Child maltreatment, attachment and psychopathology: mediating relations

Studies of the developmental consequences of child maltreatment are essential for enhancing the quality of clinical, legal, and policy-making decisions for maltreated children. Decisions about reporting a child as maltreated, removing a child from the home, developing interventions to meet the specific psychological needs of maltreated children, and evaluating the efficacy of these interventions, all necessitate a solid and sophisticated database on the developmental sequelae of child maltreatment. "Without rigor in design and method... myth will be put forward in place of knowledge as a guide to social actions"¹.

Numerous outcomes are possible for maltreated children, including healthy adaptation². However, the deleterious biological and psychological sequelae of child maltreatment not only often result in adverse consequences during childhood, but may also initiate a negative developmental cascade that continues throughout the life course³. Indeed, consistent with the concept of multifinality, maltreated children may develop a broad range of psychopathological outcomes⁴. The knowledge that there are multiple pathways to similar manifest outcomes (equifinality) and that there are different outcomes of the same pathway (multifinality) may contribute to the implementation of important refinements in the extant diagnostic classification of mental disorders⁴.

The literature indicates that exposure to child maltreatment increases the lifetime risk for many psychopathological symptoms and disorders, including depression, anxiety disorders, bipolar disorder, schizophrenia, post-traumatic stress disorder, antisocial personality disorder, internalizing and externalizing symptoms, and dissociation⁵⁻⁷ (see also Morgan and Gayer-Anderson⁸ in this issue of the journal). Likewise, maltreatment increases the risk for poor physical health outcomes, including immune dysfunction, obesity, fibromyalgia, inflammation, and diabetes.

Much research conducted on the effects of child abuse and neglect has been guided by an organizational perspective on development⁹. This perspective identifies a progression of qualitative reorganizations within and among the biological and psychological systems that proceed through differentiation and subsequent hierarchical integration.

Organizational theorists conceive development as comprising a number of age- and stage-relevant tasks. Although their salience may wane in relation to newly emerging issues, the tasks remain important to adaptation. A hierarchical picture of adaptation emerges in which the successful resolution of an early stage-salient issue increases the probability of subsequent successful adjustment⁹. As each new stage-salient issue comes to the fore, opportunities for growth and consolidation arise. The tasks include the development of emotion regulation, the formation of attachment relationships, the develop-

ment of an autonomous self, the formation of effective peer relationships, and successful adaptation to school.

The establishment of a secure attachment relationship between an infant and his or her caregiver represents a primary task during the first year of life. The capacity for preferential attachment originates during early affect regulation experiences and interactions with the caregiver. These early parent-child experiences provide a context for children's emerging bio-behavioral organization. Specifically, the pre-attachment parent-child environment helps to shape children's physiological regulation and bio-behavioral patterns of response. As development proceeds, attachment theorists have posited that a secure attachment relationship provides a base from which to explore and, ultimately, contributes to the integration of neurobiological, cognitive, affective, and behavioral capacities that influence ongoing and future relationships, as well as the understanding of self¹⁰.

Children construct "internal working models" of their attachment figures out of their interactions with their caregivers, their own actions, and the feedback they received from these interactions. Once organized, these internal working models tend to operate outside of conscious awareness and are thought to be relatively resistant to change. Children formulate their conceptions of how acceptable or unacceptable they are in the eyes of their attachment figures (i.e., their self-image) based on their interactional history with their primary caregivers. Exposed to insensitive and pathological care, maltreated children develop negative expectations regarding the availability and trustworthiness of others, as well as mental representations of the self as incompetent and unworthy¹⁰.

Maltreated infants are especially at risk for developing insecure/disorganized attachments with their primary caregiver^{11,12}. Maltreating behaviors are arguably among the most frightening parenting behaviors, placing children in an irresolvable paradox in which their attachment figure is simultaneously their source of safety and their source of fear.

Through Bowlby's influence, a growing number of theoreticians and researchers have conceptualized early attachment organization as remaining critical to the ongoing adaptational strivings of the person. However, attachment, as other major developmental tasks, continues to differentiate beyond its period of developmental ascendance. Once an attachment develops, it continues to transform and integrate with subsequent accomplishments such as autonomy and peer relations throughout the life course⁹. Thus, persons are continuously renegotiating the balance between being connected to others and being autonomous as they encounter each new developmental phase.

The representational models that emerge from the caregiving matrix of maltreated children exert influences on their

conceptualization of self and their responses to potential relationship partners. Although representational models most likely contain information specific to a given relationship, these specific models may contribute information to more generalized models of relationships¹³. Because the internal representational models of the early caregiving relationship are largely insecure in maltreated children, these children may be more likely to transmit the maladaptive relationship patterns of their childhoods to their offspring. The fact that not all maltreated children do so lends hope to a potentially bleak scenario and also speaks to the potential benefit of theoretically grounded approaches for the prevention of maltreatment, as well as for the treatment of those who have experienced caregiving trauma.

An insecure attachment may render individuals more likely to respond adversely to stress and hence be more vulnerable to pathological breakdowns. Within attachment theory, psychopathology is conceived as a developmental construction. According to this perspective, variations in early attachment are not considered to be pathology, or as directly causing pathology¹⁴. However, they do lay the foundation for disturbances in developmental processes which can eventuate in psychopathology.

In terms of examining the interrelations between maltreatment, attachment organization, and psychopathology, a review of the extant literature reveals that most studies have assessed them concurrently within a cross-sectional design. Although several of these studies have indeed discovered interrelations, the non-longitudinal nature of this work precludes making definitive causal interpretations of the findings.

In order to render veridical claims about causality, additional longitudinal studies examining the interrelations among child maltreatment, attachment organization, and psychopathology must be carried out. Such multi-wave longitudinal research will enable investigators to address the causal nature of the interrelations through a mediational analysis.

A mediating variable is one that is intermediate in the causal process relating a predictor variable to an outcome variable. The development of insecure/disorganized attachment may represent an underlying mechanism (i.e., mediator) by which

children with maltreatment experiences develop future psychopathology. Longitudinal designs with at least three waves of data are ideal for testing mediation, so that temporal ordering can be established between the independent variable (maltreatment), the mediator (attachment organization), and the outcome variable (psychopathology). Without temporal precedence, the time ordering among the variables is hypothetical but not empirically supported.

Multilevel research conducted in the context of longitudinal designs will enable researchers to ascertain how and why the statistically significant pathways from the independent variable to the mediator and from the mediator to the outcome variables occurred. Moreover, the inclusion of DNA in measurement batteries will help to discern whether genotypic variation moderates the significant mediation path(s). Finally, longitudinal randomized control trial interventions aimed at improving the quality of attachment organization in maltreated children can shed important light on the mediational links between maltreatment, attachment, and psychopathology.

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