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## A Developmental Psychopathology Perspective on Child Maltreatment

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Since first emerging as an integrative field of study in the 1980s, the discipline of developmental psychopathology has made significant contributions toward the understanding of risk, psychopathology, and resilience across the lifespan. Because both positive and negative adaptations unfold over time, the utilization of a developmental perspective is critical if the processes underlying individual pathways to positive and negative outcomes are to be understood (Sroufe, 1989, 2007). In view of the extensive negative consequences associated with child maltreatment that occur at various points in development, developmental psychopathology emerges as a particularly powerful framework for guiding both research and clinical endeavors. In fact, a developmental schema is essential if the etiology and course of maladaptation in maltreated children is to be fully understood. To date, the utilization of a developmental psychopathology perspective has resulted in significant contributions to the understanding of the causes and consequences of child maltreatment (Cicchetti & Toth, 1995; Cicchetti & Valentino, 2006; National Research Council, 1993). Such an approach can and should be informative in developing treatments that are appropriate for various developmental periods and in ascertaining when in the developmental period such interventions should be provided (Toth & Cicchetti, 1999). Moreover, a developmental psychopathology approach also has elucidated the processes that result in resilient functioning in some maltreated children despite the experience of adversity (Cicchetti, 2013; Luthar, Cicchetti, & Becker, 2000). Given the promise embodied by the utilization of a developmental psychopathology perspective for ultimately fostering positive outcomes in children who have experienced maltreatment, in this editorial we highlight the tenets of developmental psychopathology with relevance to child maltreatment. We then discuss aspects of the articles contained in this Special Issue that are consistent with a developmental psychopathology framework. We conclude by suggesting important future directions for research, clinical, and social policy initiatives that are informed by a developmental psychopathology approach.

Since its inception, developmental psychopathology has been committed to not only aiding in the understanding of processes underlying adaptation and maladaptation across the life course, but also to contributing to the prevention and treatment of maladaptive outcomes

(Cicchetti, 1990, 1993; Sroufe & Rutter, 1984). In view of this goal, the field has sought to reduce the schism between empirical research and the study and treatment of mental disorders, between the behavioral and biological sciences, and between basic and applied research (Cicchetti, 1990; Masten, 2006; Toth & Cicchetti, 1999).

The essence of developmental psychopathology, and what distinguishes it from either clinical or developmental psychology, involves its focus on both normal and abnormal developmental processes. Unlike categorical psychiatric classification systems, early systematizers in the field conceived psychopathology as a distortion, disturbance, or degeneration of normal functioning (Cicchetti, 1984; Rutter, 1986; Sroufe, 1990). Therefore, in order to understand psychopathology, one must first understand the normal functioning with which psychopathology is compared. This principle is simply demonstrated for anyone who has devoted their time exclusively to working with a special needs population. Unless one has the ability to interface with a normative population, the lens for viewing “normal” can become distorted. Thus, knowledge of normative biological, psychological, and social processes is very useful for assessing, diagnosing, preventing, and treating the maladaptation and psychopathology associated with child maltreatment.

Importantly, developmental psychopathology has challenged conventional perspectives on what constitutes mental health and mental illness. For developmental psychopathologists, the traditional perspective on immutable diagnoses is misguided and fails to recognize that ultimately adaptation or maladaptation occurs as an evolving and dynamic process between the individual and contextual factors. This framework reduces the stigma associated with mental illness as it recognizes that although someone may have a particular disorder, it is possible that they can deal with it effectively and still achieve competent functioning. For individuals who have experienced child maltreatment, this is particularly important as it acknowledges that one is not doomed to a poor developmental outcome as a function of early adversity.

Diversity in process and outcome also is a key tenet of developmental psychopathology (Cicchetti & Rogosch, 1996). We now know that similar adverse experiences can result in diverse outcomes (multifinality) and that different types of adversity may eventuate in similar outcomes (equifinality). Thus, for example, childhood maltreatment may lead to depression, antisocial behavior, personality disorder, future victimization, or the absence of psychopathology. These concepts highlight the importance of conducting multilevel assessments of functioning in individuals who have experienced child maltreatment.

As mentioned earlier, investigators in the field of developmental psychopathology are as invested in understanding pathways to competent outcomes despite adversity as they are in addressing maladaptive trajectories (Luthar et al., 2000; Masten, 2001). Moreover, they are equally interested in ascertaining why some individuals who have diverged onto a deviant pathway are able to resume positive functioning. Conducting research that can elucidate these processes in individuals with histories of child maltreatment possesses important implications for prevention and intervention initiatives. For example, Cicchetti and Rogosch (1997) found different predictors of resilient functioning in maltreated versus nonmaltreated children. For maltreated children, positive self-esteem and moderate control of their

emotions were related to resilient outcomes, whereas social and relationship factors were more important for nonmaltreated children. These results suggest that interventions that focus on relational issues to foster positive outcome may not be as effective with individuals who have been maltreated. Findings of different pathways to positive outcome among maltreated children also highlight the importance of continuing to develop and evaluate models of prevention and intervention. Although progress has been made in identifying evidence-based models of intervention for maltreated children, much work remains and it is important that the field does not prematurely restrict research funding or service reimbursement only to evidence-based models of intervention. Although we *should not* fund what has been determined to be ineffective, *we must* continue to support the innovative development of new models of intervention.

Developmental psychopathology also has fostered the utilization of interdisciplinary collaborations. As the field has increasingly advocated for the utilization of multi-level investigations that strive to understand both biological and psychological processes involved in psychopathology (Cicchetti & Toth, in press), the involvement of individuals from a range of disciplines and with various areas of expertise has become of paramount importance. Historically, the majority of knowledge about the correlates, causes, pathways, and sequelae of mental disorders was garnered from research that focused on relatively narrow domains of variables. However, in order to understand the emergence of psychopathology or the attainment of resilience in maltreated children, all levels of analysis must be examined and integrated (Cicchetti & Toth, 2009). Because child maltreatment necessarily cuts across various systems, including child welfare, mental health, medical care, education, and social policy, the developmental psychopathology perspective is very compatible with the foci of professionals in diverse professions who interface with maltreated children.

Finally, although during its early years developmental psychopathology was in danger of failing to adequately consider diverse racial and ethnic groups, as the discipline matured more integrative approaches to understanding risk, resilience, and psychopathology among diverse racial and ethnic groups has emerged. Current research conceived within a developmental psychopathology tradition has increasingly elucidated varied pathways to adaptation in different racial and ethnic groups. This increased understanding possesses significant implications for understanding and treating individuals with mental illness. Unfortunately, within child maltreatment research, a consistent understanding of the effects of maltreatment in diverse ethnic and cultural groups has been slow to emerge and is sorely needed (Elliott & Urquiza & 2006).

### Articles in this Special Issue

Articles contained in this Special Issue embody many key tenets of developmental psychopathology. In the first article, entitled “Affective Facial Expression Processing in 15 Month-Old Infants who have Experienced Maltreatment: An Event-Related Potential Study”, Curtis and Cicchetti (this issue) examined the neural correlates of facial affect processing in maltreated and nonmaltreated infants. In particular, the results suggest that the development of facial emotion processing is a dynamic process in maltreated children.

Findings for the P260 waveform were consistent with previous ERP findings in older maltreated children (Pollak, Cicchetti, Klorman, & Brumaghim, 1997), with maltreated infants showing increased amplitude to angry as compared to happy affects. However, findings for the P1 and Nc waveforms revealed a hyper-responsivity to affective novelty, with maltreated infants having greater amplitude in response to happy facial affect and nonmaltreated infants showing greater responsivity to angry faces. The results illustrate that maltreatment and the prevalent negative emotional tone in maltreating families alters the functioning of neural systems associated with the processing of facial emotion and highlight the importance of novelty during this early stage in development. Although not based on longitudinal data, these results suggest that there may be a developmental progression of the effects of maltreatment on neural functioning whereby there is a shift in salience from relatively novel facial expressions of emotion, such as happy, to those that are more familiar, such as anger. Such findings are consistent with a dynamic, transactional view of the bi-directional influence of biological and environmental-contextual forces in development.

In the second article “The Impact of Neglect on Initial Adaptation to School”, Manly, Lynch, Oshri, Herzog, & Wortel (this issue) examine processes related to the development of school competencies, including the mediational role of cognitive functioning and ego-resiliency. Neglected children had lower scores on kindergarten classroom behavior and first grade academic performance than did non-neglected children. Cognitive performance at age four mediated the relation between severity of neglect and children’s behavior in kindergarten, as well as their academic performance in first grade. Severity of neglect also was related to ego-resiliency at age four. Interesting effects emerged with respect to the moderating role of poverty, with extreme poverty attenuating the effects of ego-resiliency and behavioral performance in kindergarten. These findings are consistent with a developmental psychopathology perspective in demonstrating the principle of probabilistic epigenesis. Specifically, although early adversity affects later functioning, this does not occur deterministically. When processes that mediate the relation between early adversity and later functioning were examined, the association was found to be mediated through its effects on prior developmental domains. Moreover, in accord with an ecological transactional perspective on the development of psychopathology in maltreated children (Cicchetti & Lynch, 1993), these investigators found that adversity occurring in other levels of the ecology can modify the cascading processes linking child neglect to school performance.

In their article entitled “Neuropsychological Findings in Abused Children: Relationship of PTSD Symptoms and Abuse Indices to Neurocognitive Outcomes,” DeBellis, Woolley, & Hopper (this issue) found that maltreated children performed poorer on IQ, Academic Achievement, and nearly all of the neurocognitive domains examined when compared with nonmaltreated children. When maltreated children had PTSD, their performance was worse than maltreated youth without PTSD on a task assessing higher-order visuoconstructive abilities. These results highlight the importance of screening for the integrity of neuropsychological functioning and academic skills in all maltreated children, regardless of the absence of PTSD. Consistent with a developmental psychopathology perspective, this article also highlights diversity in outcome despite similar experiences of maltreatment.

In their article, “Decision-making Deficits among Maltreated Children”, Weller and Fisher (this issue) examined maltreated children’s decision making in two contexts: potential gains and potential losses. Maltreated and nonmaltreated children showed impairments for both domains; these differences were especially prominent in the loss domain. Moreover, maltreated children also took excessive risks and were insensitive to changes in expected values, particularly in outcomes with risky options. Follow-up analyses showed these differences to be primarily associated with insensitivity to changes in outcome magnitude for the risky option. Response latency analyses revealed that maltreated children were slower to make choices, reinforcing the underlying differences in decision-making processes between groups. Consistent with one of the principles of a developmental psychopathology approach, the results of this study possess implications for both basic and translational research.

In her article “Gender and the Development of Oppositional Defiant Disorder: Contributions of Early Family Environment”, Burnette (this issue) examined associations between intimate partner violence (IPV), harsh parenting, and parental acceptance, and responsivity on symptoms of Oppositional Defiant Disorder (ODD). IPV was associated with an increased risk of ODD symptoms, and higher parental acceptance was associated with reduced risk of ODD symptoms for both boys and girls. However gender differences emerged in the impact of harsh parenting and emotional responsiveness, with the former being a significant predictor only for girls and the latter only for boys. This article is consistent with the tenets of Developmental Psychopathology in that it models the manifestation and stability of antisocial behavior within a developmentally informed context. It also incorporates a multi-level view through its examination of how antisocial behavior is influenced by both environmental (harsh parenting, parental acceptance) and biological (gender) influences.

Consistent with the foci of developmental psychopathology, across the articles, a multi-level perspective addressing psychological, neurocognitive, physiological, and social/contextual correlates of child maltreatment is employed. Although ideally the multi-level perspective should be incorporated into a single study, the field is just beginning to fully embrace this approach and multi-level assessments within rather than across investigations remain an important area for future research. Further reflecting a central tenet of developmental psychopathology, all articles strive to elucidate the implications of basic research for informing prevention and intervention initiatives.

## **Future Directions to foster a Developmental Psychopathology Perspective on Child Maltreatment**

Although important advances have been made in understanding child maltreatment by studies guided by a developmental psychopathology perspective, significant research frontiers remain. Studies of child and adult mental health, including those conducted within a developmental psychopathology perspective, have largely neglected the period between adolescence and adulthood (Schulenberg, Sameroff, & Cicchetti, 2004). Although early experience is critical, its influence on subsequent psychopathology and mental health is highly likely to be moderated by later experience (Cicchetti & Tucker, 1994; Todd Manly et al., this issue; Sroufe, 1997). The conduct of investigations on the transition to adulthood in

individuals with histories of child maltreatment emerges as a largely untapped arena. Therefore, the examination of stage salient mechanisms that may be operative during this period is particularly important. Longitudinal research will be needed to provide vital information about how maltreated adolescents and adults resolve later stage-salient developmental issues such as identity formation, autonomy, the development of personal relationships, intimacy, and work.

As demonstrated in this Special Issue, investigations of the consequences of child maltreatment have typically examined neurobiological and psychological systems separately. The time has come to emphasize the conduct of research that examines biological and psychological systems concurrently over developmental time. In addition to multilevel investigations in basic maltreatment research, the incorporation of multilevel measurement strategies into RCTs of interventions for individuals with histories of maltreatment will be particularly important.

Although we have increased the number of evidence-based interventions that are available to treat children and adults with histories of maltreatment (Self-Brown Whitaker, Berliner, & Kolko), the dissemination of evidence-based models for treating traumatized individuals must be expedited. Toward this end, exportation to community settings and the subsequent conduct of effectiveness trials must be a priority for individuals involved with the development and conduct of RCTs demonstrating efficacy (Cicchetti & Toth, in press). Unless a commitment to dissemination is made upon the completion of successful efficacy trials, valuable treatments may languish in academic settings. In addition, far more evidence-based models are available for treating the aftermath of maltreatment than for preventing its occurrence. Therefore, increased attention needs to be directed toward the development of interventions directed toward the prevention of maltreatment. The field also would benefit greatly from research targeted toward identifying factors related to stopping the intergenerational transmission of maltreatment so that protective factors could be built into interventions for families that are at risk for multi-generational maltreatment.

We possess virtually no information about the effects of child maltreatment in middle- or upper-socioeconomic environments. Maltreatment clearly transcends social class. Consequently, research on the developmental consequences of child maltreatment and on pathways to resilient adaptation in children raised in non-low-SES environments is important to conduct in order to discover similarities and differences in the development of resilient functioning across various social class strata.

As discussed earlier, although findings on gender and maltreatment are beginning to emerge (Burnette, this issue; Feiring, Taska, & Lewis, 1999), this line of inquiry requires much more development. Given the attentional biases with respect to anger that have been identified in maltreated infants and children (Curtis & Cicchetti, this issue; Pollak et al., 1997), it is possible that boys and girls may vary in their reactions to different emotional expressions and that these differences could relate to the type of psychopathology that emerges. Relatedly, it is possible that gender differences may occur with respect to how maltreated children process and understand their abusive experiences and that these processes could vary by gender×maltreatment subtype interactions. Both of these lines of



research could ultimately possess implications for the development of intervention strategies.

In closing, utilization of a developmental psychopathology perspective has made, and will continue to make, significant contributions to understanding the causes, course, and consequences of child maltreatment. We encourage researchers, clinicians, and social policy advocates to embrace the principles embodied by this field as they strive to mitigate the adverse consequences of child maltreatment.

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