerns because it is a greater challenge to measure parental intent than parental behavior. Additionally, labeling an act as maltreatment based on its effect on child outcome contributes to difficulty in separating maltreatment from its sequelae (Barnett, Manly, & Cicchetti, 1991; Cicchetti & Manly, 2001; McGee & Wolfe, 1991). Research determinations of the maltreatment variable have ranged from investigator observations of “poor parenting” through reliance on parent and/or child report, to utilization of Child Protective Services (CPS) records. These issues are not easily resolved but need to be considered when evaluating studies on the effects of parental aggression on children.

**Inclusion/Exclusion Criteria**

Once the overarching variable of maltreatment has been operationalized, further issues arise regarding co-occurring risk factors. Depending on the overall goal of the investigation, decisions regarding homogeneity versus heterogeneity of the sample need to be made. This is an important and too often unrecognized area, as the approach taken can either increase or decrease the generalizability of the research findings. Given the prevalence in maltreatment victims of multiple forms of maltreatment (e.g., neglect and abuse) and of multiple stressors such as poverty, domestic violence, depression, residence in high crime neighborhoods, and substance use and abuse, the exclusion of individuals with these issues would ultimately result in a very
unrepresentative group of maltreatment victims and hinder the ultimate translation of research findings. These issues can muddy the waters in regard to internal validity of the research.

*Internal Validity*

When conducting research on child maltreatment, clearly, one cannot randomly assign children to abused versus nonadused groups. As a result, considerable caution is needed when attempting to make causal inferences about child maltreatment. As indicated earlier, there are many co-occurring and intertwined variables to ferret out when conducting child maltreatment research. Often quasi-experimental designs are the best one can do. Nevertheless, carefully designed studies can provide substantial insight into the possible effects of child maltreatment on children’s development, including their emotion regulation, attachment, mental health, and memory.

*Conclusion*

Research has demonstrated that multiple psychological systems are likely affected when children experience aggression and violence, particularly in their home environments. We hope that the importance of examining the influence of maltreatment on several domains of psychological functioning have been clearly highlighted here. Certainly, years of evidence have implicated maltreatment in disrupting emotional regulation, parent-child attachment, and mental health. Now, it is evident that violence likely affects children’s emotional memories as well. Further study is needed to examine the extent to which violence may adversely affect other cognitive domains such as executive functions, problem solving, planning, and learning. Although research in the area of child maltreatment is not without challenges, the potential theoretical, clinical, and social policy implications provide compelling reasons not only to continue but to increase scientific efforts in this crucial area of study.
References


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