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Review: Bridging research and practice: relational interventions for maltreated children

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Abstract

Background—Research has consistently demonstrated the deleterious consequences of child maltreatment, not only during childhood but also across the life course. In particular, maltreatment negatively affects child attachment, with high percentages of maltreated children developing insecure or disorganized attachments with their primary caregiver. Therefore, interventions informed by attachment theory are important to prevent enduring relational difficulties.

Scope—One such intervention, child–parent psychotherapy, has been shown to be efficacious in a number of randomized controlled trials. This article provides an overview of the evidence base for this intervention and the translation of this research into practice, particularly in community settings.

Conclusion—Increasingly, it is imperative that such evidence-based models of intervention be translated into community settings so that the most vulnerable children and families can benefit from them.

Keywords

Child maltreatment; Attachment; Child–parent psychotherapy; Translational research

Introduction

Child maltreatment represents one of the most heinous examples of the failure of the caregiving environment to promote positive social and emotional development (Cicchetti & Toth, 2005). Research has coalesced to demonstrate that child abuse and neglect are associated with a variety of negative and enduring psychological, behavioral, and social outcomes (Cicchetti & Valentino, 2006; Widom, 2000). Attention also increasingly has been directed toward the adverse effects of child maltreatment on psychophysiological and neurobiological development (McCrory, De Brito, & Viding, 2010; Watts-English et al., 2006), highlighting the long-term physical health consequences and increased morbidity associated with child abuse and neglect (Brown, et al., 2009; Danese, Moffitt, Pariante, Ambler, Poulton & Caspi, 2008). The estimated annual cost of child abuse and neglect in the United States, including both expenditures associated with the immediate needs of children, and those related to the long-term or secondary effects of abuse and neglect, has been estimated at 103.8 billion dollars (Wang & Holton, 2007). Despite the staggering mental and physical health burdens accompanying child maltreatment, too few empirically-supported interventions are readily available for these traumatized children and their caregivers. Increasingly, the importance of translating knowledge gained from empirical research

investigations into applied clinical settings has been highlighted (Cicchetti & Toth, 2006; Insel & Fernald, 2004).

In this article, we begin by discussing the importance of translational research. We then focus on the effects of child maltreatment on child attachment and examine attachment theory-informed interventions. Child-parent psychotherapy (CPP) is then described and studies of its efficacy and effectiveness are reviewed. In our penultimate section, an exemplar of the process of moving from laboratory-based efficacy studies to conducting evaluations of the effectiveness of CPP in real world clinical contexts is described. We conclude with a discussion of steps required to foster the exportation of interventions such as CPP into community settings and to the conduct of effectiveness studies.

Translational research

Translational research involves examining how basic behavioral and biological processes can inform the diagnosis, prevention, treatment, and delivery of services for individuals at risk for, or who have developed, a mental illness (National Advisory Mental Health Council on Behavioral Sciences, 2000). Consistent with a developmental psychopathology perspective (Cicchetti & Toth, 2009; 2006; Rutter & Sroufe, 2000), translational research can best be viewed as reciprocal in nature, with both basic researchers and individuals involved in the provision of clinical care benefitting from input derived from the other domain (Ialongo et al., 2006). The impetus to conduct translational research in the behavioral sciences emanated largely from the National Institute of Mental Health (Insel, 2005b; Insel & Scolnick, 2006) and was spurred by the recognition of the tremendous individual, social and economic burden associated with mental illness (National Advisory Mental Health Council on Behavioral Sciences, 2000). A considerable body of research has examined the effect of child maltreatment on child attachment (Barnett, Ganiban & Cicchetti, 1999; Cicchetti, Rogosch, & Toth, 2006; Lyons-Ruth et al., 1987; van Ijzendoorn, Schuengel, & Bakermans-Kranenburg, 1999) and this scientific knowledge lends itself to the development, evaluation, and exportation of models of intervention designed to disrupt a negative developmental course.

Attachment and maltreatment

One of the most important and universal tasks during the first year of life is for the child to develop an attachment relationship with the primary caregiver. Attachment is a biologically predisposed, enduring emotional connection that keeps the child in proximity to the caregiver through the vulnerable early years (Bowlby, 1969) while also providing the child with a sense of “felt security,” that engenders exploration of the environment (Cummings & Davies, 1996; Sroufe & Waters, 1977). The attachment relationship simultaneously provides the foundation for a child’s representations of the self and other to emerge across the life course (Bretherton, 1985). Four types of attachment have been consistently identified: secure, insecure-ambivalent, insecure-avoidant, and disorganized (Ainsworth, et al., 1978; Main & Solomon, 1990). Securely attached children have developed an adaptive, organized way of using their caregiver as a secure base from which to explore and return to at times of distress to seek solace. Children displaying insecure-ambivalent and insecure-avoidant attachments to their primary caregiver have developed maladaptive but organized ways of responding to caregiver behavior, whereas children with disorganized attachments display inconsistent and sometimes bizarre behavior in response to activation of the attachment system.

These attachment strategies are believed to develop in response to caregiver behavior throughout the infant’s first year of life and reflect what the infant has learned or understood about the way their caregiver will respond to their distress and proximity seeking. Securely

attached infants are likely to have a history of sensitive and responsive caregiving (Egeland & Farber, 1984), whereas children with disorganized attachments are likely to have been exposed to erratic, inconsistent and frightened or frightening caregiver behaviors, leading to an “approach-flight paradox” for the child (Hesse & Main, 2006; Lyons-Ruth, Bronfman, & Parsons, 1999). Disorganized attachments are highly prevalent among maltreated children (Cicchetti & Barnett, 1991; Cicchetti et al., 2006; van IJzendoorn et al., 1999), highlighting the disturbance of this primary relationship for young maltreated children and the importance of interventions focused on its reparation.

Children with insecure and disorganized attachments are at risk for myriad difficulties across the life course (see Sroufe, 2005). Of particular relevance to relationships, children with insecure or disorganized attachments are likely to see the self as unlovable and others as not dependable, while the securely attached child has internalized a view of the self as lovable and others as caring and trustworthy (Cicchetti, Toth, & Lynch, 1995). The negative outcomes and internal working models of relationships associated with insecure and disorganized attachments in infancy highlight the importance of providing early intervention while this relationship is still malleable in order to modify and enhance the caregiving environment and subsequently the child’s attachment organization and developmental course.

Overview of attachment theory informed interventions

Over the last few decades a number of attachment theory informed interventions have been developed with a focus on improving the parent-child relationship as a way to enhance the child’s development. In 1986, Steps Toward Effective, Enjoyable Parenting (STEEP) was born out of the Minnesota Longitudinal Study of Parents and Children (Erickson & Egeland, 2004). The attachment theory-informed STEEP program focuses on the parent-child relationship with a combination of home visits and group sessions designed to support parental sensitivity, promote knowledge of child development, and build parental social support while helping parents reflect on their own early childhood experiences. Intervention is conducted at both the dyadic and individual level in this program throughout the first two years of the child’s life. Mothers who participated in the STEEP program show greater sensitivity to signals from their baby and a better understanding of child development, although contrary to study hypotheses, differences in attachment were not found post-intervention compared to a control group (Erickson et al., 2004).

The Circle of Security Intervention is another attachment theory-based program that utilizes a group format to intervene in the parent-child relationship. However, unlike STEEP, joint parent-child sessions are not held, and instead caregivers meet together in small groups for 20 sessions. Parents are provided with psychoeducation about attachment theory and watch and discuss video-recorded interactions between each caregiver and their child as the vehicle for enhancing parental responsiveness to child cues (Hoffman et al., 2006; Marvin et al., 2002). This intervention has been found to effectively promote attachment security, with more than 40% of toddlers or preschoolers with a disorganized attachment prior to intervention demonstrating a secure attachment post-intervention (Hoffman et al., 2006).

Dozier and colleagues, working with a maltreated foster care population, have developed Attachment and Biobehavioral Catch-up (ABC) as an intervention for foster parents. The three main components of this brief attachment theory informed intervention are to 1) provide an environment in which the foster child can feel nurtured and loved even when the parent feels pushed away by the child; 2) help the caregiver work through personal issues that may be interfering with their caregiving abilities; 3) offer a highly controllable interpersonal environment to allow children to better regulate at the bio-behavioral level

(Dozier, 2003; Dozier et al., 2008). The ABC intervention is delivered in 10 joint parent-child sessions, and research supports its efficacy at promoting adaptive child attachment behaviors and regulating cortisol. Children from dyads participating in the ABC intervention displayed fewer avoidant behaviors in attachment system eliciting situations compared to children from dyads who received an educational intervention (Dozier et al., 2009). Additionally, cortisol production in foster infants and toddlers who received the ABC intervention resembled patterns similar to those found in children who had never been in foster care and was different from patterns found in foster infants and toddlers whose caregivers participated in an educational intervention (Dozier et al., 2008).

Moss and colleagues recently demonstrated the efficacy of a very brief (eight, 90-minute sessions) parent-child intervention compared to a control condition to reorganize attachment for maltreated children ages one to five (Moss et al., 2011). Intervener structured parent-child play sessions were videotaped and then watched immediately with the parent during the session to discuss parental observations and reinforce sensitive parental behavior (Moss et al., 2011). Children in the intervention condition were more likely to change from an insecure or disorganized attachment to a secure attachment after the 8-week intervention compared to the children in the control condition (Moss et al., 2011).

Child–parent psychotherapy (CPP)

The present article focuses on CPP as an intervention for children during the first five years of life who have experienced or are at heightened risk for abuse and neglect, including exposure to domestic violence. CPP was conceived out of Selma Fraiberg's work with parents and their infants (Fraiberg, Adelson & Shapiro, 1975), was further developed by Alicia Lieberman and colleagues (Lieberman & Van Horn, 2004), and currently encompasses Infant-Parent Psychotherapy as well as Preschooler-Parent Psychotherapy (Lieberman & Van Horn, 2008). CPP has its origins in attachment theory, developmental psychopathology, and stress and trauma work, while also being informed by cognitive-behavioral and social learning theories (Lieberman & Van Horn, 2008). Rather than focus individually on the child or parent, the therapist's client in CPP is the relationship between the caregiver and child. Through dyadic sessions, the therapist utilizes the child's spontaneous play and naturally occurring interactions between the parent and child as a vehicle for understanding maladaptive relational patterns and as an entryway for therapeutic change. The therapist encourages mutually enjoyable interactions between the parent and child, provides a voice for the child in order to interpret needs that the parent may be struggling to understand, and encourages developmentally appropriate parental expectations.

An additional focus of CPP involves helping the parent develop insight into how the "ghosts" from maladaptive relationships in his or her past can be influencing the present day interactions with the child in an effort to break the intergenerational transmission of maladaptive relational representations from parent to child (Fraiberg et al., 1975). Through unconditional positive regard and a non-judgmental, empathic stance, the therapist works to build a strong therapeutic relationship with the caregiver through which she can have a corrective emotional experience and begin to rework representations of herself and herself in relation to others, including her child. It is through these interventions that the therapist fosters more positive and consistent interactions between parent and child, leading to reparations in the relationship. The CPP model also recognizes the influence of broader contextual factors on the occurrence of child maltreatment and on the developing relationship between the parent and child (Bronfenbrenner, 1979; Lynch & Cicchetti, 1998), thus an additional therapist role in the CPP model is to serve as a liaison between the family and other community resources. The therapist advocates for the family to ensure that basic needs are being met, including housing, food, and adequate financial resources. In recent

years, CPP has gained increased attention as an evidence-based, culturally sensitive treatment for maltreated children and their caregivers.

CPP efficacy research

Cicchetti and colleagues conducted a randomized clinical trial of CPP compared to a psycho-educationally based parenting intervention for maltreated infants and their primary caregiver (Cicchetti, Rogosch & Toth, 2006). Non-treatment seeking dyads with documented family histories of child maltreatment were recruited from the Department of Human Services and randomly assigned to CPP, psychoeducational parenting intervention (PPI), or a community standard group. At the time of enrollment, children in this study had not been removed from their primary caregivers and placed in the foster care system. Pre-intervention, 87.5% of infants in the CPP condition and 83.3% in the PPI intervention evidenced disorganized attachments. Post-intervention, these rates had decreased to 32% and 45% respectively for CPP and PPI, with the majority of toddlers in each intervention developing a secure attachment by the end of the intervention. The two intervention groups had higher rates of securely attached children post-intervention than the community standard group, although they did not differ from each other. Results provide strong support for the efficacy of CPP in promoting secure attachment in infants from maltreating families. Work is currently underway by this Rochester-based research team to investigate attachment security one-year post intervention.

Another randomized clinical trial, conducted by Toth and colleagues, sought to explore the impact of CPP on preschool children's representations of self and mother (Toth et al., 2002). Children and their caregivers were randomly assigned to CPP, PPI, or community standard, and representational models were assessed with the MacArthur Story-Stem Battery (Bretherton et al., 1990). Children in the attachment-based intervention, CPP, experienced significant declines in negative self-representations and maladaptive maternal representations and significant increases in positive self-representations and mother-child relationship expectations from pre- to post-intervention. While changes in representations were also found in the PPI condition, negative self-representations decreased significantly more in CPP compared to PPI, and positive self-representations and mother-child relationship expectations improved in the CPP over the PPI condition at a trend level. These findings highlight the efficacy of CPP for reworking representations of self and other in maltreated children.

In addition to promoting attachment security in maltreated infants and reworking representations of self in maltreated preschoolers, CPP also has been found to be efficacious at promoting positive child adaptation in other domains. CPP was more effective than community standard plus case management at improving child behavioral problems and trauma symptoms for children aged three to five who had been exposed to marital violence (Lieberman, Van Horn & Ghosh Ippen, 2005). A six-month follow-up study of CPP found that reductions in child behavior problems were maintained, suggesting the durability of CPP for treating child symptoms (Lieberman, Ghosh Ippen & Van Horn, 2006).

Implementing CPP in community settings

The above findings support the efficacy of CPP in controlled research trials; however it is critical that preventive interventions be exported to the clinical world more broadly once efficacy has been established. CPP was recently examined in a community setting emphasizing wrap around care for diverse youth in foster care (Weiner, Schneider & Lyons, 2009). Children receiving services at one of the two agencies delivering CPP for this project were eligible to participate if they had experienced a moderate or severe traumatic experience, were under the age of 6, and had a caregiver willing to participate in treatment.

Child traumatic stress symptoms and behavioral and emotional needs decreased significantly for African American, biracial, and Hispanic children receiving the CPP intervention, but not for White children (Weiner et al., 2009). Additionally, risk behaviors decreased and strengths increased for African American and biracial children participating in this study (Weiner et al., 2009).

The feasibility and effectiveness of CPP was also examined in a community setting as part of Florida's Infant and Young Child Mental Health Pilot Project (Osofsky et al., 2007). In this study, CPP was administered to families in which the parent had maltreated their child and was court ordered to participate or was identified as at high risk for abuse or neglect. Attrition was high, with more than 50% of families dropping out before engagement or during treatment; however increased behavioral and emotional responsiveness and positive discipline were observed in the caregivers who completed treatment, as was decreased intrusiveness (Osofsky et al., 2007). Additionally, development improved in at least one domain (communication, gross motor, fine motor, problem solving, or personal –social) for 50% of the children receiving CPP who had previously been screened as at risk for a developmental delay (Osofsky et al., 2007). Importantly, during the first three years of the pilot study, there were no new reports of child abuse or neglect involving children completing CPP with their caregiver.

These studies provide preliminary evidence for the feasibility of utilizing CPP with families willing to engage in a community setting, and results suggest that child symptom reduction and improved parenting are attainable when CPP is exported from the laboratory into the non-academic clinical arena. However, to date, it is unclear what impact CPP has on the attachment relationship when applied in a community setting. Currently, Toth and colleagues are collaborating with community partners on an effectiveness study of CPP for teen mothers residing in poverty to promote attachment security and prevent child maltreatment before families become involved with the child protective services system. This project is aptly named “Building Healthy Children”.

Development of the Building Healthy Children (BHC) program

Drawing upon efficacy studies of CPP, and in partnership with the Monroe County Department of Human Services (DHS) and the United Way of Greater Rochester, a program designed to prevent maladaptive parenting and maltreatment in impoverished mothers who had their first child prior to the age of 21 was developed. This initiative was born out of the recognition that community child welfare services had become focused on treatment rather than prevention and that primary and secondary prevention holds considerable potential for decreasing child maltreatment in potentially vulnerable populations.

This collaborative endeavor incorporated knowledge from a university setting as well as community expertise. We believed that this strategy could best foster the ultimate exportation of evidence-based treatments into the broader community. Importantly, the community-based program funders recognized the need to critically evaluate the program and dedicated dollars to the evaluation process. Although a number of evidence-based interventions were incorporated into the BHC program model, in this article we highlight the exportation and evaluation of CPP.

During a three year period, over 300 participants were enrolled and randomly assigned to either the BHC active treatment or to an enhanced care as usual arm after informed consent was received. It is important to highlight that this non-treatment seeking group of mothers and children were recruited through a medical center pediatrics department, thereby facilitating the identification of eligible participants and the likelihood that they would agree to take part in the program. Specifically, eligible mothers were told that because they

brought their baby to the medical clinic for care that they were being offered several supportive services, depending on their needs. For example, they could receive assistance with transportation to medical appointments, with securing childcare, DHS benefits, or resources for their baby. Further, they were offered parenting support and assistance with employment and education. The research was initially explained as trying to get feedback from moms in the program about their experience with being a young parent. Mothers randomized to the comparison group were told only that we were interested in receiving feedback about their experience being a young parent, including their opinions on being a parent and stressors facing them as young mothers. Both groups received gift cards to thank them for their participation and time in the assessment visits. We found that a very high percentage of eligible women agreed to the services offered and the retention rate of enrolled participants has been very high at approximately 85%. Women also were quite willing to complete research visits designed to evaluate service effectiveness. A multi-level of analysis measurement battery that incorporated assessments of emotional and behavioral functioning, as well as possible genetic moderators of outcome, was utilized. The design and evaluation of the BHC program as described below highlight strategies that can increase the translation of research knowledge into clinical community settings.

First, it was important that all partners involved in BHC valued each other's expertise and differing perspectives. Exporting and evaluating an evidence-based model of therapy to the community requires considerable compromise. For example, although our research team was invested in utilizing a rigorous measurement strategy to evaluate outcome, our community partners who had considerable experience dealing with young mothers raised concern about the burden of assessment that we initially proposed and feared that participants would discontinue their participation in the program. Consequently, the measurement battery was re-examined and only the most critical elements were retained.

Second, challenges that can arise related to the actual delivery of an evidence-based model in community clinical settings, such as infidelity to the model, must be anticipated. These concerns were avoided in the BHC project by ensuring proper administrative structure to support the implementation of CPP. This structure included reasonable caseloads and ongoing supervision, components critical to ensuring fidelity to the model and thus successfully importing evidence-based models such as CPP into community settings (Toth, Manly, & Nilsen, 2008). In the absence of such administrative structure and the fidelity of implementation that they support, negative effectiveness outcome data may emerge that is actually erroneous.

The BHC initiative reflects a culmination of over two decades of discussions and the development of trust among Mt. Hope Family Center, a university-based facility, and community service providers, government, and private funding sources. It is clear that such effective partnerships are possible, but that enduring commitment across systems and the ability to recognize and build on the strengths of diverse organizations are integral to success.

Limitations

CPP has received support of both efficacy and emerging effectiveness research as an intervention that promotes positive child adaptation in the context of maltreatment; however, limitations to the application of this model must be noted. First, the majority of the research described above was conducted with children in the custody of one of their biological caregivers, and may not extend to children who have been removed from their primary caregiver and placed in the foster care system unless plans are reunification with the biological caregiver. Other interventions, such as ABC (Dozier, 2003; Dozier et al., 2008)

may be more appropriate for children who reside in foster care. However, recent national statistics indicate that only 20.8% of maltreated children are removed from the home (U.S. Department of Health and Human Services, 2010), necessitating the development and dissemination of effective interventions that strengthen the relationship between the child and their primary caregiver when removal does not take place. Second, the age of the child is an important consideration when deciding whether CPP is the appropriate intervention. CPP is designed for children ages zero to five given its focus on the attachment relationship, which is ascendant during the first few years of life. Importantly, children under the age of one are at the highest risk for maltreatment (U.S. Department of Health and Human Services, 2010), a statistic that emphasizes the need for effective interventions with very young children and their caregivers. Interventions such as Trauma-Focused Cognitive Behavioral Therapy (Cohen, Mannarino, Deblinger, 2006) are likely to be more appropriate for older children who have experienced maltreatment. Next, extreme cognitive limitations in either the parent or the child may also limit the success of CPP. Other interventions designed for families where developmental disabilities are present should be considered when the initial assessment indicates that either the parent or child may have difficulty engaging in CPP due to severe cognitive limitations. Finally, as with any intervention, families willing to participate in CPP may have an openness to change that may not be representative of all maltreating families. Notably, however, participants in these studies were not treatment seeking, underscoring the significance of detecting treatment effects for CPP in a sample that was not motivated to seek intervention on their own.

Conclusions

Although basic research is increasingly being translated to the prevention and treatment of child maltreatment, the growth of basic research knowledge has generally surpassed its application to mental disorders (Fenton et al., 2002). The prevention and treatment of the sequelae of child maltreatment is not an exception to this unfortunate reality. In order to bridge the gap between basic and applied research and its application to problems of clinical importance, investigators and clinicians must stretch beyond traditional boundaries. Collaborations across disciplines are necessary if areas as diverse as neuroscience, genetics, emotion, cognition, social cognition, and interpersonal processes are to be incorporated into addressing the needs of children in maltreating families. As efforts have expanded to incorporate basic research knowledge into clinical arenas, it has become increasingly clear that this is necessarily a gradual process. To begin, it is critical that those conducting basic research are committed to conceiving their questions with the goal of having findings ultimately inform applications of the knowledge gained (Cicchetti & Toth, 2006). Clearly, before theoretically-informed models of prevention or intervention can be developed, applied to maltreating populations, and evaluated, there must be an understanding of the mechanisms and processes that contribute to a maladaptive course of development. As an exemplar of this process, the extensive basic research conducted on attachment theory and the consequences associated with children developing an insecure or disorganized attachment to their primary caregiver contributed to the development of CPP. This theoretically derived intervention was then rigorously tested in multiple efficacy trials to determine its utility for maltreating families and for families with domestic violence in highly controlled research settings. Now that efficacy has been established, effectiveness studies have been and are currently being undertaken to determine the feasibility of exporting this empirically based treatment into the broader clinical arena. As a last step in this process, it is important for the scientific community to be open to feedback from those implementing interventions in the field and to use this information when revising interventions and seeking mediators and moderators of treatment efficacy.

Research has coalesced to suggest that maltreated children are at high risk for developing a disorganized attachment to their caregiver during the first years of life. When this early developmental task is not navigated successfully, the child is at risk for continued maladaptation across the life course (Sroufe, 2005). Early interventions such as CPP that successfully reorganize the attachment relationship may alter the negative developmental cascade and promote competence across multiple domains over the child's life course (Masten & Cicchetti, 2010). Recent research suggests that early preventive interventions with maltreated children are even capable of promoting normative neurobiological development (Cicchetti, Rogosch, Toth & Sturge-Apple, 2011; Fisher, Stoolmiller, Gunnar & Burraston, 2007), highlighting the continued importance of studying change processes in the lab while applying efficacious interventions in the community. Mutual respect and openness to growth across systems will do much to foster the translation of research on the causes and consequences of child maltreatment into reducing the burden to individuals and to society more broadly.

Key Practitioner Message

- Child maltreatment is a prevalent problem that exerts deleterious effects on various developmental domains, including attachment
- Attachment theory informed interventions such as Child parent psychotherapy (CPP) have been found to be efficacious.
- Increasingly, efficacious interventions must be exported from university-based laboratory settings and utilized in community settings
- Encouraging results are emerging from effectiveness studies providing CPP to maltreated children and their families in the broader community
- A key to translating intervention research to practice lies in an enduring commitment across systems and the ability to recognize and build on the strengths of diverse organizations

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