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## Emotion Identification and Beliefs about Emotions as Mediators of PTSD and Parenting Meta-Emotion Philosophies

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Emotion Identification and Beliefs about Emotions as Mediators of PTSD and Parenting Meta-  
Emotion Philosophies

A dissertation submitted in partial fulfillment  
of the requirements for the degree of  
Doctor of Philosophy in Psychology

by

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## Abstract

Approximately 20% of women are sexually victimized and incarcerated women's rates of victimization are much higher. In addition, women have a higher rate of PTSD and trauma-related sequelae than men. Interpersonal trauma experiences can have a negative impact on emotional processes such as alexithymia, recognizing others' emotions, and healthy beliefs about emotional experiences. These difficulties are associated with problematic parenting. However, the mediational processes by which PTSD and disruptive emotional processes affect parenting is unclear. The current study examines the associations among PTSD, alexithymia, negative beliefs about emotions, emotion recognition in children, and parenting meta-emotion philosophies in incarcerated women presenting for exposure-based group psychotherapy for sexual violence victimization. Women ( $N = 93$ ) were incarcerated for a minimum of 3 months and were serving a maximum sentence of 2 years for non-violent offenses. All women had at least one child at some point during their lifetime and over half of the sample had PTSD symptoms above the cut-point for a probable PTSD diagnosis. Analyses indicate that PTSD was associated with alexithymia and negative beliefs about emotions pre-treatment, but was not associated with parenting meta-emotion philosophies. After treatment, there were significant reductions in PTSD, alexithymia, negative beliefs about emotions, and dismissing parenting meta-emotion philosophies. Findings suggest exposure-based group psychotherapy can be effective at reducing PTSD, disruptive emotional processes, and negative parenting philosophies, but may not increase positive parenting philosophies. Continued research on emotional processes related to sexual victimization will help elucidate the mediational processes related to parenting difficulties related to interpersonal trauma, and will help inform evidenced-based principles of change.

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## Introduction

Compared to men, women are more likely to experience interpersonal trauma and are more likely to experience negative sequelae related to interpersonal trauma including PTSD, other mental health symptoms, and interpersonal difficulties (Charuvastra & Cloitre, 2008; Cloitre et al., 2009; van der Kolk, 2007). One interpersonal problem related to trauma and PTSD symptoms is difficulty in the parenting role (van Ee, Kleber, & Jongmans, 2016). Difficulties parenting are important because they affect both maternal and child wellbeing (Elgar, McGrath, Waschbusch, Stewart, & Curtis, 2004; Gross, Shaw, Moilanen, Dishion, & Wilson, 2008; Madigan, Wade, Plamondon, Maguire, & Jenkins, 2017; McDonald et al., 2019; Morelen, Rosenblum, & Muzik, 2018; Neece, Green, & Baker, 2012; Sun et al., 2017; Vostanis et al., 2006). For example, a recent study using both mothers and fathers with a cross-lagged design showed bidirectional effects where parenting stress predicted child behavior problems and child behavior problems predicted parenting stress over a six year period (Neece et al., 2012). Therefore, it is important to understand what processes are acting upon this association. There are many processes (i.e., biological, attentional, maladaptive cognitions) that may influence the associations between trauma experiences, PTSD, and parenting difficulties; however, this paper focuses on emotional processes – specifically, difficulties identifying emotions in oneself, difficulties interpreting emotions in children, and maladaptive cognitions about emotions. In the current study, I sought to: a) explore the associations among PTSD, disruptive emotional processes, and parenting philosophies in incarcerated women who have experienced sexual trauma, and b) clarify if treatment for PTSD symptoms would also lead to changes in disruptive emotional processes and parenting meta-emotion philosophies (i.e., attitudes about how parents should address, teach about, or ignore their child's emotions).

Accordingly, I first review the prevalence of interpersonal violence victimization in women in general and in women who are incarcerated - an especially vulnerable population. Next, I discuss PTSD symptoms and mental health correlates, disruptive emotional processes related to PTSD (i.e., difficulties identifying emotions, negative beliefs about emotions, and recognizing emotions in others), and PTSD's association with negative parenting outcomes. I then describe the current study's methodology, results, and limitations.

### **Interpersonal Violence in Women**

Each year, approximately five million violent crimes that are interpersonal in nature (i.e., sexual assault, domestic violence, physical assault, and robbery) occur (Truman & Morgan, 2015). By definition, these crimes are considered traumas because they threaten the perceived physical and emotional safety of the victim (American Psychiatric Association, 2013).

Interpersonal traumas are more likely to have detrimental outcomes (e.g., PTSD, depression, anxiety, emotion regulation difficulties, substance use, criminal involvement) than non-interpersonal traumas (e.g., car accidents, natural disasters, fires; Charuvastra & Cloitre, 2008; Ford, Elhai, Connor, & Frueh, 2010; Kessler et al., 1995; Shalev & Freedman, 2005). For example, there are higher rates of PTSD among rape survivors, childhood physical abuse survivors, and domestic violence survivors (8-29%) and lower rates of PTSD for accidents and natural disasters (3-5%; Kessler et al., 1995).

Outcomes are not only distinguished by interpersonal and non-interpersonal trauma types, but they are also distinguished by contextual variables. For example, individuals who experience childhood interpersonal traumas (e.g., physical abuse, neglect) by a caregiver are more likely than children who do not experience interpersonal traumas to experience post-traumatic stress symptoms and re-victimization of interpersonal trauma (i.e., domestic violence,

sexual assault; Radford, Corral, Bradley, & Fisher, 2013; Walsh, DiLillo, & Scalora, 2011). In addition, adolescents and adults who experience sexual assault or domestic violence have higher rates of post-traumatic stress symptoms than individuals who experience community violence and peer victimization (Radford et al., 2013). Finally, individuals who experience multiple instances of interpersonal victimization (i.e., poly-victimization) have higher rates of detrimental outcomes than non-victimized or single-event victimized peers (Charak, DiLillo, Messman-Moore, & Gratz, 2018; Finkelhor, Ormrod, & Turner, 2009; Ford et al., 2010; Holt et al., 2017; Turner, Finkelhor, & Ormrod, 2010). Of note, although many studies differentiate between single-event traumas and poly-victimization, it is common to experience poly-victimization (Gratz, Bornovalova, Delany-Brumsey, Nick, & Lejuez, 2007; Manly, Kim, Rogosch, & Cicchetti, 2001).

Of the five million victims of interpersonal traumas, approximately 58% are female (Truman & Morgan, 2015). In 2015, women were more likely than men to experience serious violent victimization. In fact, 61% of violent crimes victims were women. Of sexual assault victims, 85% are women, and 56% of physical assault victims are women. Throughout childhood, female and male children have similar prevalence rates of interpersonal trauma with the exception of sexual victimization, where female children (1-21%) experience higher levels of sexual victimization than male children (1-13%). Of note, male children experience higher prevalence rates of peer victimization, physical violence from non-caregivers, and exposure to community violence than female children (Radford et al., 2013). Moreover, women are more likely to be poly-victimized than their male counterparts (Ford et al., 2010; Holt et al., 2017). By adulthood, 21% of women report sexual victimization (Radford et al., 2013). Given the high rates of PTSD related to interpersonal trauma, detrimental outcomes for poly-victimization, and



the high rates of female poly-victimization, it is especially important to understand trauma and its sequelae in women and their offspring.

**Victimization in Incarcerated Women.** Although women have high rates of interpersonal violence, female inmates have higher rates of interpersonal victimization than their non-corrections involved counterparts (Browne, Miller, & Maguin, 1999). Estimates indicate that approximately 30% to 98% of female inmates are victims of interpersonal violence (Browne et al., 1999; Green, Miranda, Daroowalla, & Siddique, 2005), and a recent review of 28 independent studies indicate a 56% to 82% lifetime prevalence rate for sexual assault among incarcerated women (Karlsson & Zielinski, 2018). Moreover, the prevalence for lifetime sexual assault is greater in incarcerated women than in community samples of women and in samples of incarcerated men (Karlsson & Zielinski, 2018). In correctional settings across the United States, up to 91% of female inmates have had one mental health diagnosis in their lifetime, and up to 53% of female inmates have a lifetime prevalence of PTSD (Lynch et al., 2014). The review by Karlsson and Zielinski (2018) indicate prevalence rates for lifetime PTSD range from 29% to 53% and the prevalence for current PTSD diagnoses ranges from 15% to 29%. Much like the prevalence rates of sexual violence, the prevalence rates for any mental illness, and PTSD specifically, are greater than the prevalence rates found among both community samples of women and incarcerated men (Karlsson & Zielinski, 2018). Given the disproportionate rates of victimization and PTSD among incarcerated women, it is hypothesized that interpersonal victimization is a significant contributor to female incarceration (Belknap & Holsinger, 2006; Browne et al., 1999; Lynch et al., 2014; Lynch, DeHart, Belknap, & Green, 2012; Lynch et al., 2017; Salisbury & Van Voorhis, 2009). Indeed, women report victimization occurring prior to

mental health difficulties which preceded substance abuse and incarceration (DeHart, Lynch, Belknap, Dass-Brailsford, & Green, 2014).

### **Detrimental Outcomes after Victimization**

Because approximately one-fourth of community women and approximately three-fourths of incarcerated women have experienced sexual violence, it is important to understand the sequelae of these experiences. Individuals who have experienced interpersonal trauma often experience both generalized mental health symptoms and trauma-specific symptoms following trauma exposure, and for poly-victims these negative outcomes are more likely. Generalized mental health symptoms include depression, anxiety, substance use, and delinquency (APA, 2013; Charuvastra & Cloitre, 2008; Cloitre, Scarvalone, & Difede, 1997; Cloitre et al., 2009; Cuevas, Finkelhor, Ormrod, & Turner, 2009; Ford et al., 2010; Herman, Perry, & van der Kolk, 1989; Herman, 1992; Hetzel-Riggin & Roby, 2013; Holt et al., 2017; Shipman, Edwards, Brown, Swisher, & Jennings, 2005; van der Kolk, 2007; Walsh, Latzman, & Latzman, 2014).

Approximately 35% of women who are victims of interpersonal trauma also experience significant depression symptoms, and for women who have experienced poly-victimization, they are more likely than both non-trauma and single-trauma peers to experience lasting clinically significant depression and anxiety symptoms (Cloitre et al., 2009; Holt et al., 2017).

Furthermore, individuals who have experienced poly-victimization are more likely to experience difficulties with alcohol use, drug use, and delinquency than both individuals who did not experience trauma and individuals who were not poly-victimized. These aforementioned externalizing difficulties are independent of depressive and post-traumatic stress symptoms (Ford et al., 2010). Below, I will review trauma-specific outcomes (PTSD) and other disruptive emotional process that are related to trauma victimization.

**PTSD.** Posttraumatic stress disorder (PTSD) is a disorder that is specific to trauma. It is classified by the American Psychiatric Association (APA) in the *Diagnostic and Statistical Manual of Mental Disorders – 5<sup>th</sup> Edition* (DSM-5; APA, 2013). The first criterion of PTSD is exposure to a potentially traumatic event which includes witnessing, experiencing, repeatedly learning of intimate details of or learning about a significant other's sudden threatened death, serious injury, or sexual assault. Individuals with PTSD often experience a heterogeneous mix of symptoms which are broadly classified into four clusters. The first cluster is *intrusion* and may include recurrent memories or dreams of the traumatic experience, experiences where the individual feels as if the event is happening again, and distress in response to reminders of the event. The second cluster is *avoidance* and may include avoidance of thoughts and feelings regarding the event and avoidance of reminders about the experience (e.g., people and places). The third cluster is *negative alterations in cognitions* and may include negative expectations of others and oneself, self-blame, persistent anger, guilt or shame, and anhedonia. The fourth cluster is *hyperarousal* and may include the inability to connect with others, hypervigilance, difficulties with sleep, exaggerated startle response, risky behavior, and irritability (APA, 2013). The lifetime prevalence rate for PTSD is 8.7% and the twelve-month prevalence rate for PTSD is 3.5% (APA, 2013).

As stated previously, women are more likely to experience interpersonal trauma and poly-victimization, which in turn increase the likelihood of experiencing PTSD symptoms. In a clinical sample of women who have experienced interpersonal trauma, 31% of women exceeded the clinical cut-off for PTSD symptoms (Cloitre et al., 2009). Furthermore, individuals who experienced poly-victimization of interpersonal trauma were more likely to experience PTSD symptoms than individuals who witnessed an assault or survived an accident (Ford et al., 2010).

Of women who have experienced childhood and adulthood or adulthood only sexual assault, approximately 70% met criteria for PTSD (Cloitre et al., 1997). These results indicate that sexual assaults and poly-victimization significantly increase the likelihood of PTSD in women.

Although PTSD is a common outcome of sexual victimization, there are other outcomes of victimization. One of these outcomes is disruptive emotional processes. There are many emotional processes that can go awry in the aftermath of trauma. In fact, many of the symptoms of PTSD are related to dysfunctional emotional processes such as irritability, hyperarousal, avoidance of feelings, feelings of guilt, anger, or shame, and emotional distress in response to reminders of the event. Moreover, interpersonal trauma is related to significant difficulties regulating moods (Cloitre et al., 2009), and poly-victimization is associated with difficulties accepting one's own emotional responses, being emotionally aware, and having emotional clarity (Charak et al., 2018). In this review, I will focus on alexithymia and beliefs about emotions as two disruptive emotional processes that can result from trauma exposure.

**Alexithymia.** Alexithymia is defined as a difficulty with emotion identification in oneself, and has been related to trauma experiences and PTSD (Zeitlin, McNally, & Cassiday, 1993). For example, victims of sexual assault are more likely to have difficulties with emotion identification than individuals who have not been assaulted (Zeitlin et al., 1993). When considering poly-sexual victimization, women who experience multiple episodes of sexual assault report more difficulties identifying emotions than women who experience a single sexual assault (Zeitlin et al., 1993). In addition, women who experience childhood and adulthood sexual victimization are more likely to experience difficulties identifying emotions than women who experience sexual assault only during adulthood (Cloitre et al., 1997). Thus, victimization types, timing, and frequency contribute to difficulties identifying emotions.

Although victimization characteristics contribute to difficulties in emotion processes, PTSD, specifically, is also associated with alexithymia. For example, individuals diagnosed with PTSD have more difficulties with identifying feelings than people without PTSD (Frewen, Dozois, Neufeld, & Lanius, 2008; Frewen, Pain, Dozois, & Lanius, 2006; Fukunishi, Sasaki, Chishima, Anze, & Saijo, 1996; Polusny, Dickinson, Murdoch, & Thuras, 2008), and women with PTSD related to interpersonal trauma demonstrate particular difficulties describing and identifying feelings (Frewen, Dozois, Neufeld, & Lanius, 2011; Powers, Cross, Fani, & Bradley, 2015). Furthermore, women who are revictimized (i.e., experienced child sexual abuse and adolescent/adult sexual assault) have more difficulties knowing what they feel than women who are not revictimized (Walsh et al., 2011). However, it is unclear if certain PTSD symptom clusters are uniquely related to alexithymia; some studies indicate associations among alexithymia, avoidance, and numbing clusters (Fukunishi et al., 1996), but other studies have found associations among alexithymia, hyperarousal and dissociative symptoms (Schechter et al., 2015). Importantly, the overall findings of the reviewed literature indicate that victimization and subsequent PTSD are associated with difficulties identifying one's emotions.

**Beliefs about emotions.** In addition to experiencing difficulties identifying emotions, victims of trauma also have negative cognitions about the adaptiveness and acceptability of emotions and emotion expression (i.e., negative beliefs about emotions). Negative beliefs about emotions are maladaptive cognitions about emotional experiences and expressions which were first postulated by Beck (1979) and elaborated on by Williams (1989; as cited by Nightingale & Williams, 2000). For example, women who experience multiple interpersonal traumas, childhood abuse, adolescent sexual assault, and adulthood sexual assault are more likely to have negative beliefs about emotional experiences than women who did not experience interpersonal trauma

(Charak et al., 2018; Gratz et al., 2007). Similarly, women who have experienced poly-sexual victimization have more maladaptive cognitions about emotional experiences than women who have experienced a single event sexual assault and women who have not experienced a sexual assault (Walsh et al., 2011). Moreover, maladaptive cognitions about emotions partially mediate the relation between experiential avoidance and moderate-severe childhood trauma experiences, indicating negative beliefs about emotions contribute to avoidance symptoms after experiencing interpersonal trauma (Walsh et al., 2011).

The importance of beliefs about emotions also extends past trauma experiences to PTSD specifically. For example, the presence of maladaptive cognitions about emotions increases the correct prediction of PTSD diagnosis after accounting for trauma experience and avoidance coping (Nightingale & Williams, 2000). Relatedly, beliefs about losing affective control, which are beliefs that there are negative consequences when an individual has strong emotions, are positively associated with PTSD symptoms (Price, Monson, Callahan, & Rodriguez, 2006). In childhood abuse survivors, negative beliefs about emotions uniquely predict PTSD symptoms when also controlling for the presence of negative affectivity and intensity of negative affectivity (Tull, Jakupcak, McFadden, & Roemer, 2007). When treating women with PTSD, changes in beliefs about losing affective control are related to changes in PTSD symptoms (Price et al., 2006). Interestingly, individuals with PTSD who have more negative beliefs about emotions report more unsupportive interactions with others than individuals with more adaptive beliefs about emotions (Fransworth & Sewell, 2011).

Women are at an increased risk for victimization and therefore also at an increased risk for trauma sequelae. PTSD and disruptive emotional processes are also often related to interpersonal difficulties (Charuvastra & Cloitre, 2008; M. Cloitre et al., 1997; Wiseman et al.,

2002). In many cultures, the mother-child relationship is an important interpersonal relationship. Thus, understanding how trauma experiences, PTSD, and disruptive emotional processes influence parenting and parent-child outcomes is essential in supporting the wellbeing of women and children.

### **Parenting in Women with PTSD**

Parents with trauma histories and/or PTSD are more likely to have difficulties with parenting than individuals without PTSD (Ammerman, Putnam, Chard, Stevens, & Van Ginkel, 2012; Huth-Bocks, Guyon-Harris, Calvert, Scott, & Ahlfs-Dunn, 2016; Leen-Feldner et al., 2013; Schechter et al., 2008; Tomassetti-Long, Nicholson, Madson, & Dahlen, 2015). For example, in mothers with PTSD symptoms and a history of child maltreatment and intimate partner violence, PTSD symptoms were positively related to withdrawal behaviors during interactions with their infants (Schechter et al., 2008). PTSD is also associated with helplessness and fear in the parent-child relationship as identified by a self-report questionnaire (Huth-Bocks et al., 2016). In a review conducted by van Ee, Kleber, & Jongmans (2016), the authors indicate there are many themes reflected in the literature regarding the association between parenting and PTSD symptoms: a) parents with PTSD perceive their child and their relationship with their child more negatively than parents without PTSD, b) parents with PTSD are more likely than parents without PTSD to interact with their children in more negative ways (i.e., increased aggressiveness, increased avoidance, increased intrusiveness, increased hostility, lower sensitivity, and lower responsivity), and c) children perceive their parents with PTSD as more controlling, more role reversed, and less affectionate than children of parents without PTSD.

Although PTSD in general has many associations with parenting, some evidence indicates that certain PTSD clusters have unique contributions to parenting. For example,

dysphoria is positively associated with parenting stress where parents who have an increase in dysphoria also report increased parenting stress (Tomassetti-Long et al., 2015). Avoidance and numbing symptoms are significant predictors of increased punishment and decreased acceptance of age-appropriate behaviors, even after controlling for other mental health symptoms such as depression (Ammerman et al., 2012). Furthermore, avoidance and negative alterations in cognitions are uniquely associated with increased parenting stress (i.e., lack of competence, feelings of isolation, and lack of attachment to the child) and feelings of helplessness in the parenting role (Calvert, Petretic, Berman, & Lentz, 2016). These parenting difficulties are associated with child internalizing symptoms, externalizing symptoms, and changes in child-HPA-axis functioning (Leen-Feldner et al., 2013).

PTSD is not the only trauma outcome that can negatively impact parenting; indeed, disruptive emotional processes may also affect parenting. Different emotional processes that are related to PTSD and other mental health outcomes can be associated with parenting. However, I will review parenting difficulties related to recognizing emotions and negative beliefs about emotions in general mental health difficulties and PTSD-specific difficulties.

### **Difficulties in Parenting Due to Emotion Recognition and Negative Beliefs about Emotions**

**General post-traumatic outcomes and emotion recognition in parenting.** Evidence that indicates mothers who experience trauma-related symptomology have difficulties in emotional processes needed for parenting tasks. This literature uses both pictures of infant emotions and self-reported difficulties of identifying emotions as opposed to experimental paradigms of alexithymia that is used in the adult literature. In regard to maternal depressive symptomology, higher depressive symptoms are associated with less accurate interpretations of infants' positive facial expressions (Broth, Goodman, Hall, & Raynor, 2004). Relatedly, mothers



with depression and anxiety symptoms are more likely than mothers without these difficulties to identify infants' expressions as negative (i.e., sadness; Webb & Ayers, 2015).

**PTSD and emotion recognition in parenting.** In addition to depression and anxiety, PTSD is also associated with difficulties identifying infant facial expressions, and PTSD-related alexithymia is associated with difficulties identifying infant affect (Schechter, Moser, et al., 2015; Schechter, Suardi, et al., 2015). Higher PTSD symptoms are associated with interpretations of infant faces as fearful (Knezević & Jovancević, 2004). Not only are PTSD symptoms associated with the way a parent interprets their child's emotions, but the context of the traumatic experience is also associated with interpretations of child emotions. For example, experiences of betrayal trauma (i.e., trauma committed by a significant other) were associated with increased trauma symptoms and reduced interpretations of sadness in infants' emotions (Bernstein, Tenedios, Laurent, Measelle, & Ablow, 2014).

Trauma characteristics, PTSD, and other mental health difficulties can influence how women interpret their child's emotions. Next, I will review how the way women interpret emotions may influence their parenting behavior. In studies regarding parenting outcomes of PTSD-related alexithymia, results indicate that alexithymia in mothers is predictive of caregiving quality and child social emotional outcomes. Results of a longitudinal study conducted by Schechter, Moser, and colleagues (2015) indicate that both PTSD symptoms and alexithymia are predictive of maternal sensitivity. Specifically, mothers who endorsed more PTSD symptoms and more alexithymia symptoms were more likely than mothers with less severe symptoms to be rated as less sensitive during observational interactions. Another study by Schechter, Suardi, and colleagues (2015) indicates that mothers who are better able to consider their children's emotions are less likely to report negative cognitions about their child than mothers who have difficulties

considering their children's emotions. Furthermore, lower maternal accuracy in detecting infant emotions, fewer maternal endorsements of infant sad-emotions, and more maternal endorsements of infant angry-emotions predicted parent-child relationship problems (Bernstein et al., 2014). Together, these studies indicate that difficulties in identifying children's emotions may predict deleterious caregiving practices and poor child social-emotional development.

**PTSD and beliefs about emotions in parenting.** Similar to PTSD's and alexithymia's contributions to difficulties in parenting, negative beliefs about emotions can also contribute to difficulties in parenting. In the parenting literature, beliefs about emotions of the child are termed *meta-emotion philosophies* (Gottman, Katz, & Hooven, 1996). Meta-emotion philosophies are schemata regarding thoughts and feelings of one's own emotions and one's child's emotions (Gottman et al., 1996). There are three main purposes of meta-emotion philosophies: a) inhibit negative parental emotions and facilitate positive parenting, b) increase children's physiological regulation at a biological level, and c) increase children's emotion regulation at a behavioral level (Gottman et al., 1996).

There are two meta-emotion philosophies: emotion-dismissing and emotion-coaching. The objective of an emotion-coaching philosophy is to use emotions as teaching opportunities or opportunities to be close with the child. Parents who use emotion-coaching philosophies use emotions to validate the child's experience, label the child's experience, and teach problem solving (Gottman et al., 1996). Emotion-coaching philosophies include behaviors such as discussion, instruction, and matching emotional tone.

The objective of an emotion-dismissing philosophy is to quickly change a child's negative emotional experience because of the belief that negative emotions are potentially harmful. Parents who use emotion-dismissing philosophies try to change the child's negative

emotion quickly and send messages that negative emotions are not important. Emotion-dismissing philosophies include behaviors such as dismissing the child's emotional state or distracting the child from an emotional state (Casey & Fuller, 1994; Gottman et al., 1996). Importantly, emotion-dismissing philosophies are not intended to be harsh or insensitive; parents who use emotion-dismissing philosophies want their children to not feel distressed and want to alleviate distress as quickly as they can (Gottman et al., 1996). Emotion-coaching philosophies are related to positive child outcomes such as better emotion coping and regulation, emotion understanding and labeling, prosocial behavior, and better psychological health (Brand & Klimes-Dougan, 2010; Cooke, Stuart-Parrigon, Movahed-Abtahi, Koehn, & Kerns, 2016; Rogers, Halberstadt, Castro, MacCormack, & Garrett-Peters, 2016; Shaffer, Suveg, Thomassin, & Bradbury, 2012; Shortt, Stoolmiller, Smith-Shine, Eddy, & Sheeber, 2010). Emotion-dismissing philosophies are associated with negative child outcomes including depressive symptoms, decreased self-esteem, and more externalizing problems (Katz & Hunter, 2007; Katz & Windecker-Nelson, 2004; Lunkenheimer, Shields, & Cortina, 2007; Shortt et al., 2010).

Given the dysfunctional emotional processes that may occur in women who have experienced trauma and PTSD, it is likely that mothers may have difficulties positively evaluating and coaching their children's emotional experiences, especially when coupled with difficulties in emotion identification and negative general beliefs about the acceptability of emotions. Although mothers' experiences of domestic violence are not associated with parenting meta-emotion philosophies, mothers who experience PTSD related to the domestic violence are more dismissing towards their child's sad emotions than mothers without PTSD. There are no differences between mothers with and without PTSD in regard to coaching angry emotions (Johnson & Lieberman, 2007). Importantly, interpersonal trauma victimization is not

deterministic, as mothers who experienced domestic violence but who could be coaching towards their children's sad emotions were less likely to have children with internalizing disorders than mothers who were dismissing towards their children's sad emotions (Johnson & Lieberman, 2007). Together, these findings suggest that dysfunctional emotion processes associated with PTSD, rather than just trauma exposure *per se*, may be associated with negative meta-emotion philosophies. Of note, the only study examining this association directly was limited to women who have experienced domestic violence. Given the rate of PTSD is significantly lower in victims of domestic violence as compared to victims of childhood abuse and sexual assault, it is unclear how other trauma experiences may be associated with parenting meta-emotion philosophies.

### **Summary**

Women have a higher rate of interpersonal victimization than their male counterparts and are at increased risk for significant psychopathology due to the types of interpersonal trauma that are likely to occur (i.e., childhood maltreatment, childhood sexual assault, adolescent/adult sexual assault, poly-victimization; (Charuvastra & Cloitre, 2008; M. Cloitre et al., 1997; Marylene Cloitre et al., 2009; Cuevas et al., 2009; Ford et al., 2010; J. L. Herman et al., 1989; Judith Lewis Herman, 1992; Hetzel-Riggin & Roby, 2013; Holt et al., 2017; Shipman et al., 2005; van der Kolk, 2007; Walsh et al., 2014). Moreover, victimization can lead to both intrapersonal and interpersonal difficulties, including PTSD (Cloitre et al., 2009). PTSD, in particular, is associated with other disruptive emotional processes including difficulties identifying emotions (i.e., PTSD-related alexithymia) and negative beliefs about the utility and acceptability of emotions (Charak et al., 2017; Ford et al., 2010; Walsh et al., 2011). These difficulties can also contribute to interpersonal problems including problems with parenting (Ammerman et al., 2012; Huth - Bocks et al., 2016; Leen-Feldner et al., 2013; Schechter et al.,

2008; Tomassetti-Long et al., 2015). Parenting difficulties among individuals with PTSD are well documented; thus, it is important to elucidate possible statistical mediators of the association between PTSD and parenting difficulties. PTSD-related alexithymia and negative beliefs about emotions may be two promising contenders for statistical mediation because disruptive emotional processes may contribute to higher likelihood of using emotion-dismissing philosophies rather than emotion-coaching philosophies while parenting (Johnson & Lieberman, 2007). If this is the case, then treatment for PTSD could be expected to reduce these dysfunctional emotional processes and reduce emotion-dismissing philosophies. Further, positive changes to parenting meta-emotion philosophies could contribute to healthy child social-emotional outcomes. Although these disruptive emotional processes may help explain the relationship between PTSD and parenting, there is relatively little literature exploring these hypothesized relationships and no literature of which I am aware that measures parenting changes after exposure-based treatment for sexual victimization.

### **Purpose & Hypotheses**

The purpose of the current study was to examine relations among PTSD, emotion awareness (i.e., identification), beliefs about emotions, and parenting meta-emotion philosophy in a diverse sample of incarcerated mothers who have experienced interpersonal trauma (i.e., sexual violence victimization). Additionally, the current study aimed to test a serial mediation model of the effects of PTSD on parenting meta-emotion philosophy. Specifically, I hypothesize an association between PTSD and parenting meta-emotion philosophy that is serially mediated by emotion identification and beliefs about emotions, respectively. Finally, the current study aimed to determine whether a short-term, trauma-focused treatment group that utilizes imaginal exposure and psychoeducation to lessen the impact of trauma and enhance emotion regulation

could produce changes in a) emotion identification, b) beliefs about emotions, and c) parenting meta-emotion philosophies.

There were three main hypotheses. Hypothesis 1: PTSD, emotion identification, beliefs about emotions, and parenting meta-emotion philosophies would be associated. Specifically, higher levels of PTSD symptoms would be associated with a) more difficulties in emotion identification in oneself, b) more negative beliefs about emotions, and c) less normative emotion recognition in children, and d) more problematic parenting meta-emotion philosophies (i.e., more dismissing, less coaching). Hypothesis 2: The association between PTSD and parenting meta-emotion philosophies would be serially mediated by emotion awareness in the self, emotion identification in others, and beliefs about emotions (see Figure 1). Hypothesis 3: Short-term group treatment would result in a) better emotion awareness in the self, b) better emotion identification in others, c) less negative beliefs about emotions, d) less problematic parenting meta-emotion philosophies (i.e., less dismissing), and e) more positive parenting meta-emotion philosophies (i.e., more coaching).

## **Method**

### **Participants**

Women who are mothers were recruited from a community corrections center for incarcerated women to participate in the current study. Two women declined participation and a total of 93 women consented to participation in the study. Child age was not used as an exclusion criterion for this study. The current study was taken from a larger sample of treatment seeking women at the correctional facility. Participant ages ranged from 19 – 57 years ( $M = 33.17$ ;  $SD = 9.41$ ) and most (approximately 85%) were White. The women varied in the number of children they had ( $M = 2.50$ ;  $SD = 1.49$ , range 1 – 7). See Table 1 for all demographic information.

## **Recruitment**

All available women attended an evening meeting at the corrections facility where clinicians invited the women to join an exposure-based trauma treatment group. The announcement consisted of defining sexual violence, providing examples of symptoms related to sexual violence, explaining the differences between the treatment groups (i.e., exposure required and exposure optional), informing women of the time and date of the next group, and an anonymous narrative of a previous group members' experience in the group. Women were instructed to speak with their counselor if they were interested in one of the groups, and the counselors provided permission for the women to attend the group. Participation in the sexual violence group was completely voluntary. Before attending the first group session, group leaders met with the women, explained the research component of the group, and group members completed pre-treatment measures. Participation in the research was completely voluntary and continuation in the group was not dependent upon agreeing to complete the research measures. Women completed post-treatment measures when the group concluded.

## **Description of Treatment Group**

Women who were interested in the SHARE group were allowed to choose between two groups: "sharing required" and "sharing optional" groups; they also had an opportunity to choose to be randomly assigned to one of the groups. The group comprised 8 sessions that last approximately 1.5 hours per session. Both groups received psychoeducation about sexual trauma, common outcomes of sexual assault, emotions, and exposure-based treatment. Women in the "sharing required" group were guided through imaginal exposures by the group leaders and listened to other group members' imaginal exposures. The "sharing optional" group listened to

actors being guided through imaginal exposures. Both groups engaged in challenging maladaptive cognitions at the end of the group.

## Measures

Participants completed measures that assess demographics, current symptoms of PTSD and depression, alexithymia, identification of emotions in children, general beliefs about emotions, and beliefs about the use of emotions in parenting. Each is reviewed below.

**Predictor variable.** Current trauma symptoms were assessed using the PTSD Checklist for DSM-5 (PCL-5; Weathers et al., 2013). This 20-item measure assesses common symptoms indexing PTSD. In addition to a total score, there are four subscales that correspond to the four symptoms clusters of PTSD (i.e., intrusion, avoidance, negative alterations in cognitions and mood, and alterations in arousal and reactivity). Item responses range from 0 (*Not at all*) to 4 (*Extremely*). Summed scores range from 0 – 80, where higher scores indicate more PTSD symptoms. In this study, only the total score was used. A cut-point of 33 for a diagnosis of PTSD is recommended (Weathers et al., 2013). The PCL-5 has demonstrated high test-retest reliability ( $r = .82 - .86$ ) and acceptable convergent and discriminant validity (Bovin et al., 2016). Internal consistency reliability in the current sample for the total scale was excellent ( $\alpha = .94$ ).

**Mediating variables.** Alexithymia was assessed using the Toronto Alexithymia Scale – 20 items (TAS-20; Bagby, Parker, & Taylor, 1994; Bagby, Taylor, & Parker, 1994). Data indicate a three-factor structure that is theoretically related to the concept of alexithymia including *Difficulty Identifying Feelings*, *Difficulty Describing Feelings*, and *Externally-Oriented Thinking*. Items are rated on a 5-point Likert scale from 1 (*Strongly disagree*) to 5 (*Strongly agree*) and summed to provide a total score. Total scores range from 20 – 100, where higher scores indicate more difficulties with emotion identification within one's self. In previous



studies, the mean of a psychiatric sample (e.g., meeting criteria for an anxiety disorder, somatoform disorder, depressive disorder, personality disorder, substance use disorder) was approximately 55 and the mean of a community sample was approximately 47 (Bagby et al., 1994). The TAS-20 has demonstrated acceptable convergent and discriminant validity (Bagby et al., 1994). In this study, the internal consistency reliability for the total scale was good ( $\alpha = .81$ ). However, upon inspection of the reliability of the subscales, *Difficulty Identifying Feelings* was the only reliable subscale ( $\alpha = .88$ ). The *Difficulty Describing Feelings* subscale ( $\alpha = .28$ ) and *Externally-Oriented Thinking* subscale ( $\alpha = .35$ ) were both unacceptable. Thus, the *Difficulty Identifying Feelings* subscale was used in this study. Subscale scores range from 7 – 35, where higher scores indicate more difficulties with emotion identification in the self.

Cognitions about the acceptability of experiencing and expressing emotions were assessed using the Beliefs about Emotions Scale (BES; Rimes & Chalder, 2010). The BES is a 12-item scale where items are rated from 0 (*Totally disagree*) to 6 (*Totally agree*). A total scale score was obtained by summing all the items. The total scale ranges 0 – 72, with higher scores indicating more negative beliefs about emotions. Internal reliability estimates indicate high internal consistency ( $\alpha = .91$ ; Rimes & Chalder, 2010). In regard to validity, depression, anxiety, and perfectionism are moderately associated with more negative beliefs about emotions. Furthermore, the BES is sensitive to changes in cognitions due to treatment: individuals who completed a course of cognitive-behavioral therapy had fewer negative beliefs about emotions than when they started treatment (Rimes & Chalder, 2010). The internal consistency reliability for beliefs about emotions in this sample was excellent ( $\alpha = .95$ ).

The ability to identify emotions in others, specifically infants, was assessed using the Infant Facial Expressions of Emotion from Looking at Pictures (IFEEL; Emde, Butterfield &

Osofsky, 1987). The IFEEL is a stimulus set of 30 pictures of infants displaying different emotions. Emotions displayed in the pictures include variations of joy, excitement, distress, boredom, surprise, anger, fear, disgust, and shame. For each stimulus, the respondent was asked to choose one emotion word that best represents how the child may be feeling. For this assessment, responses can be scored both categorically and dimensionally. For categorical scoring, responses are given a specific number based on the emotion category to which the response belongs. For dimensional scoring, the response is scored based on locations within two dimensions (i.e., hedonic tone and arousal). Test-retest reliability of IFEEL is marginally acceptable ( $\alpha = .64 - .66$ ) when using both categorical scoring and dimensional scoring (Appelbaum, Butterfield, & Culp, 1993). Previous research indicates women who have experienced traumatic events and women from high-risk groups are more likely to identify sadness and fear in infant faces than the standardization group (Emde, Osofsky, & Butterfield, 1993; Knezević & Jovancević, 2004). For this study, a continuous scoring was used whereby responses were coded for the percentage of the normative sample who also used that emotion category and then the 30 items were summed. Scoring was done in this way because the hypotheses inquired about difficulties recognizing child emotions. The IFEEL measure was the only assessment of young child faces that was not computerized of which I was aware. I chose to score relative to the normative sample because the hypotheses also inquired about abnormal processes. The total score ranged from 0 – 14, with higher scores indicating greater similarity with the normative sample. Additionally, number of emotion category responses were summed for each participant. In this sample, using the relative to the normative sample scoring, the internal consistency reliability was  $\alpha = .62$ , suggesting questionable reliability.

**Outcome variable.** Parenting meta-emotion philosophies (i.e., the emotions and cognitions related to responding to a child's emotions and teaching a child about emotions) were measured using the 21-item Parenting Emotional Style Questionnaire (PESQ; Havighurst, Wilson, Harley, Prior, & Kehoe, 2010). The PESQ is a 21-item scale. Items are rated on a 5-point Likert-type scale, from 1 (*Strongly disagree*) to 5 (*Strongly agree*). The measure has three scales: *Emotion Dismissing*, *Emotion Coaching*, and *Empathy/Connection* measuring the degree to which parents dismiss their children's emotions, teach their children about emotions, and try to connect with their children's emotions, respectively. Higher scores on each scale indicate stronger beliefs in regard to dismissing, coaching, and connection. Internal consistency reliability is adequate for each scale (*Emotion Dismissing*  $\alpha = .82 - .87$ ; *Emotion Coaching*  $\alpha = .78 - .84$ ; *Empathy/Connection*  $\alpha = .67 - .82$ ) in previous studies. In regard to validity, parental report of emotion coaching and empathy are associated with observations of using more emotion labels and exploration of emotions (Havighurst et al., 2010). Internal consistency reliability for all scales were good in this sample (*Emotion Dismissing*  $\alpha = .83$ , *Emotion Coaching*  $\alpha = .87$ ; *Empathy/Connection*  $\alpha = .81$ ). Given the empathy items overlap with the emotion coaching scale, only the emotion dismissing and emotion coaching scales were used.

## **Procedures**

Given the vulnerable nature of the population recruited for this study, a double-consenting procedure was used. During the pre-treatment meeting, potential participants were told about the research study and informed consent was reviewed. The researchers emphasized that participants could discontinue the study at any time without penalty and treatment did not depend on their participation. The women reviewed the informed consent document and provided a signature before continuing with the questionnaires and stimulus set (questionnaires

and stimulus set are reviewed above). After completing the questionnaires, participants were asked to again provide their consent to use their materials as part of a research study. This allowed participants to decline participation after having had the opportunity to review all study questions and materials. At the 8<sup>th</sup> (final) therapy session, participants were asked to complete the same questionnaires and stimulus set. At that time, women were again reminded of the research study, asked to complete the measures, and then provided consent to use their data in the study. Completion of assessment materials took approximately 30 minutes at pre-treatment and post-treatment.

### **Data Analysis**

To address Hypothesis 1, correlational analyses were conducted using SPSS. To address Hypothesis 2, any independent and dependent variables that were correlated were added to a serial mediation model using an SPSS macro PROCESS (Preacher & Hayes, 2017; see Figure 1). Hypothesis 3 was addressed using paired samples T-tests in SPSS. Missing data were handled by using an appropriate data estimation method (e.g., multiple imputation, expectation maximization). Data transformations were conducted as needed and compared with the non-transformed data. Given there were two treatment groups, post-treatment measures of outcome variables (i.e., alexithymia, emotion identification in children, beliefs about emotions, and parenting meta-emotion philosophies) were analyzed for group differences using t-tests.

### **Power Analysis**

To determine the sample size needed to detect a relation if one is present, a power analysis using G-Power 3.1.9.2 was conducted (Faul, Erdfelder, Buchner, & Lang, 2009). An *a priori* effect size of .30 was utilized because of lack of prior studies and the clinical relevance of a moderate effect size. Utilizing an effect size of .30, a power level of .80, setting the number of

predictors to 7, and the probability level of a Type I error for testing the null hypothesis to .05, a sample size of 56 was needed.

## Results

### Data Preparation

All variables were assessed for normality by assessing histograms, skewness and kurtosis. All variables were within acceptable limits. Thus, no transformations were made on the data. Missing data was handled using both listwise deletion and expectation maximization. Results for both methods were similar; thus, the listwise deletion results are presented. Because listwise deletion results are presented, there are varying  $n$ 's for each variable at pre and post treatment.

### Descriptive Statistics of Study Variables

Women ( $N = 93$ ) in the current study were all victims of sexual violence and 72% of women completed the group (i.e., attended six or more sessions). Approximately half of the participants (58%) reported clinically significant PTSD symptoms on the PCL5 as defined by a cut-point of 33 (see Table 2). The women scored a mean of 22.80 ( $SD = 7.05$ ) on difficulties identifying emotions on the TAS-20 which is 1.5 standard deviations greater than a community sample mean for the same subscale ( $M = 14.27$ ,  $SD = 5.20$ ; Parker, Taylor, & Bagby, 2003). They also scored a mean of 58.49 ( $SD = 16.84$ ) on the BES, indicating more negative beliefs about the usefulness of emotions than both healthy controls ( $M = 27.9$ ,  $SD = 11.3$ ) and clinical participants ( $M = 35.0$ ,  $SD = 14.3$ ) in previous studies (Rimes & Chalder, 2010). From the IFEEL picture set, the women used the "interest" emotion category more often than other emotions ( $M = 5.25$ ,  $SD = 3.74$ ). The "interest" emotion category includes "thinking", "looking", and "wondering." Fifty percent of women scored 8.33 or above (from a 0 to 14 scale) in relation to the normative sample. This indicates half of the women approximated the normative sample in

over half of the trials. Additionally, approximately 47% of women used a non-emotion word at least once to describe how the infant was feeling. This is largely consistent with the normative sample. Finally, women's self-report of parenting on the PESQ was similar to community mothers in emotion dismissing ( $M = 34.25$ ,  $SD = 9.80$ ) but 1.5 standard deviations below the mean for emotion coaching ( $M = 31.30$ ,  $SD = 5.78$ ; Havighurst et al., 2010).

Demographic variables, number of children, treatment group, and treatment completion were not significant predictors of the study variables with minor exceptions. Age was associated with the BES where younger women had more negative beliefs about emotions ( $r = -.32$ ,  $p < .001$ ). Higher PESQ emotion dismissing was associated with treatment non-completion,  $t(80) = 2.02$ ,  $p < .05$ . Non-completers were more likely to use a non-emotion word on the IFEEL than completers,  $t(82) = -2.04$ ,  $p < .05$ .

### **Associations among Study Variables**

Consistent with hypothesis 1, PTSD, alexithymia, and beliefs about emotions were associated (see Table 3). PTSD (PCL5) was positively associated with difficulties identifying emotions (TAS-20;  $r = .50$ ,  $p < .001$ ) and positively associated with the BES ( $r = .45$ ,  $p < .001$ ). Contrary to hypothesis 1, emotion recognition in children was associated with higher PTSD symptoms and parenting meta-emotion philosophies were not associated with PTSD and disruptive emotional processes. The PCL5 was related to IFEEL where higher PTSD symptoms were associated with identifying emotions more similarly to the normative sample ( $r = .24$ ,  $p < .05$ ). The TAS-20 was positively associated with the BES ( $r = .63$ ,  $p < .001$ ). The TAS-20 was not related to PESQ-emotion dismissing, PESQ-emotion coaching, or IFEEL. The BES was not associated with PESQ-emotion dismissing, PESQ-emotion coaching, or IFEEL. The PESQ scales were not associated with IFEEL. The PESQ-emotion coaching and PESQ-emotion

dismissing were moderately correlated with each other ( $r = .44, p < .001$ ) indicating those who have higher emotion coaching also endorse more emotion dismissing. Because there were no associations between the PCL5, TAS-20, BES, IFEEL, and PESQ scales, the serial mediation model for hypothesis 2 was not conducted (Kraemer, Kiernan, Essex, & Kupfer, 2008).

Demographic variables, number of children, treatment group, and treatment completion were not significant predictors of the study variables with minor exceptions. Age was associated with the BES where younger women had more negative beliefs about emotions ( $r = -.32, p < .001$ ). Higher PESQ emotion dismissing was associated with treatment non-completion,  $t(80) = 2.02, p < .05$ . Non-completers were more likely to use a non-emotion word on the IFEEL than completers,  $t(82) = -2.04, p < .05$ .

### **Pre-Post Treatment Changes**

Prior to examining changes from pre- to post-treatment, differences between the “sharing required” and “sharing optional” groups were analyzed using paired-samples T-tests. There were not significant differences between the groups; thus, both treatment groups were included in the following analyses.

Consistent with hypothesis 3, paired samples T-tests indicate that there were significant differences between the pre- and post-group measures (see Table 2). PTSD symptoms were significantly reduced from pre- to post-treatment,  $t(58) = 9.29, p < .001$ . In addition, the TAS-20 [ $t(41) = 4.58, p < .001$ ] and the BES [ $t(60) = 5.01, p < .001$ ] were also significantly reduced post-treatment. Finally, philosophies about dismissing emotions were also significantly reduced post-treatment,  $t(65) = 2.60, p < .05$ .

Because women who did not complete treatment scored more highly on the PESQ, an intent to treat analysis was conducted to ensure the changes in the PESQ were not due to drop-

out. To conduct the intent to treat analysis, the last observation of each participant was carried forward (Soares & Carneiro, 2002); therefore, if a participant did not have post-treatment data, their observations from their pre-treatment data were used. These analyses indicated that the PESQ-emotion dismissing significantly declined from pre-test to post-test,  $t(81) = 2.57, p < .05$ . PESQ-emotion coaching and IFEEL remained unchanged.

### **Exploratory Analyses**

Because there was a positive association between IFEEL and PTSD, exploratory analyses were conducted to determine which symptom clusters may be driving this association. These analyses indicated that the hyperarousal subscale ( $r = .23, p < .05$ ) and the negative alterations in cognitions subscale ( $r = .27, p < .05$ ) were the two PTSD subscales associated with IFEEL. Furthermore, because the dismissing parenting meta-emotion philosophies reduced from pre-treatment to post-treatment, exploratory analyses were conducted to determine the associations among the post-test variables. In post-test analyses, PTSD ( $r = .32, p < .05$ ), difficulties identifying emotions (TAS-20;  $r = .36, p < .01$ ), and beliefs about emotions (BES;  $r = .31, p < .01$ ) were positively correlated to dismissing meta-emotion philosophies (PESQ-emotion dismissing).

### **Discussion**

The associations among PTSD, difficulties identifying one's emotions, and negative beliefs about emotions were all positive, which was in support of hypothesis 1. This is consistent with previous literature (Charak et al., 2018; Frewen, Dozois, Neufeld, & Lanius, 2008; Gratz et al., 2007; Powers, Cross, Fani, & Bradley, 2015; Price et al., 2006; Walsh et al., 2011; Zeitlin et al., 1993). However, there was a positive relationship between PTSD and emotion recognition in infant faces, which was contrary to hypothesis 1. This finding was also contradictory to previous



studies indicating individuals with PTSD and trauma histories have more difficulties with emotion recognition in others (Bernstein et al., 2014; Schechter, Moser, et al., 2015; Schechter, Suardi, et al., 2015). However, a few studies indicated there were no differences in emotion recognition between individuals with high and low PTSD symptoms (Lysaker et al., 2015; Masten et al., 2008) or differences between individuals with combat exposure and non-trauma controls (Amdur, Larsen, & Liberzon, 2000). There is no evidence to suggest that individuals with higher PTSD symptoms would have *more* normative emotion recognition abilities than individuals with lower PTSD symptoms. In fact, this finding is counterintuitive given the extensive research on dysregulated emotional processes in individuals with PTSD (APA, 2013; Charuvastra & Cloitre, 2008; Cloitre et al., 2009; Cloitre, Scaravone, & Difede, 1997; Cuevas, Finkelhor, Ormrod, & Turner, 2009; Ford et al., 2010; Herman, Perry & van der Kolk, 1989; Herman, 1992; Hetzel-Riggin & Roby, 2013; Holt et al., 2017; Shipman et al., 2005; van der Kolk, 2007; Walsh et al., 2014).

To understand the association between the IFEEL and PCL5 from hypothesis 1, exploratory analyses were conducted to determine which PCL5 subscales were driving the association. These exploratory analyses indicated that hyperarousal and negative alterations in cognitions were associated with emotion recognition in infant faces. Although these exploratory analyses were conducted to seek clarity on the positive relationship between PTSD and more normative emotion recognition in infants, there was no literature to support this finding. Therefore, these findings may be spurious given the low correlation (.24) and *p* value of .046. If the findings are spurious and there is no association between PTSD symptoms and emotion recognition (IFEEL), this would be consistent with the Schechter (2008) study given that all participants in both samples experienced interpersonal trauma and PTSD symptoms.

Another explanation for the odd findings is that I used a normative approach to coding the emotion recognition task (IFEEL). This is a different approach from other researchers who used emotion category, or tone (i.e., calm to arousing) and valence (i.e., pleasant to unpleasant). When using emotion category as the emotion process, researchers have found that male trauma survivors have difficulties identifying fear faces as compared to other emotions (Umiltá, Wood, Loffredo, Ravera, & Gallese, 2013) and female trauma survivors are more likely to use sadness and fear compared to other emotions (Webb & Ayers, 2015). When using emotion tone and valence, trauma victims are more likely to rate pleasant pictures consistently less arousing (Spahic-Mihajlovic, Crayton, & Neafsey, 2005) and neutral images as less arousing (Litz, Orsillo, Kaloupek, & Weathers, 2000). I chose to use a normative approach because the hypothesis dictated measurement of an abnormal emotion processes in women with children; thus, it was important to use infant or child pictures and an approach that indicated correct/incorrect or normative/not normative. The differences in the way emotion processes were measured may help explain why these findings were contrary to other findings.

The PESQ (parenting meta-emotion philosophies) dismissing and coaching scales were positively correlated in this study. This is not consistent with theory regarding meta-emotion philosophy given the definition of a meta-emotion philosophy includes a coherent strategy for thinking about one's own and one's child's emotions (Katz & Hunter, 2007), and a coaching strategy can be viewed as opposite from a dismissing strategy. In studies using the meta-emotion interview, there is no coding for a dismissing philosophy; however, there is coding for awareness of the child's emotions. It could be extended that one who is not aware of his/her child's emotions would not be able to coach the child in regard to emotion and would likely be dismissing (Lagace-Seguin & Coplan, 2005). Most studies indicated that higher emotion

coaching scores were associated with higher emotion awareness of the child (Cohodes, Hagan, Lieberman, & Dimmler, 2016; Katz & Hunter, 2007; Katz & Windecker-Nelson, 2004). In addition, one study correlates the interview emotion coaching construct with the emotion coaching and emotion dismissing questionnaire constructs. This study indicates that emotion coaching in the interview is highly, positively associated with the emotion coaching questionnaire construct and highly, negatively associated with the emotion dismissing construct (Lagace-Seguin & Coplan, 2005). The Lagace-Seguin & Coplan (2005) study does not indicate whether the questionnaire construct scales are correlated. Although initial studies indicated the constructs are distinct, the scales in this study were moderately and significantly correlated. This is also found in another study using the questionnaire constructs of emotion coaching and emotion dismissing (Havighurst, Wilson, Harley, & Prior, 2009). Although principle components analysis with orthogonal rotation indicated a two-factor structure which corresponds to emotion coaching and emotion dismissing, these scales have small to moderate, significant correlations. This may indicate that some parents do not have a coherent strategy for helping the child cope with emotions; thus, they use both strategies. If this is the case, this would be consistent with attachment theory's constructs of disorganized caregiving and disorganized attachment where there is no coherent strategy for parenting one's child and no coherent strategy for relating to one's parent, respectively (George & Solomon, 2008; Lyons-Ruth, Bronfman, & Parsons, 1999; Lyons-Ruth & Jacobvitz, 2008).

Although many studies indicate that PTSD is related to poor parenting outcomes, this study indicated there was no relation between PTSD and parenting meta-emotion philosophies which was contrary to hypothesis 1. In a study using domestic violence survivors with PTSD, the authors found that PTSD was related to increased emotion dismissing philosophies (Johnson &

Lieberman, 2007). This finding is expected given that avoidance is a main symptom of PTSD and that negative beliefs about emotions are also related to PTSD (Charak et al., 2018; Farnsworth & Sewell, 2011; Gratz et al., 2007; Nightingale & Williams, 2000; Walsh et al., 2011). With the exception of the aforementioned study, there are no other studies of which the author is aware using the construct of meta-emotion philosophies with parents with PTSD and violence victimization histories. There are key differences between the study using domestic violence survivors and the current study. One significant difference is the population that was used. In the Johnson & Lieberman (2007) study, participants were women who were with their children, but in this study, the women were inmates who had not seen their children in three months to many years and our participants did not always have custody of their children.

Another difference in the aforementioned study to the current study was the assessment of the meta-emotion philosophies. The Johnson and Lieberman (2007) study used the meta-emotion philosophy interview whereas the current study used the self-report questionnaire. There are many difficulties with measuring parent behaviors and philosophies via self-report. One well known limitation to self-report is the social desirability bias. Observationally, our women were guarded about their parenting practices, often painting themselves in a positive light although they may not have custody of their children or their mental health might have impacted their ability to provide for their children.

Additionally, research indicates that self-reported parenting is not always congruent with actual behavior. In fact, research indicates there is a small to modest correlation between behavioral observations and parent report data (Bögels & Melick, 2004; Hawes & Dadds, 2006; McHale, Kuersten-Hogan, Lauretti, & Rasmussen, 2000). Moreover research also suggests there are significant discrepancies between parenting self-reports and behavior observations in CPS

referred mothers and mothers at high-risk for maltreating their children (Bailey, DeOliveira, Wolfe, Evans, & Hartwick, 2012; Bennett, Sullivan, & Lewis, 2006). Many of the women in the sample may fit this description given their current context. If this is the case, true associations among PTSD, disruptive emotional processes, and parenting meta-emotion philosophies may have been detected if parenting was measured using parenting observations rather than self-report.

Although much of the parenting data was discrepant from the literature, the post-treatment symptom reductions were congruent with hypothesis 3. Changes in PTSD symptoms were expected given previous data indicating that participation in the SHARE group is associated with PTSD symptom reduction (Karlsson, Bridges, Bell, & Petretic, 2014; Karlsson, Zielinski, & Bridges, 2015). The post-treatment decline in negative beliefs about emotions is consistent with research. For example, the Price and colleagues (2006) study also showed that reductions in negative beliefs about emotions predicted changes in PTSD and depressive symptomology. Both the current study and the Price and colleagues (2006) study are consistent with the BES validity study which indicates that the BES is sensitive to treatment gains with cognitive-behavioral treatment (Rimes & Chalder, 2010).

In addition to reductions in PTSD and negative beliefs about emotions, difficulties identifying one's emotions were also lower when measured post-treatment, consistent with hypothesis 3. This finding is consistent with a study conducted by Zorzella and colleagues (2019). In this study, women with histories of severe childhood trauma attended group psychotherapy. This group addressed issues of "safety, affect regulation, self-care, stabilization, skill building, education, and support" (Zorzella, Muller, Cribbie, Bambrah, & Classen, 2019, p.3). Much like the current study, women reported fewer PTSD and alexithymia symptoms after

treatment (Zorzella et al., 2019). Both studies are consistent with notions of PTSD-related alexithymia as a treatable symptom related to experiences of victimization.

Post-test analyses also provided mixed findings regarding parenting philosophies. There were reductions in emotion-dismissing philosophies from pre- to post-treatment, but not increases in emotion-coaching philosophies. The change in dismissing philosophies is interesting given that parenting meta-emotion philosophies were not related to PTSD at pre-treatment. In post-test analyses, PTSD, difficulties identifying emotions, and beliefs about emotions were positively associated with dismissing meta-emotion philosophies. There are different explanations for this finding. The differences in the pre-test and post-test analyses may indicate that at pre-test overall levels of distress was high. This distress may have created a restricted range for testing associations with a more distal variable such as parenting. However, at post-test when there was more variability in responding the associations among the variables were more apparent. Another explanation for this finding is that as general distress goes down, so too does negative evaluation of oneself in relation to many variables. This hypothesis could be tested by looking at variables that should not change due to treatment. Although emotion dismissing philosophies were associated with PTSD and disruptive emotional processes, emotion coaching meta-emotion philosophy remained unassociated with any of the study variables.

There were differences among pre-test and post-test analyses for emotion dismissing parenting philosophies. There are many different explanations for these differences. Because there was no control group in this study, these differences may be due to the passage of time. In addition, a third variable such as overall emotion dysregulation may account for the differences in pre-test and post-test parenting philosophies. These changes could also be associated with declines in distress. It may be that as women's parenting philosophies change there is a decrease

in distress or that declines in distress lead to reductions in emotion dismissing philosophies. A possible explanation for the later is that if women are less distressed and can cope with emotions more effectively, they may be less inclined to believe that the way to handle their child's emotions is to immediately alleviate their child's distress. If this is the case, this fits with both psychoeducation given at the beginning of the SHARE group and the experiential component of the group (i.e., exposures). Exposure teaches clients that they can face negative emotions. This is a powerful learning experience that can generalize. In fact, this is the basis of learning theory in general and exposures specifically. Furthermore, the SHARE group models emotion coaching processes via psychoeducation given at the beginning of treatment, modeling during exposures, and processing emotions throughout the duration of treatment. Clinicians also warn against emotion dismissing strategies throughout treatment. Thus, all components of treatment may be associated with the differences in pre- and post-treatment dismissing meta-emotion philosophies. However, although emotion dismissing parenting philosophies decreased after treatment, the women did not report an increase in emotion coaching parenting philosophies. Thus, to create positive changes in parenting, it is likely that parenting specific interventions are also needed.

### **Limitations and Future Directions**

Women in prison have a high need of services including trauma treatment. However, understanding their parenting is challenging given the women's current context. The current study had a number of limitations. First, the nature of the group treatment may have contributed to selection bias. Women had to be willing to talk about the sexual victimization they experienced and they also had to be willing to take part in a therapy group. It is possible that women who experienced more avoidance symptoms and who are more anxious in group settings elected not to participate in the group treatment. This bias may have contributed to an

underestimation of PTSD symptoms, alexithymia, negative beliefs about emotions, and emotion dismissing philosophies in this population because the women who may have scored the highest for these constructs did not participate.

The study design was also limited because participation in the study was not restricted by child age. Emotion socialization is often a construct measured in preschool children and used to predict later social competency; however, some studies have investigated emotional socialization practices in parents of older children and adolescents. The current study included women who had young children, but also included women who were mothers of adult children. Because the possible age range of children is so wide, the measurement of emotion socialization may be flawed. Items that are appropriate for young children may not be appropriate for older children and adolescents. Additionally, the task of parenting adult children is different from the task of parenting children and adolescents; assumingly, emotional socialization is likely not part of parenting an adult child. Furthermore, women were not instructed to think about a particular child when they were answering questions. Children are often different from each other; thus, the strategies used to parent children can be different for each child. This could have also affected the way the women filled out the parenting meta-emotion philosophy measure.

It is unclear how women may respond to parenting questionnaires while they are in prison: they may respond to what they have done in the past or what they would like to do/ plan to do in the future. In addition, the women in our sample had some difficulties being asked about parenting because they had been separated from their children. This caused some of the women significant emotional distress, and it is possible that this emotional distress impacted the way the women responded. As with many self-reports, there is also a high likelihood of social desirability bias. Moreover, self-reported parenting behaviors or attitudes are not always highly correlated



with behavioral observations of parenting. In this study, we did not have the opportunity to observe the women with their children and it is unclear how behavioral observations would have been associated with the other constructs of interest.

Furthermore, our sample (i.e., all sexual victimization and most participants had moderate to high PTSD symptoms) had a restricted range of PTSD symptoms which may have impacted our abilities to find associations in the pre-treatment data. This hypothesis is somewhat supported in the post-treatment data. After treatment, the women had a greater range in PTSD symptoms and there was a significant positive association between PTSD symptoms and emotion dismissing parenting philosophies. However, given the nature of significance testing, these findings may be due to error: a) pre-test non-significance due to Type II error or b) post-test significance due to Type I error. More data is needed to understand these findings.

Finally, the measures used in this study interpreting infant emotions and for parenting meta-emotion philosophies may have been flawed. When trying to determine the ability to interpret child emotions, the author compared the current sample to the normative sample of the IFEEL data. This is not how the original authors intended the use of this measure. Thus, the validity and reliability of the measure used in this way is questionable. Future studies should use measures constructed to determine “correct” or “incorrect” in order to determine if there is an abnormal emotion identification process occurring. Furthermore, the parenting meta-emotional philosophies measure was originally constructed as an interview. It is possible there is some information lost when moving from a structured interview to a questionnaire-based assessment. There is some evidence indicating this may be the case, given the difference in findings between the current study and the Johnston and Lieberman (2007) study.

Overall, the current study adds to the PTSD treatment literature in many ways. First, this study adds to the growing literature evidencing the effectiveness of exposure-based group treatment for sexual victimization in incarcerated women. Not only do PTSD symptoms reduce, but this study offers evidence of other significant treatment gains including reductions in maladaptive cognitions about emotions and reductions in difficulties identifying emotions. Although replication is needed, this study also indicates that treatment of women's mental health symptoms (i.e., PTSD, alexithymia, maladaptive beliefs about emotions) may lead to a reduction in problematic parenting philosophies. However, because there was not an increase in positive parenting philosophies, this study indicates positive parenting skills need to be explicitly taught.

Future research should continue to measure emotional processes related to sexual victimization and PTSD. Specifically, research should move beyond pre-test/post-test designs and gather information multiple times across treatment in order to model the actual change processes. This methodology will be able to speak to more specific mediational processes and temporal predictors. Continued research with incarcerated women is essential given the vulnerable nature of this group and the high cost of incarceration to society. In addition, parenting in incarcerated women is an area of study that needs more attention. Children of incarcerated women are oftentimes in kinship care and foster care, and understanding the needs of these women and their children is necessary to support the well-being of both women and children who are especially vulnerable.

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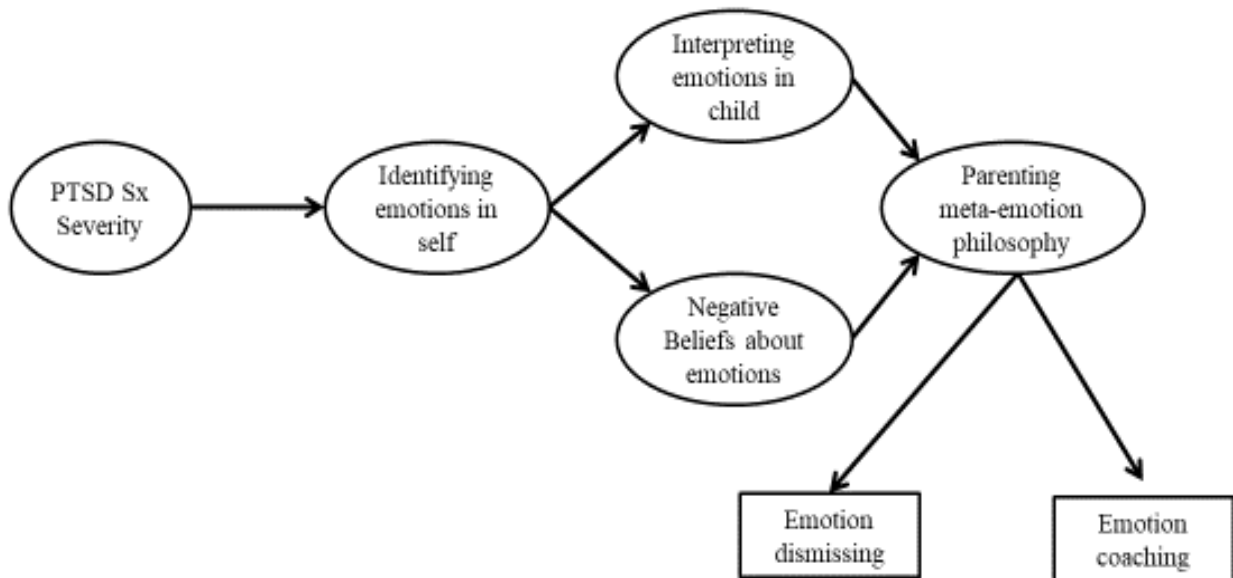
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## Appendix



**Figure 1**  
Conceptual Model

Table 1  
*Demographic Characteristics of the Sample*

Variable	M(SD) / N(%)
Age	33.17 (9.41)
Number of Children	2.5 (1.5)
Ethnicity	
African American	4 (4.3%)
Mexican, Latina, or Hispanic Origin	1 (1.1%)
Native American	6 (6.5%)
White	79 (84.9)
Other	3 (3.2%)
Relationship Status	
Married	27 (29.0%)
Dating, Not married	12 (12.9%)
Single	26 (28.0%)
Divorced	16 (17.2%)
Other	12 (12.9%)
Previous Therapy	
Yes	63 (67.7%)

Table 2  
*Descriptives of Study Variables*

Variable	<i>n</i>	$\alpha$	Pre-test <i>M(SD)</i>	Post-test <i>M(SD)</i>	<i>t</i>	<i>df</i>
PCL5	87	.94	38.33 (18.32)	14.19 (11.86)	9.29***	58
TAS-20	52	.88	22.80 (7.05)	17.41 (7.56)	4.58***	41
BES	89	.95	58.49 (16.84)	43.93 (15.29)	5.01***	60
IFEEL	58	.62	8.33 (1.66)	8.52 (1.29)	-.84	57
PESQ – Dismissing	82	.85	34.25 (9.80)	31.01 (6.07)	2.60*	65
PESQ – Coaching	82	.61	31.30 (5.78)	31.56 (4.98)	-.43	67

*Note.* PCL5 is PTSD Checklist for DSM5, TAS-20 is Difficulty Identifying Emotions in the Toronto Alexithymia Scale-20 items, BES is Beliefs about Emotions Scale, PESQ-Dismissing is Dismissing Emotions Scale in the Parenting Emotional Style Questionnaire, PESQ-Coaching is Coaching Emotions Scale in the Parenting Emotional Style Questionnaire.

\* $p < .05$  \*\*\*  $p < .001$

Table 3  
*Summary of Demographic and Study Variable Pre- and Post- Test Associations*

Measure	1	2	3	4	5	6	7	8
1. Maternal Age	--	.19	-.08	.00	.19	-.04	.02	.22
2. Number of Children	.19	--	.10	.18	.29*	-.09	.04	.07
3. PCL5	-.09	.12	--	.44**	.48**	-.20	.32*	.19
4. TAS-20	-.16	-.04	.50***	--	.32*	-.06	.29*	.12
5. BES	-.32**	-.06	.45**	.63***	--	.33	.31	-.01
6. IFEEL	-.04	-.09	.24*	.24	.13	--	.07	.10
7. PESQ - Dismissing	.00	.11	.15	.27	.16	.04	--	.41**
8. PESQ - Coaching	.11	-.07	.06	.07	-.07	.06	.44***	--

\* *Note* Pre-test correlations are below the diagonal and post-test correlations are above the diagonal.

\* $p < .05$  \*\* $p < .01$  \*\*\*  $p < .001$



## IRB Approval Letter



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**To:** Ana Julia Bridges  
MEMH 202C

**From:** Douglas James Adams, Chair  
IRB Committee

**Date:** 12/17/2018

**Action:** Approval

**Action Date:** 12/17/2018

**Protocol #:** 1708004395R008

**Study Title:** Evaluating a Sexual Violence Therapy Group with Incarcerated Women

**Expiration Date:** 11/10/2019

**Last Approval Date:** 12/17/2018

**Risk Level:**

The above-referenced protocol has been approved following Full Board Review by the IRB Committee that oversees research with human subjects.

If the research involves collaboration with another institution then the research cannot commence until the Committee receives written notification of approval from the collaborating institution's IRB.

It is the Principal Investigator's responsibility to obtain review and continued approval before the expiration date.

Protocols are approved for a maximum period of one year. You may not continue any research activity beyond the expiration date without Committee approval. Please submit continuation requests early enough to allow sufficient time for review. Failure to receive approval for continuation before the expiration date will result in the automatic suspension of the approval of this protocol. Information collected following suspension is unapproved research and cannot be reported or published as research data. If you do not wish continued approval, please notify the Committee of the study closure.

**Adverse Events:** Any serious or unexpected adverse event must be reported to the IRB Committee within 48 hours. All other adverse events should be reported within 10 working days.

**Amendments:** If you wish to change any aspect of this study, such as the procedures, the consent forms, study personnel, or number of participants, please submit an amendment to the IRB. All changes must be approved by the IRB Committee before they can be initiated.

You must maintain a research file for at least 3 years after completion of the study. This file should include all correspondence with the IRB Committee, original signed consent forms, and study data.

cc: Maegan L. Calvert, Investigator

### PCL-5

Below is a list of problems that people sometimes have in response to a very stressful experience. Please read each problem carefully and then put a number from 1 (*not at all*) to 5 (*extremely*) in the box to indicate how much you have been bothered by that problem *in the last week*.

In the past week, how much were you bothered by...	Not at all (1)	A little bit (2)	Moderately (3)	Quite a bit (4)	Extremely (5)
1. Repeated, disturbing, and unwanted memories of the stressful experience?					
2. Repeated, disturbing dreams of the stressful experience?					
3. Suddenly feeling or acting as if the stressful experience were happening again (as if you were actually back there reliving it)?					
4. Feeling very upset when something reminded you of the stressful experience?					
5. Having strong physical reactions when something reminded you of the stressful experience ( <i>for example, heart pounding, trouble breathing, sweating</i> )?					
6. Avoiding memories, thoughts, or feelings related to the stressful experience?					
7. Avoiding external reminders of the stressful experience ( <i>for example, people, places, conversations, activities, objects or situations</i> )?					
8. Trouble remembering important parts of the stressful experience?					

## PCL-5 (Cont.)

<b>In the past week, how much were you bothered by...</b>	<b>Not at all (1)</b>	<b>A little bit (2)</b>	<b>Moderately (3)</b>	<b>Quite a bit (4)</b>	<b>Extremely (5)</b>
9. Having strong negative beliefs about yourself, other people, or the world ( <i>for example, having thoughts such as: I am bad, there is something seriously wrong with me, no one can be trusted, the world is completely dangerous</i> )?					
10. Blaming yourself or someone else for the stressful experience or what happened after it?					
11. Having strong negative feelings such as fear, horror, anger, guilt, or shame?					
12. Loss of interest in activities that you used to enjoy?					
13. Feeling distant or cut off from other people?					
14. Trouble experiencing positive feelings ( <i>for example, being unable to feel happiness or have loving feelings for people close to you</i> )?					
15. Irritable behavior, angry outbursts or acting aggressively?					
16. Taking too many risks or doing things that could cause you harm?					
17. Being "superalert" or watchful or on guard?					
18. Feeling jumpy or easily startled?					
19. Having difficulty concentrating?					

20. Trouble falling or staying asleep?					
--	--	--	--	--	--

TAS – 20						
		Strongly Disagree	Moderately Disagree	Neither Disagree nor Agree	Moderately Agree	Strongly Agree
1.	I am often confused about what emotion I am feeling.	1	2	3	4	5
2.	It is difficult for me to find the right words for my feelings.	1	2	3	4	5
3.	I have physical sensations that even doctors don't understand.	1	2	3	4	5
4.	I am able to describe my feelings easily.	1	2	3	4	5
5.	I prefer to analyze problems rather than just describe them.	1	2	3	4	5
6.	When I am upset, I don't know if I am sad, frightened, or angry.	1	2	3	4	5
7.	I am often puzzled by sensations in my body.	1	2	3	4	5
8.	I prefer to just let things happen rather than to understand why they turned out that way.	1	2	3	4	5
9.	I have feelings that I can't quite identify.	1	2	3	4	5
10.	Being in touch with emotions is essential.	1	2	3	4	5
11.	I find it hard to describe my feelings easily.	1	2	3	4	5

TAS – 20 (Cont.)						
		Strongly Disagree	Moderately Disagree	Neither Disagree nor Agree	Moderately Agree	Strongly Agree
12.	People tell me to describe my feelings more.	1	2	3	4	5
13.	I don't know what's going on inside me.	1	2	3	4	5
14.	I often don't know why I am angry.	1	2	3	4	5
15.	I prefer talking to people about their daily activities than their feelings.	1	2	3	4	5
16.	I prefer to watch "light" entertainment shows rather than psychological dramas	1	2	3	4	5
17.	It is difficult for me to reveal my innermost feelings, even to close friends.	1	2	3	4	5
18.	I can feel close to someone, even in moments of silence.	1	2	3	4	5
19.	I find examination of my feelings useful in solving personal problems.	1	2	3	4	5
20.	Looking for hidden meanings in movies or plays distracts from their enjoyment.	1	2	3	4	5

**BES**

Please tick the column that best describes how you think. Please note that because people are different, there are no right or wrong answers to these statements. To decide whether a given answer is typical of your way of looking at things, simply keep in mind how you think most of the time.

	Totally Agree	Agree Very Much	Agree Slightly	Neutral	Disagree Slightly	Disagree Very Much	Totally Disagree
1. It is a sign of weakness if I have miserable thoughts.							
2. If I have difficulties I should not admit them to others.							
3. If I lose control of my emotions in front of others, they will think less of me.							
4. I should be able to control my emotions.							
5. If I am having difficulties it is important to put on a brave face.							
6. If I show signs of weakness then others will reject me.							
7. I should not let myself give in to negative feelings.							
8. I should be able to cope with difficulties on my own without turning to others for support.							
9. To be acceptable to others, I must keep any difficulties or negative feelings to myself.							
10. It is stupid to have miserable Thoughts.							
11. It would be a sign of weakness to show my emotions in public.							
12. Others expect me to always be in control of my emotions.							

## PESQ

Below you will see statements that describe feelings mothers and their children may have. For each statement please circle how much you agree or disagree. If you do not have children, or if you are not sure about any item, just make your “best guess” about how you would respond. There are no right or wrong answers.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. When my child is angry, I want to know what he/she is thinking.	1	2	3	4	5
2. When my child is scared, it's an opportunity for getting close	1	2	3	4	5
3. When my child is worried, it's time to solve a problem.	1	2	3	4	5
4. Anger is an emotion worth exploring.	1	2	3	4	5
5. I try to change my child's worried moods into cheerful ones.	1	2	3	4	5
6. I prefer my child to be happy rather than overly emotional.	1	2	3	4	5
7. Sadness is something that one has to get over.	1	2	3	4	5
8. When my child gets angry my goal is to get him/her to stop.	1	2	3	4	5
9. I help my child get over sadness so he/she can move onto other things.	1	2	3	4	5
10. When my child is angry, it's an opportunity for getting close.	1	2	3	4	5
11. When my child is scared, I take some time to try to experience this feeling with him/her.	1	2	3	4	5
12. When my child is angry, it's time to solve a problem.	1	2	3	4	5
13. When my child is sad, I am expected to fix the world and make it perfect.	1	2	3	4	5
14. Childhood is a happy-go-lucky time, not a time for feeling worried.	1	2	3	4	5
15. When my child is sad, it's time to problem solve.	1	2	3	4	5
16. Childhood is a happy-go-lucky time, not a time for feeling sad or angry.	1	2	3	4	5
17. When my child gets worried my goal is to make him/her feel better.	1	2	3	4	5
18. When my child is worried I want to know what he/she is thinking.	1	2	3	4	5



PESQ (Cont.)					
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
19. When my child is angry, I take some time to try to experience this feeling with him/her.	1	2	3	4	5
20. When my child gets sad, it's a time to get close.	1	2	3	4	5
21. I try to change my child's angry moods into cheerful ones.	1	2	3	4	5

**IFEEL Picture Set**

Directions: Here are some pictures of babies' facial expressions. Please tell us, in one word if possible, the strongest and clearest feeling each baby is expressing. There are no right or wrong answers. Please respond with what first comes to your mind. We would like to have you turn the pages of the picture booklet one at a time. In the space on this sheet, which has the same number as the picture you are thinking about, write down what each baby is feeling.

100. \_\_\_\_\_

124. \_\_\_\_\_

101. \_\_\_\_\_

125. \_\_\_\_\_

102. \_\_\_\_\_

126. \_\_\_\_\_

103. \_\_\_\_\_

127. \_\_\_\_\_

104. \_\_\_\_\_

128. \_\_\_\_\_

105. \_\_\_\_\_

129. \_\_\_\_\_

106. \_\_\_\_\_

107. \_\_\_\_\_

108. \_\_\_\_\_

109. \_\_\_\_\_

110. \_\_\_\_\_

111. \_\_\_\_\_

112. \_\_\_\_\_

113. \_\_\_\_\_

114. \_\_\_\_\_

115. \_\_\_\_\_

116. \_\_\_\_\_

117. \_\_\_\_\_

118. \_\_\_\_\_

119. \_\_\_\_\_

120. \_\_\_\_\_

121. \_\_\_\_\_

122. \_\_\_\_\_

123. \_\_\_\_\_

**Note: The IFEEL stimulus is copyrighted and can be requested from the first author.**