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Caregiver Insightfulness and Young Children's Violence Exposure: Testing a Relational Model of Risk and Resilience

Sarah A. O. Gray,

Tulane University

Danielle Forbes,

Jewish Family & Children's Service

Margaret Briggs-Gowan, and

University of Connecticut Health Sciences Center

Alice S. Carter

University of Massachusetts Boston

Abstract

This study employed a relational post-traumatic stress frame to explore the co-contribution of young children's exposure to violence and caregiver insightfulness on child behavioral outcomes in a high-risk, non-referred sample of caregivers and preschoolers ($n = 64$; mean age 3.83 years, $SD = .77$). Caregiver insightfulness did not have a main effect on child outcomes but did moderate the relation between violence exposure and child behavior across all observed outcomes. Violence-exposed children with non-insightful caregivers demonstrated higher caregiver-rated internalizing and externalizing behaviors and observer-rated negative affect than all other groups. Among children not exposed to violence, insightfulness was not related to children's behavior problems or negative affect, suggesting violence-specific processes. Though cross-sectional, results suggest that the effects of violence and caregiver insightfulness on child outcomes are contingent on one another and that caregiver insightfulness may play a protective role in contexts of violence.

Keywords

Insightfulness Assessment; representation; violence; trauma; parenting

Young children are at particular risk for being exposed to violence-related potentially traumatic events (PTEs; Fantuzzo & Fusco, 2007). Prevalence studies suggest that approximately one in four children under four years of age has been exposed to a PTE, and that approximately 1 in 7 children of children under four years has been exposed to a PTE characterized by interpersonal violence (including community, family, and child-directed violence; Briggs-Gowan, Carter, et al., 2010; Briggs-Gowan, Ford, Fraleigh, McCarthy, & Carter, 2010). These rates are higher for children living in poverty (Margolin & Gordis,

2000; Briggs-Gowan, Ford, et al., 2010), where prevalence rates of exposure to interpersonal violence up to 45% have been documented (Ainsberg, 2001). While most research on children and violence focused on older children, evidence supporting the deleterious effects of exposure to violence on young children's functioning across a wide range of competencies and domains, including broad psychopathology symptoms, is growing (Briggs-Gowan, Carter, et al., 2010; Huth-Bocks, Levendosky, & Semel, 2001; Mongillo, Briggs-Gowan, Ford, & Carter, 2009). Moreover, violence exposure appears to be more strongly related to psychopathology than non-violent potentially traumatic exposures (Briggs-Gowan, Carter, et al., 2010).

However, not all children exposed to potentially traumatic events, including violence, develop trauma-related symptomatology (Martinez-Torteya, Bogat, von Eye, & Levendosky, 2009). What differentiates children who are vulnerable to the impacts of violence from those who are resilient? The etiology of post-traumatic symptomatology is multiply-determined and involves child-, family-, and community-level factors, as well as factors related to the exposure itself (Bogat, DeJonghe, Levendosky, Davidson, & von Eye, 2006; Briggs-Gowan, Ford, et al., 2010; Finkelhor, Ormrod & Turner, 2007; Howell, Graham-Bermann, Czyz, & Lilly, 2010; Martinez-Torteya et al., 2009). Caregivers appear to play a crucial role in children's adaptation following violence exposure as primary attachment figures protect young children from harm, regulate young children's stress responses, and direct children's coping and meaning making, critical processes following PTEs (Bogat et al., 2006; Lieberman, Van Horn, & Ozer, 2005; Scheeringa & Zeanah, 2001). Yet a potentially complicating factor is that many caregivers themselves have been exposed to violence (Margolin and Gordis, 2000). Scheeringa & Zeanah (2001) proposed the construct "Relational PTSD" to describe how primary caregiving relationships may be critical to expressions of posttraumatic stress in early childhood. A number of studies demonstrate the association between parent and family factors and maladaptive child outcomes – including higher rates of PTSD, increased number of PTSD symptoms, and elevated internalizing, externalizing, depression, aggression, and social difficulties (for review, see Scheeringa & Zeanah, 2001). Two theorized pathways of effect include: 1) caregivers' psychopathology and distress, and 2) caregivers' attachment-related behaviors.

A small but growing body of research demonstrates links between caregivers' experiences of violence, distress or psychopathology symptoms, and young children's outcomes in contexts of both family and community violence (Briggs-Gowan, Ford, et al., 2010; Ainsberg, 2001; Linares et al., 2001; Laor et al., 1997). Relations have been documented linking caregiver exposure to violence and psychopathology to parent-child relationship factors (Gustafsson & Cox, 2012; Yoo & Huang, 2012; Cohen, Hien, & Batchelder, 2008), such as harsh and punitive parenting behaviors (Lyons-Ruth & Block, 1996) or observed withdrawal and avoidance in interactions (Schechter et al., 2008); however, these studies have not examined child outcomes. A smaller number of studies have examined mediational pathways by which, in contexts of family violence, caregiver psychopathology appears to impact child outcomes through parenting behaviors (Levendosky et al., 2006; Huang, Wang & Warrener, 2010; Gustafsson, Cox & Blair, 2012; Grasso et al., in press). Lending strong evidence to the relational nature of post-traumatic stress in early childhood, for example, in a sample of 85 preschoolers exposed to family violence, severity of child

behavior problems was predicted *only* by the observed quality of the mother-child relationship and maternal PTSD; severity of child violence exposure did not directly predict child behavior problems (Lieberman, Van Horn, & Ozer, 2005). Taken together, this body of research suggests a model, more robustly examined in family violence contexts than in community violence contexts, by which caregiver symptomatology impacts child outcomes by way of caregiver-child relationships.

Attachment theory provides a lens through which to understand the intersection of experiences of violence and parent-child relationships. Beyond specific psychopathology symptoms, caregivers also carry with them into the caregiving relationship their own history of how they were cared for. Through the frame of internal working models of relationships, attachment theory describes a pathway through which caregiver's implicit models of her/himself and of her child may be negatively impacted by caregivers' experiences of violence – a relational view of self and other that may then be transmitted across generations (Levendosky et al., 2012).

Negative attributions of the child have been associated with caregivers' own histories of violence (Gara, Allen, Herzog, & Woolfolk, 2000) as well as use of harsh parenting tactics with their children (Lorber, O'Leary, & Kendziora, 2003). Mothers who have experienced violence have been found to have significantly more negative representations of both their young children (Schwerdtfeger & Goff, 2007; Schechter et al., 2005) and of themselves as mothers (Huth-Bocks, Levendosky, Theran, & Bogat, 2004), though these studies did not include child outcomes. Negative representations may also interrupt caregivers' capacity to be attuned to and regulate children's negative affect. A study among 30 preschool-aged children whose mothers were victims of family violence (Johnson & Lieberman, 2007) found that, in addition to severity of mothers' PTSD, mothers' lack of attunement to children's anger and sadness predicted externalizing behaviors. The authors did not find support for a mediational model in which attunement mediated the relation between violence and child behavior because severity of conflict was not associated with maternal attunement. However, moderation was not tested in this study; it may be that maternal attunement to children's emotions moderates the impact of violence exposure on child behavior problems. In a longitudinal study of children exposed to intrauterine cocaine, children's disorganized attachment at twelve months predicted higher rates of PTSD symptoms at age eight following exposures to violence (Macdonald et al., 2008). Thus, a growing body of evidence suggests that parent-child attunement and child attachment may be critical in the link between children's exposures to violence and child functioning. Pursuantly, many evidence-based treatments for young children exposed to violence work at the level of the caregiver-child relationship (Lieberman, Van Horn, & Ghosh Ippen, 2005; Timmer et al., 2005; Dozier et al., 2006).

Relational Resilience? Insightfulness and Sensitive Caregiving

Relative to the evidence that negative attributions or representations may impact child outcomes, more limited attention has been paid to the relational protective factors that may protect young children from the deleterious impacts of violence. Determining the relational resilience factors that may enable a caregiver to remain warm and maintain a positive

parent-child relationship in the face of violence may inform prevention and intervention among these children and families.

Theorized as a capacity underlying responsive caregiving and rooted in attachment theory, insightfulness is defined as the ability to inhabit the child's mind or identify motives that underlie behavior. As described by the authors of the Insightfulness Assessment, designed to measure this construct, three main features of insightfulness are assessed: "insight regarding the motives for the child's behavior, an emotionally complex view of the child, and openness to new and sometimes unexpected information regarding the child" (Oppenheim & Koren-Karie, 2009, p. 268). As Fraiberg and her colleagues described with the concept of "Ghosts in the Nursery," caregivers' own unresolved conflicts and trauma may interfere with their ability to "see" their child's motives, behaviors, and emotions (Fraiberg, Adelson, & Shapiro, 1975). This concept was elaborated further by Lieberman and colleagues (Silverman & Lieberman, 1999), who have explored how caregivers' negative attributions about their children's motives can interrupt sensitive caregiving in a vicious cycle of self-fulfilling prophecies: caregivers' negative attributions (e.g. the child is greedy or malicious) lead to insensitive caregiving, which in turn leads to exacerbated negative child behavior, by which attributions are confirmed. Lieberman has also theorized "Angels in the Nursery," or protective forces that may allow caregivers with violent histories to be warm, responsive caregivers (Lieberman, Padron, Van Horn, & Harris, 2005).

Consistent with studies using other measures of caregivers' representations of their children (Slade, Belsky, Aber, & Phelps, 1999; Parker & Zeanah, 1997), caregiver classification on the Insightfulness Assessment has been linked to attachment behavior in children (Oppenheim, Koren-Karie, & Sagi, 2001) and maternal sensitivity (Koren-Karie, Oppenheim, Dolev, Sher, & Etzion-Carasso, 2002). In a sample of mothers and children clinically referred to treatment for child behavior problems, only 9% of mothers were classified as insightful (Oppenheim, Goldsmith, & Koren-Karie, 2004), and among those referred to treatment under court supervision, only 11% were classified as insightful (Oppenheim & Koren-Karie, 2009). Although the measure to date has not been used to examine questions about traumatic process, work using other measures of maternal representations has explored impacts of mothers' experiences of violence on representations. While some evidence indicates caregiver violence poses a risk for negative representations (Huth-Bocks et al., 2004; Lyons-Ruth & Block, 1996), in other samples, experiences of violence and PTSD have not been found to relate to caregiver representations (Schechter et al., 2005; Stacks et al., 2014). To date, these studies have not examined links to child adjustment in contexts of violence.

The overarching aim of this study was to explore the co-contributions of children's exposure to violence and caregiver insightfulness to child behavior outcomes in a high-risk, community sample of caregivers and their children 3–5 years of age. Because poverty and diffuse sociodemographic risk often co-occur with violence and obscure its unique risk to child mental health outcomes (Briggs-Gowan, Carter, et al., 2010; Briggs-Gowan, Ford, et al., 2010; Ainsberg, 2001), this study was conducted with a racially and ethnically diverse, low-income, urban sample. We hypothesized that caregiver classification as insightful would be associated with lower levels of child internalizing and externalizing symptoms and

observer ratings of child negative affect. Regarding violence exposure, we hypothesized that children's violence exposure would be associated with child behavior and observed negative affect. Finally, it was hypothesized that caregiver insightfulness would moderate the relation between child exposure to violence and child behavior, such that dyads with higher levels of caregiver insightfulness would show a weaker relation between violence exposure and child behavior. In other words, we expected that insightfulness would be protective for children exposed to violence.

Methods

Participants

All participants were low-income based on their eligibility for receiving services from Women Infants and Children (WIC) and Head Start programs (100–185% of federal poverty guidelines). Sixty of the 64 participants were biological mothers of the participating child, two were fathers, one a grandmother, and one a great-grandmother (age range: 18–74); findings were parallel with non-maternal caregivers excluded, so reported results include the whole sample. Caregivers were racially diverse (19% white, 45% black; 22% Latino), and 36% of caregivers were bilingual. The sample was majority single-parent (61%) and currently unemployed (53%); modal level of education was some college (13% with college degree). Children (girls = 34, boys = 30) were between 3–5 years of age (mean age = 3.83, $SD = .77$).

Procedures

Caregivers and children were invited to participate from a larger screening study at WIC and Head Start programs. In that larger study, screener surveys included information on parent and child exposure to potentially traumatic events (PTEs) on the Life Events Checklist (Gray, Litz, Hsu & Lombardo, 2004). In the second phase, caregivers and children completed a 2–3 hour visit at their home or in the lab, based on parent preference. Exclusion criteria for the second phase included not being able to complete interviews in English, and diagnosis of global developmental delay by parent report. The sample was enriched for endorsement of violence-related PTEs; specific items used in screening included child or parent witnessing or experiencing physical assaults or threats, being attacked with a weapon, being robbed or mugged, combat or exposure to a war zone, being held in captivity, and violence in the community. Dyads with no child or parent violence exposure reported on the screener, but who were group-matched on child age and sex and parent bilingual status and education, were also invited to participate. Caregivers were given \$50 for their participation, and children were given a book and toy. All procedures were approved by a university IRB; in-person visits were conducted by graduate students in clinical or counseling psychology.

Measures

Sociodemographic information—Caregivers reported on their own and children's race, ethnicity, and age, as well as education, marital status, and bilingual status.

Child measures

Exposure to violence and potentially traumatic events: In the second phase, children's exposure to violence and other potentially traumatic events was assessed with caregivers using paper-and-pencil as well as interview formats, and children were classified as violence-exposed if either method indicated exposure ("or" rule). First, caregivers completed a modified version of the *Preschool Age Psychiatric Assessment* (PAPA; Egger et al., 2006), a structured diagnostic interview with caregivers of 2- to 5-year-old children with good psychometric properties. The PAPA PTSD module includes an interview-based screen for 21 potentially traumatic events, including exposures to violence.

Child violence exposure was further assessed with the *Conflict Tactics Scale – Revised Version* (CTS-2) (Straus, Hamby, Boney-McCoy, & Sugarman, 1996), a widely-used measure of inter-partner conflict styles, including intimate partner violence over the past year. For this study, scales of physical assault were used. Individuals were interviewed on the frequency of tactics they use as well as tactics their partners employed over the past year, ranging from never to more than 20 times. The measure has demonstrated strong psychometric properties, including in a sample at high-sociodemographic-risk (Newton, Connelly, & Landsverk, 2001). Reliability for the physical assault scale was acceptable in this sample ($\alpha = .76$). Based on both caregiver responses on the PAPA and CTS, a dichotomous child exposure to violence variable was created, which included children who had been direct victims of violence by non-participating caregivers ($n = 3$) and children who had witnessed violence in the home ($n = 11$) and in their communities ($n = 8$) for a total of 22 children categorized as exposed to violence. In addition to violence exposure variables, based on caregivers' responses in the PAPA, a dichotomous variable for non-violent potentially traumatic exposure in the child was created for use in covariate analyses.

Child behavior problems: Caregivers reported on their children's behavior with the widely-used *Child Behavior Checklist 1.5–5: CBCL* (Achenbach, 2000), composed of 99 child behaviors rated on a 0-1-2 Likert. In these analyses, externalizing and internalizing raw sum scales were used ($\alpha = .90$ & $.88$).

Child negative affect: Observed child negative affect was coded using the *Parent-Child Interaction Rating Scales* (PCIRS; Sosinsky, Marakovitz & Carter, 2004). Six minutes of free-play caregiver-child interactions in which parent or child could choose from three bags of toys were rated on two 7-point scales reflecting the extent to which the child demonstrated signs of negative affect in the context of the interaction, as well as the extent to which negativity and hostility were directed towards the caregiver. Behavioral indicators of negative affect included whining, frowning, or crying; the absence of negative affect was reflected by either neutrality or positive affect. Ratings of 1 on each scale reflect "very low" levels of negative affect, ratings of 4 indicate "moderate" levels, and ratings of 7 indicate "very high" levels. Coding was completed by two coders, one of whom was blind to violence exposure status and both of whom were blind to insightfulness status; 20% of tapes were checked for inter-rater reliability, which was strong ($ICC = .92$).

Caregiver measures

Caregiver insightfulness: The *Insightfulness Assessment* (Oppenheim & Koren-Karie, 2002) is an attachment-informed coded interview that measures parents' capacity to empathically understand motives underlying their child's behavior in a complete, positive, and child-focused manner. Caregiver and child interactions were videotaped across three activities with the parent: a free play task, a wordless book task, and a parent distraction task, where children were given a simple toy and caregivers were asked to complete a form. Subsequently, caregivers viewed segments of videotape during a semi-structured interview about perceptions of children's thoughts and feelings. Interviews were coded on 10 scales and classified as one of four categories: *insightful* about children's motives and complex in the view of the child; *one-sided*, or predetermined and inflexible about children's experiences, at times struggling to stay focused on the child's experience; *disengaged*, or demonstrating a lack of complexity or engagement around children's words; and *mixed*, or showing more than one or contradictory and incoherent patterns. Twenty percent of transcripts were coded for reliability. Reliability for classifications and individual items was in the acceptable range (classification kappa = .77; for items, ICCs ranged from .76–.95). Coders were blind to child violence exposure and all other outcome and predictor variables. Non-insightful categories (one-sided, disengaged, mixed) were collapsed in categorical analyses due to small cell size, yielding a dichotomous insightfulness variable (insightful & non-insightful).

Although not the focus of hypotheses, additional data was collected on caregivers' violence exposure and their self-reported psychopathology for descriptive purposes.

Caregiver violence exposure: To address caregiver history of exposure, the PAPA interview was adapted to probe for parents' experiences of the same events. A caregiver exposure to violence variable was generated based on caregivers' reporting of their own histories of exposure to potentially traumatic events on 21 items that paralleled the child exposure measure.

Caregiver psychopathology: Caregivers also completed a global measure of psychological distress and symptomatology in the *Brief Symptom Inventory* (Derogatis & Melisaratos, 1983), a widely used shortened version of the longer Symptom Checklist (SCL-90-R). Participants rated themselves on a 1–5-point Likert scale of distress for 53 items, yielding a General Severity Index score of psychological distress that is a mean of all item responses ($\alpha = .97$) in this sample.

Results

Effect sizes are reported in partial eta squared and Cohen's d where appropriate.

Preliminary Analyses

Two dyads were excluded from negative affect analyses due to data missing from equipment malfunctions. One dyad had over 50% missing data on the CBCL and was excluded from those analyses; the remainder of participants had low levels of missing data on the CBCL.

and BSI (4 cases missing 1–2 items in a scale); mean substitution was used for these cases. Several outliers were identified among the violence-exposed group, including three on the CBCL internalizing scale outliers and two on the BSI; outliers were winsorized. The BSI remained positively skewed and leptokurtic, so logarithmic transformation was applied for analyses. By design, violence-exposed and non-exposed groups were matched on child sex and age as well as parent bilingual status and education level; there were no significant between-group differences on child age, caregiver bilingual status, or education level ($ps = .27-.74$). See Table 1 for descriptive statistics for exposed and non-exposed groups.

Caregivers of children in the violence-exposed group endorsed significantly more of their own symptom distress, as rated on the BSI, than caregivers of non-exposed children ($t(62) = 2.60, p = .01, d = .75$; see Table 1). However, caregivers were not significantly different across child violence exposure groups on categorization as insightful ($\chi^2(1, N = 64) = 2.70, p = .44$). In this high-risk sample, 50% of caregivers of children with violence exposure were classified as insightful, 36% one-sided, and 14% disengaged. Among caregivers of non-exposed children, 38% were classified as insightful, 31% one-sided, 26% disengaged, and 5% mixed.

Caregivers in this sample also reported of their own exposures to potentially traumatic events, including high rates of witnessing and experiencing physical (80%) and sexual (27%) violence. Caregivers who reported their own exposure to violence ($n = 53$) also endorsed more symptom severity on the BSI than caregivers without histories of their own history of violence exposure ($n = 11$; $t(62) = 2.48, p = .02, d = 1.23$). A logistic regression indicated that caregiver psychopathology on the BSI was not associated with categorization as insightful ($n = 27$) or non-insightful ($n = 37$).

Covariate Analyses

Potential covariates, including caregiver age, marital status, and bilingual status and child sex and age were explored in relation to predictor and outcome variables of interest. Given evidence that non-violence-related traumas can contribute to children's psychopathology above and beyond violence (Graham-Bermann et al., 2012), presence of non-violent potentially traumatic events was also explored as a covariate. Caregiver age was negatively correlated with violence exposure and child externalizing behaviors and was linked to higher likelihood of positive insightful categorization and thus was covaried in analyses including externalizing symptomatology. Despite being a verbally mediated task, caregiver insightful was not associated with caregiver education or bilingual status. No other significant correlations were found between sociodemographic variables and predictor and outcome measures, so no other demographic variables were covaried. See Table 2 for correlations between study variables. Observed rating of child negative affect were positively correlated with caregiver report of internalizing but not externalizing problems.

Hypothesis Testing

Insightfulness and child behavior—Contrary to hypothesis, there were no significant differences between children with insightful ($n = 27$) and non-insightful ($n = 37$) caregivers on externalizing ($F(1, 58) = 1.28, p = .29$) behaviors; children with insightful caregivers

were marginally more likely to have children with lower internalizing scores ($t(62) = 1.96, p = .06$). Caregiver insight was not related to observed negative affect ($t(60) = .11, p = .92$).

Violence and child behavior—Consistent with hypotheses, violence exposure was significantly related to children's behavior (see Table 1). Caregivers rated children in the violence-exposed group higher on externalizing ($t(61) = 3.99, p = .001, d = 1.08$) and internalizing ($t(61) = 3.90, p = .000, d = 1.16$) problems. Observed ratings of child negative affect were not different across violence exposure groups ($t = .92, p = .36$).

Putting it together: Co-contribution of violence and insightfulness to child behavior—To test whether caregiver insightfulness moderated the relation between child violence exposure and child behavior, a series of general linear models were run, with children's problem behavior as dependent variables, dichotomous child violence exposure and caregiver insightfulness as fixed factors, and a violence-by-insightfulness interaction term. Parent age was included as a covariate in analyses in which externalizing behavior was the outcome.

For child internalizing symptoms, there was a significant violence by insightfulness interaction ($F(1, 59) = 19.08, p < .001$, partial eta squared = .24; see Figure 1, Table 3). Among children exposed to violence, children with insightful caregivers were rated as having fewer internalizing problems than children with non-insightful caregivers ($t(20) = 3.98, p = .001, d = 1.70$). Insightfulness was not associated with internalizing behaviors among children not exposed to violence ($t(39) = .14, p = .89, d = .04$). Among children with insightful caregivers, exposure to violence was not associated with internalizing scores ($t(25) = 1.19, p = .24, d = .46$). However, among children with non-insightful caregivers, children exposed to violence were rated significantly higher on internalizing behaviors than children not exposed to violence ($t(34) = 6.98, p < .001, d = 2.47$).

A parallel pattern of moderation by insightfulness was observed in the relation between violence exposure and child externalizing symptoms ($F(1, 56) = 12.21, p = .001$, partial eta squared = .18; see Figure 2, Table 3). Post-hoc analyses revealed that among children exposed to violence, children with insightful caregivers were rated as significantly lower in externalizing than children with non-insightful caregivers ($t(20) = 3.04, p = .007, d = .82$). There was no association between insightfulness and externalizing behavior among children not exposed to violence ($t(39) = 1.58, p = .12, d = .48$). Among children with insightful caregivers, there was no association between violence exposure and child externalizing scores ($t(25) = .56, p = .58, d = .29$). However, among children with non-insightful caregivers, children exposed to violence were rated significantly higher on externalizing behaviors than children not exposed to violence ($t(34) = 6.52, p < .001, d = 2.13$).

Finally, a similar pattern of moderation by insightfulness was present in the relation between violence exposure and observed child negative affect ($F(1, 58) = 7.77, p = .007$, partial eta squared = .12; see Figure 3, Table 3). Among children exposed to violence, children with insightful caregivers were rated as demonstrating significantly less negative affect in interaction than children with non-insightful caregivers, ($t(19) = 2.79, p = .01, d = 1.20$); in contrast, there was no association between insightfulness and observed negative affect

among children not exposed to violence ($t(39) = 1.27, p = .22, d = .43$). Among children with insightful caregivers, there was no significant difference between externalizing scores of children who had been exposed to violence and those who had not ($t(25) = .76, p = .45, d = .46$). However, among children with non-insightful caregivers, children exposed to violence demonstrated significantly more negative affect in interactions than children not exposed to violence ($t(33) = 3.89, p < .001, d = 1.33$).

Discussion

The present study was grounded in a theoretical framework of relational post-traumatic risk and resilience in early childhood and explored the role of caregiver insightfulness and child exposure to violence in young children's behavior. Consistent with hypotheses and the well-documented link between exposure to early life adversity and behavioral outcomes (Putnam, Harris, & Putnam, 2013), young children's exposure to violence was associated with higher caregiver ratings of both internalizing and externalizing behavior. This pattern was not noted in observer ratings of young children's negative affect. Not consistent with hypotheses, caregivers' capacity to see things from the child's point of view – insightfulness – was not predictive of children's behavior in the sample as a whole. However, these main effects on child behavior must also be considered in the context of clear and consistent moderation patterns of caregiver insightfulness by child violence exposure predicting to child behavioral outcomes, suggesting that caregiver insightfulness may be particularly relevant to child outcomes in contexts of the extreme stress of violence exposure.

Across all behavioral outcomes, caregiver insightfulness appeared to serve as a relationship-based protective factor among children exposed to violence. Among children with histories of violence exposure, caregiver insightfulness was linked to lower problem behaviors by parent report and lower negative affect by observer ratings. Whereas insightfulness did not relate to problem behaviors among children without violence exposure, among children with violence exposure, insightfulness appeared to buffer the impact of violence exposure on children's problem behaviors, whether assessed by both caregiver report and observer ratings. Among children exposed to violence, caregivers' capacity to openly and flexibly focus on their child's inner worlds (categorized as insightful) was associated with caregiver report of problem behavior on average similar to that of children who had not been exposed to violence. In contrast, children exposed to violence who had caregivers who were non-insightful had internalizing and externalizing symptoms that were significantly higher.

Both parent-child relationship quality (e.g., disorganized attachment patterns; Van IJzendoorn, Schuengel, & Bakermans-Kranenburg, 1999) and violence exposure (Briggs-Gowan, Carter et al., 2010) have been linked to psychopathology risk. While we anticipated that caregiver insightfulness would confer broad benefits to child behavior, this pattern was not observed in this sample, perhaps due to limited sample size restricting power, although broad main effects of violence exposure on child outcomes were observed. Rather, these findings suggest that violence and insightfulness may act in concert with one another to predict children's risk for negative adaptation. Overall, these patterns are consistent with the long-held tenet of attachment theory that caregivers' co-regulation of stress in young children grows out of their capacity to intuit children's needs and in turn respond sensitively,

and that such sensitive caregiving may provide protection for children's outcomes in contexts of environmental adversity. This pattern of moderation, wherein the influence of caregiver insightfulness and child exposure on children's behavioral outcomes appear contingent on one another, is broadly consistent with the "moderating effect" in the relational model of post-traumatic stress proposed by Scheeringa and Zeanah (2001), in which the effects of potentially traumatic experiences on young children's outcomes were hypothesized to be moderated by the caregiver-child relationship.

These findings, in concert with other moderation patterns observed in the literature on attachment, early trauma, and developmental psychopathology, can help to illuminate how some children appear to do well or "bounce back" from contexts of exposure to stress and potentially traumatic events (Alink, Cicchetti, Kim & Rogosch, 2009; Gilissen, Bakersmans-Kranenburg, Van IJzendoorn, & Van der Veer, 2008). Specifically, in this sample, caregiver non-insightfulness and environmental adversity, in the form of violence exposure, appeared to have *additive* effects on children's psychopathology during the preschool period, a critical developmental moment for the organization of self-regulation skills. However, caregivers' capacities to understand preschoolers' inner worlds appeared to serve as a protective factor in the presence of the risk factor of violence exposure, buffering the negative consequences of stress on children's outcomes. Since this relationship consistently was observed *only* among preschoolers with the risk factor of violence exposure, caregiver insightfulness appears to be serving as protective factor in the truest sense (Masten & Garmezy, 1985), buffering risk for maladaptation *specifically* within contexts of risk, here the exposure to violence. Thus, findings suggest that a deficit in caregiver insightfulness may not present risk in and of itself, but may precipitate developmental risk for maladaptation within contexts of adversity. These patterns are also consistent with patterns described in the child maltreatment literature (Alink, Cicchetti, Kim, & Rogosch, 2009), by which the contribution of the environmental insult of child maltreatment to child outcomes is in some cases contingent on the quality of the caregiving relationship.

The specific processes underlying this apparent protective link may be multiple. It may be that early experiences of security contribute to children's enhanced self-concept and regulatory capacities prior to the exposures in this sample, providing a buffer for the environmental insult of violence exposure (Alink, Cicchetti, Kim & Rogosch, 2009). Additionally, caregivers' understanding of children's reactions in the context of the violence may have supported dyads' open communication, caregivers' availability to children's bids for assistance, and children's adaptive meaning-making and positive coping vis a vis the exposure. Given the cross-sectional nature of this study, parsing these effects is impossible; unpacking these developmental psychopathology questions would require longitudinal design.

It is additionally notable that in this low-income, high-risk sample enriched for child violence exposure, caregiver classification as insightful on the Insightfulness Assessment (42%) was only somewhat lower than what has been reported in normative samples in previous studies (65–68%). Despite high rates of reported exposures to potentially traumatic events among caregivers, including physical (80%) and sexual (27%) violence, the 42% rate of insightfulness in this non-clinical, high-risk, sample was much higher than what has been

found in clinical samples of caregivers of clinically-referred children (9%) or caregivers under court supervision (11%; Oppenheim, Goldsmith, & Koren-Karie, 2004; Oppenheim & Koren-Karie, 2009). These rates suggest that insightfulness represents a set of capacities that are accessible and available to individuals with high sociodemographic risk. Additionally, these rates are consistent with current research in adult exposure to potentially traumatic events, which document that while most adults have been exposed to at least one PTEs, resilience is the most common outcome (Bonnano, Westphal, & Mancini, 2010). Importantly, insightfulness was also not associated with caregiver education or bilingual status in this sample, despite the fact that the insightfulness assessment is a verbally-mediated task.

Caregiver insightfulness category was also not associated with children's violence exposure, suggesting that insightfulness does not necessarily allow for caregivers in low income, high-risk communities to protect their young children from violence. These findings are consistent with previous findings that among mothers of young children exposed to intimate partner violence, severity of conflict was not related to mothers' attunement to their children's emotions (Johnson & Lieberman, 2007). These data suggest that in environments with high levels of violence, children's exposure may be independent of parents' capacities; however, the moderation findings in this sample suggest that insightfulness may support the child's capacity to cope with the stress of exposure, potentially reducing the impacts on children's behavioral disturbance.

In this sample, caregiver psychopathology was not related to classification as insightful, suggesting that caregivers' capacity to understand children's motives and perspectives is not related to caregivers' own symptom-related distress, at least in this non-clinical, community-recruited sample. The lack of relation between psychopathology and insightfulness is consistent with two previous studies failing to find associations between mothers' post-traumatic symptoms and their capacity to think about mental states in children (Schechter et al., 2005; Stacks et al., 2014). The insightfulness interview may be tapping not simply into mental representations but rather more directly into the cognitive and affective capacity to mentalize, or reflect on the mental state of others (Fonagy, Gergely, Jurist, & Target, 2004), theorized to be a capacity *underlying* mental representation of relationships that has been linked to transmission of attachment patterns (Kelly, Slade, & Grienberger, 2005). These findings provide the preliminary suggestion that, in dyads with histories of exposure to violence, reflective capacity may be critical to understanding the intergenerational transmission of trauma, independent of what caregivers' psychopathology may explain in that transmission.

Several limitations constrain conclusions that can be drawn. Most critically, the present study is cross-sectional; causality cannot be inferred. However, given the clear and consistent pattern of findings, future research may explore these relationships longitudinally. Additionally, future work may evaluate the impact of manipulating insightfulness experimentally through therapeutic intervention, some of which explicitly target caregiver meaning-making of young children's behavior (Lieberman, Ghosh-Ippen, & Van Horn, 2006).

The sample, while diverse and low-income, is also small in size and not representative, limiting generalizability. It may be that different types of exposures may be linked to different child outcomes (Lynch & Cicchetti, 1998) and that polyvictimization may increase risk for negative outcomes (Finkelhor, Ormrod & Turner, 2007); however, capturing this range of complexities was beyond the scope of this study. No caregivers in this sample were perpetrators of the violence children witnessed; pathways likely differ in instances of maltreatment or where the caregiver is the source of threat (Cassidy & Mohr, 2001; Alink, Cicchetti, Kim, & Rogosch, 2009)). Violence data was also recorded only by one caregiver's report, and state records of child abuse and neglect were not consulted.

Moreover, there is a growing body of literature that suggests that children may differ in their genetic and neurobiological sensitivity to positive as well as negative environmental contexts (Belsky & Pluess, 2009); child-level factors like temperament, genetics, and affective processing styles, that likely contribute to children's adaptation following a potentially traumatic event, as well as to their receptiveness to positive environmental contexts, were not examined in this study.

Caregivers who were the subjects of the insightfulness interview were also the reporters on children's psychopathology using pen-and-paper methods, and their perception of children's behavior is likely linked to their insightfulness capacities; however, direct associations between insightfulness and child behavior was not observed in the overall sample, and patterns were mirrored in observer ratings of child behavior. Additionally, ratings of child behavior were captured in the context of observing the caregiver-child relationship; by design, these codes reflect both overall child negative affectivity as well as negative affect directed towards or that is not contained by the caregiver. Future studies may want to incorporate measurement of children's behavior by third-party report or in observed interactions with non-caregiving adults or peers. Finally, this study explored only one caregiving relationship, while we know that young children often have multiple caregivers and attachment relationships.

However, this study design also had methodological strengths. Given that all children were low-income and at high sociodemographic risk, we were able to examine violence-specific processes absent of the confounding effects of these risks, and thus results are applicable to communities where violence is more common. Moreover, all participants, including those with violence exposure, were recruited directly from community agencies serving families living in poverty rather than treatment providers serving children and parents with psychopathology. Community-based recruitment allowed for documentation of these clinically-relevant processes among non-treatment-seeking dyads, which included children who are less symptomatic in addition to symptomatic children. Finally, the lack of necessity to include covariates meant that analyses retained power.

It is critical to point out that this relation between caregiver insightfulness and child behavior does not indicate that caregivers are to blame for children's outcomes, particularly in the absence of a model that integrates the contribution of individual child differences. Rather, caregiver-child relationships may be a critical source of recovery and target for intervention, particularly if caregivers are struggling to support children who are themselves

struggling (Scheeringa & Zeanah, 2001). Improving insightfulness may be a target of intervention and in one study, was associated with improvement in behavior problems in a small high-risk sample of preschoolers (Oppenheim et al., 2004).

Caregivers' interpretations of children's behavior appear to be adaptable to change through intervention, including through video feedback techniques (Smith, Dishion, Moore, Shaw, & Wilson, 2013) and among violence-exposed dyads (Schechter et al., 2006). Given the burgeoning evidence that exposure to violence impacts caregivers' internal working models (Huth-Bocks et al., 2004; Schechter et al., 2008; Schechter et al., 2005), it may be that improving caregiver insightfulness is constitutive of or a step towards improving relationship quality, and in turn child functioning, in families impacted by violence. However, as work on the development of these treatments is still relatively new, relational mechanisms of change – which may include changes in caregiver insightfulness – have yet to be documented in these interventions (Toth, Gravener-Davis, Guild, & Cicchetti, 2013). Until we know what specific relational change processes result in treatment outcomes for young children and their caregivers, we will not be able to best target our treatments to suit their needs.

Conclusion

This study provides evidence that caregivers' capacity to reflect on children's experience in a child-focused and positive manner may prevent the development of symptom expression under contexts of early violence exposure. The interaction effects observed were clear and consistent across child behavioral outcomes, suggesting that in contexts of violence exposure, the link between caregiver insightfulness and child outcomes is strong, with evidence of a protective function. Given the well-established risk that early exposure to adversity has on a wide range of health and mental health outcomes across the lifespan (Putnam, Harris, & Putnam, 2013), documenting protective factors, particularly modifiable ones, is of critical public health importance. While protecting children from exposures to interpersonal violence may not always be feasible, particularly in low-resourced communities where violence is endemic, these findings suggest that supportive caregivers' capacities may promote optimal child outcomes.

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Figure 1.
Interaction Between Categorical Caregiver Insight and Child Violence Exposure Predicting
Internalizing Behaviors

Figure 2.
Interaction Between Categorical Caregiver Insight and Child Violence Exposure Predicting Externalizing Behaviors

Figure 3.
Interaction Between Categorical Caregiver Insight and Child Violence Exposure Predicting
Observer Ratings of Negative Affect

Table 1

Descriptive Statistics of Dimensional Study Variables by Violence Grouping

	Violence Exposed (n = 22)		Non-Exposed (n = 42)	
	M	SD	M	SD
Parent Psychopathology (BSI GSI)	.43**	.28	.23	.24
Child Externalizing (CBCL)	14.97***	7.90	7.61	5.43
Child Internalizing (CBCL)	10.60***	6.36	4.93	2.69
Negative Affect (PCIRS)	3.95	1.72	3.20	1.96
Categorized as Insightful	50% (n = 11)	–	38% (n = 16)	–
Categorized as Non-insightful	50% (n = 11)	–	62% (n = 26)	–

Note. Notations indicate significantly higher scores between groups;

*
p < .05,

**
p < .01,

p < .001

Table 2

Correlations between Main Study Variables

	1.	2.	3.	4.	5.
1. Child Violence Exposure					
2. Caregiver Psychopathology	.33*				
3. Child Externalizing	.53***	.28*			
4. Child Internalizing	.61***	.46**	.68***		
5. Child Negative Affect	.19	.05	.23	.32*	
6. Caregiver Insightfulness	-.11	.01	.04	.23	-.01

Note.

* $p < .05$,

** $p < .01$,

*** $p < .001$.

Appropriate correlations run depending on combination of types of variables (Pearson, point-biserial). Insightfulness coded 1: insightful; 2: non-insightful; Violence exposure coded 0: not exposed; 1: exposed.

Table 3

Means and Standard Deviations Within Violence Exposure and Insightfulness Groups

	Insightful	Non-insightful
<u>Internalizing</u>		
Violence-Exposed	6.48 (3.54) (n = 11)	14.73 (5.90) (n = 11)
Non-Exposed	5.01 (2.84) (n = 16)	4.89 (2.64) (n = 25)
<u>Externalizing</u>		
Violence-Exposed	10.64 (6.20) (n = 11)	19.31 (7.16) (n = 11)
Non-Exposed	8.93 (6.56) (n = 15)	6.42 (4.52) (n = 24)
<u>Negative Affect</u>		
Violence-Exposed	3.09 (1.14) (n = 11)	4.90 (1.79) (n = 11)
Non-Exposed	3.75 (2.70) (n = 16)	2.84 (1.25) (n = 24)

Note: Across all outcomes, violence-exposed and non-insightful means are significantly higher than all other cells; other cells are not significantly different from one another.