The Impact of Violence on the Emerging Development of Emotion Regulation: The Role of the Caregiver

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THE IMPACT OF VIOLENCE ON THE EMERGING DEVELOPMENT OF EMOTION REGULATION:
THE ROLE OF THE CAREGIVER

by

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ABSTRACT
THE IMPACT OF VIOLENCE ON THE EMERGING DEVELOPMENT OF EMOTION REGULATION:
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Caregivers teach children how to navigate an emotional world (Thompson, 1994), and children's ability to manage emotional reactions underlies their mental health as well as their social and academic performance (Zeman, Cassano, Perry-Parish, & Stegall, 2006). However, children who experience adverse life events are at risk for impaired development of emotion regulation (Maughan & Cicchetti, 2002). Little is known about how parents of at-risk youth can continue to foster healthy development of emotion regulation for their children. Therefore, the current study aims to identify specific parenting practices that promote adaptive emotion regulation in at-risk preschoolers.

Multi-method, multi-informant data were collected from 124 caregiver-child dyads from Next Door Head Start programs in Milwaukee, WI. Results largely indicated that caregiver behavior was associated with resilience for preschool children. Specifically, results indicated a *positive* relationship between interparental aggression and emotion regulation abilities for children when caregivers demonstrated the following behaviors: 1) self-reported adaptive emotion regulation, 2) global acceptance when children talked about sadness, 3) sensitive responsiveness to their child during a play interaction, 4) structuring and scaffolding during play, and 5) *invalidation* of sadness. Similarly, exposure to interparental aggression was *negatively* related to a child's ability to manage emotions when caregivers demonstrated a *lack* of: 1) effective listening when children talked about sadness, and 2) positivity and emotion regulation during a play interaction. These findings provide practical insight into how parents can purposefully resource their child's emotional development in order to promote resilience.

Keywords: preschool, emotion regulation, resilience, violence, emotion socialization

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INTRODUCTION

Emotion regulation is critical for adaptive psychosocial functioning (Cicchetti, Ackerman, & Izard, 1995). Children's ability to develop, express, and manage both pleasant and unpleasant feelings is associated with social competence (Denham et al., 2003), academic adjustment (Herndon, Bailey, Shewark, Denham, & Bassett, 2013), and mental health (Eisenberg et al., 2001). Early exposure to adversity, including witnessing and directly experiencing violence, interrupts the development of emotion regulation and increases the likelihood of maladaptive outcomes such as internalizing and externalizing symptoms and peer rejection (e.g., Kim & Cicchetti, 2010; Maughan & Cicchetti, 2002). Research indicates that caregivers have an important role in the development of children's emotion regulation (Thompson, 1994). Parental emotion socialization practices have been dichotomized into two global categories: those that are supportive (i.e., validating responses) and facilitate emotional development, and those that are un-supportive (i.e., invalidating responses), and inhibit emotional functioning (e.g., Eisenberg, Cumberland, & Spinrad, 1998; Gottman, Katz, & Hooven, 1997). Much of this research has focused on parenting practices for children in middle childhood growing up within a "typical" environment (e.g., Baker, Fenning, & Crnic, 2011). As a result, very little is known about the relationship between specific parenting practices and emotion regulation in preschool-aged children exposed to high levels of adversity (Morris, Silk, Steinberg, Myers, & Robinson, 2007). Therefore, the purpose of the current study was to examine how specific caregiver socialization strategies are related to emotion regulation in a high-risk sample of preschool-aged children. The findings can provide insight into ways that caregivers can promote adaptive emotion regulation in young at-risk children.

Importance of Emotion Regulation

The way that emotional reactions are managed, including how they are monitored, evaluated, and modified in an effort to achieve a desired goal, is the process of emotion regulation (Thompson, 1994). Emotion regulation is a key ingredient in social, academic and personal effectiveness (Gross & Muñoz, 1995).

Social Competence

Children's emotion regulatory abilities are associated with greater social competence, better social skills, and greater popularity (Dunn & Brown, 1994; Eisenberg, Fabes, & Murphy, 1996; Fabes et al., 1999). Social competence refers to skills that enable making, interacting with, and keeping friends, such as cooperating and taking into account how others are feeling (Howes, Rubin, Ross, & French, 1988). Social competence in preschool has been associated with future social adjustment and academic achievement (for a review see Ladd, 2005). For example, preschool-age children who showed better regulation in emotionally distressing situations were evaluated as more socially competent in preschool as well as later in kindergarten (Denham et al., 2003).

Academic Success

Emotion regulatory abilities are also positively associated with academic success, including standardized achievement test scores (Howse, Lange, Farran, & Boyles, 2003), even when other variables including earlier academic success are taken into account (Carlton, 2000; Shields et al., 2001). Graziano, Reavis, Keane, and Calkins (2007) showed that emotion regulation as reported by parents positively predicted academic success and productivity in the classroom, as well as better/improved performance in math and early

literacy standardized tests (Graziano et al., 2007). The authors suggest that learning within a school setting requires persistence and frustration tolerance, and failure to properly manage difficult emotions may impede the ability to learn. In the same study, children with greater emotion regulation also had more positive relationships with their teachers and were less likely to have behavior problems; in turn, better teacher-student relationships predicted greater academic success.

Mental Health

Emotional functioning is closely linked to psychopathology. For example, internalizing disorders, such as depression and anxiety, are characterized by marked difficulty managing emotions (Plutchik, 1993). Emotion regulation has a transactional relationship with these disorders such that it can be both the cause and the result of psychopathology. For example, in a sample of adolescents, emotion regulation was associated with a reduced impact of emotional reactivity on depressive symptoms (Shapero, Abramson, & Alloy, 2016), and in another sample of adolescents, ineffective regulation of negative affect was related to higher levels of depressive symptoms and problem behavior (Silk, Steinberg, & Morris, 2003). Likewise, adolescents with internalizing symptoms were more likely than adolescents in a control group to engage in maladaptive emotion regulation strategies such as rumination and self-blame (Garnefski, Kraaij, & van Etten, 2005). Emotion regulation is also implicated in externalizing disorders, such as disruptive behavior disorders, which may reflect an undercontrol of negative emotions and impulses (Zeman, Shipman, & Suveg, 2002).

Development of Emotion Regulation

Emotion regulation begins as a dyadic process; during infancy, emotions are co-regulated by the parent and child. For example, caregivers help regulate infant arousal during face-to-face interactions by expressing different types of feelings and different levels of feeling intensity (Brazelton, Koslowski, & Main, 1974). As a result, infants learn to discriminate between different feelings and learn to match what is going on externally with how they feel internally and how they respond (Kopp, 1989). This process assists infants in using social referencing to modulate their own reactions to novel stimuli, based on the reaction of their caregiver (Campos & Sternberg, 1981).

As children enter their second year, they are able to participate more actively with their caregiver in the dyadic regulation of their emotion. For example, children begin to engage the caregiver in specific ways to signal how they are feeling (e.g., crawl behind the caregiver, tug at clothing, or use shoulder as comfort to cope with fear). During this time, caregivers may develop ideas about when, why, and how they will address child distress, which in turn will impact the development of emotion regulation strategies for their child (Demos, 1986). For example, if a caregiver uses the same regulatory strategies (e.g., feeding) regardless of why the child is crying, the child will likely not generate his or her own repertoire of tactics to regulate negative emotion.

Preschool-age children become increasingly adept at seeking comfort from adults and regulating their affect more independently. Emotion regulation strategies for preschoolers include avoiding or ignoring emotionally arousing situations, and using distraction, and reassuring self-talk (Thompson, 1990). Children continue to rely on caregiver guidance to regulate emotions, but they are also able to incorporate what they

have learned into ongoing self-regulatory efforts (Carlson, 2005; Denham, 1997). For example, through modeling and instruction, caregivers teach children about display rules, which are guidelines designed to alter emotional behavior so it is appropriate for the situation (e.g., saying "thank you" for an ugly sweater from Grandma; Cole, 1986).

Preschool represents an important time for emotional development for several reasons. Executive function and language skills are rapidly developing, which allows for improved ability to engage in problem solving, goal-directed behavior, and planning, as well as the skills to talk about emotions. As a result, caregivers continue to help preschool-age children in learning effective independent emotion regulation strategies. As children develop and enter middle childhood, emotion regulation becomes more independent of the parent (Eisenberg & Morris, 2002); therefore, preschool reflects a developmentally-appropriate time to identify the effectiveness of caregivers' emotion regulation strategy attempts. Preschoolers are still referencing their caregivers for regulation strategies, which means that parents are important targets for prevention and intervention.

Parental Emotion Socialization

According to Morris et al. (2007), children's emotion regulation is shaped through observation, parenting behaviors, and emotional relationships within the family, as reflected by the quality of attachment relationships and level of emotional expressiveness.

Emotion Reinforcement and Coaching

One way that parents explicitly and directly socialize emotion regulation is through didactic instruction, which also is known as "emotion talk" or coaching. Emotion coaching refers to parental awareness of child emotions, willingness to talk about and validate

emotions, and guidance on how to regulate emotions (Gottman et al., 1997). Emotion

coaching has been linked to better emotional understanding in preschool-age children

(Denham, Zoller, & Couchoud, 1994) and better self-regulation in a low-income sample of

preschool children (Brophy-Herb, Stansbury, Bocknek, & Horodysnski, 2012). Emotion

coaching also has been identified as a buffer in the relationship between poor emotion

regulation and externalizing behavior (Dunsmore, Booker, & Ollendick, 2013). Specifically,

children with poor emotion regulation exhibited less externalizing behavior when their

parents engaged in emotion coaching as compared to children whose parents did not

engage in emotion coaching (Dunsmore et al., 2013). Alternatively, unsupportive responses

to children's disclosure of vulnerable emotions may make children feel shame and self-

doubt, and develop symptoms of psychopathology (Fabes, Leonard, Kupanoff, & Martin,

2001; Lunkenheimer, Shields, & Cortina, 2007).

Limited research on gender differences in emotion socialization suggests that there

are some differences between mothers and fathers. For instance, one study found that

mothers engaged in more supportive emotion coaching during a teaching task than did

fathers (Wilson & Durbin, 2013). Furthermore, infants experienced more distress in the

presence of a non-responsive mother as compared to a non-responsive father (Ekas,

Braungart-Rieker, Lickenbrock, Zentall, & Maxwell, 2011; Ekas, Lickenbrock, & Braungart-

Rieker, 2013), and in the context of interparental conflict, only maternal emotional support

was related to the development of child emotion regulation (Fosco & Grych, 2013). Since

mothers are traditionally the primary caretakers, it is possible that mothers play a larger

role in emotion regulation development because they typically spend the most time with

the child (Kiel & Kalomiris, 2015).

Parent Emotional Expressivity and Modeling

Another way that parents explicitly, but indirectly, socialize emotion regulation is through their own emotional reactions and modeling of emotional behavior (Barrett & Campos, 1987). Children start to tag events with emotional meaning based on their parents' emotional reactions (Denham & Kochanoff, 2002). Children also learn the types of emotional expressions that are appropriate for specific social contexts (Eisenberg et al., 1998). Parents' affective expressions regulate the parent-child interaction and set the tone for dyadic engagement (Butler, 2011; Dix, 1991). For example, positive parental emotion expressivity and warmth promote child expressions of positive affect, cooperation, and regulatory skills (Brophy-Herb et al., 2012; Eiden, Edwards, & Leonard, 2007; Eisenberg et al., 2005; Thompson & Meyer, 2007).

Likewise, pervasive negative caregiver affect can result in children's difficulty reading and processing social information, emotion dysregulation, and problems with adjustment (Denham, 1989; Isley, O'Neil, Clatfelter & Parke, 1999). However, parents' expression of negative affect may promote healthy emotion regulation in certain circumstances, if the affect is appropriate and genuine (Biringen, 2005). For example, parents who express sadness at a funeral are conveying an important message that helps children evaluate, organize, and motivate responsive actions to similar events. Indeed, parental expressivity of negative affect in response to children's expressions of anger and sadness has been related to *low* levels of preschoolers' externalizing problems (Teti & Cole, 1995) and *higher* levels of acceptance of teachers' authority (Greenberg et al., 1999). Research suggests that the *type* and *amount* of parental negative expressivity may be important to consider. For example, when parents express hostile negativity (e.g., showing

contempt) rather than softer negative emotions (e.g., crying after a disagreement) were related to externalizing problems in elementary school children (Eisenberg et al., 2001).

The relationship between parental expressivity and child emotion regulation also is likely impacted by cultural values. When to express emotions and the meaning conveyed by affect is likely to differ across cultures and parent gender. For example, one study found that mothers and fathers showed similar levels of negative expressiveness in European American and African American families, whereas fathers were more negatively expressive than mothers in Lumbee American Indian families (Brown, Craig, & Halberstadt, 2015).

Parental emotion regulation

In order for parents to respond appropriately to the emotional experiences of their children, they need to be aware of their own emotions and effectively manage their own anxieties and concerns (Greenberg, 2015). In their 2011 review of parent involvement in child emotion regulation, Bariola, Gullone, and Hughes point out that although several reviews have described pathways for a connection between parent and child emotion regulation (e.g., Bridges et al., 2004; Morris et al., 2007), there was not existing literature at the time of the review to demonstrate this relationship empirically. Recently, the relationship between parent and child emotion regulation was illustrated in a sample of at-risk preschoolers. Specifically, maternal emotion dysregulation was positively associated with their children's displays of sadness and negatively associated with their children's problem solving during a task designed to elicit anger (Binion & Zalewski, 2017).

Attachment

In addition to parenting behaviors and practices, relationship dynamics also contribute to the development of emotion regulation. Researchers have suggested a direct link between the attachment process and the development of emotion regulation (for a review see Calkins & Hill, 2007). Sroufe (1996) argued that infants and children develop internal working models of affect in the same way they develop templates for behavior. Specifically, when distressed infants receive supportive care from their attachment figures, they learn to expect that expressions of affect will be met with appropriate, responsive attention from their caregivers and from the social world, and as a result, they feel comfortable expressing a full range of affect. Alternatively, if parents respond inconsistently to their infants, the infants may learn, for example, that exaggerated screams are a successful way to engage the caregivers, and this strategy may become incorporated into their behavioral repertoire. One longitudinal study demonstrated that secure attachment in infancy was predictive of effective use of emotion regulation strategies in a sample of low-income preschoolers (Gilliom, Shaw, Beck, Schonberg, & Lukon, 2002). Specifically, when presented with a frustrating task, attachment security at age one-and-a-half years uniquely predicted use of self-distraction, information gathering, and passive waiting, which were then predictive of children having fewer externalizing problems than peers at school entry.

Emotional Availability

The construct of emotional availability (EA) refers to the level of emotional attunement between the caregiver and child (Biringen, 1987). EA is a relational construct unique to each parent-child dyad (Biringen, 2005). Being emotionally available means communicating an openness and acceptance of another's feelings and needs (Emde, 1998). EA is inspired by attachment theory (Bowlby, 1969), as well as the family systems

perspective (e.g., Guttman, 1991). Attachment can be conceptualized as a component of EA, but EA extends attachment theory in several key ways (Biringen & Easterbrooks, 2012).

First, EA is a measure of the emotional connection between caregiver and child (Biringen, 2005). Two mothers can engage in the same behavior with their children but may be rated differently on emotional availability because the needs and goals of each dyad are unique. Second, EA refers to the acceptance of a wide range of emotions and is not specific to distress (Biringen, 2005). In contrast to the attachment system, which is activated in the presence of distress, EA can be observed during pleasurable experiences as well as in response to distress (Biringen & Easterbrooks, 2012). Finally, whereas attachment largely focuses on the behavior of the child as an indicator of the attachment relationship, EA incorporates both parent and child characteristics (Biringen & Easterbrooks, 2012). EA measures both a broad sense of child-caregiver emotional attachment and specific aspects of the relationship, including unique contributions from the caregiver (e.g., sensitivity and hostility) and the child (i.e., responsiveness and involvement).

Components of EA have been used to highlight this constructs' association with emotion regulation (e.g., Kertes et al., 2009; Little & Carter, 2005). In a sample of low-income 12-month-old infants and their mothers, the EA component of maternal hostility was associated with infant difficulty regulating distress during an emotion challenge, even after accounting for infant temperament (Little & Carter, 2005). This is consistent with the idea that parents are implicitly socializing infant emotion regulation through both nonverbal and verbal aspects of emotional availability. This study also found that when compared to other published percentages of EA, there were higher rates of nonoptimal EA in this sample of low-income, predominantly unmarried, African American participants as measured by

both child and mother dimensions. This suggests that some populations may be particularly

vulnerable to detached, complicated, or problematic emotional attachments, which could

have significant implications for child emotion regulation and related outcomes. Thompson

(2011) notes that emotions are influenced by social situations and standards. In fact,

research shows that compared to middle-income children, lower income children have

different expectations for how peers will respond to their distress, which influences their

emotional reactivity and self-regulation (Raver, 2004).

Exposure to Violence in Childhood

The environment that children grow up in has a socializing effect on their ability to

self regulate. Many children are exposed to violence in the home and the community,

making them vulnerable to a range of risk factors, including impaired emotional

development. Prevalence estimates for exposure to violence vary across nationally

representative samples. The National Longitudinal Study of Adolescent Health (Add Health;

Hussey, Chang, & Kotch, 2006) gathered retrospective data on adolescents' lifetime

exposure (i.e., from birth to sixth grade) to childhood abuse and neglect. Results indicated

that physical abuse, as defined by being "slapped, hit, or kicked" by a parent or other

caregiver, was reported by 28.4% of participants, physical neglect by 11.8%, and contact

sexual abuse by 4.5% of participants (Hussey et al., 2006). The National Survey of Children's

Exposure to Violence (NatSCEV; Finkelhor, Turner, Ormrod, & Hamby, 2009) assessed a

broader range of experiences with abuse and violence that included physical altercations

with peers and reported annual rates of exposure to violence of 50.2% for boys and 42.1%

for girls. Reports of caregiver-initiated maltreatment (i.e., physical, psychological abuse, and

neglect) were similar to prior studies (10.6% and 9.7% for boys and girls, respectively), and

rates for sexual victimization were 7.4% for girls and 4.8% for boys (Finkelhor et al., 2009).

Data from NatSCEV (Finkelhor et al., 2009) indicates that it is important to consider how

violence experienced in and out of the home affects the development of emotion regulation

for children.

Outcomes of Violence Exposure

Children exposed to violence are more likely to engage in dating violence,

delinquency, and further victimization, and they are also at higher risk for developing

psychopathology (e.g., Fergusson, Boden, & Horwood, 2008; Noll & Grych, 2011; Vagi et al.,

2013). In fact, results from one community sample indicated that the more types of abuse

an individual reported experiencing as a child, the more likely he/she was to report abuse as

an adult (Chiu et al., 2013). For example, the prevalence of physical abuse was 27% among

women exposed to one type of childhood abuse, 49% among women exposed to two types

of childhood abuse, and 69% for women exposed to three types of childhood abuse. Similar

rates were observed for men and women across all three types of abuse (i.e., physical,

sexual and psychological).

The Impact of Violence on the Development of Emotion Regulation

One important mechanism that has been identified for the association between

childhood victimization and continued impairment into adulthood is emotion dysregulation

(e.g., Lilly, London, & Bridgett, 2014). The literature consistently has demonstrated that all

forms of violence, regardless of the specific type, lead to a disruption in the healthy

development of emotion regulation (e.g., Davies, Cicchetti, & Martin, 2012; Maughan &

Cicchetti, 2002; Schwartz & Proctor, 2000). For example, in a sample of 88 maltreated and

51 non-maltreated, low-income preschool-aged children and their mothers, 80% of the

maltreated children exhibited dysregulated emotion patterns as compared to only 37.2% of

the nonmaltreated children (Maughan & Cicchetti, 2002). Children who are not directly

victimized may witness Intimate Partner Violence (IPV) between adults, and this exposure

also leads to lifelong negative outcomes including behavior problems (Lewis et al., 2010),

victimization (Mitchell, Finkelhor, & Wolak, 2001), and poor academic outcomes (Margolin

& Gordis, 2000). IPV occurs in approximately 30% of homes with children (McDonald,

Jouriles, Ramisetty-Mikler, Caetano, & Green, 2006). IPV has been indirectly associated with

emotion regulation through predictors of parental warmth and emotionally sensitive

parenting (Fosco & Grych, 2013).

Children exposed to stressful and traumatic events may have short-term goals for

coping in the moment that conflict with their long-term adjustment (Thompson, 2011). For

example, suppressing emotions may help children cope with physical abuse, but emotional

suppression may inhibit the development of emotional intimacy in a romantic relationship

later on. Therefore, the emotion regulation strategies that children develop to cope in the

short-term (e.g., hypersensitivity to conflict) can undermine long-term adjustment and

increase the likelihood of adjustment problems including internalizing disorders,

externalizing disorders, social competence, academic failure, and later victimization and

perpetration (for a review of emotion regulation across psychopathology see Aldao, Nolen-

Hoeksema, & Schweizer, 2010). As a result, relational disturbances in early family life pose a

significant threat to a child's ability to process and manage emotions effectively (Greenberg,

Kusche, & Speltz, 1991).

Physiological Mechanisms

One way that violence and adversity negatively impact the development of emotion regulation is through neural mechanisms. Early adverse experiences alter regulatory networks such as the hypothalamic-pituitary-adrenal (HPA) axis and the autonomic nervous system (Danese & McEwen, 2012). Alterations in these regulatory networks can disrupt awareness of affective states, reduce the ability to use cognitive strategies to de-escalate the arousal, and can lead to the inability to respond to new threats (Danese & McEwen, 2012; Siegel, 2003). Chronic exposure to severe stress is associated with elevated cortisol production, which is associated with neurological alterations that may result in problems with emotional control including the ability to experience, tolerate, and manage emotions (e.g., Perry, 2009). The inability to monitor affective states reduces the power to use rising emotions as a protective mechanism and may increase the likelihood of revictimization (Noll & Grych, 2011).

Caregiver Influence

A second pathway through which exposure to violence is indirectly related to the development of emotion regulation is through caregiver influence. Exposure to violence may impair a caregiver's abilities to socialize emotions in an adaptive way for their children. Parents who engage in physical and psychological violence have a high incidence of comorbidity with disorders that have an underlying component of emotion dysregulation, including depression (Graham-Bermann, Gruber, Howell, & Girz, 2009). Women who experience psychological abuse may be at particular risk for longstanding problems with post-traumatic stress disorder (PTSD), anxiety, and depression (Blasco-Ros, Sánchez-Lorente, & Martinez, 2010). Depression creates emotional withdrawal, irritability, and a

negative perspective (Goodman & Gotlib, 1999), which negatively impact parenting

practices. For this reason, caregivers whose children have been expsed to adversity and

violence represent important targets for intervention. If caregivers learn to effectively

socialize successful emotion regulation strategies, this may protect at-risk children from

poor outcomes related to maladaptive emotion regulation.

Regulatory disorders, such as depression, may compromise caregivers' ability to

provide aspects of parenting that are most valuable in influencing healthy emotional

development (Morris et al., 2007). One problem is that depressed mothers experience their

own problems with emotion regulation, which limits their capacity to model adaptive

coping (Goodman & Gotlib, 1999). As a result, children of mothers who are depressed learn

and model maladaptive regulatory behaviors and fail to learn effective ones (Kochanska,

2002). Specifically, depressed mothers are less responsive to their children's emotional

states and are more likely to display anger and sadness than non-depressed mothers (Field,

Healy, Goldstein, & Guthertz, 1990). Depressed mothers also are less playful and more

critical of their children, and they are less able to provide consistent maternal warmth

(Goodman & Gotlib, 1999). Warm affect is not only a buffer against the harm of exposure to

trauma, but it also is a contributing factor in the development of healthy emotion regulation

(Gagné, Drapeau, Melançon, Saint-Jacques, & Lépine, 2007). In fact, several studies have

found deficits in emotion regulation among children with depressed caregivers (Garber,

Braafladt, & Zeman, 1991; Radke-Yarrow, Nottelmann, Belmont, & Welsh, 1993; Silk, Shaw,

Forbes, Lane, & Kovacs, 2006).

Current Study

The influence of parenting on children's emotion regulation has been well established (e.g., Thompson, 2011). However, little is known about the relationship between parenting and children's emotion regulation in the context of violence. As a result, the current study aims to assess the relationship between parenting practices and child emotion regulation in young children exposed to violence.

The current study used multiple measures (i.e., caregiver and teacher report) to assess emotion regulation in a sample of high-risk preschool children. It tested the following research questions:

1. Are caregivers' emotion regulation (self-report) and emotion socialization strategies (measured observationally and through caregiver-report) related to children's emotion regulation (caregiver- and teacher-report)? Research has shown that parent affect and emotion socialization are related to child emotion regulation (Binion, & Zalewski, 2017; Denham & Kochanoff, 2002; Gottman et al., 1997). It was hypothesized that caregiver emotion regulation and validating emotion socialization strategies will be positively related to child emotion regulation.
2. Is caregiver-child emotional availability (measured observationally) related to child emotion regulation? Emotional availability is a measure of the emotional connection between a caregiver and child and has been associated with child emotion regulation during infancy (Little & Carter, 2005). It was hypothesized that caregiver emotional availability will be positively related to child emotion regulation.
3. Is children's exposure to violence (caregiver-report) related to:
   a. caregivers' emotion regulation, emotion socialization strategies, and caregiver-child emotional availability? Research shows that exposure to violence disrupts neurological processes responsible for managing emotional reactions (Danese & McEwen, 2012). Further, violence exposure is a risk factor for PTSD, anxiety, and depression (Blasco-Ros, Sánchez-Lorente, & Martinez, 2010), all of which are likely to negatively influence parenting due to symptoms such as emotional withdrawal and irritability. As a result, it was hypothesized that children's exposure to violence will be negatively related to caregiver emotion regulation, emotion socialization strategies, and caregiver-child emotional availability.
   b. children's emotional regulation? Due to the impact violence has on neurological development and on the caregiver, it was hypothesized that exposure to violence will be negatively related to child emotion regulation.

4. Do caregiver-child emotional availability, caregiver emotion regulation, and caregiver emotion socialization strategies moderate the relationship between exposure to violence and child emotion regulation? It was hypothesized that better caregiver-child emotional availability, caregiver emotion regulation, and caregiver emotion socialization strategies will buffer the effects of children's exposure to violence on child emotion regulation.

METHODS

Participants

A total of 124 children, from grades K3, K4, and K5, and their caregivers were

recruited from four Next Door Head Start programs in Milwaukee, WI. As Table 1 shows,

most children were four years old (M = 3.96; SD = .86) and African American (n = 115;

92.70%). The majority of caregivers were African American (n = 111, 91.0%), mothers (n =

95; 76.60%), and were around the age of 30 (M = 31.71; SD = 9.24). Most caregivers had

raised the participating child since birth (n = 103; 83.10%). Caregiver education ranged from

less than high school (n = 7; 5.70%) to a master's degree (n = 6; 4.90%); most caregivers had

either a high school diploma, GED, or associate's degree (n = 102; 82.80%).

Procedure

This study was approved by the Marquette Institutional Review Board (IRB). Data

was collected at the schools in a private area during the school day. Caregivers were

informed that the purpose of this project was to learn about how families who have

experienced stress deal with common childhood feelings and behaviors. After informed

consent was obtained, each caregiver and child engaged in the *Parent-Child Emotion*

Interaction Task (PCEIT; Shipman & Zeman, 1999), which was used to observationally assess

caregiver responses to child emotions. Next, the caregiver completed a series of

questionnaires regarding the self, child, and home environment. Finally, each caregiver-child

dyad engaged in a seven-minute unstructured play assessment designed to assess

emotional availability (Biringen, Robinson, & Emde, 2000). Appointments were

approximately one hour in length and each family received a twenty dollar gift card to

Target for participating. Lastly, teachers completed a report of child emotion regulation

(*Preschool Behavioral and Emotional Rating Scale*; PreBERS; Epstein & Synhorst, 2008). All

observations were videotaped and subsequently coded.

Measures

Emotion socialization. The *Parent-Child Emotion Interaction Task* (PCEIT; Shipman

& Zeman, 1999) was used to observationally assess caregiver response to child emotion.

Children were asked to "talk with your caregiver about a time that you felt ___ (i.e., anger

or sadness)." When appropriate, caregivers were asked to provide supportive suggestions.

Caregivers were told to respond to their child as they normally would. Dyads were asked to

talk for at least one minute and no more than five minutes for each emotion. Anger and

sadness were presented in random order. The PCEIT was videotaped and coded for

caregivers' validating and invalidating responses to children using the *Parent-Child*

Validation/Invalidation Behavior Coding Scales (Schneider & Fruzzetti, 2002). For each

emotion, the frequency and intensity of verbal and non-verbal caregiver behavior was

measured using four scales to capture validation and three scales to capture invalidation of

child emotions. Validation scales included emotion-focused listening (i.e., attention and

interest), emotion support validation (i.e., acceptance and understanding), emotion

coaching (i.e., effort to increase understanding and management of feelings), and global

validation (i.e., caregiver's "presence," and use of other validation skills). Invalidation scales

included listening traps (i.e., lack of attention and interest), support invalidation (i.e., lack of

acceptance, rejection, or disagreement), and global invalidation (i.e., frequency of

engagement in listening and support invalidation traps). See Table 2 for a detailed

description of each scale. For the current sample, viable data was obtained from 121

participants; an investigator coded 100% of the data, and a trained research assistant double coded 20% of the caregiver-child conversations. Single intraclass correlation (ICC) scores for caregiver validation of both mad and sad feelings ranged from .94 to 1.00 and indicated strong interrater reliability (see Table 3).

In addition to observing caregiver emotion socialization strategies in real time, caregivers completed the *Emotion-Related Parenting Styles* questionnaire (ERPS; Hakim-Larson, Parker, Lee, Goodwin, & Voelker, 2006). This is a measure designed to assess caregiver emotion coaching beliefs and behavior. This 20-item measure includes four subscales: emotion coaching, caregiver acceptance of negative emotion, caregiver rejection of negative emotion, and caregiver uncertainty/ineffectiveness. Items are measured on a 5-point Likert scale from 1 = *Always false* to 5 = *Always true*. Example items are: "Children acting sad are usually just trying to get adults to feel sorry for them" and "I want my child to experience anger." Higher scores indicate more use of the subscale behavior. In the current sample, this measure demonstrated poor reliability for three of the subscales: caregiver rejection of negative emotion (α = .47), caregiver acceptance of negative emotion (α = .60), and feelings of uncertainty/ineffectiveness (α = .66), and acceptable reliability for the emotion coaching subscale (α = .76). As a result, only the emotion coaching subscale was used for analyses.

Child emotion regulation. Caregivers completed the *Emotion Regulation Checklist* (ERC; Shields & Cicchetti, 1997). This is a 24-item measure assessing children's capacity for emotion self-regulation. Responses range from 1=*rarely/never* to 4=*almost always*. Example items include "can quickly recover from upset or distress; doesn't pout or remain sullen, anxious or sad after emotionally distressing events" and "is prone to angry

outbursts/tantrums easily." In our sample, this measure demonstrated good internal

consistency with an alpha of .85.

Child emotion regulation also was assessed by caregiver and teacher report on the

emotion regulation subscale of the *Preschool Behavioral and Emotional Rating Scale*

(PreBERS; Epstein & Synhorst, 2008). This subscale includes 13 items such as "accepts

responsibility for own behavior." Each item was rated on a four-point scale, where 0 = *not at*

all like this child and 3 = *very much like the child*. In our sample, this measure demonstrated

good internal consistency when completed by caregivers (α = .89) and by teachers (α = .94).

Emotional availability. EA was assessed using a video recording of a 7-minute free-

play interaction between the caregiver and child. The EA scales (Biringen et al., 2000) were

used to assess EA of both the caregiver and the child (Biringen & Robinson, 1991). Each

subscale is measured on a 7-point Likert scale. Scales included caregiver sensitivity (i.e.,

ability to "read" and respond to child), caregiver structuring (i.e., ability to scaffold play

tasks), caregiver non-intrusiveness (i.e., ability to let the child lead the interaction),

caregiver non-hostility (i.e., appropriate regulation of unpleasant affect), child

responsiveness (i.e., eagerness or willingness to engage with the adult), and child

involvement (i.e., incorporating the adult into the interaction or story line). See Table 4 for a

detailed description of behavioral codes. EA scales were coded by the investigator and a

research assistant who have both been approved as reliable to code by Biringen after an

extensive training period. All participants completed the unstructured play task; however,

interactions from two participants could not be coded due to technical errors. As a result,

there were 122 viable interactions to code. The investigator coded all of the dyadic

interactions that she did not administer, and the research assistant coded the remaining

interactions (n = 11) and double coded approximately 20% of all interactions (n = 28). As seen in Table 2, ICCs demonstrated good internal consistency for caregiver subscales with alphas ranging from .70 to .86; however, internal consistency was poor for child subscales: alpha for child responsiveness = .66 and alpha for child involvement = .56. As a result, only caregiver subscales were used for analyses.

Caregiver emotion regulation. Caregivers' ability to regulate their own emotions was measured with the *Difficulties with Emotion Regulation Scale* (DERS; Gratz & Roemer, 2004). The DERS is a 36-item measure assessing characteristic patterns of emotion regulation and includes items such as, "I experience my emotions as overwhelming and out of control," and "I have difficulty making sense out of my feelings." Responses range from 1=*almost never*, to 5=*almost always*, and responses were summed to create a total score; higher scores indicated more adaptive emotion regulation. In the current sample, this measure demonstrated strong internal reliability with an alpha of .93.

Violence. The following measures assessed both experienced and witnessed violence in and outside the home.

Interparental aggression. Interparental aggression was measured using the Revised *Conflict Tactic Scale Short Form* (CTS2S; Straus & Douglas, 2004). This is a 20-item scale that assesses both perpetration and victimization of partner abuse within the past year, in order to assess children's total exposure to interparental aggression. Although it is possible that the caregiver was referring to relationship violence that occurred with a partner other than their child's biological parent, the current study will continue to refer to responses from this measure as indicative of "interparental aggression." Responses range from 0=*Never* to 6=*more than 20 times.* There is also a response option 7 = *happened in the*

past, but not in the last year. Example items include "insulted or swore at each other," and

"threw or smashed or hit or kicked something." In the current sample, internal consistency

was good with an alpha of .88.

   Exposure to violence. Youth's exposure to violence was assessed with the *Juvenile*

*Victimization Questionnaire (*JVQ; Finkelhor, Hamby, Ormrod, & Turner, 2005). This is a 25-

item measure adapted from the original 34-item measure that assessed the experiences of

children through caregiver proxy report. Items referring to caregiver-initiated maltreatment

were excluded, as requested by Next Door. Example items include, "Do peers make your

child scared or feel really bad because they are calling him/her names, saying mean things

or saying they don't want him/her around?" and "did your child see anyone get attacked on

purpose with a stick, rock, gun, knife or other thing that would hurt? Somewhere like: at

home, at school, at a store, in a car, on the street, or anywhere else?" Each item is

measured with a yes or no response. Responses were summed to obtain a summary score

of victimization. Due to Head Start preference, items assessing physical and sexual abuse

were excluded. In the current sample, internal consistency was strong with an alpha of .83.

RESULTS

After descriptive and correlational analyses, hierarchical regression analyses were conducted in order to answer the first and second research questions regarding the relationship between caregiver behaviors and both caregiver- and teacher-reported child emotion regulation. Multivariate multiple regression analyses were then used to answer the third research question investigating the relationship between exposure to violence and both caregiver behavior and child emotion regulation. Finally, hierarchical regression analyses were used to test caregiver behaviors as moderators of the relationship between exposure to violence and the child's ability to regulate emotions both at home and at school. In all analyses, caregiver emotional availability behaviors (i.e., sensitivity, structuring, non-intrusiveness, and non-hostility) were analyzed separately in order to determine the specific components related to child emotion regulation. Furthermore, all caregiver validating (i.e., emotion focused listening, emotion support validation, emotion coaching, and a global score of validation), and invalidating strategies (i.e., emotion focused listening traps, emotion support invalidation, and a global score of invalidation) were analyzed separately for both the child's mad and sad emotions. Strategies for socializing mad and sad emotions were analyzed separately to investigate if socialization differed depending on the emotion expressed by the child.

Across all caregiver measures (124 participants x 6 questionnaires = 644), only 8 individual measures were left blank (< .02%), and across all participants, only 2 teacher measures were missing completely (< .02%). Scores on these measures were coded as missing and were not included in analyses. Of the remaining measures, less than 1% of data was missing across items, and only two participants had more than 1% missing data (i.e.,

1.3% and 5.8% missing). Linear regression was used to impute missing data across these measures that were otherwise complete.

Descriptive Data and Data Reduction

Many children in this sample were exposed to violence (see Table 5). Specifically, caregivers reported that 68.3% of children had been victimized either in or out of the home at least once in their lifetime, and about half of the sample (n = 62, 50.2%) had been victimized more than once. Types of violence reported included crime victimization, witnessed violence, and peer and sibling victimization. On average, children in this sample experienced about two to three instances of victimization (M= 2.47, SD = 3.09). Response options used to measure interparental aggression accounted for occurrence and frequency on a scale from 0 = *never happened* to 7 = *happened more than 20 times in the past year*. In this sample, most caregivers (66.4%) reported interparental aggression. On this 20-item measure, caregivers could have endorsed a range of responses from 0 – 140. Response totals ranged from a minimum of 0 to a maximum score of 72 (M= 8.12, SD = 13.44).

Caregivers in this sample reported engaging in fairly high levels of emotion regulation (M = 152.72; SD = 19.62; Range = 0 – 180) and emotion coaching (M = 22.11; SD = 3.52; Range = 0 -25). Furthermore, on average, caregivers were observed engaging in similar levels of validation when talking to their children about sad and mad emotions (see Table 6). Specifically, they were observed engaging in about 9 behaviors consistent with emotion-focused listening for sad (M = 9.06; SD = 4.49) and mad emotions (M = 9.84; SD = 5.35), but other validation strategies were observed less frequently for both sad and mad emotions (Ms = < 1). Global validation is scored on a scale from 0 – 6, and on average caregivers were rated between 2 – 3 for sad (M = 2.64; SD = .90) and mad emotions (M = 2.66; SD = .99).

Invalidation also was observed at similar rates for mad and sad emotions (see Table 7). For instance, caregivers were observed engaging in about 6 behaviors consistent with emotion-focused listening traps for sad feelings (M = 6.12; SD = 3.89) and mad feelings (M = 6.51; SD = 3.85). Comparatively, emotion support invalidation was less common for both sad (M = 1.30; SD = 1.65) and mad feelings (M = 1.37; SD = 1.60). Finally, global invalidation was measured on a scale from 0 – 6, and caregivers received an average rating of about 2 for both sad (M = 2.22; SD = .64) and mad feelings (M = 2.26; SD = .64). Caregivers also were observed engaging in fairly consistent levels of emotional availability across subscales. EA scales are scored from 0 – 29. Most caregivers were rated as non-hostile (M = 25.74; SD = 2.41). On average, caregivers received a mean rating of 23.54 on non-intrusiveness (SD = 3.77) and mean ratings of about 21 for both structuring (M = 21.72; SD = 5.22) and sensitivity (M = 21.07; SD = 4.78).

A correlation analysis was used to determine the relationship between the two caregiver-reports of child emotion regulation (ERC; Shields & Cicchetti, 1997; PreBERS; Epstein & Synhorst, 2008). These measures were highly correlated (r = .54, p = .001), and as a result, scale scores were converted to z scores and summed to create a total caregiver reported score of child emotion regulation, which was then used for all analyses (α = .90). Next, a correlation analysis was used to determine the relationship between caregiver- and teacher-reported child emotion regulation. These reports were not significantly correlated (r = .13, p = .17). Thus, analyses were run separately for caregiver and teacher reports of child emotion regulation.

Correlational analyses were then conducted to determine the associations between study variables and demographic variables, in order to better understand the correlates of

emotion regulation and emotion socialization (see Tables 6 – 11). Child demographics

significantly associated with emotion regulation were accounted for in all analyses. Notably,

as seen in Table 8, child age was positively and significantly correlated with caregiver-

reported child emotion regulation (r = .19, *p* = .04), and child gender was positively and

significantly correlated with teacher-reported child emotion regulation (r = .30, *p* = .001),

such that teachers reported higher levels of emotion regulation for females than for males.

A one-way between subjects analysis of variance (ANOVA) also indicated that teacher-

reported child emotion regulation differed significantly by child age (*F*(3, 118) = 3.11, *p* =

.03). Post hoc comparisons using the Tukey HSD test indicated that the mean score for three

year olds (M= 22.77, SD = 7.69) was significantly lower than the score for four year olds (M =

26.83, SD = 7.14).

As displayed in Table 6, child age was also significantly and negatively correlated

with caregiver use of emotion-focused listening for sad (r = -.26, *p* = .004) and mad (r = -.27,

p .003) emotions, and as seen in Table 7, child age was positively correlated with global use

of invalidation strategies for sad (r = .22, *p* = .01) and mad (r = .21, *p* = .01) emotions, and

emotion support invalidation of mad feelings (r = .29, *p* = .002). Displayed in Table 10, child

age was negatively correlated with all 4 caregiver measures of availability: sensitivity (r = -

.25, *p* = .01), structuring (r = -.25, *p* = .01), non-intrusiveness (r = -.30, *p* = .001), and non-

hostility (r = -.27, *p* = .003).

As illustrated in Tables 6 – 11, the correlation analyses also indicated that caregiver

demographics such as age, education, and length of time as the caregiver were associated

with parenting behaviors. Caregiver age was positively correlated with emotion support

validation for sad feelings (r = .25, *p* = .01) and with both sensitivity (r = .19, *p* = .04) and

non-hostility (r = .19, *p* = .04). Caregiver education was positively correlated with emotion

support validation for sad feelings (r = .23, *p* = .01), a global score of validation skills for sad

feelings (r = .23, *p* = .01), emotion-focused listening traps for mad feelings (r = .21, *p* = .02),

and with all four measures of caregiver availability: sensitivity (r = .31, *p* = .001), structuring

(r = .22, *p* = .02), non-intrusiveness (r = .20, *p* = .03), and non-hostility (r = .19, *p* = .04).

Length of time as caregiver was positively related to the use of global invalidation

strategies for mad feelings (r = .24, *p* = .01) such that caregivers who had spent more time

raising the child were more likely to use invalidating strategies when the child was mad.

Given that the sample sizes for caregivers other than mothers were small, *t* tests were used

to compare mothers and fathers on observed emotion socialization strategies. Mothers and

fathers did not differ significantly on emotion focused listening, emotion support validation,

emotion coaching, or in their global skill use for mad or sad feelings.

The Relationship Between Caregiver Behavior and Child Emotion Regulation

The first and second research questions asked whether emotion socialization (i.e.,

emotion coaching and validation/invalidation of emotion), caregiver emotion regulation,

and emotional availability are related to child emotion regulation. To answer these

questions, several hierarchical linear regression analyses were conducted. A total of 12

hierarchical regression analyses were conducted to test the association of caregiver- and

teacher-reported child emotion regulation with: 1) caregiver-reported regulation and

emotion coaching, 2) observed caregiver validation of sad emotions, 3) observed caregiver

validation of mad emotions, 4) observed caregiver invalidation of sad emotions, 5) observed

caregiver invalidation of mad emotions, and 6) caregiver emotional availability. Since child

age was correlated with caregiver reports of child emotion regulation and several observed

variables, child age was accounted for in step 1 of regression analyses. Since child gender

was significantly correlated with teacher-reported child emotion regulation, child gender

was also accounted for in step 1 when predicting teacher-reported child emotion regulation.

Caregiver-reported emotion regulation and socialization. As seen in Table 12,

after accounting for child age, caregiver emotion regulation (β = .31, *p* = .001) and caregiver

emotion coaching (β = .38, *p* = .001) were associated with child emotion regulation. After

accounting for child age and child gender, caregiver emotion regulation and caregiver

reported socialization variables were not associated with teacher-reported child emotion

regulation.

Observed caregiver validation/invalidation of emotions. After accounting for

demographic variables, observed caregiver validation and invalidation of sad and mad

emotions were not associated with caregiver-reported child emotion regulation. Global

validation of sadness was significantly associated with teacher-reported child emotion

regulation (β = .28, *p* = .04; Table 13), but other observed validation and invalidation

behaviors of sad and mad emotions were not.

Observed caregiver emotional availability. After accounting for child age, non-

hostility was associated with caregiver-reported child emotion regulation (β = .33, *p* = .04;

full results in Table 14). After accounting for child age and gender, emotional availability

subscales were not associated with teacher-reported child emotion regulation.

The Relationship Between Exposure to Violence and Caregiver and Child Outcomes

The third research question asked about the relationship between exposure to

violence and caregiver emotion regulation, emotion socialization, and emotional availability

and child emotion regulation. The measures of violence exposure, Conflict Tactics Scale

(CTS2S; Straus & Douglas, 2004) and Juvenile Victimization Questionnaire (JVQ; Finkelhor et al., 2005) were not significantly related (r = .23, *p* = .15) and were thus analyzed separately.

To answer the third research question, four multivariate multiple regressions were conducted, followed by two hierarchical multiple regressions. Multivariate analyses were used due to the correlation between outcome variables. The multivariate nature of the analysis allows for an examination of the differential effects of the multiple predictor variables on multiple dependent variables while limiting the number of analyses conducted, thus reducing the likelihood of obtaining statistically significant results due to chance. Guidelines suggest that the sample size for multivariate multiple regression analyses should be roughly 20 times the number of variables entered (Dattalo, 2013), and the sample for the present study exceeds that guideline. Four multivariate multiple regressions were conducted to assess the association of two measures of violence with four sets of caregiver factors: 1) caregiver-reported emotion regulation and emotion coaching, 2) observed caregiver validation of child sad and mad emotions, 3) observed caregiver invalidation of child sad and mad emotions, and 4) observed caregiver emotional availability. Given that multivariate analyses are designed to account for the correlation between outcome variables, caregiver outcomes were grouped for analyses based on theoretical and empirical associations with one another. For each regression, Wilk's lambda was used to test the omnibus hypothesis that all beta coefficients across all dependent variables equal zero. When multivariate analyses indicated a significant result, each dependent variable was regressed on all of the independent variables. Unstandardized regression coefficients were then calculated for independent variables in the two models,.

Caregiver-reported emotion regulation and emotion coaching. As seen in Table 15, a multivariate multiple regression revealed a significant multivariate main effect for interparental aggression (Wilks' λ = .91, F (2, 112) = 5.67, p = .004) and for child victimization (Wilks' λ = .92, F (2, 112) = 4.62, p = .01) as predictors of caregiver emotion regulation and coaching. Further, significant univariate main effects for both interparental aggression and child victimization were observed. Specifically, there was a main effect of interparental aggression for parent emotion regulation (*F* (1, 115) = 5.84, p = .02) and for emotion coaching (*F* (1, 115) = 7.93, p = .01). Parameter estimates suggest that higher levels of interparental aggression were associated with lower levels of both caregiver emotion regulation (B = -.32, p = .02) and emotion coaching (B= -.06, p = .01). There also was a main effect of child victimization observed for caregiver emotion regulation (*F* (1, 115) = 4.78, p = .03). Parameter estimates suggest that greater child victimization was associated with lower levels of caregiver emotion regulation (B= -1.22, p = .03).

Observed caregiver validation of emotions. Illustrated in Table 16, a multivariate multiple regression did not reveal a significant multivariate main effect for interparental aggression (Wilks' λ = .98, F (8, 105) = .23, p = .99) but did reveal a significant main effect for child victimization (Wilks' λ = .83, F (8, 105) = 2.67, p = .01). Univariate analyses examining child victimization as a predictor showed that main effects were not significant for validation of mad or sad emotions.

Observed caregiver invalidation of emotions. As seen in Table 17, a multivariate multiple regression did not reveal a significant multivariate main effect for interparental aggression (Wilks' λ = .98, F (6, 107) = .34, p = .91), but did reveal a significant main effect for child victimization (Wilks' λ = .83, F (6, 107) = 2.81, p = .01). Univariate analyses for child

victimization showed that there was a main effect of child victimization for emotion-focused listening traps for sad emotions ($F_{(1, 109)}$ = 9.42, p = .003) and for mad emotions ($F_{(1, 109)}$ = 12.54, p = .001). Parameter estimates suggest that child victimization was positively associated with emotion focused listening traps for sad (B = .33, p = .003) and mad emotions (B = .39, p = 001).

Observed caregiver emotional availability. A multivariate multiple regression did not reveal a significant multivariate main effect for interparental aggression (Wilks' λ = .97, F (4, 110) = .76, p = .55) or for child victimization (Wilks' λ = .94, F (4, 110) = 1.92, p = .11).

Child emotion regulation. A hierarchical linear regression revealed that after accounting for child age in step 1, caregiver-reported child emotion regulation was not predicted by either interparental aggression or a history of victimization. Similarly, a hierarchical linear regression revealed that after accounting for child age and child gender in step 1, teacher-reported child emotion regulation was not predicted by either interparental aggression or a history of victimization.

Caregiver Behavior as a Moderator

Finally, to answer the fourth research question that asked whether the emotional relationship between caregiver and child, caregiver emotion socialization techniques, and caregiver emotion regulation moderated the relationship between exposure to violence and child emotion regulation, moderation analyses were conducted according to guidelines from Aiken and West (1991). To preserve power given the sample size, separate moderation analyses were conducted for each moderator, and each moderator was tested separately with the two reports of child emotion regulation (i.e., caregiver and teacher). As a result, 40

separate moderation analyses were conducted (i.e., 20 moderation analyses were tested with caregiver-reported emotion regulation, and the same 20 moderators were tested with teacher-reported emotion regulation). It should be noted that the subscales of the caregiver emotional availability measure were significantly correlated (i.e., r ranges from .45 to .85, p < .01); however, subscales were analyzed separately as moderators because they represent unique conceptual constructs, with unique practical implications. The implications of this are elaborated on in the discussion. All predictor variables were centered by subtracting the mean from the sum for each variable. To test each moderator in the prediction of caregiver-reported child emotion regulation, a hierarchical regression analysis was performed. In step 1, child age was entered. In step 2, interparental aggression and victimization were entered. In step 3, the moderator was entered. Finally, in step 4, the two interaction terms were entered (i.e., moderator x interparental aggression and moderator x child victimization). The same analyses were used to test each moderator in the prediction of teacher-reported child emotion regulation; however, in step 1, child gender was also entered.

To probe interaction effects, simple slopes were estimated using conventional guidelines (+/- 1 SD from the mean), and a linear regression analysis was performed to compare main effects of the moderator above and below the mean. Further, a "regions of significance" analysis was performed to obtain the specific upper and lower bounds of a moderator variable (Aiken & West, 1991; Hayes & Matthes, 2009; Preacher, Curran, & Bauer, 2006). This approach allows for greater precision in identifying the moderating effects compared to the conventional representation of the slopes. The regions of significance indicate the exact ranges of the moderator variable where the simple slopes are significantly different from zero.

The prediction of caregiver-reported child emotion regulation. Hierarchical

regression analyses revealed significant main effects of caregiver emotion regulation (β =

.36, *p* = .00) and caregiver-reported emotion coaching (β = .40, *p* = .001); however, there

were no significant interaction effects with these variables (see Tables 18 & 19). No main or

interaction effects were found for observed caregiver emotion coaching, or for the following

moderators: emotion focused listening for mad, emotion support validation for mad or sad

feelings, a global score of validation for mad or sad feelings, emotion invalidation for mad or

sad feelings (i.e., emotion focused listening traps, emotion support invalidation, and a global

score of invalidation), or caregiver emotional availability scales (i.e., sensitivity, structuring,

non-intrusiveness, and non-hostility).

A hierarchical regression analysis did reveal a significant interaction of emotion-

focused listening for sadness and interparental aggression (β = .28, *p* = .01; see Table 20)

after accounting for child age (β = .20, *p* = .03). A test of simple slopes revealed that at

traditional levels of high and low reports of the moderator (+/- 1 SD from the mean), the

association between interparental aggression and emotion focused listening for sadness

was not significant. To probe for the interaction effect, simple slopes were tested at (0.5 +/-

SD around the mean). Results indicated that at low levels of emotion focused listening,

interparental aggression was negatively associated with caregiver reported child emotion

regulation (β = -.40, *p* = .01), and at high levels of emotion focused listening, interparental

aggression was not associated with child emotion regulation (β = .10, *p* = .54). See Figure 1.

The "regions of significance" analysis revealed similar results such that interparental

aggression was negatively associated with caregiver reported child emotion regulation

when emotion focused listening for sadness scores fell below -5.91 (β = -.36, *p* = .01), but

when emotion focused listening for sadness scores were higher than -5.91, interparental

aggression was not associated with child emotion regulation (β = .04, p = .76.)

The prediction of teacher-reported child emotion regulation. In the prediction of

teacher-reported child emotion regulation, results were largely supportive of the

hypotheses, but there were some surprising findings. As expected, caregiver emotion

regulation, validation, and emotional availability were significant moderators in the

relationship between interparental aggression and child emotion regulation. On the other

hand, unexpected direct and interaction effects were also found for caregiver *invalidation*.

As seen in Table 21, a hierarchical regression analysis revealed a significant

interaction of caregiver emotion regulation and child exposure to interparental aggression

(β = .30, p = .01). To probe this interaction effect, simple slopes were estimated for

participants who were high and low on caregiver emotion regulation (+/- 1 SD from the

mean). A test of simple slopes revealed that at low levels of caregiver emotion regulation,

interparental aggression was not associated with child emotion regulation (β = -.21, p = .23),

but, at high levels of caregiver emotion regulation, interparental aggression was positively

associated with teacher-reported child emotion regulation (β = .25, p = .04). This interaction

is depicted in Figure 2. The "regions of significance" analysis revealed that interparental

aggression did not predict teacher reported child emotion regulation when caregiver

emotion regulation scores were below 7.43, but interparental aggression was positively

associated with child emotion regulation when caregiver emotion regulation scores were

above 7.43. When simple slopes were tested at high and low levels of this critical value,

results were not significant at high or low levels of caregiver emotion regulation.

After accounting for child age and gender, a hierarchical regression analysis revealed a significant interaction of global validation of sadness and interparental aggression (β = .24, p = .03; see Table 22). Tests of simple slopes using conventional guidelines revealed that at high (+ 1SD above mean) levels of global validation skills for sadness, interparental aggression was positively associated with teacher-reported child emotion regulation (β = .31, p = .01), but at low (- 1 SD below mean) levels of global validation skills for sadness, interparental aggression was not associated with child emotion regulation (β = -.06, p = .70). The interaction is displayed graphically in Figure 3. The "regions of significance" analysis did not identify a specific value or region of the moderator variable where the simple slopes are significantly different from zero. A hierarchical regression analysis did not reveal significant main or interaction effects of global validation of children's mad emotions after accounting for child age and gender.

As depicted in Table 23, after accounting for child age and child gender (β = .29, p = .002), a hierarchical regression analysis revealed a significant interaction of caregiver sensitivity and interparental aggression (β = .33, p = .001). Using conventional guidelines (+/- 1 SD from mean), tests of simple slopes indicated that at low levels of sensitivity, interparental aggression was not associated with child emotion regulation (β = -.31, p = .05), however, at high levels of sensitivity, interparental aggression was positively associated with child emotion regulation (β = .42, p = .001). See Figure 4. The "regions of significance" analysis revealed that significant effects of the moderator could be detected when scores for sensitivity were below -4.48 and above -.86. Using this range to test the effects of the moderator, results of tests of simple slopes were similar to results of tests that used conventional guidelines. Specifically, at low levels of the sensitivity (< -4.48), interparental

aggression was negatively associated with teacher-reported child emotion regulation (β = -.44, *p* = .02), and at high levels of sensitivity (> -.86), interparental aggression was positively associated with teacher-reported child emotion regulation (β = .42, *p* = .001).

As depicted in Table 24, after accounting for child age and child gender (β = .29, *p* = .002), a hierarchical regression analysis revealed a significant interaction of caregiver structuring and interparental aggression (β = .31, *p* = .001). Using conventional guidelines (+/- 1 SD from mean), tests of simple slopes indicated that at low levels of structuring, interparental aggression was not associated with child emotion regulation (β = -.17, *p* = .33), however, at high levels of structuring, interparental aggression was positively associated with child emotion regulation (β = .46, *p* = .001). See Figure 5. The "regions of significance" analysis revealed that significant effects of the moderator could be detected when scores for structuring were below -5.16 and above -1.39. Using this range to test the effects of the moderator, results of tests of simple slopes were similar to results of tests that used conventional guidelines. Specifically, at low levels of structuring (< -5.16), interparental aggression was not associated with teacher-reported child emotion regulation (β = -.33, *p* = .16), and at high levels of structuring (> -1.39), interparental aggression was positively associated with teacher-reported child emotion regulation (β = .36, *p* = .002).

As depicted in Table 25, after accounting for child age and child gender (β = .29, *p* = .002), a hierarchical regression analysis revealed a significant interaction of caregiver non-hostility and interparental aggression (β = .24, *p* = .01). Using conventional guidelines (+/- 1 SD from mean), tests of simple slopes indicated that at low levels of non-hostility, interparental aggression was negatively associated with child emotion regulation (β = -.41, *p* = .02), however, at high levels of non-hostility, interparental aggression was not associated

with child emotion regulation (β = .20, *p* = .28). See Figure 6. The "regions of significance"

analysis did not identify a specific value or region of the moderator variable where the

simple slopes were significantly different from zero.

With regard to caregiver invalidation, a main effect was found for emotion focused

listening traps for mad emotions (β = .22, *p* = .03), but no interaction effects were found for

this variable (see Table 26). Furthermore, as seen in Table 27, a hierarchical regression

analysis revealed a significant interaction between emotion support invalidation for sadness

and interparental aggression (β = .21, *p* = .03). Tests of simple slopes revealed that at high (+

1SD above mean) levels of emotion support invalidation for sadness, the association

between interparental aggression and child emotion regulation was approaching

significance (β = .31, *p* = .06). At low (- 1 SD below mean) levels of support invalidation for

sadness, interparental aggression was not associated with child emotion regulation (β = -

.002, *p* = .99). The interaction is displayed graphically in Figure 7. Simple slopes were also

tested with other possible cut points for the moderator (i.e., +/- 0.5, 1.5 SD from mean), and

a significant association between invalidation of sadness and emotion regulation was not

found. The "regions of significance" analysis did not identify a specific value or region of the

moderator variable where the simple slopes are significantly different from zero. No

significant main or interaction effects were found for emotion support invalidation for mad

feelings in the prediction of teacher reported child emotion regulation.

As seen in Table 28, a hierarchical regression analysis revealed a significant

interaction between global invalidation traps for sad emotions and interparental aggression

(β = .21, *p* = .03). Using conventional guidelines (+/- 1 SD from mean), tests of simple slopes

revealed that at low levels of global invalidation traps for sad emotions, interparental

aggression was not associated with teacher reported child emotion regulation (β = -.08, *p* = .46), but at high levels of invalidation, interparental aggression was positively associated with teacher-reported child emotion regulation (β = .21, *p* = .001). See Figure 8. The "regions of significance" analysis revealed that interparental aggression was not associated with teacher-reported child emotion regulation when global invalidation scores fell below .15, but interparental aggression was positively associated with teacher-reported child emotion regulation when global invalidation scores were above .15; however, tests of simple slopes using this critical value indicated that interparental aggression was not associated with teacher reported child emotion regulation at high or low levels of global invalidation of sadness. There were no main or interaction effects observed for global validation of mad feelings.

Finally, hierarchical regression analyses did not reveal significant main or interaction effects of caregiver-reported or observed caregiver emotion coaching, emotion focused listening for mad or sad emotions, emotion support validation for mad or sad emotions, or for caregiver non-intrusiveness predicting teacher-reported child emotion regulation.

DISCUSSION

The primary goal of this study was to identify specific caregiver behaviors associated with emotion regulation in children who have been exposed to violence and therefore are at higher risk for dysregulation and maladjustment. Much of the literature on this topic has focused on maladaptive outcomes associated with violence, and studies of protective factors have identified only very broad dimensions of parenting, such as parental warmth, as predictors of resilience. The current results provide evidence that there are specific caregiver behaviors related to adaptive emotion regulation for at-risk preschool aged children and have important implications for understanding resilience in children exposed to violence. Children in this sample were exposed to high rates of violence: 68.3% had experienced at least one violent incident, and 66.4% of caregivers reported the occurrence of interparental aggression. Other studies have reported similar rates of violence in Head Start samples (e.g., Graham-Bermann & Seng, 2005). The findings showed that caregiver behaviors had unique direct and moderating associations with children's emotion regulation. The results are organized below by type of caregiver behavior.

Caregiver's Emotion Regulation

First, there was a negative associations between caregivers' capacity to regulate their own emotions and reports of interparental aggression. This is consistent with previous work showing that caregivers who experience relationship violence are at risk for having difficulty regulating their own emotions (Levendosky & Graham-Bermann, 2001), and likewise, difficulty regulating emotions also increases the risk for perpetration (Caiozzo, Houston, & Grych, 2016) and victimization (Messman-Moore, Walsh, & DiLillo, 2010) with a

romantic partner. Child victimization also was negatively associated with caregiver emotion regulation, potentially indicating that the violence children experienced had a secondary impact on caregivers (Manion et al., 1996), or caregivers with poor ability to regulate their emotions may be more likely to put their child in a risky or dangerous situation.

Caregivers' ability to regulate their emotions also was positively associated with their own reports, but not teacher reports, of children's ability to regulate their emotions. This finding represents an important empirical demonstration of a widely held belief that children learn about emotion regulation from the way caregivers model regulation of their own emotions (e.g., Morris et al., 2007), and supports recent research demonstrating similar results (Binion & Zalewski, 2017). This finding also may suggest that children may regulate their emotions differently at home, compared to school, and their emotion regulation ability may be susceptible to different influences, depending on the context they're in. Alternatively, this finding could reflect that caregivers rate themselves and their children similarly, and teachers have a unique perspective.

Finally, caregiver emotion regulation moderated the relationship between the interparental aggression that children were exposed to at home and children's ability to regulate their emotions at school. Specifically, interparental aggression was *positively* related to children's emotion regulation, when caregivers self-reported high levels of their own emotion regulation. This suggests that for children exposed to violence, having a well-regulated caregiver acts as a protective mechanism for their own emotional development, particularly during the school day. This indicates that even when children are not with their caregivers, and they are regulating independently, their regulation is influenced by previous

observations of their caregiver, which, for at-risk youth, is particularly helpful when caregivers model healthy regulation.

Emotion Coaching

Caregiver reports of emotion coaching demonstrated direct, but not interaction effects. Caregiver reported emotion coaching was negatively related to interparental aggression. Caregivers who experience relationship violence may not have the skills to coach their child through emotional discomfort. For example, Katz and Windecker-Nelson (2006) found that, for a predominantly European-American sample, although domestic violence was not associated with a general deficit in emotion coaching, it was associated with less emotion coaching of anger and fear depending on whether the caregiver was the perpetrator or the victim of domestic violence. The current results suggest that for this sample, interparental violence also was generally associated with deficits in emotion coaching. Caregiver reported emotion coaching also was positively associated with caregiver reports, but not teacher reports, of children's emotion regulation. The association between emotion coaching and children's ability to regulate emotions is consistent with prior research (Brophy-Herb, et al., 2012), and also suggests that this relationship may vary according to the context the child is in (i.e., home or school).

Listening

Based on observational assessment, when conversations about mad and sad emotions were analyzed separately, a caregiver's ability to demonstrate active listening and attention (i.e., emotion focused listening) was not directly associated with the child's ability to regulate at home or school, or with the child's exposure to violence. However,

exploratory analyses revealed that when examining a caregiver's ability to listen actively to a child's mad and sad emotions in combination, this ability was positively associated with children's history of victimization. This suggests that caregivers may be trying to overcompensate to protect their children. However, a caregiver's *lack* of active listening in the context of both mad and sad emotions, demonstrated by their unsupportive tone, body language, and use of ineffective or unhelpful questions, also was positively associated with their child's history of victimization. Previous research has suggested that maltreating mothers engaged in less validation and more invalidation in response to children's emotions, compared to non-maltreating mothers (Shipman et al., 2007), and the current findings suggest that even when the caregiver is not directly involved in perpetrating the violence, their ability to socialize emotions is associated with the violence their child is exposed to.

A direct, positive association also was found between a caregiver's lack of active listening, demonstrated by a lack attention and interest when talking to a child about their mad, but not sad feelings, and a child's ability to regulate their emotions in school. Although this finding requires replication in order to best interpret, one possible explanation is that this result is capturing caregiver behavior for a subset of youth who are particularly dysregulated. As a result, what was interpreted and coded as lack of support, may have been the caregiver engaging in active ignoring of an emotional reaction that was inappropriate in intensity. If this were the case, a lack of attention to an exaggerated emotional expression may actually shape the child's emotion regulation in a positive way. It also is possible that this finding may reflect cultural differences in emotion socialization;

however, further research is needed to understand the differential influences on children of parenting across cultures.

Finally, a caregiver's ability to demonstrate active, engaged listening to a child's sad, but not mad feelings, moderated the relationship between exposure to interparental aggression and a child's ability to regulate their emotions, according to caregivers. Specifically, when emotion focused listening was infrequent, interparental aggression was *negatively* related to a child's emotion management at home. This suggests that when caregivers do not listen supportively to their child's emotions, the development of their child's emotion regulation is more vulnerable to the harmful effects of exposure to violence, particularly in the home setting.

Acceptance of Emotions

Observations of emotional support, acceptance, and validation during conversations about children's emotions did not relate to children's outcomes; however, a caregiver's lack of acceptance (i.e., emotion support invalidation) demonstrated by their rejection of or disagreement with their child's sad, but not mad feelings, moderated the relationship between exposure to interparental aggression and a child's ability to manage emotions in the classroom, in a surprising way. Specifically, when caregivers were *not* accepting and were invalidating of their child's sadness, interparental aggression was trending towards a *positive* association with emotion regulation, according to teacher-report. Although the literature largely suggests that invalidation is related to poor emotional development for children, this relationship may not be so simple. For example, negative caregiver affect in response to child expressions of anger and sadness was *negatively* associated with externalizing problems in preschoolers (Teti & Cole, 1995). In combination with the current

results, it seems that not all invalidation is "created equal." For example, caregivers who express hostility and contempt, may be negatively socializing their child's emotional development, compared to caregivers who express "softer" negative emotions such as boredom and disagreement, which do not have the same negative consequences on a child's emotional competence (Eisenberg et al., 2001). The current results may be picking up on the nuances of invalidation, and suggest that further research is needed to understand its relationship with children's emotion regulation, particularly in the context of violence.

Global Validation

Although a caregiver's global ability to provide validation of mad feelings was not associated with a child's violence exposure or emotion regulation, interaction effects were found for a caregiver's global validation of their child's sad feelings. Specifically, when caregivers engaged in high levels of global validation during conversations about a child's sad feelings, the child's exposure to interparental aggression was positively associated with their ability to regulate emotions in school. This finding suggests that children who witness violence between their caregivers demonstrate resilient outcomes in the school setting when their caregiver listens, accepts, and validates their sad feelings.

Surprisingly, global use of invalidation during conversations about sadness also moderated the relationship between interparental aggression and emotion regulation in the classroom; such that when global invalidation was high, interparental conflict was *positively* associated with a child's emotion regulation, according to teacher-report. In conjunction with the previous suggestion that these findings are highlighting the nuances of invalidation, it also is possible that in this cultural context, children interpreted some of these conventionally invalidating behaviors in a supportive way. Therefore, perhaps behaviors

previously thought to be universally invalidating may not be interpreted as such by all children. Replication and cross-cultural comparison will be essential to interpretation.

Emotional Availability

Results from the current study demonstrated that the way a caregiver emotionally connects with the child is related to resilient outcomes for the child. Specifically, caregiver sensitivity, structuring, and non-hostility moderated the relationship between interparental aggression and a child's ability to manage emotions at school, but not at home. These findings suggest that the impact of receiving emotionally available care on a child's ability to manage emotions may be best observed when children are independent of their caregivers and family, such as in a school setting.

Caregiver sensitivity refers to a caregiver's ability to "read" and respond to their child's emotional reactions and needs and also includes skills in timing, flexibility, creativity, and conflict resolution. When caregivers were rated as highly sensitive, children's exposure to interparental aggression was positively related to teacher's reports of the children's emotion regulation. This finding suggests when children are at risk for impaired emotional development due to exposure to violence in the home, they can demonstrate normative regulatory abilities outside of the home, when they have caregivers who respond sensitively to their emotional needs. This finding extends the literature on attachment that establishes a direct association between sensitivity and emotion regulation for children (for a review see Calkins & Hill, 2007).

A caregiver's ability to structure encompasses their efforts to provide guidance within the zone of proximal development so that children can achieve success and a sense of accomplishment. Similar to sensitivity, when caregivers demonstrated a high degree of

structuring, interparental conflict was positively associated with a child's ability to regulate emotions at school. This suggests that not only is a caregiver's sensitive responding an important element in the promotion of emotion regulation for at-risk children, but their provision of guidance at a developmentally appropriate level also is associated with resilient outcomes.

Lastly, a caregiver's non-hostility refers to their appropriate regulation of unpleasant emotions, as well as the positive affect observed in their facial expression and tone of voice, and their ability to maintain positive play themes or re-direct negative play themes. Non-hostility was the only component of emotional availability that demonstrated both direct and interaction effects. Specifically, non-hostility was positively related to caregiver reports of their child's ability to regulate emotions and also was a moderator in the relationship between interparental aggression and teacher reported emotion regulation of the child. The positive relationship between caregiver non-hostility and child emotion regulation extends previous research that also has demonstrated a positive association between maternal hostility and difficulty regulating distress in infancy (Little & Carter, 2005), and the results suggest that this caregiver behavior continues to influence the development of emotion regulation during the preschool years. Furthermore, the current results emphasize that the way caregivers regulate their own emotions helps at-risk children to achieve healthy milestones within their own development of emotion regulation, particularly as expressed in the classroom.

Demographics

Some child and caregiver outcomes varied based on demographic factors. Specifically, both caregivers and teachers reported "better" emotion regulation abilities for

older children, and teachers rated girls higher than boys in their ability to regulate their emotions. As a result, analyses accounted for these child demographics in order to best understand the association between emotion regulation and relevant study variables.

Reports of child emotion regulation varied between caregivers and teachers, which is consistent with research that shows caregiver and teacher reports of child problem behaviors are not typically correlated (Rescorla, et al., 2014). Varying reports may illustrate that children demonstrate different abilities to regulate depending on their environmental context. School may represent a more demanding environment for children, putting more of a burden on their regulation abilities. Further, caregiver reports of child regulation may be confounded by their own abilities to identify, understand, and regulate their emotions. Examination of both teacher- and caregiver- reported child emotion regulation yielded the observation of unexpected patterns. For instance, direct effects of caregiver emotion socialization on child emotion regulation were only observed with caregiver reports of child emotion regulation; whereas, interaction effects were largely observed with teacher reports of the way children regulate their emotions.

Furthermore, caregivers engaged in more observed validation of child emotions and were more emotionally available when children were younger, and caregivers engaged in more invalidation of child emotions with older children. Further, the longer the caregivers reported that they had been in charge of raising their child, the less likely they were to validate their child's sad feelings, and the more likely they were to invalidate their child's mad feelings. Research suggests that emotion socialization practices are influenced by caregiver goals, values, and beliefs about emotions (Gottman et al., 1996) as well as by child characteristics, such as age (Friedlmeier & Trommsdorff, 1999). Specifically, caregivers are

less forgiving of an older child with regard to emotional behavior (Dix, Ruble, Grusec, & Nixon, 1986); however, the age at which caregivers expect emotional competency is not universal, and some cultures emphasize early maturity of their children in terms of regulating emotions according to cultural standards (Trommsdorff & Rothbaum, 2008). The research highlighting cultural influence on emotion socialization is predominantly focused on understanding the differences between Western and Eastern cultures (e.g., Trommsdorff & Rothbaum, 2008); however, the current results suggest that some families may start raising expectations for emotional competency when their children are as young as four or five. Future research would benefit from better understanding variations in emotion socialization strategies within and across social class, race, and ethnicity.

In sum, almost all caregiver behaviors, with the exception of observations of emotion support validation and emotion coaching for mad and sad feelings and non-intrusiveness as a component of emotional availability, were related to either a child's experience of victimization, their emotion regulation, or both. Therefore, the results have emphasized the importance of examining the effects of violence on children from a strengths-based perspective. Identifying the negative impacts of violence on children and caregivers is important, but it does not provide any practical information for positive youth development. The current findings suggest that children are resilient, and caregiver behavior is integrally associated with resilient outcomes for children.

Limitations

Although results of the current study contribute to an overall understanding of the development of emotion regulation for young children, several limitations should be noted. One limitation is that caregiver and teacher reports were used to assess children's emotion

regulation, rather than the use of observational assessment. Although a majority of studies of child emotion regulation utilize caregiver and/or teacher reports, these reports are subject to biases and are limited by level of insight of the reporter. Second, the study used a cross-sectional design and only captured interactions and child functioning at one point in time, as opposed to longitudinally across multiple time points. This design limits an understanding of the prospective risk and protective factors of child emotion regulation and resilience. This study also was limited by an overrepresentation of mothers in the sample. Although correlations and mean level comparisons did not reveal a significant difference between mothers and fathers in their use of emotion socialization, the small sample of fathers is limiting. Therefore, it will be important to extend findings to include a larger sample of fathers.

Clinical Implications

Given that the preschool period represents an important time for caregivers to act as socializing agents in their children's emotional development, current findings suggest several positive ways that caregivers can promote healthy emotion regulation for their children, especially in the context of violence exposure. Encouragingly, interaction effects demonstrated that in this sample, caregiver behavior was associated with emotional resilience in preschool-aged children. Caregiver behaviors only interacted with interparental aggression, rather than child victimization, to influence the emotion regulation of children, which suggests that caregivers may be particularly important for mitigating the potentially harmful effects of interparental aggression on children's emotional development. The results suggest that there are specific tools that caregivers can utilize to protect at-risk children by promoting the development of their emotion regulation at a young age.

Specifically, caregivers should be mindful of how they are handling their own emotions because when they display genuine, positive affect, appropriate frustration tolerance, and general skills in handling a range of emotions, they are indirectly teaching their children about healthy emotion regulation, and they are promoting resilience for their children in the context of violence exposure. The results also may suggest that parent influence alone may not be enough to protect children from direct victimization; further research is needed to understand factors that promote resilience for children who have been maltreated. It is possible that these children would benefit from receiving support from multiple settings such as home and school.

Further, the way caregivers talked to their children about emotions has important implications for the development of emotion regulation for their children. Specifically, when caregivers demonstrated active listening and were deemed as globally validating during conversations about sadness, children demonstrated better regulatory abilities even when they were exposed to high levels of interparental conflict. The way caregivers talked to their children about experiences of sad compared to mad feelings, seemed to be especially important for promoting resilience.

Although this sample was exposed to high levels of both victimization and interparental aggression, results indicated that this exposure did not have a direct association with children's ability to regulate their emotions. This may indicate that at this age, children are still co-regulating their emotions with their caregivers and are referencing them for emotional development. Both the child's victimization and the caregiver's engagement in interparental aggression were associated with the caregiver directly by impacting their ability to regulate emotions, and their use of validation and invalidation of

children's mad and sad emotions. This suggests that during the preschool years, the best avenue for helping children cope with experiences of violence may be to provide support, education, and guidance to their caregivers.

Finally, outside the context of violence, analyses suggest that at-risk preschool-aged children learn to manage their emotions from their caregivers in a number of ways, including watching caregivers regulate their emotions, as well as having caregivers who engage directly with them in emotion coaching and who relate to them in a non-hostile way (i.e., authentic and well-regulated).

Research Implications

The results suggest several important implications for future research. First, one of the strengths in the current study's methodology was the multi-informant design. Finding different patterns of results for caregiver and teacher reports suggests the importance of gathering data about children from reporters who observe them in different contexts. Using only caregiver-report or only teacher-report would have yielded an incomplete picture of the way the children in this sample learn about emotion regulation.

Second, utilizing both report and observational measures also served an important function. Caregiver reports of their own behavior can be confounded by limitations in memory, understanding of the questions, and desirability bias; however, these reports have the benefit of capturing a general pattern of behavior. On the other hand, observational assessments captured actual caregiver behavior, unlimited by reporter biases, but they are only truly reflective of a "snapshot" in time and possibly susceptible to situational factors such as variations in experimenter administration or feeling embarrassed. As a result, future

research on the influence of caregivers in the way children regulate their emotions should strongly consider utilizing a multi-method design.

Third, although the *PCEIT* has largely been used with children in middle childhood (Shipman & Zeman, 1999), the current study demonstrated that this measure can be used reliably to examine validating and invalidating behaviors of caregivers of children in preschool. In large part, children in this age range were able to converse about their emotions, without difficulty. Further, because the coding system works to capture caregiver behavior in particular, when children did have a difficult time or were shy in front of the camera, this presented an opportunity to see how caregivers handled the difficulty their child was having, in real time.

Fourth, examination of caregiver validation and invalidation in the context of both mad and sad child emotions also has implications for future research. Specifically, some unique findings were found with caregiver invalidation of emotions that challenge the generalist assumption that universally, validation is good, and invalidation is bad (Eisenberg et al., 1998). Further, the way caregivers talked to their children about sad emotions, interacted with violence exposure to promote resilience in a way that socialization of mad emotions did not. As a result, examining emotion socialization across emotions may be diluting the picture. The current results suggest that for this sample, validating sad feelings, rather than mad feelings helped at-risk children learn about emotion regulation. Thus, future research should aim to replicate and extend these findings by comparing the effects of emotion socialization of specific emotions.

Finally, some of the results from this study may be best understood in the context of SES, race, and ethnicity, but this is difficult to determine, because a comparison of how

emotion socialization practices operate based on these demographic variables does not exist. It is also probable that differences in emotion socialization practices differ within-groups as well, and in order to best understand the practical implications of emotion socialization, it will be important to investigate the specific contextual factors that influence caregivers as agents of emotion socialization (Cole & Tan, 2007).

CONCLUSION

In sum, results indicated several findings that enhance the field's understanding of the development of emotion regulation for at-risk preschool-age children and have important research and clinical implications. Specifically, results suggest that caregivers have important skills at their disposal to help their at-risk children learn how to manage emotions. For instance, moderation analyses revealed that caregivers engaged in specific behaviors, including listening and talking about their child's sadness, regulating their own emotions, and demonstrating emotionally available care, that were associated with the development of emotion regulation for children exposed to interparental aggression. These findings have important implications for understanding the effects of violence exposure through a framework of resilience and have practical implications for clinical intervention. Children's exposure to violence also was directly related to outcomes for caregivers, but not children, indicating that intervention efforts for children in this age range may want to focus on targeting the caregiver. Without considering the context of violence, caregiver emotion regulation, emotion coaching, and non-hostility were directly associated with the development of their child's emotion regulation. Finally, methodological strengths that included a multi-informant and multi-method design led to a more comprehensive understanding of emotion regulation and socialization for this sample. In general, the current study emphasizes the integral role that caregivers play in the development of emotion regulation for young children, particularly in the context of violence exposure at home and in the community.

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Table 1

De*mographic Characteristics for Participants (N = 124)*

Item	Category	Frequency	Percentage	Mean (SD)
Child Age	3	43	34.70	3.96 (.86)
	4	48	38.70	
	5	28	22.60	
	6	5	4.00	
Child Grade	K3	55	44.40	1.69 (.70)
	K4	52	41.90	
	K5	17	13.70	
Child Gender[a]	Male	63	50.80	1.50 (.50)
	Female	61	49.20	
Child's Race/Ethnicity	Black/African American	115	92.70	na
	Multi-racial	8	6.50	
	Hispanic/Latino	1	.80	
Caregiver Type[b]	Mother	95	76.60	1.60 (1.52)
	Father	16	12.90	
	Grandmother	8	6.50	
	Grandfather	1	.80	
	Foster Mother	1	.80	
	Other Relative	3	2.40	
Length as Caregiver[c]	Since Birth	103	83.10	7.63 (1.09)
	More than 4 years	10	8.10	
	3-4 years	4	3.20	
	2-3 years	3	2.40	
	2-6 months	3	2.40	
Caregiver Age	< 20	3	2.40	31.71 (9.24)
	20-30	52	43.70	
	30-40	42	35.29	
	40-50	16	13.45	
	50-60	5	4.20	
	60-70	1	.84	
Caregiver Race/Ethnicity	Black/African American	111	91.0	na
	Multi-racial	6	4.90	
	White	3	2.50	
	Hispanic/Latino	2	1.60	
Caregiver's Education[d]	> High School	7	5.70	2.41 (.89)
	High School/GED	78	63.40	

Associate's	24	19.40
Bachelor's	8	6.50
Master's	6	4.90

[a]Male = 1, Female = 2. [b]Mother = 1, Father = 2, Stepmother = 3, Grandmother = 4, Foster Mother = 5, Foster Father = 6, Stepfather = 7, Grandfather = 8. [c]Since birth = 1, More than 4 years = 2, three to four years = 3, two to three years = 4, one to two years = 5, six to twelve months =6, two to six months = 7, less than one month = 8. [d]Less than High School= 1, Associates Degree = 2, Master's Degree = 3, High School Diploma or GED = 4, Bachelor's Degree = 5, Doctoral Degree= 6.

Table 2

Caregiver-Child Validation/Invalidation Behavior Coding Scales

Caregiver Emotion Validation/Invalidation	Description	Scoring
Emotion Focused Listening	Verbal and non-verbal behaviors that indicate attention and interest in the child's emotional experience. Specific behaviors coded include: supportive body language (i.e., a Likert scale from 0-2), reflection or paraphrase of the child's words, and effective/helpful questions, which are open-ended, focus on the emotional experience of the child, and allow the child time to respond	Total number of behaviors observed
Emotion Support Validation	Behaviors and comments that communicate acceptance and understanding of the child's experience, emotions, and perspective. Specific behaviors coded include: normalization of the child's experience, verbal and non-verbal demonstrations of empathy, compassionate statements, and language/tone (i.e., coded on a Likert scale from 0-2).	Total number of behaviors observed
Emotion Coaching	Demonstration of attempts to extend the child's understanding, management and handling of feelings. Specific behaviors coded include: verbal attempts to build perspective taking, or increase understanding of the cause and result of feelings, build child's emotional vocabulary, understanding of emotion intensity, and concept of underlying and mixed emotions, and encourage healthy coping/problem solving	Total number of behaviors observed
Global Validation Skills	Based in part on the caregiver's scores received for emotion focused listening, emotion support validation, and emotion coaching. Scores range from 0 = *None, not "present" with the child* to 6 = *Very Strong, caregiver meets criteria of 5*	Likert scale from 0 - 6

	and <u>both</u> emotion support and emotion coaching skills are clearly present and used consistently	
Listening Traps	Verbal and non-verbal behaviors that indicate a lack of attention and interest in the child's emotional experience. Specific behaviors coded include: unsupportive body language (i.e., a Likert scale from 0-2), unsupportive tone (i.e., a Likert scale from 0-2), and unhelpful/ineffective questions	Total number of behaviors observed
Support Invalidation	Statements, questions, and/or behaviors that communicate a lack of acceptance, rejection, or disagreement of the child's emotion, experience, or perspective. Specific behaviors include explanations/lecturing/teaching, minimizing, "should" or "don't" statements/judgment, doubt/disbelief, body language (i.e., Likert scale from 0-1), "at least" statements, and criticism/blaming	Total number of behaviors observed
Global Invalidation	Based in part on the caregiver's scores received for listening traps, and emotion support invalidation. Scores range from 0 = *Caregiver does not engage in any listening traps or invalidation traps* to 6 = *Very Strong*, *caregiver engages in 5 or more strong invalidation traps*	Likert scale from 0 - 6

Table 3

Summary of Intraclass correlation (ICC) sores for Caregiver Validation and Invalidation of Child Emotions and Caregiver Emotional Availability.

Caregiver Emotion Validation[a]		Single Rater
Sad	Global Skills	.97
	Emotion Focused Listening	.99
	Emotion Support Validation	.94
	Emotion Coaching	1.00
Mad	Global Skills	.99
	Emotion Focused Listening	.99
	Emotion Support Validation	.90
	Emotion Coaching	1.00
Caregiver Emotion Invalidation[b]		Single Rater
Sad	Listening Traps	.98
	Invalidation	1.00
	Global Invalidation	.97
Mad	Listening Traps	1.00
	Invalidation	1.00
	Global Invalidation	.97
Parent Emotional Availability[b]		Single Rater
Sensitivity		.86
Structuring		.86
Non-intrusiveness		.75
Non-hostility		.70
Child Emotional Availability[b]		Single Rater
Responsiveness		.66
Involvement		.56

[a]n = 121.

[b]n = 122.

Table 4

Emotional Availability Coding Scales

Caregiver Emotional Availability	Dimensions[a]	General Description[b, c]
Sensitivity	1. Affect 2. Clarity of Perceptions and Appropriate Adult Responsiveness 3. Awareness of Timing 4. Flexibility and Creativity 5. Adult Acceptance 6. Amount of Interaction 7. Conflict Situations	The adult's ability to "read" a child and be emotionally and openly communicative with that child. Caregivers high in sensitivity are typically affectively positive, appropriately responsive to the circumstances and the child's emotion, and display congruence between verbal and nonverbal expressions.
Structuring	1. Provision of Guidance 2. Success of Attempts 3. Amount of Structuring 4. Limit Setting 5. Remaining Firm in the Face of Pressure 6. Verbal vs. Nonverbal Structuring 7. Peer vs. Adult Role	The adult's ability to "break up" play tasks into smaller pieces and to set limits. Structuring is about providing a supportive frame in a relaxed, unforced way through verbal and nonverbal channels
Non-intrusiveness	1. Follows Child's Lead 2. Non-interruptive Ports of Entry into Interaction 3. Commands, Directives 4. Adult Talking 5. Didactic Teaching 6. Verbal vs. Physical Interferences 7. The Adult is Made to "Feel" Intrusive	Intrusive behavior can take many forms: If adults set the pace and tone of the interaction too often, ask too many questions, direct the course of play rather than let the child take the lead, and create frequent theme changes, they are intruding on a child's autonomy.
Non-hostility	1. Lacks Negativity in Face or Voice 2. Lacks Mocking, Ridiculing, or Disrespect 3. Lack of Threats of Separation 4. Not Losing One's "Cool" During Stressful Times 5. Lack of Frightening Behavior	Although it is normal for caregivers to feel some degree of irritation or anger toward a child every now and then, adults who score high on non-hostility demonstrate appropriate regulation of unpleasant emotions so that children do not feel like the targets

	6. Silence 7. Lack of Hostile Play Themes	or the source of stress.
Child Emotional Availability	Dimensions	Description
Responsiveness	1. Affect/Emotion Regulation 2. Responsiveness 3. Age-appropriate Autonomy-Seeking 4. Positive Physical Positioning 5. Lack of Role Reversal 6. Lack of Avoidance 7. Task-Oriented	Responsiveness is captured by the child's eagerness or willingness to engage with the adult when the adult offers a suggestion or moves to interact with the child. It is emotional responsiveness toward the adult with a balance between connection with the adult, and exploration away from the adult.
Involvement	1. Simple Initiative 2. Elaborative Initiative 3. Use of Adult 4. Lack of Over-Involvement 5. Eye Contact 6. Body Positioning 7. Verbal Involvement	Involvement is the degree to which the child attends to and engages the adult in play. Asking questions, narrating a story line, requesting assistance, or demonstrating materials to adults are all examples of involving behavior. The child appears eager, but not anxious as he or she tries to engage the adult.

[a]The first two dimensions for each scale are rated on a Likert scale from 0 – 7, and the remaining 5 dimensions are rated on a Likert scale from 0 – 3.
[b]Obtained from Biringen (2009). *The universal language of love: Assessing relationships through the science of emotional availability.* Boulder, CO: EA Press.
[c]A total score is derived from summing the scores for each dimension; each scale is scored on a Likert Scale from 0 – 29.

Table 5

Frequency of Exposure to Violence

Variables	Frequency	Percent
Victimization	n = 123	
No victimization	39	31.70
1 event	22	17.90
2 events	19	15.40
3 events	14	11.40
4 – 5 events	15	12.20
6 - 15 events	14	11.20
M (SD)	2.47 (3.09)	
Range	0 - 25	
Min. – Max.	0 - 15	
Variables	Frequency	Percent
Interparental Aggression	n = 119	
No exposure	40	33.60
Exposed to at least one event	79	66.40
M (SD)	8.12 (13.44)	
Range	0 – 140	
Min. – Max.	0 - 72	

Table 6

Observation of Caregiver Emotion Validation and Demographic Variables: Correlations and Descriptive Statistics (N = 121)

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Emotion Focused Listening for Sad	_													
Emotion Coaching for Sad	.14	_												
Emotion Support Validation for Sad	.03	.41*	_											
Global Skills for Sad	.54**	.46**	.58**	_										
Emotion Focused Listening for Mad	.59**	.11	.15	.33**	_									
Emotion Coaching for Mad	-.11	.05	-.03	-.06	.16	_								
Emotion Support Validation for Mad	.07	.09	.27**	.26**	.25**	.04	_							
Global Skills for Mad	.30**	.17	.28**	.49**	.55**	.48**	.49**	_						
Child Age	-.26**	.11	.01	-.10	-.27**	-.14	-.00	-.10	_					
Child Gender[a]	.05	.12	.12	.15	.04	-.03	.11	.01	-.03	_				
Caregiver Type[b]	-.06	.16	.21*	.13	-.05	.11	.08	.09	-.11	-.10	_			
Length as Caregiver[c]	.04	.08	.05	.07	.12	.01	.10	.05	.06	.12	-.33**	_		

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Caregiver Age	-.17	-.02	.25**	.08	-.09	.00	.10	.06	.00	.08	.56**	-.19*	_	
Caregiver Education d	.15	-.01	.23*	.23*	.05	-.17	.17	.14	-.08	-.07	.11	.12	.25*	_
M	9.06	.07	.15	2.64	9.84	.07	.24	2.66	3.96	1.50	1.60	7.63	31.71	2.41
SD	4.49	.28	.42	.90	5.35	.26	.66	.99	.86	.50	1.52	1.09	9.24	.89
Range	na	na	na	0 - 6	na	na	na	0 - 6	3- 6	1 - 2	1 – 8	1 – 8	13- 69	1 - 6
ICC	.99	1.00	.94	.97	.99	1.00	.90	.99	na	na	na	na	na	na

[a]Male = 1, Female = 2.
[b]Mother = 1, Father = 2, Stepmother = 3, Grandmother = 4, Foster Mother = 5, Foster Father = 6, Stepfather = 7, Grandfather = 8. [c]Since birth = 1, More than 4 years = 2, three to four years = 3, two to three years = 4, one to two years = 5, six to twelve months =6, two to six months = 7, less than one month = 8. [d]Less than High School= 1, Associates Degree = 2, Master's Degree = 3, High School Diploma or GED = 4, Bachelor's Degree = 5, Doctoral Degree= 6.
*p < .05. **p < .01.

Table 7

Observation of Caregiver Emotion Invalidation and Demographic Variables: Correlations and Descriptive Statistics (N = 121)

Variables	1	2	3	4	5	6	7	8	9	10	11	12
Emotion Focused Listening Traps - Sad	-											
Emotion Support Invalidation - Sad	.17	-										
Global Traps – Sad	.23*	.68**	-									
Emotion Focused Listening Traps - Mad	.42**	-.00	-.04	-								
Emotion Support Invalidation - Mad	.04	.37**	.23*	.12	-							
Global Traps – Mad	.04	.35**	.25*	.13	.78**	-						
Child Age	-.06	.14	.22*	-.17	.29**	.21*	-					
Child Gender[c]	-.05	.04	-.02	.04	.06	.04	-.03	-				
Caregiver Type[d]	.14	.13	-.06	.05	.00	-.13	-.11	-.10	-			
Length as Caregiver[e]	.05	.09	.11	.14	.17	.24*	.06	.12	-.33*	-		
Caregiver Age	.01	.06	.05	.04	-.09	-.14	.00	.08	.56**	-.19*	-	
Caregiver Education[f]	.09	-.08	-.11	.21*	-.04	-.09	-.08	-.07	.11	.12	.25*	-

Variables	1	2	3	4	5	6	7	8	9	10	11	12
M	6.12	1.30	2.22	6.51	1.37	2.26	3.96	1.50	1.60	7.63	31.71	2.41
SD	3.89	1.65	.64	3.85	1.60	.64	.86	.50	1.52	1.09	9.24	.89
Range	na	na	0 - 6	na	na	0 - 6	3- 6	1 - 2	1 – 8	1 – 8	13- 69	1 - 6
ICC	.98	1.00	.99	1.00	1.00	.97	na	na	na	na	31.71	2.41

[a]PR = Parent Report; sum of standardized parent reports of emotion regulation. [b]TR = Teacher Report. [c]Male = 1, Female = 2.
[d]Mother = 1, Father = 2, Stepmother = 3, Grandmother = 4, Foster Mother = 5, Foster Father = 6, Stepfather = 7, Grandfather = 8. [e]Since birth = 1, More than 4 years = 2, three to four years = 3, two to three years = 4, one to two years = 5, six to twelve months =6, two to six months = 7, less than one month = 8. [f]Less than High School= 1, Associates Degree = 2, Master's Degree = 3, High School Diploma or GED = 4, Bachelor's Degree = 5, Doctoral Degree= 6.
p < .05. **p* < .01.

Table 8

Caregiver and Teacher Reports of Child Emotion Regulation and Demographic Variables: Correlations and Descriptive Statistics (N = 122)

Variables	1	2	3	4	5	6	7	8
PR[a] child emotion regulation	–							
TR[b] child emotion regulation	.13	–						
Child Age	.19*	.09	–					
Child Gender[c]	.03	.30**	-.03	–				
Caregiver Type[d]	-.04	-.20	-.11	-.10	–			
Length as Caregiver[e]	.15	.17	.06	.12	-.33**	–		
Caregiver Age	.09	-.05	.00	.08	-.56**	.19*	–	
Caregiver Education[f]	.01	-.12	-.08	-.07	.01	.12	.25**	–
M	.00	24.92	3.96	1.50	1.60	7.63	31.71	2.41
SD	1.74	7.57	.86	.50	1.52	1.09	9.24	.89
Range	-5 - 4	0 - 39	3 - 6	1 - 2	1 - 8	1 - 8	13 - 69	1 - 6
α	.90	.94	na	na	na	na	na	na

[a]PR = Parent Report; sum of standardized parent reports of emotion regulation. [b]TR = Teacher Report. [c]Male = 1, Female = 2. [d]Mother = 1, Father = 2, Stepmother = 3, Grandmother = 4, Foster Mother = 5, Foster Father = 6, Stepfather = 7, Grandfather = 8. [d]Since birth = 1, More than 4 years = 2, three to four years = 3, two to three years = 4, one to two years = 5, six to twelve months =6, two to six months = 7, less than one month = 8. [f]Less than High School= 1, Associates Degree = 2, Master's Degree = 3, High School Diploma or GED = 4, Bachelor's Degree = 5, Doctoral Degree= 6. *$p < .05$. **$p < .01$.

Table 9

 Caregiver Reports of Parent Emotion Regulation and Coaching and Demographic Variables: Correlations and Descriptive Statistics (N = 122)

Variables	1	2	3	4	5	6	7	8
Parent Emotion Regulation	_							
Emotion Coaching	.28**	_						
Child Age	-.002	.11	_					
Child Gender[a]	-.04	-.12	-.03	_				
Caregiver Type[b]	.06	-.04	-.11	-.10	_			
Length as Caregiver[c]	.02	.10	.06	.12	-.33*	_		
Caregiver Age	.08	-.05	.00	.08	.56**	-.19*	_	
Caregiver Education[d]	.10	.02	-.08	-.07	.11	.12	.25**	_
M	152.72	22.11	3.96	1.50	1.60	7.63	31.71	2.41
SD	19.62	3.52	.86	.50	1.52	1.09	9.24	.89
Range	0 - 180	0 - 25	3 - 6	1 - 2	1 - 8	1 - 8	13 - 69	1 - 6
α	.93	.76	na	na	na	na	na	na

[a]Male = 1, Female = 2.
[b]Mother = 1, Father = 2, Stepmother = 3, Grandmother = 4, Foster Mother = 5, Foster Father = 6, Stepfather = 7, Grandfather = 8. [c]Since birth = 1, More than 4 years = 2, three to four years = 3, two to three years = 4, one to two years = 5, six to twelve months =6, two to six months = 7, less than one month = 8. [d]Less than High School= 1, Associates Degree = 2, Master's Degree = 3, High School Diploma or GED = 4, Bachelor's Degree = 5, Doctoral Degree= 6.
*$p < .05$. **$p < .01$.

Table 10

Child Exposure to Violence and Demographic Variables: Correlations and Descriptive Statistics (N = 119)

Variables	1	2	3	4	5	6	7	8
Interparental Aggression	_							
Victimization	.12	_						
Child Age	-.04	.13	_					
Child Gender[a]	-.09	.00	-.03	_				
Caregiver Type[b]	-.01	.11	-.11	-.10	_			
Length as Caregiver[c]	.21*	-.01	.06	.12	-.33**	_		
Caregiver Age	-.15	-.00	.00	.08	.56**	-.19*	_	
Caregiver Education[d]	-.14	.02	-.08	-.07	.11	.12	.25**	_
M	8.12	2.47	3.96	1.50	1.60	7.63	31.71	2.41
SD	13.44	3.09	.86	.50	1.52	1.09	9.24	.89
Range	0 - 140	0 - 25	3 - 6	1 - 2	1 - 8	1 - 8	13 - 69	1 - 6
α	.88	.83	na	na	na	na	na	na

[a]Male = 1, Female = 2.
[b]Mother = 1, Father = 2, Stepmother = 3, Grandmother = 4, Foster Mother = 5, Foster Father = 6, Stepfather = 7, Grandfather = 8. [c]Since birth = 1, More than 4 years = 2, three to four years = 3, two to three years = 4, one to two years = 5, six to twelve months =6, two to six months = 7, less than one month = 8. [d]Less than High School= 1, Associates Degree = 2, Master's Degree = 3, High School Diploma or GED = 4, Bachelor's Degree = 5, Doctoral Degree= 6. *p < .05. **p < .01.

Table 11

Observation of Caregiver Emotion Availability and Demographic Variables: Correlations and Descriptive Statistics (N = 122)

Variables	1	2	3	4	5	6	7	8	9	10
Sensitivity	—									
Structuring	.85**	—								
Non-intrusiveness	.68**	.45**	—							
Non-hostility	.79**	.62**	.67**	—						
Child Age	-.25**	-.25**	-.30**	-.27*	—					
Child Gender[a]	.04	-.04	.03	.03	-.03	—				
Caregiver Type[b]	.11	.11	.08	.10	-.11	-.10	—			
Length as Caregiver[c]	-.02	.05	-.13	-.10	.06	.12	-.33**	—		
Caregiver Age	.19*	.15	.16	.19*	.00	.08	.56**	-.19*	—	
Caregiver Education[d]	.31**	.22*	.20*	.19*	-.08	-.07	.11	.12	.25**	—
M	21.07	21.72	23.54	25.74	3.96	1.50	1.60	7.63	31.71	2.41
SD	4.78	5.22	3.77	2.41	.86	.50	1.52	1.09	9.24	.89
Range	1- 29	1- 29	1- 29	1- 29	3 - 6	1 - 2	1 - 8	1 - 8	13 - 69	1 - 6

[a]Male = 1, Female = 2.
[b]Mother = 1, Father = 2, Stepmother = 3, Grandmother = 4, Foster Mother = 5, Foster Father = 6, Stepfather = 7, Grandfather = 8. [c]Since birth = 1, More than 4 years = 2, three to four years = 3, two to three years = 4, one to two years = 5, six to twelve months =6, two to six months = 7, less than one month = 8. [d]Less than High School= 1, Associates Degree = 2, Master's Degree = 3, High School Diploma or GED = 4, Bachelor's Degree = 5, Doctoral Degree= 6.
*$p < .05$. **$p < .01$.

Table 12

Summary of Hierarchical Regression Analysis for Caregiver-*Reported Emotion Regulation and Emotion Coaching Predicting* Caregiver-*Reported Child Emotion Regulation (N = 123)*

	Model 1			Model 2		
Variable	*B*	*SE B*	*β*	*B*	*SE B*	*β*
Child Age	.41	.19	.20*	.32	.16	.16*
Caregiver Emotion Regulation				.03	.01	.31**
Emotion Coaching				.19	.04	.38**
R^2	.04			.34		
F for change in R^2	4.86*			20.18**		

p < .05. **p* < .01.

Table 13

Summary of Hierarchical Regression Analysis for Observed Caregiver *Validation of Child Sad Emotion Predicting Teacher-Reported Child Emotion Regulation (N = 121)*

Variable	Model 1			Model 2		
	B	*SE B*	$β$	B	*SE B*	$β$
Child Age	.96	.76	.11	1.18	.80	.14
Child Gender	4.99	1.32	.33**	4.92	1.32	.33**
Emotion Focused Listening -Sad				-.02	.10	-.02
Emotion Coaching – Sad				-.75	.93	-.09
Emotion Support Validation - Sad				-1.97	1.85	-.10
Global Skills in Validation - Sad				1.31	.64	.28*
R^2	.12			.16		
F for change in R^2	7.84**			3.74**		

p < .05. **p* < .01.

Table 14

Summary of Hierarchical Regression Analysis for Observed Caregiver *Emotional Availability Predicting* Caregiver-*Reported Child Emotion Regulation (N = 122)*

Variable	Model 1			Model 2		
	B	*SE B*	*β*	*B*	*SE B*	*β*
Child Age	.37	.18	.19*	.49	.19	.24*
Sensitivity				-.12	.09	-.31
Structuring				.04	.06	.11
Non-intrusiveness				.03	.06	.07
Non-hostility				.24	.11	.33*
R^2	.03			.08		
F for change in R^2	4.26*			2.13		

*p < .05. **p < .01.

Table 15

Summary of Multivariate Regression Analysis for Interparental Aggression and Child Victimization Predicting Caregiver-*Reported Emotion Regulation and Emotion Coaching (N = 119)*

Multivariate	*df*	*F*	*Wilks' λ*	η^2
Interparental Aggression	2, 112	5.67**	.91	.09
Child Victimization	2, 112	4.62*	.92	.08
Interparental Aggression	*Sum of Squares*	*df*	*F*	η^2
Caregiver Emotion Regulation	2057.71	1, 115	5.84*	.05
Emotion Coaching	80.99	1, 115	7.93*	.07
Child Victimization	*Sum of Squares*	*df*	*F*	η^2
Caregiver Emotion Regulation	1683.74	1, 115	4.78*	.04
Emotion Coaching	27.25	1, 115	2.67	.02

*p < .05. **p < .01.

Table 16

Summary of Multivariate Regression Analysis for Interparental Aggression and Child Victimization Predicting Observed Caregiver *Validation of Sad and Mad Emotions (N = 119)*

Multivariate	*df*	*F*	*Wilks' λ*	*η²*
Interparental Aggression	8, 105	.23	.98	.02
Child Victimization	8, 105	2.67*	.83	.17

Interparental Aggression	*Sum of Squares*	*df*	*F*	*η²*
Emotion Focused Listening - Sad	.86	1, 107	.04	.001
Emotion Support Validation - Sad	.03	1, 107	.37	.003
Emotion Coaching - Sad	.15	1, 107	.83	.01
Global Validation Skills - Sad	.46	1, 107	.58	.01
Emotion Focused Listening - Mad	1.50	1, 107	.05	.001
Emotion Support Validation - Mad	.02	1, 107	.23	.002
Emotion Coaching - Mad	.004	1, 107	.02	.001
Global Validation Skills - Mad	.18	1, 107	.21	.002

Child Victimization	*Sum of Squares*	*df*	*F*	*η²*
Emotion Focused Listening - Sad	61.81	1, 107	3.04	.03
Emotion Support Validation - Sad	.15	1, 107	1.98	.02
Emotion Coaching - Sad	.07	1, 107	.38	.003
Global Validation Skills - Sad	.20	1, 107	.25	.002
Emotion Focused Listening - Mad	106.78	1, 107	3.80	.03
Emotion Support Validation - Mad	.05	1, 107	.75	.01
Emotion Coaching - Mad	.09	1, 107	.37	.003
Global Validation Skills - Mad	.13	1, 107	.15	.001

*p < .05. **p < .01.

Table 17

Summary of Multivariate Regression Analysis for Interparental Aggression and Child Victimization Predicting Observed Caregiver *Invalidation of Sad and Mad Emotions (N = 109)*

Multivariate	*df*	*F*	*Wilks' λ*	η^2
Interparental Aggression	6, 107	.34	.98	.02
Child Victimization	6, 107	2.81*	.86	.14
Interparental Aggression	*Sum of Squares*	*df*	*F*	η^2
Emotion Focused Listening Traps - Sad	4.20	1, 109	.32	.003
Emotion Support Invalidation - Sad	1.62	1, 109	.65	.01
Global Use of Invalidation - Sad	.03	1, 109	.08	.001
Emotion Focused Listening Traps -Mad	2.60	1, 109	.19	.002
Emotion Support Invalidation - Mad	.94	1, 109	.39	.003
Global Use of Invalidation - Mad	.43	1, 109	1.00	.01
Child Victimization	*Sum of Squares*	*df*	*F*	η^2
Emotion Focused Listening Traps - Sad	124.87	1, 109	9.42**	.08
Emotion Support Invalidation - Sad	.54	1, 109	.22	.002
Global Use of Invalidation - Sad	.03	1, 109	.08	.001
Emotion Focused Listening Traps -Mad	170.06	1, 109	12.54**	.10
Emotion Support Invalidation - Mad	.01	1, 109	.003	.001
Global Use of Invalidation - Mad	.04	1, 109	.09	.001

*p < .05. **p < .01.

Table 18

Summary of Hierarchical Regression Analysis for the Interaction of Caregiver *Emotion Regulation and Exposure to Violence Predicting* Caregiver-*Reported Child Emotion Regulation (N = 119)*

	Model 1			Model 2			Model 3			Model 4		
Variable	*B*	*SE B*	*β*	*B*	*SE B*	*β*	*B*	*SE B*	*β*	*B*	*SE(B)*	*β*
Child Age	.40	.18	.20*	.40	.18	.21*	.41	.17	.21*	.41	.17	.21*
Interparental Aggression				-.02	.01	-.15	-.01	.01	-.08	.00	.01	.02
Victimization				-.03	.05	-.16	.01	.05	.01	-.03	.05	-.06
Caregiver Emotion Regulation (ER)							.03	.01	.36**	.04	.01	.41**
Parent ER x Interparental Aggression										.00	.00	.11
Caregiver ER x Victimization										-.00	.00	-.17
R^2	.04			.07			.19			.22		
F for change in R^2	5.01*			2.88*			6.49**			5.01**		

*p < .05. **p < .01.

Table 19

Summary of Hierarchical Regression Analysis for the Interaction of Caregiver *Emotion Coaching and Exposure to Violence Predicting* Caregiver-*Reported Child Emotion Regulation (N = 119)*

	Model 1			Model 2			Model 3			Model 4		
Variable	B	SE B	β	B	SE B	β	B	SE B	β	B	SE(B)	β
Child Age	.44	.18	.22*	.45	.19	.22*	.27	.17	.18*	.39	.17	.19*
Interparental Aggression				-.02	.01	-.16	-.01	.01	-.06	-.01	.01	-.06
Victimization				-.04	.05	-.07	-.07	.05	-.12	-.04	.05	-.06
Caregiver Emotion Coaching (EC)							.21	.05	.40**	.17	.05	.33**
Parent EC x Interparental Aggression										-.00	.00	-.04
Parent EC x Victimization										-.04	.02	-.18
R^2	.05			.06			.20			.21		
F for change in R^2	5.70*			3.27*			8.37**			6.15**		

*p < .05. **p < .01.

Table 20

Summary of Hierarchical Regression Analysis for the Interaction of Emotion Focused Listening for Sadness and Exposure to Violence Predicting Caregiver-*Reported Child Emotion Regulation (N = 119)*

Variable	Model 1			Model 2			Model 3			Model 4		
	B	SE B	$β$	B	SE B	$β$	B	SE B	$β$	B	SE B	$β$
Child Age	.40	.18	.20*	.41	.18	.20*	.48	.19	.24*	.46	.19	.23*
Interparental Aggression				-.02	.01	-.16	-.02	.01	-.15	-.01	.01	-.07
Victimization				-.03	.05	-.06	-.05	.05	-.08	-.07	.05	-.12
Emotion Focused Listening (EFL-S)							.05	.04	.12	.06	.04	.17
EFL-S x Interparental Aggression										.01	.00	.28*
EFL-S x Victimization										-.02	.01	-.15
R^2	.04			.07			.09			.14		
F for change in R^2	4.87*			2.84*			2.55*			2.93*		

*p < .05. **p < .01.

Table 21

Summary of Hierarchical Regression Analysis for the Interaction of Caregiver *Emotion Regulation and Exposure to Violence Predicting Teacher-Reported Child Emotion Regulation (N = 119)*

Variable	Model 1			Model 2			Model 3			Model 4		
	B	$SE\ B$	$β$	B	$SE\ B$	$β$	B	$SE\ B$	$β$	B	$SE\ B$	$β$
Child Age	.73	.78	.08	.92	.79	.11	.92	.79	.11	1.29	.79	.15
Child Gender	4.30	1.37	.28**	4.47	1.37	.30**	4.44	1.37	.29*	4.33	1.34	.29*
Interparental Aggression				.07	.05	.12	.07	.06	.12	.19	.07	.32**
Victimization				-.29	.22	-.12	-.31	.23	-.13	-.56	.24	-.23*
Caregiver Emotion Regulation (ER)							-.02	.04	-.04	.00	.04	.01
Parent ER x Interparental Aggression										.01	.00	.30**
Parent ER x Victimization										-.01	.01	-.14
R^2	.09			.11			.11			.17		
F for change in R^2	5.24**			3.44*			2.76*			3.21**		

p < .05. **p* < .01.

Table 22

Summary of Hierarchical Regression Analysis for the Interaction of Global Validation of Sadness and Exposure to Violence Predicting Teacher-Reported Child Emotion Regulation (N = 119)

	Model 1			Model 2			Model 3			Model 4		
Variable	*B*	*SE B*	*β*	*B*	*SE B*	*β*	*B*	*SE B*	*β*	*B*	*SE B*	*β*
Child Age	.85	.78	.10	1.05	.78	.12	1.16	.78	.13	1.12	.77	.13
Child Gender	4.81	1.36	.32**	5.00	1.36	.33**	4.80	1.37	.32**	4.72	1.36	.31**
Interparental Aggression				.07	.05	.13	.08	.05	.13	.14	.06	.25*
Victimization				-.30	.22	-.13	-.29	.22	-.12	-.38	.22	-.16
Global Validation (GVS-S)							1.06	.78	.12	1.88	.85	.22*
GVS-S x Interparental Aggression										.21	.10	.24*
GVS-S x Victimization										-.33	.26	-.12
R^2	.11			.14			.15			.19		
F for change in R^2	6.64**			4.22**			3.77**			3.56**		

p < .05. **p* < .01.

Table 23

Summary of Hierarchical Regression Analysis for the Interaction of Caregiver *Sensitivity and Exposure to Violence Predicting Teacher-Reported Child Emotion Regulation (N = 119)*

	Model 1			Model 2			Model 3			Model 4		
Variable	B	SE B	$β$	B	SE B	$β$	B	SE B	$β$	B	SE B	$β$
Child Age	.72	.77	.09	.91	.77	.11	.95	.80	.11	1.07	.76	.13
Child Gender	4.35	1.35	.29**	4.53	1.35	.30**	4.53	1.36	.31**	4.26	1.29	.29**
Interparental Aggression				.07	.05	.13	.07	.05	.13	.13	.05	.22*
Victimization				-.28	.22	-.12	-.29	.22	-.12	-.37	.21	-.16
Caregiver Sensitivity (S)							.03	.15	.02	.11	.14	.07
S x Interparental Aggression										.05	.01	.33**
S x Victimization										.02	.05	.05
R^2	.09			.12			.12			.23		
F for change in R^2	5.50**			3.58**			2.85*			4.41**		

p < .05. **p* < .01.

Table 24

Summary of Hierarchical Regression Analysis for the Interaction of Caregiver *Structuring and Exposure to Violence Predicting Teacher-Reported Child Emotion Regulation (N = 119)*

Variable	Model 1			Model 2			Model 3			Model 4		
	B	SE B	β	B	SE B	β	B	SE B	β	B	SE B	β
Child Age	.72	.77	.09	.91	.77	.11	1.01	.81	.12	1.13	.77	.13
Child Gender	4.35	1.35	.29**	4.53	1.35	.30**	4.58	1.36	.31*	4.57	1.31	.31**
Interparental Aggression				.07	.05	.13	.07	.05	.13	.11	.05	.19*
Victimization				-.28	.22	-.12	-.30	.22	-.13	-.51	.23	-.21*
Caregiver Structuring (St)							.06	.14	.04	.13	.13	.09
St x Interparental Aggression										.04	.01	.31**
St x Victimization										.04	.01	.09
R^2	.09			.12			.12			.22		
F for change in R^2	5.50**			3.58**			2.88*			4.16**		

*p < .05. **p < .01.

Table 25

Summary of Hierarchical Regression Analysis for the Interaction of Caregiver *Non-hostility and Exposure to Violence Predicting Teacher-Reported Child Emotion Regulation (N = 119)*

Variable	Model 1			Model 2			Model 3			Model 4		
	B	$SE\ B$	β	B	$SE\ B$	β	B	$SE\ B$	β	B	$SE\ B$	β
Child Age	.72	.77	.09	.91	.77	.11	.80	.80	.10	.88	.77	.10
Child Gender	4.35	1.35	.29**	4.53	1.35	.30**	4.55	1.35	.31**	3.93	1.33	.26**
Interparental Aggression				.07	.05	.13	.07	.05	.12	.08	.05	.13
Victimization				-.28	.22	-.12	-.28	.22	-.12	-.26	.22	-.01
Non-hostility (N-h)							-.16	.29	.05	.20	.29	.06
N-h x Interparental Aggression										.06	.02	.24*
N-h x Victimization										.08	.08	.09
R^2	.09			.12			.12			.19		
F for change in R^2	5.50**			3.58**			2.91*			3.45**		

p < .05. **p* < .01.

Table 26

Summary of Hierarchical Regression Analysis for the Interaction of Emotion Focused Listening Traps for Mad and Exposure to Violence Predicting Teacher-Reported Child Emotion Regulation (N = 119)

Variable	Model 1			Model 2			Model 3			Model 4		
	B	$SE\ B$	$β$	B	$SE\ B$	$β$	B	$SE\ B$	$β$	B	$SE\ B$	$β$
Child Age	.85	.78	.10	1.05	.78	.12	1.49	.79	.17	1.50	.79	.17
Child Gender	4.81	1.36	.32**	5.00	1.36	.33**	4.95	1.34	.33**	5.24	1.34	.35**
Interparental Aggression				.07	.05	.13	.07	.05	.12	.08	.05	.14
Victimization				-.30	.22	-.13	-.48	.23	-.20*	.64	.24	-.27**
Emotion Focused Listening Traps (EFLT-M)							.42	.19	.22*	.27	.20	.14
EFLT-M x Interparental Aggression										.01	.01	.10
EFLT-M x Victimization										.07	.05	.16
R^2	.11			.14			.18			.20		
F for change in R^2	6.64**			4.22**			4.54**			3.80**		

*p < .05. **p < .01.

Table 27

Summary of Hierarchical Regression Analysis for the Interaction of Emotion Support Invalidation for Sad and Exposure to Violence Predicting Teacher-Reported Child Emotion Regulation (N = 119)

Variable	Model 1			Model 2			Model 3			Model 4		
	B	*SE B*	*β*	*B*	*SE B*	*β*	*B*	*SE B*	*β*	*B*	*SE(B)*	*β*
Child Age	.85	.78	.10	1.05	.78	.12	.80	.79	.09	.84	.77	.10
Child Gender	4.81	1.36	.32**	5.00	1.36	.33**	4.91	1.35	.33**	5.20	1.33	.34**
Interparental Aggression				.07	.05	.13	.08	.05	.13	.11	.05	.19*
Victimization				-.30	.22	-.13	-.30	.22	-.13	-.37	.21	-.15
Emotion Support Invalidation (ESI-S)							.75	.44	.16	.73	.43	.15
ESI-S x Interparental Aggression										.08	.04	.21*
ESI-S x Victimization										-.28	.04	-.17
R^2	.11			.14			.16			.21		
F for change in R^2	6.64**			4.22**			4.03**			4.00*		

*p < .05. **p < .01.

Table 28

Summary of Hierarchical Regression Analysis for the Interaction of Global Invalidation Traps for Sad and Exposure to Violence Predicting Teacher-Reported Child Emotion Regulation (N = 119)

Variable	Model 1			Model 2			Model 3			Model 4		
	B	*SE B*	*β*	*B*	*SE B*	*β*	*B*	*SE B*	*β*	*B*	*SE(B)*	*β*
Child Age	.85	.78	.10	1.05	.78	.12	.79	.80	.09	.79	.78	.09
Child Gender	4.81	1.36	.32**	5.00	1.36	.33**	5.02	1.36	.33**	5.16	1.33	.34**
Interparental Aggression				.07	.05	.13	.07	.05	.13	.06	.05	.09
Victimization				-.30	.22	-.13	-.30	.22	-.12	-.25	.21	-.11
Global Invalidation Traps (GIT-S)							1.44	1.08	.12	1.60	1.14	.14
GIT-S x Interparental Aggression										.24	.11	.21*
GIT-S x Victimization										-.81	.45	-.17
R^2	.11			.14			.15			.21		
F for change in R^2	6.64**			4.22**			3.76**			3.87**		

*p < .05. **p < .01.

Figure 1. Interaction of Emotion Focused Listening for Sadness and Exposure to
Interparental Aggression Predicting Teacher-Reported
Child Emotion Regulation. *β = -.40, *p* = .01.
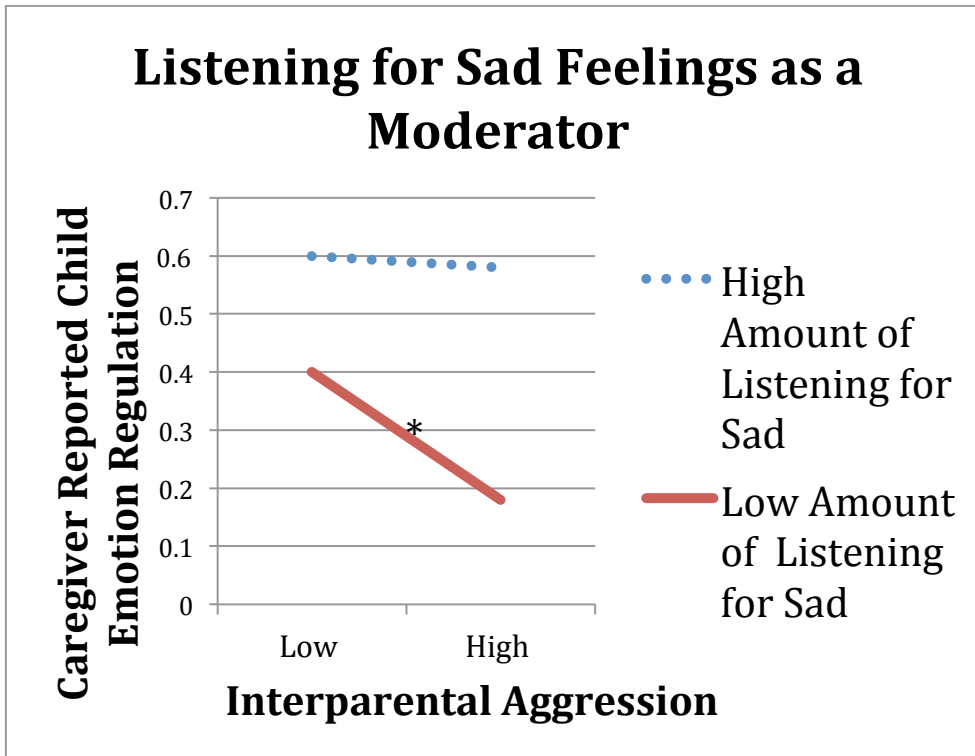
Figure 2. Interaction of Parent Emotion Regulation and Exposure to Interparental Aggression Predicting Teacher-Reported Child Emotion Regulation. *β = .25, *p* = .04.
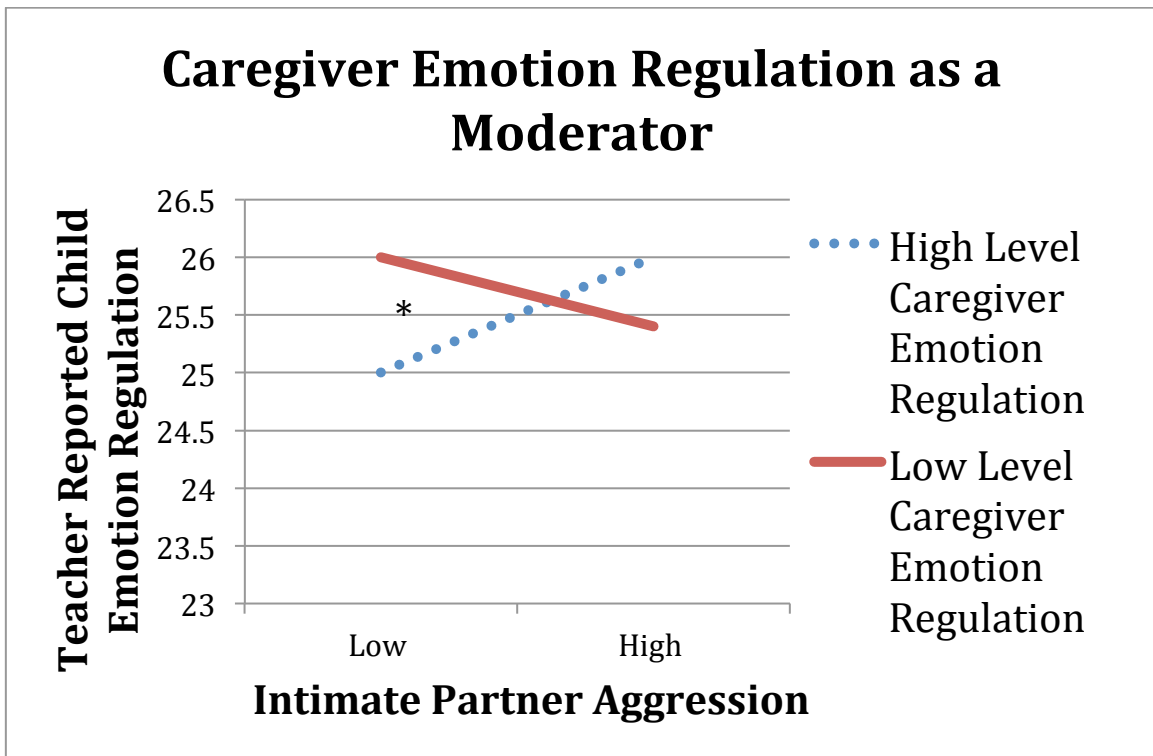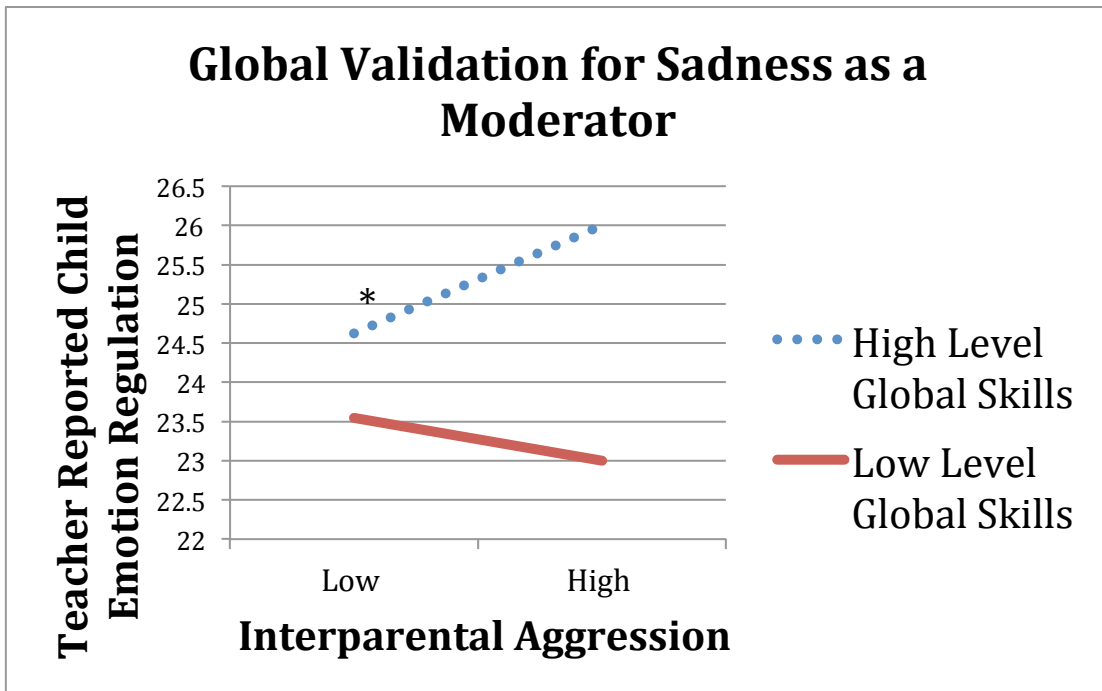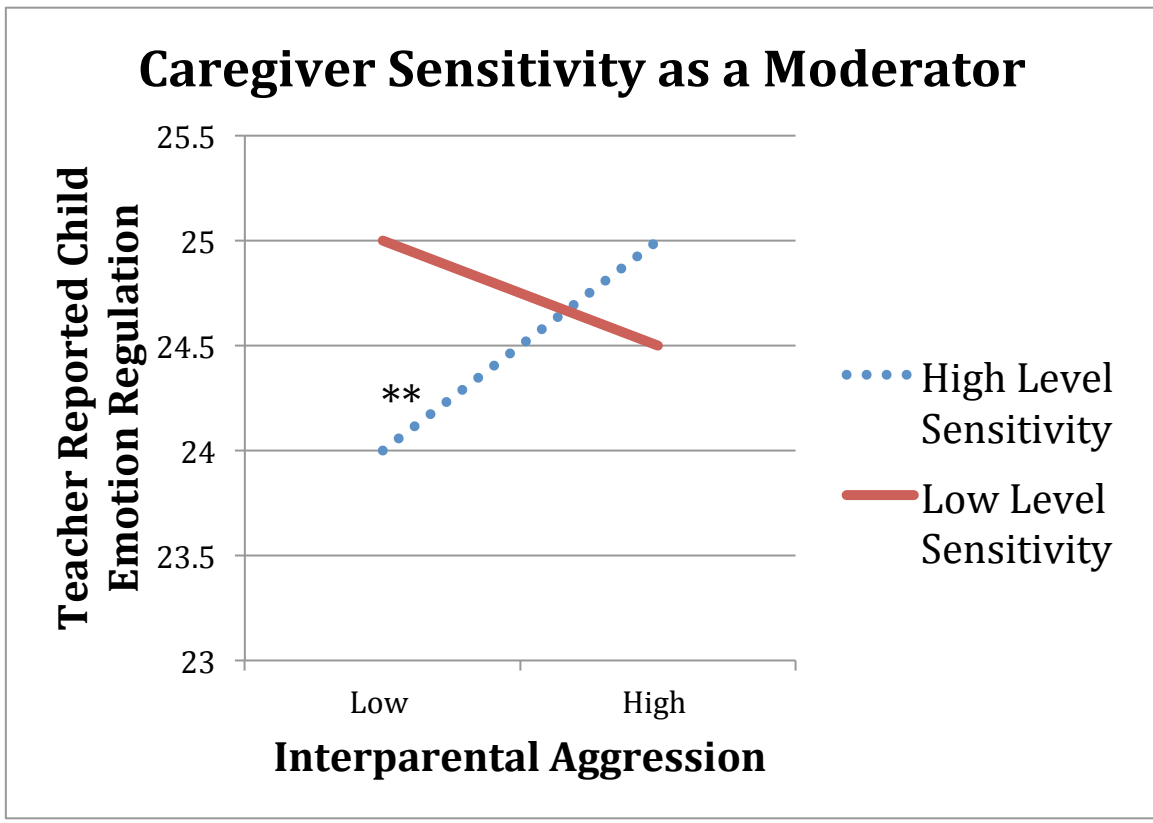

Caregiver Emotion Regulation as a Moderator

Figure 3. Interaction of Global Validation for Sadness and Exposure to Interparental Aggression Predicting Teacher-Reported Child Emotion Regulation. *β = -31, *p* = .01.

Global Validation for Sadness as a Moderator

Figure 4. Interaction of Parent Sensitivity and Exposure to Interparental Aggression Predicting Teacher-Reported Child Emotion Regulation. ** β = .42, *p* = .001.

Figure 5. Interaction of Parent Structuring and Exposure to Violence Predicting Teacher-Reported Child Emotion Regulation. ** β = .46, *p* = .001.
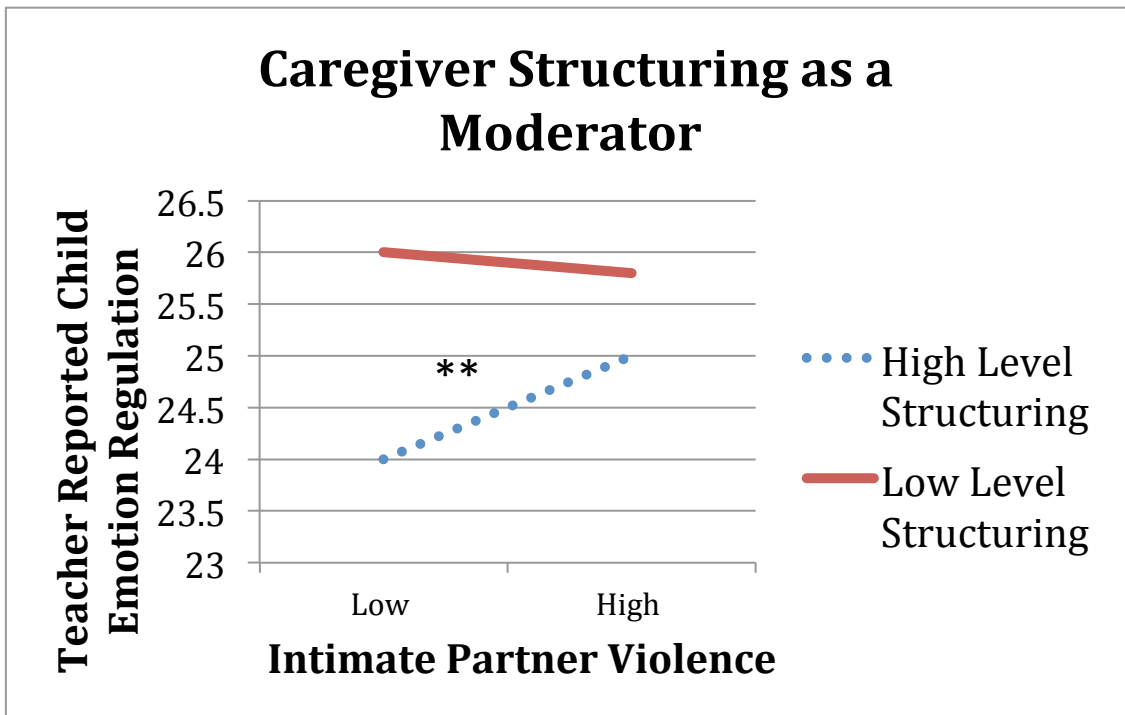
Figure 6. Interaction of Parent Non-hostility and Exposure to Violence Predicting Teacher-Reported Child Emotion Regulation. ** β = -.41, p = .02.
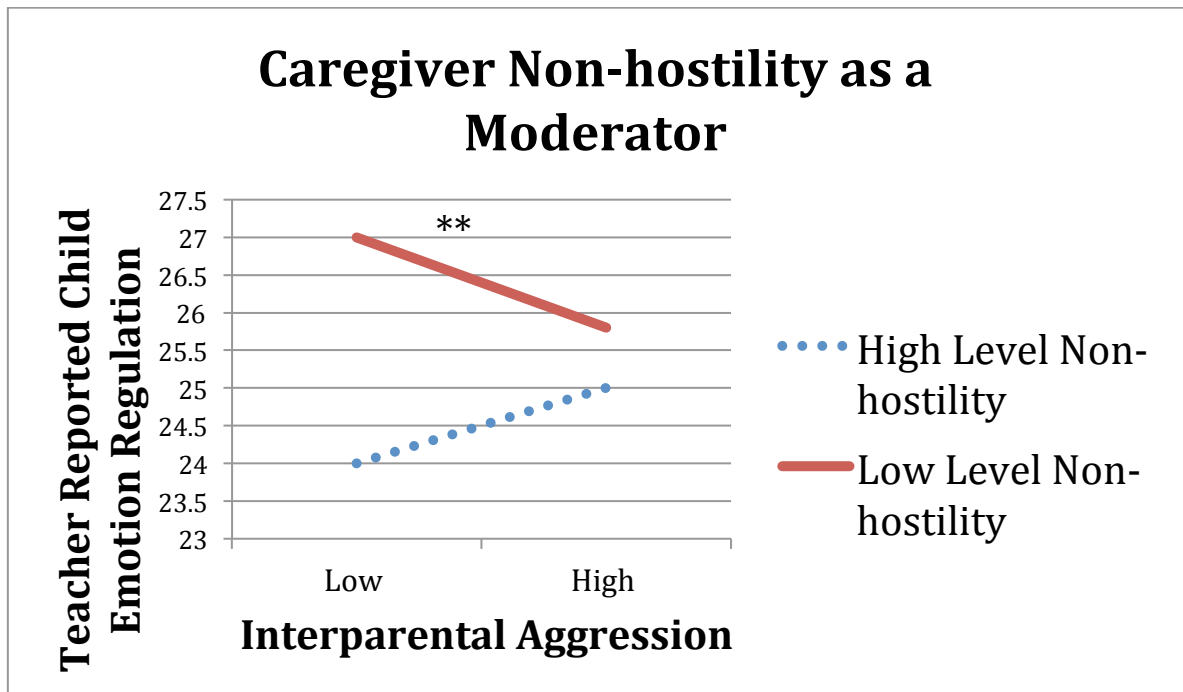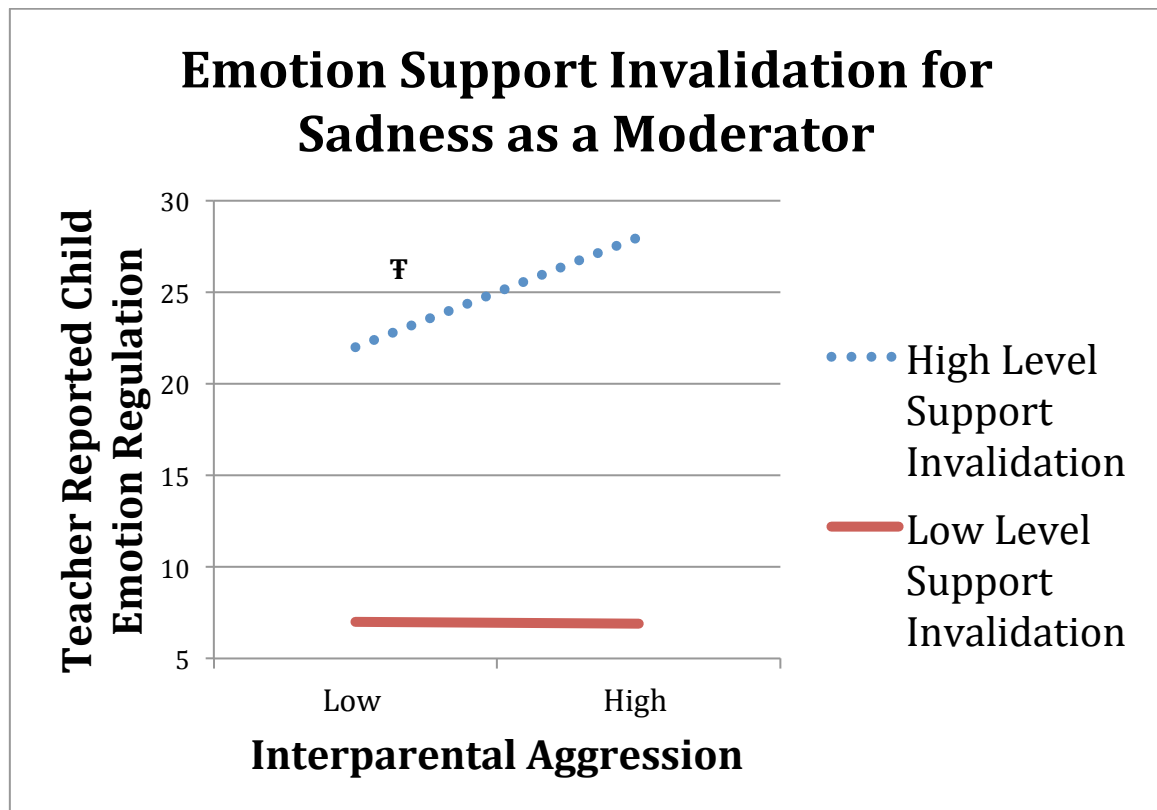
Figure 7. Interaction of Emotion Support Invalidation for Sadness and Exposure to Interparental Aggression Predicting Teacher-Reported Child Emotion Regulation. $^{\intercal}\beta$ = .31, *p* = .06.
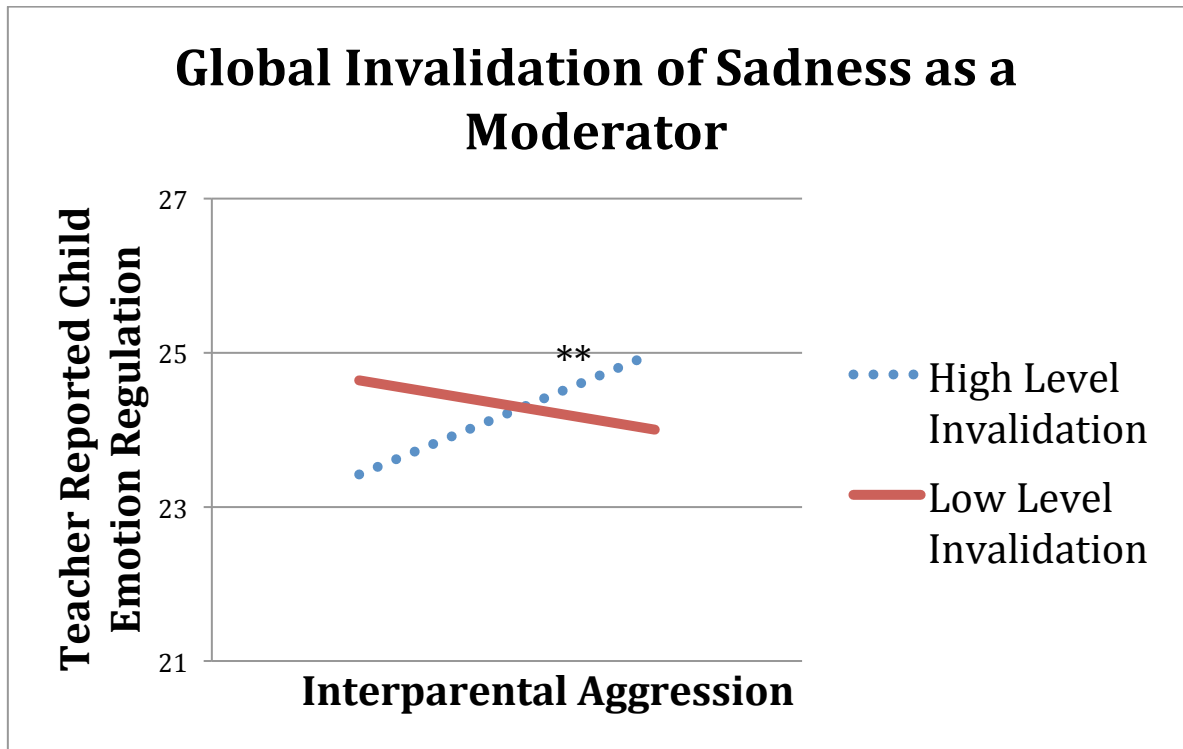
Figure 8. Interaction of Global Invalidation for Sadness and Exposure to Interparental Aggression Predicting Teacher-Reported Child Emotion Regulation. ** β = .21, *p* = .001.