

City University of New York (CUNY)

## CUNY Academic Works

---

Dissertations, Theses, and Capstone Projects

CUNY Graduate Center

---

2-2015

### The Mechanisms Of Transmission: Examining The Effects Of Childhood Interpersonal Violence Across Generations

Amber Nemeth

*Graduate Center, City University of New York*

[How does access to this work benefit you? Let us know!](#)

More information about this work at: [https://academicworks.cuny.edu/gc\\_etds/600](https://academicworks.cuny.edu/gc_etds/600)

Discover additional works at: <https://academicworks.cuny.edu>

---

This work is made publicly available by the City University of New York (CUNY).

Contact: [AcademicWorks@cuny.edu](mailto:AcademicWorks@cuny.edu)

THE MECHANISMS OF TRANSMISSION:  
EXAMINING THE EFFECTS OF CHILDHOOD INTERPERSONAL VIOLENCE  
ACROSS GENERATIONS

By  
AMBER NEMETH, M.A.

A dissertation submitted to the Graduate Faculty in Psychology in partial fulfillment of  
the requirement for the degree of Doctor of Philosophy  
The City University of New York

2015

UMI Copyright Form

2015

AMBER NEMETH

All Rights Reserved

This manuscript has been read and accepted for the  
Graduate Faculty in Psychology in satisfaction of the  
Dissertation requirement for the degree of Doctor of Philosophy

(Print) Denise Hien, Ph.D.  
\_\_\_\_\_

(Signature) \_\_\_\_\_  
Chair of Examining Committee

\_\_\_\_\_  
Date

(Print) Joshua Brumberg, Ph.D.  
\_\_\_\_\_

(Signature) \_\_\_\_\_  
Executive Officer

\_\_\_\_\_  
Date

(Print) Arietta Slade, Ph.D.  
\_\_\_\_\_

(Print) Peter Fraenkel, Ph.D.  
\_\_\_\_\_

(Print) Lesia Ruglass, Ph.D.  
\_\_\_\_\_

(Print) Lisa Cohen, Ph.D.  
\_\_\_\_\_

Supervisory Committee

## Abstract

THE MECHANISMS OF TRANSMISSION:  
EXAMINING THE EFFECTS OF CHILDHOOD INTERPERSONAL VIOLENCE  
ACROSS GENERATIONS

by

Amber Nemeth, M.A.

Advisor: Professor Denise Hien, Ph.D.

This study examined the direct relationship between maternal exposure to childhood interpersonal violence (sexual and/or physical abuse) and behavioral problems in her pre- to early-adolescent children. It also examined whether maternal aggression (psychological and physical aggression) and emotion dysregulation (lifetime PTSD diagnosis and alexithymia) exerted a significant indirect effect on this relationship. This study was a secondary analysis of data collected from a cross-sectional and cross-generational study designed to examine associations among maternal impairments (substance abuse, general psychopathology, neuropsychological functioning), child-rearing deficits (parenting deficits, child neglect, child physical/ sexual abuse), and adverse child outcomes (self-regulation deficits, aggressive behavior, and substance use). Using the bootstrapping method, a multiple mediation path analysis was conducted with a sample of 147 mother and child pairs. No direct relationship emerged between the maternal childhood interpersonal violence exposure and behavioral problems in her child. Although there were significant associations along the emotion dysregulation paths, no significant indirect effects emerged. However, maternal aggression exerted a significant indirect effect on this relationship. Sixty-eight percent of the relationship between

maternal exposure to childhood interpersonal violence and her child's behavioral problems was accounted for by maternal aggression, firmly establishing that psychological variables significantly influence intergenerational transmission. This study expands on earlier findings with younger children by showing the link between violence experienced in a mother's childhood and maladjustment in her child exists in older children as well. It suggests that this distress, in the mother, her child, and their relationship, may persist throughout the years. This distress is detrimental to her child's well being, as the affective and behavioral difficulties these children exhibit, apparent on the eve of adolescence, take on pressing need for intervention. The need to address the behavioral problems is paramount, as childhood internalizing and externalizing behavioral problems are associated with a host of long-term psychological, physical and social challenges.

## Acknowledgements

The road to the completion of this dissertation has been long and winding. There are many people to thank who were invaluable supportive along the way. I am thankful to Denise Hien, for her mentorship, support, and guidance as I defined and carved out my own path these past four years. I am so appreciative of Arietta Slade for providing such detailed and thoughtful feedback on many drafts of this study, for sharing her wisdom on the power of the mother-child bond, and for her unfailing support since the start of my training. I would also like to thank Peter Fraenkel, Lesia Ruglass, and Lisa Cohen for their editorial comments, all of which helped clarify my thinking and improve this project.

I am deeply indebted to my family and friends for their support and encouragement. I couldn't have done it without them. This is especially so for Richard, who has only known me as a graduate student. I am thankful for his love, support, and encouragement... and for his belief that I would eventually complete this work. My children Charlotte and Cameron made this project so much more meaningful and fulfilling. They make my world a brighter place and teach me so much about love and life. Finally, I am grateful to Michaele for her presence in my life through this journey, and to L.B. for taking a chance so many years ago.

## Table of Contents

I.	Chapter One – Introduction	1
II.	Chapter Two – Literature Review	5
A.	Theoretical Literature Review	5
1.	Maternal Aggression	6
2.	Affect Dysregulation and Maternal Aggression	11
3.	Maternal Affect Dysregulation and Child Dysregulation	16
B.	Research Literature Review	22
1.	Aggressive Parenting	22
2.	Affect Dysregulation and Aggressive Parenting	24
3.	Post-Traumatic Stress Disorder	26
4.	Alexithymia	31
5.	Aggressive Parenting and Child Outcome	34
6.	Affect Dysregulation and Child Outcome	36
C.	Conclusion and Study Hypotheses	38
III.	Chapter Three – Research Methods	40
A.	Participants	40
B.	Procedures	40
C.	Measures	42
IV.	Chapter Four - Results	49
A.	Descriptive Statistics	50
B.	Model Testing	56
C.	Model One	57
D.	Model Two	65

E.	Model Three	69
V.	Chapter Five – Discussion	71
VI.	Appendix	108
VII.	Figures	122
VIII.	References	125

## List of Tables

Table 1: Maternal Demographic Characteristics	50
Table 2: Child Demographic Characteristics	50
Table 3: Frequencies, Means, Skewness, Kurtosis for Mediating and Dependent Variables	50
Table 4: Pearson Correlations among the Independent Variable, CIPV, and the Mediating Variables	52
Table 5: Reliability for Mediating and Dependent Variables	53
Table 6: Pearson Correlation of Maternal Age with all Dependent and Mediating Variables	53
Table 7: Chi-square analyses of Maternal Ethnicity and Lifetime Diagnosis of PTSD	54
Table 8: Analysis of Variance (ANOVA) for Ethnicity with all Dependent and Mediating Variables	54
Table 9: Analysis of Variance for Maternal Marital Status with all Dependent and Mediating Variables	54
Table 10: Analysis of Variance for Maternal Education with all Dependent and Mediating Variables	55
Table 11: Multiple Comparisons Analysis of Maternal Education and CAPI	55
Table 12: Crosstabulation for Child Gender and PTSD Diagnosis	55
Table 13: Difference in Variables Based on Child Gender (T-Test)	55
Table 14: Pearson Correlation for Child's Age on Independent, Dependent and Mediating Variables	56

Table 15: Model One Summary	57
Table 16: Model Two Summary	65
Table 17: Model Three Summary	69

## List of Diagrams

Figure 1: Model One	122
Figure 2: Model Two	123
Figure 3: Model Three	124



## CHAPTER 1: INTRODUCTION

### Overview of Study

#### Statement of Problem and Significance of Study

*“In every nursery there are ghosts. They are the visitors from the unremembered past of the parents, the uninvited guests at the christening. Under favorable circumstances, these unfriendly and unbidden spirits are banished from the nursery and return to their subterranean dwelling place. The baby makes his own imperative claim upon parental love and, in strict analogy with the fairy tales, the bonds of love protect the child and his parents against the intruders, the malevolent ghosts.....*

*But how shall we explain.....families who appear to be possessed by their ghosts? The intruders from the past have taken up residence in the nursery, claiming tradition and rights of ownership. They have been present at the christening for two or more generations. While no one has issued an invitation, the ghosts take up residence and conduct the rehearsal of the family tragedy from a tattered script” (p.387) (Fraiberg, Adelson, and Shapiro, 1975).*

These are the opening lines of the paper, “Ghosts in the Nursery,” by Fraiberg, et al., (1975). This seminal paper explores how, and under what circumstances, interpersonal aggression gets transmitted across generations, specifically through mothers. Although many women with traumatic histories do not go on to abuse their children and do in fact protect their children from such harm, Widom (1989), in an extensive review, found that estimates of a history of abuse among abusing parents range from 7% to 70%. Two additional studies determined that roughly 30% of individuals maltreated as children perpetuate violence with their own children, which is roughly six times the national average for maltreatment (Kaufman & Zigler, 1987; Pears & Capaldi, 2001). Such variation indicates that, while traumatic exposure is a risk factor for aggression against one’s children, there is not a direct relationship. In fact, the processes by which transmission occurs are complex.

Fraiberg observed that women who had been unable to resolve their experiences of interpersonal violence were most likely to repeat their own experiences, leading to psychological difficulties in their children. Fraiberg noted that mothers who relied primarily on defenses such as denial, avoidance and identification with the aggressor were likely to repeat the traumas in the next generation, with the aim of avoiding their own split-off and painful affects. These mothers experienced difficulty in their ability to differentiate past experiences from the present, thereby reenacting their old experiences in their current parent-child relationship.

Despite the fact that Fraiberg and numerous other clinicians have noted a link between early trauma exposure and maternal aggression, there is little research examining this phenomenon in the context of both mother's experiences and the resulting behaviors of her children. One reason for this is that -- as a whole -- the literature on this topic is fragmented. Definitions of interpersonal violence exposure, parental aggression, and psychopathology vary, as do study methodologies. Moreover, few studies examine variables in both mothers and children and even fewer examine variables in older children.

This study aimed to examine the links between maternal childhood interpersonal violence (IPV) exposure and behavioral problems in her pre- to early-adolescent children. Internalizing and externalizing behavioral problems were chosen as outcomes as they frequently co-occur with other types of pathology and are related to a host of long term psychiatric problems.

This study examined two possible mechanisms for the link between maternal childhood IPV exposure and child behavioral outcomes: maternal aggression and

maternal affect dysregulation. We hypothesized first that *maternal aggression* would mediate the relationship between maternal childhood IPV exposure and her child's internalizing and externalizing behavioral problems. Second, we hypothesized that maternal *affect dysregulation*, as measured by lifetime PTSD diagnosis and alexithymia, would mediate the relationship between maternal childhood IPV exposure and maternal aggression. Finally, we hypothesized that maternal *affect dysregulation*, as measured by lifetime PTSD diagnosis and alexithymia, would independently mediate the relationship between maternal childhood IPV exposure and her child's internalizing and externalizing behavioral problems.

This study is unique for several reasons. Very few studies take into account both maternal factors and outcomes in children (Pears & Capaldi, 2001; Roberts, O'Connor, Dunn, & Golding, 2004; Koverola, Papas, Pitts, Murtaugh, Black, & Dubowitz, 2005; Noll, 2009). Maternal aggression was chosen as a mediator because clinical theory and research link maternal aggression to both maternal childhood IPV exposure and internalizing and externalizing behavior problems in the next generation. Yet few studies have examined it in relation to both maternal trauma and adverse child outcomes. Maternal affect dysregulation (alexithymia, and PTSD) is an understudied risk factor in IPV exposed mothers for adverse child outcomes. Additionally, although research solidly links childhood IPV exposure to both PTSD and alexithymia, little research exists on whether, and if so how, these types of regulatory disorders in mothers influence the next generation. Moreover, alexithymia was chosen as a measure of affect dysregulation because for some traumatized individuals, PTSD may not be an adequate measure of symptomatology as they may use dissociation and avoidance to cope with overwhelming

affects. Moreover, sparse research exists on the relationship between alexithymia and parenting abilities. Further, by investigating both affect regulation disorders and parental aggression, we integrated multiple theoretical models for a more complex perspective on the phenomenon of intergenerational transmission of aggression.

## CHAPTER 2: REVIEW OF THE LITERATURE

This section will review perspectives on the intergenerational transmission of maladjustment that result from maternal exposure to childhood IPV. The first section will review theoretical and clinical perspectives on the contributions of aggressive parenting and affect regulation disorders to this cycle. Subsequent sections will examine research supporting the relationship between childhood IPV exposure, aggressive parenting, and disorders of affect regulation (PTSD and alexithymia). Finally, relevant research will be reviewed on the impact of these variables on childhood behavioral problems.

### Theoretical Literature Review

#### *Maternal Exposure to Interpersonal Violence and Level of Child Risk*

Interpersonal violence (IPV) is defined as “the mental result of one sudden, external blow or a series of blows, rendering the young person temporarily helpless and breaking past ordinary coping and defensive operations” (Terr, 1991, p.2). Although there is no published epidemiological data on the overall level of risk that a mother’s experiences of childhood IPV places on her children, clinicians and researchers have long understood that exposure to violence in one generation puts subsequent generations at risk for a range of adverse outcomes. When the intergenerational cycle of violence was first proposed, it was assumed that those who were abused as children would inevitably abuse their children, and create the next generation of violent offenders (Kaufman & Zigler, 1987).

Although we now know this is not exactly the case, we also know these children are at increased risk for a variety of adverse outcomes. For example, maternal exposure

to both childhood and adult IPV was significantly associated with their young children's psychological health, including internalizing and externalizing behavioral (Koverola et al., 2005; Roberts et al., 2004). A recent multi-generational longitudinal study (Noll, Trickett, Harris, & Putnam, 2009) further validated that, compared with children of non-sexually abused mothers, children born to mothers who had experienced childhood sexual abuse were more likely to experience adverse psychological and social outcomes. Confirming a multitude of previous studies, the mothers in this study were also at heightened risk for experiencing psychiatric difficulties and maltreating their own children.

### *Maternal Aggression*

In studies investigating rates of aggressive parenting in childhood IPV exposed parents, rates varied between 7% and 70% (Widom, 1989). Two studies (Kaufman & Zigler, 1987; Pears & Capaldi, 2001) found that roughly 30% of individuals maltreated as children perpetuate violence with their own children. Studies investigating rates of adverse outcomes in children exposed to aggressive parenting have shown that children are at substantially increased risk of adverse outcomes, including internalizing and externalizing behavioral problems (Milner, Thomsen, Crouch, Rabenhorst, Martens, & Dyslin, 2010).

Identification with the aggressor is one theory that explains why some women who have been exposed to the terror of interpersonal violence go on to act aggressively toward their own children. Although it is considered a common stage in normal superego development, where the child identifies with normal parental threats and the qualities of other important adults around her, Anna Freud (1937) suggests that this identification is

also ‘one of the ego's most potent weapons in its dealings with external objects which arouse its anxiety.’ (p. 117). It is a defense whereby the child takes in the parent’s aggressive acts as a means of maintaining the external love object and provides the child with the opportunity to understand the aggression from the inside out.

*“The most singularly devastating aspect of childhood abuse is the violent penetration and co-opting of mind that occurs when one is emotionally and physically dependent on another who violates and exploits—when ... one person is granted the authority to control and define the other's reality, even when that definition of reality exists in stark contrast to the person's actual lived experience” (Davies, 2000, p. 219).*

This excerpt from a paper by Davies beautifully exemplifies the experience of aggressor and victim, highlighting the intrapsychic and interpersonal processes that take place. A victim of trauma utilizes the developmentally benign protective identificatory mechanisms described by Anna Freud to ward off unbearable feelings (Freud, 1937, Ferenczi, 1933). However in this case, the parameters that define one's experiential world have not been negotiated between the participants in an interpersonal relationship; rather, they have been directly imported from the mind of the threatening other person (Frankel, 2002). The individual, in turn, protects herself by learning to identify with the needs and intentions of her aggressor, only to later replay the scenario with herself as the perpetrator.

If the parent-child relationship is conceptualized as a relationship of mutual offering where the child offers her very being and her vitality to her parents, the repetition of trauma can be conceived of as a child’s fixation on her parent’s rejection of her offering. To manage this rejection the child shifts her sense of self from her initial, internally oriented state where she is in touch with her wishes. She becomes externally

oriented toward the needs of others. Identifying with the negation of her wishes helps her to deny the experience of helplessness and rejection.

According to Shabad (1990), the repetition of aggression occurs because there is a security in the familiarity of repetition. This security is enacted when a woman represses her wishes for true safety, as well as the painful links between her childhood traumas and her eventual disillusionment of her childhood wishes. This defensive security comes at the cost of her creativity and her ability to respond flexibly to her environment. It sentences the woman to unconsciously repeat this cycle with her own children in an attempt to undo her disillusionment and gain the safety she truly desires.

Fraiberg and her colleagues (1973) noted that mothers exhibited conflicts with their own babies that were unusually similar to these parents' descriptions of their own early childhood and unresolved conflicts, and without apparent awareness. These mothers must be able to hold a psychological space for a range of her child's experiences. In the face of her child's emotional experience, where under similar circumstances she was deprived, she is abruptly faced with her own conflicts and loss. A mother who finds it too painful or is too envious of her child's opportunity is unable to allow a new interpretation of her child's experience, based on her child's uniqueness. Instead, she is compelled to reenact her unresolved experiences.

Fraiberg and her colleagues demonstrated that once the painful childhood affects are acknowledged in a therapeutic environment, a mother is less likely to repeat them. She is finally able to identify with the injured child (herself as a child) and act protectively toward her own child. Without this acknowledgment however, a mother is

fated to blindly repeat them, as she may find herself aligned unconsciously with her abusers as a way to justify her own injuries.

Frankel (2002) suggests that identifying with the aggressor as a mechanism for coping with trauma involves two components. First, the victim learns to read her perpetrator's needs and intentions in order to prepare for their advances. She takes in the threatening person, holding them close to keep herself safe from harm. She learns what the aggressor wants and can intuit it before he even knows. The victim must learn to remain still, stay calm, disappear, remove all aspects of personal identity, so that the aggressor does not feel threatened or find opportunity to attack, either psychologically or physically. Her vitality and subjective experience are sacrificed in the name of her safety.

Secondly, the victim learns to justify the attacker's abuse by accepting his aggressive actions and denouncing her own state of being. The victim convinces herself that she deserved it, asked for it, even wanted it because she was weak or bad. All of which is more tolerable than the notion of being helpless and at the mercy of surprising and unwanted attacks. The justification also preserves the love feelings she may have for her abuser.

By introjecting the attacker's badness, she protects herself from the ultimate betrayal of her loved one (Ferenczi, 1933). Feelings of helplessness and betrayal at the hands of a loved and needed figure are less desirable than taking in the badness of the other. By maintaining the fantasy of power and badness, the victim feels she has some control over the attacks. This introjective process helps the victim to cope with traumatic feelings. Yet it also perpetuates the experience of trauma (Frankel, 2002). By continuing

to reactivate the experience, she is compelled to search for control, power and justification even at the expense of her children's well-being.

While Ferenczi (1933) believed this introjection was a reaction to the trauma, Fairbairn (1943) saw it as a means of gaining control over the aggression. For Fairbairn, the external world becomes a battleground for acting out conflicts with internalized objects. In unconscious processes, time expands in all directions, fantasy and reality are intertwined, and people are interchangeable. Later re-enactments of abuse are attempts to understand the original abusers intentions from the inside. They are opportunities to walk in their shoes, feel what they feel, and see the world through their eyes. From this perspective, continued aggression with the next generation is an attempt to seek out these early bad introjects, understand them and conquer them.

Internalization of the aggressor is also a way to keep the fight alive. "We may try to master our inner foe by domination or, more cleverly, by submission, but he will continue to haunt us; we can never truly vanquish him because he has really beaten us, at least at one moment in our lives" (Frankel, 2002, p. 107). He later continues: "In fantasy, often unconscious fantasy, we endlessly continue the battle that we dare not wage in reality. The trauma and humiliation of having given up in reality may even lead us never to give up the internal fight, but to carry on our efforts to subdue and conquer our attacker either in our minds or by projecting his image onto proxies in the outer world and struggling with them" (Frankel, 2002, p. 107).

A victim's compulsion to repeat aggressive acts provides evidence for the need to identify with the aggressor. In these cases, the individual replaces fear and helplessness with a sense of omnipotence (Van der Kolk, 1989). Women who learn to identify with

their aggressors have been unable to come to terms with their own feelings of vulnerability and helplessness. When a mother has been subjected to experiences where her own subjectivity has been violated, her ability to see her child's subjectivity will be compromised when it threatens the stability of her internal world.

According to Klein (1957), a mother with a history of deprivation or abuse may not be able to meet her child's affective needs because she is envious that, unlike her, he will have his needs met. She theorizes that in this case, if the child has something his mother considers good but not belonging to her, she is motivated to destroy it so that no one can enjoy the benefits. The mother may find herself envious of her child's ability to express need and distress without being subjected to the terror she felt. To compensate, she may take on the terrorizing role in order to destroy in her child what she feels is lacking within her. For example, her child's expression of vulnerability may elicit her need to dominate and diminish his needs in order to protect her from feeling her own disavowed vulnerability.

#### *Affect Dysregulation and Maternal Aggression*

Since affect dysregulation is a common result of childhood IPV exposure, a more recent line of thinking has explored how difficulties with a mother's affect regulatory abilities create a greater probability that she will revive the abusers of her past in her present parent-child relationship. This perspective asserts that when threatened, these traumatized mothers are more easily emotionally dysregulated. These women utilize dissociation, hypervigilance, and denial as methods of keeping old feelings at bay and protecting against the possibility of new threats. Aggression is used as a means of gaining control over her own disorganized emotional state, which feels terrifying.

A review of theoretical literature linking childhood IPV exposure, disorders of emotion regulation and aggressive parenting will clarify why these mothers are at increased risk. These experiences originate outside of the individual and result in a number of internal changes including lasting physiological arousal, affective, cognitive and memory-based problems (Van der Kolk, 1988). Exposure to childhood IPV also distorts biological functions related to emotional processing. The victim is unable to process the emotions surrounding these events and must therefore take defensive measures to contain them. Moreover, the physiological disruption of IPV exposure creates new pathways through which future emotional stimuli are processed creating a biological vulnerability for dysregulation.

Terr (1991) outlines two types of interpersonal violence that an individual can experience. The first is a single event that sears into the mind. When experienced in childhood and not adequately addressed, the after-effects become a second chronic trauma. For these children, the devastation involves not only the domination and threat of the perpetrator, but also how her family responds emotionally to the abuse. This lack of acknowledgement is frequently the most devastating aspect, as the child is left to grapple with her experiences alone and in discordance with the interpersonal experience of her family. Clinical studies indicate that how a family responds to their child's experience of IPV greatly determines the post-traumatic symptoms and developmental sequelae (Schechter, 2007; Appleyard & Okofsky, 2003). With an estimated 70% (Kaufman & Zigler, 1987) of childhood violence exposure occurring in the home, by a known caregiver, inadequate family responsiveness is a common secondary trauma.

Chronic IPV, according to Terr (1991), is the second type of trauma. It creates deformations of intrapsychic processes and within the fabric of interpersonal interactions. The term “complex trauma” is used to describe this experience of “multiple, chronic, and developmentally prolonged traumatic events, most often of an interpersonal nature (e.g., sexual or physical abuse, war, community violence) and early-life onset (Van der Kolk, 2005). A substantial body of research reviewed by Van der Kolk and colleagues (Van der Kolk, Pelcovitz, Roth, Mandel, McFarlane, & Herman, 1996) has shown that early and prolonged trauma in childhood affects the capacity to regulate the intensity of affective responses. The responses are often characterized by a host of cognitive, emotional and physiological alterations that result in character pathology and disturbed object relations (Herman, 1992a). This dysregulation is associated with a wide spectrum of problems including aggression against the self and others. In fact, reenactments of anger may occur with such frequency that it becomes a central and organizing feature of the individual’s personality (Terr, 1991).

Herman (1992a) describes three broad categories in which women who have experienced chronic interpersonal violence often experience difficulties. They include 1) somatization, 2) dissociation, and 3) affective changes, including depressive symptoms, hyperarousal and intrusive symptoms. Massive defenses including denial, repression, dissociation, self-anesthesia, self-hypnosis, identification with the aggressor, and aggression turned against the self are enacted to protect the psyche from repetitive trauma. These women also frequently experience an absence of feeling, a sense of rage, and unremitting sadness. These defensive positions result in observable symptoms of affect dysregulation.

Emotion regulation is defined as intrinsic and extrinsic processes that recognize and control emotional reactions, including how intense they are and how long they last in order to accomplish personal goals (Thompson, 1994). Thompson's widely accepted definition is useful in this study because it encompasses three essential elements: 1) internal processes responsible for experiencing and identifying personal emotions; 2) a social component for recognizing the emotional state of others; 3) a behavioral component for modulating one's reaction to determine the appropriate behavioral response.

These elements are developmentally based and evolve through many important steps until a complex association of differentiated affects exists and the individual can empathize with the emotional states of others. For this to occur, a child requires stability, flexibility, and consistency in the caregiving system and her broader environment. The psychically overwhelming nature of childhood IPV upsets the developmental acquisition of each element of the emotion regulation process. It shatters the assumption of a benign world and the reliability that adults can respond appropriately to help a child interpret and modulate her emotional experience.

Taking into account the internal representational world of the survivor of childhood IPV, Mitchell (1998) suggests that aggression develops not only from intrapsychic processes, but is a response situated within a relational context. A child learns that she is aggressive through the internalization of being aggressed upon, or by having her own behavior interpreted as aggressive by her important caregivers. Once aspects of the internal and external world are perceived as dangerous, aggression may be

used to defend this particular configuration of the self against those who might threaten it (Mitchell, 1998).

Klein (1930) suggested that symbolization of emotional states does not adequately develop unless aggressive feelings toward the important objects are displaced (Klein, 1930). This stage of early aggression is essential for a child to test the stability of her object world, her boundaries, and her autonomy. However, when this symbolization process comes into contact with real adult aggression, it is ignored, or is improperly responded to by another, the child is overwhelmed and disorganized. It leaves her unable to symbolize her emotional and cognitive experiences. With this capacity impaired, she has few resources for understanding and managing her own aggression or the aggression of others. She cannot find a suitable integrated psychic location for aggression and she is left with few choices for how to navigate her own aggressive feelings or other's feelings. Instead aggression is accompanied by a sense of impending annihilation and a belief in her inherent destructiveness.

For women who continue to act aggressively in situations where there is little objective sense of danger, such as in relation to their children, the internal object world must be examined to understand their responses. These women live in a perpetual world of internal and external danger that has become embedded in their sense of self and exists independently beyond their original experiences of threat. As long as these particular self-object relational configurations are internalized, aggression is used to organize the self and maintain a coherent view of the world and interpersonal relationships.

Over the long term there is a decreased capacity to modulate physiologic arousal, which in turn leads to reduced ability to utilize symbols and fantasy to cope with stress.

This hyperarousal interferes with the ability to make calm and rational assessments and instead the individual tends toward action (Van der Kolk, 1989). These individuals tend to experience these later stresses as somatic states rather than as specific events that require specific means of coping. Responses to current stimuli are acted out as if the trauma had returned. This occurs without conscious awareness that a past injury, not the present, is the reason for the stress response.

Maternal affect dysregulation creates an important context within which aggressive parenting occurs because of the tendency to react to a situation instead of thinking and taking in the perspective of the child. In this case a mother uses force to dominate and overpower her child both physically and psychologically. Here, the nature of aggression is to obliterate the subjectivity of the other in order to prevail (Herman, 1992b).

#### *Maternal Affect Dysregulation and Child Dysregulation*

Affect dysregulation also influences the broader context within which a mother interacts with her child. Neglect, inconsistency, dissociation, and hypervigilance create an environment within which the child is unable to adequately learn how to self-regulate. A mother's organization of her house and her daily patterns reflect her ability to navigate the shifting tides of her emotions. Further, a child witnesses the ways in which his mother organizes herself and interacts in other relationships. He learns from her, through direct examples in their shared environment and her responsiveness to him.

Internalization, the process through which a child learns about himself in relation to others, creates the initial problems that occur in children with inadequate maternal care (Alexander, 1992). A child's emotion regulatory abilities are directly influenced by his

mother's ability to regulate emotions because a child's object world first arises out of his mother's general care taking abilities. Later care of a child is modeled on this early infant care (Winnicott, 1960a) and is the foundation on which later interpersonal configurations are filtered. For example, later success in peer relations can be predicted as early as pre-school (Youngblade and Belsky, 1989).

Winnicott (1967) describes this process, which involves both projective and introjective identificatory mechanisms, as cross-identification. The baby observes the mother's mental states, identifying in them his own feelings, and then internalizes the exchange. These mental representations are internalized as ways of being that color later autobiographical knowledge, filter incoming interpersonal data, and form the basis for implicit and explicit knowledge of being in relationships with other people.

This internalization develops through an "accumulation of memories of care, the projection of personal needs and the introjection of care details" (Winnicott 1960a). This process helps the infant know how he is loved and to whom he is connected emotionally and psychologically. These mental representations become his subjective reality. This new capacity for object relations provides the child with a general sense of well-being, and allows him to take expectations about interpersonal exchanges and apply them to other relationships.

Continual disruptions of interpersonal care prohibit the infant from "coming into being through a personal experience" (Winnicott, 1960a). Instead of responding to his unique needs, these mothers respond based on their projections. Winnicott describes how these impingements interfere with healthy development since the child is reacting to the environment instead of developing his own life force.

In order to receive attention or evade maternal aggression, he is forced into a state of being that suits the mother and her capacities. His un-integrated feelings remain sequestered in an altered world. Without the opportunity to integrate his aggressive strivings with his loving feelings, the child does not adequately develop self-object differentiation or have a shared external reality with the parent (Winnicott, 1945). The development of a “false self” (Winnicott, 1960b) is one defensive strategy to cope with a severe mismatch between internal experience and what is reflected back to the child physically or psychologically. Here, the child aims to please the other, but internally cannot not engage in any true interpersonal exchange.

Attachment theory and research expand on this perspective and describe how a variety of adverse maternal parenting practices that result from emotion dysregulation have long term effects on a child’s behavior. The type of attachment a child develops with his primary caregiver creates a neurological and interpersonal foundation for many later developmental tasks. On the basis of early experiences with the attachment figure, the infant develops expectations about (a) his role in relationships (worthy and capable of getting others’ attention versus unworthy and incapable of getting needed attention) and (b) others’ roles in relationships (trustworthy, accessible, caring, and responsive versus untrustworthy, inaccessible, uncaring, and unresponsive) (Alexander, 1992).

Bowlby (1973) describes these internalized constructs as internal working models, a mental construction that forms the basis of the personality and includes both emotional and cognitive qualities. The development of this internal working model is so relationship-bound that the child’s concept of both self and other gets internalized. Through continual interaction with the parent, the child internalizes the nature of his care

giving and receiving, forming internal models of interacting that he will draw upon in future relationships. The infant learns which emotions and behaviors are responded to, ignored or punished depending on how the mother tolerates and interprets his bids for interaction.

During this early development, the mother is responsible for regulating her baby's varying states of arousal, helping the baby navigate non-optimal high or low affective states. Schore and Schore (2008) write that the focus on how "affective bodily-based processes" are non-consciously, interactively regulated has shifted attachment theory to a theory of regulation. Schore (2010) later suggests that attachment stress is the "asynchrony of psychobiological attunement." Therefore, an infant's mental representations of early relationships develop in part based on how his mother enacts her conflicts with his affective signals (Fonagy, Steele, Moran, Steele, & Higgitt, 1993). A mother's ability to read and respond to her child's intentions forms the basis for his ability to accurately understand the intentions of himself and others.

These maternal interactions are imprinted by the end of the first year into the implicit-procedural (non-conscious) memory and are the child's basis for his affect-regulatory strategies. Both inform later expectations and 'gut' reactions of how interpersonal exchanges will unfold (Schore, 2010). These patterns of mother-infant relating continue along a similar pattern as the child grows.

For mothers who encounter difficulties regulating their baby's affective states, this tension will only increase over time. The child's own defensive strategies eventually influence the dyadic tension, and the conflicted mother will then be faced with parenting a difficult child. She will be less prepared to manage her child's increasing demands,

which will only reinforce the child's defensive practices. The long-term impact of this misattunement includes problems in brain development related to regulatory processes.

In one study of correlates between parenting and infant attachment, 82% of abused or neglected infants displayed disorganized attachment behaviors toward their parent (Carlson, Cicchetti, Barnett, & Braunwald 1989). Disorganized attachment is associated with an inability to use caregivers for soothing and with the emergence of pathological self-regulatory behaviors (Van der Kolk, 1994). Main and Hesse (1990) have advanced the hypothesis that disorganization in infant attachment strategies is related to parental unresolved fear that is transmitted to the infant either through behavior that is frightening to the infant or because the parent herself is frightened.

It has been hypothesized that a parent's attachment pattern will subsequently predict her child's attachment pattern, perpetuating ineffective models of intimate relationships. Work with the Adult Attachment Interview has revealed that parents of disorganized infants show evidence of un-integrated mental contents when discussing loss or trauma. These parents are likely to become overwhelmed by anxieties and distortions in their relationships with their own children that create un-integrated or contradictory care giving responses, much as the disorganized infant displays un-integrated or contradictory attachment behaviors (Lyons-Ruth & Block, 1996; Main & Cassidy, 1988; Alexander, 1992).

Disturbed object relations have been implicated in the connection between different forms of maternal interpersonal violence exposure and problematic parenting. For example, mothers with a history of physical abuse or witnessed violence were more likely to display a hostile behavior profile at home (Lyons-Ruth, 2006). In contrast,

mothers with a history of sexual abuse or parental loss (but not physical abuse) were more likely to exhibit helpless, withdrawn or neglectful behaviors with their infants (Lyons-Ruth and Block, 2006). In an earlier study, Lyons-Ruth & Block (1996) discovered that sexually abused mothers appeared more likely to manage their negative affects by moving away from interaction with the infant. Despite this, clinical treatment of sexual abuse survivors reveals the underlying fear and rage in those who have been sexually victimized (Alexander, 1992) indicating the agonizing psychic conflict these women endure.

Lyons-Ruth (2006) views these two maternal profiles – helpless and hostile – as complimentary stances in a two person dyadic system. Mothers vacillate between both forms so that the infant’s attachment behaviors are heightened but also rejected. Reenacting her family of origin experiences, these women often engage in non-collaborative modes of sharing within their family, reinforcing this psychic split. For example, either privileging the parent’s voice over the child’s, or decreeing certain forms of affects “true” while others are denied. This pattern creates a skewed power structure where one person is helpless to take initiative while the other person’s needs dominate. This sets up a dominant-submissive dyadic system that her child internalizes as one of his earliest representational models and modes of functioning.

Overall, these parents also have difficulty maintaining positively toned interactions with their children. This results in “deletions” within the child’s ability to expand upon his own positive states or develop competency in eliciting responses from another person (Lyons-Ruth, 2006). Both types of parenting styles create conflict within the child about whether to approach or withdraw from the desired parent. This

problematic development sets the child on an adverse trajectory. He will approach future relationships with a diminished sense of competency and flexibility, only compounding these problems and further solidifying his negative self-concept.

## Research Literature Review

### *Aggressive Parenting*

Research supports the hypothesis that women exposed to childhood IPV, who continue to identify with the aggressors of their past, are more likely to engage in aggressive parenting practices. A study of the psychological, behavioral and physical characteristics of traumatized mothers found that the experience of early abuse predicted maternal aggression above and beyond any mediating variable (Pears & Capaldi, 2001). Although they added additional variance, no other variable in their study, including maternal pathology and difficulty disciplining child, statistically influenced this relationship.

A study conducted by Craig and Sprang (2007) examined the intergenerational transmission of trauma in a sample of 1,680 male and female caregivers. They concluded that caregivers who experienced any sort of trauma were significantly more likely to have elevated scores on the Child Abuse Potential Inventory (CAPI) than non-traumatized caregivers. They did not find a significant difference between type of trauma or age at which the trauma exposure occurred (childhood or adulthood), or whether there was cumulative trauma in both childhood and adulthood. However, history of child sexual abuse and adult sexual abuse were the strongest predictors of abuse potential. They also found that those who experienced both child and adult trauma were four times more

likely to have CAPI scores in the clinical range than the no trauma group, indicating the detrimental effects of cumulative abuse.

In a general population sample with 55% of the participants earning \$50,000 or more and 88% married, Newcomb & Locke (2001) assessed whether a history of child maltreatment, defined as sexual abuse, physical abuse, emotional abuse, and emotional or physical neglect, predicted a variety of poor parenting practices. Poor parenting was measured by level of warmth, aggression, neglect, and rejection. They first confirmed a moderately strong association between their general factor of Child Maltreatment to their general factor of Poor Parenting, indicating a significant relationship between a mother's exposure to interpersonal violence in childhood and later aggressive parenting practices. Their findings suggest that early abuse adversely impacts parents across a range of socioeconomic positions.

Some controversy exists as to the ways in which men and women later access aggressive identifications and how aggression manifests for each gender. For example, multiple studies indicate that while abused men later victimize others, abused women are more prone to becoming attached to abusive men, thus allowing themselves and their children to be victimized (Carmen, Rieker, & Mills, 1984; Jaffe, Wolfe, Wilson, & Zak 1986). However, multiple studies determined that women with trauma histories were significantly more likely to act abusively toward their own children, regardless of their relationships status (Banyard, Williams, & Siegel, 2003; Cohen, Hien, & Batchelder, 2008). In fact, Banyard et al., (2003) while controlling for the effects of pathology, found that interpersonal violence exposure exerted significant direct effects on parenting practices. In addition to problematic perceptions of themselves as a parent, maternal

cumulative trauma directly impacted parenting difficulties and increased rates of physical punishment, neglectful behaviors and an increase in protective services involvement.

### *Affect Dysregulation and Aggressive Parenting*

Recent studies have also examined the ways in which psychiatric difficulties related to emotional regulation interfere with a traumatized mother's ability to adequately parent her child. These difficulties include increased reactivity, distorted views of their children and the parent-child relationship, and difficulties with consistent parenting and general emotional availability (Cohen, et al., 2008; Berz, Taft, & Watkins, 2008; Ford & Fournier, 2007; Ruscio, 2002; Schechter, Coots, Zeanah, Davies, Coates, Trabka, Marshall, Liebowitz, & Myers, 2005). Two methods of measuring emotion regulation pathology include examining lifetime presence of Post-Traumatic Stress Disorder (PTSD) and level of alexithymic symptoms. PTSD and alexithymia are two disorders of emotion regulation that are the result of IPV exposure (Boney-McCoy & Finkelhor, 1996; Rossman, Bingham, & Emde, 1997; Krystal, 1978a, van der Kolk et al., 1996).

Although alexithymia and PTSD developed along different theoretical lines and from different sets of patients, van der Kolk and his colleagues' (1996) study showed that the diagnosis of PTSD significantly co-occurs with somatization, as measured by alexithymia. This is particularly true for individuals with a history of interpersonal childhood trauma. Central to both concepts, is the experience of ineffectual coping mechanisms for interpersonal stressors characterized by dysregulated emotions.

It is important to understand why some women exposed to childhood IPV develop PTSD and alexithymia, while others do not. Although there are no published estimates on the percentage of trauma exposed individuals who develop alexithymia, the rates of

PTSD following trauma exposure vary, depending on population, age, and trauma type. In a meta-analysis that included 34 studies with 2697 children, Fletcher (1996) reported that 36% of children developed PTSD from a variety of traumas. However, when examining sexual victimization only, rates of PTSD in children vary widely, from 0% (Livingston, 1987) to 48% (McLeer, Deblinger, Atkins, Foa, & Ralphe, 1988), to 90% (Kiser, Ackerman, Brown, Edwards, McColgan, Pugh, & Pruitt, 1988). In adults, an estimated 24% develop PTSD after exposure to a traumatic experience (Fletcher, 1996). While for sexual victimization alone, an estimated 50% of women develop PTSD (Breslau, Kessler, Chilcoat, Schultz, Davis, & Andreski 1998).

Since these statistics vary widely, it is likely that additional factors influence these outcomes. In a well-known meta-analysis (Brewin, Andrews, & Valentine, 2000) of 77 articles on the prevalence of PTSD after trauma exposure, it was determined that history of child abuse, psychiatric history, and family psychiatric history significantly predicted PTSD diagnosis. An additional study assessing women for one year following an interpersonal assault (sexual or physical) found that levels of numbing symptoms immediately following the assault were significantly associated with PTSD severity and chronicity (Feeny, Zoellner, Fitzgibbons, & Foa, 2000). Similar to Fraiberg's observations, they concluded that perhaps these women's difficulty emotionally engaging with these memories led to their inability to process memories and begin to heal.

### *Post-Traumatic Stress Disorder*

The term PTSD was created in the 1970's as an attempt to capture the experience of individuals exposed to traumatic wartime activities (Brett, 1996). Since then it has been associated with a variety of traumatic experiences including childhood interpersonal

violence. Several studies (Deblinger, McLeer, Atkins, Ralphe, & Foa, 1989; Kiser et al., 1988; McLeer, Deblinger, Henry, & Orvaschel, 1992; Wolf, Sas, & Wekerle, 1994) found that a significant percentage of sexually abused children met criteria for PTSD. While Deblinger et al., (1989) also found that physical abuse was significantly associated with PTSD in children.

PTSD is the only diagnosis in the DSM-IV-R (American Psychiatric Association, 2000) that requires a specific etiology: exposure to an extreme traumatic stressor. The diagnosis includes a subjective component where the individual's response involves intense fear, horror or helplessness. This emphasizes how personal reactions to an event are central to its development.

The primary symptoms of PTSD are then divided into three criteria. The first cluster, criteria B involves re-experiencing symptoms and is required for a diagnosis. They include intrusive memories, nightmares, and reliving the trauma. It also includes feeling intense distress (psychological or physical) when reminded of the traumatic event. The second cluster, criteria C, refers to efforts made to avoid stimuli (including feelings) and emotional numbing. This includes persistent avoidance of thoughts, feelings, and reminders of the trauma; inability to recall aspects of the trauma; loss of interest in social engagements and other important activities; emotional numbing and a foreshortened future. The third cluster, criteria D, involves arousal symptoms. These include insomnia, irritability, difficulty concentrating, hypervigilance, and a heightened startle response.

Those who develop PTSD may continue to experience these symptoms long after the abuse ends because they are caught in a cycle of being unable to appropriately up-regulate or down-regulate their emotions in response to current situational demands.

Several trauma theorists have conceptualized PTSD as characterized by the alteration between intrusive re-experiencing of the trauma and numbing of emotional responsiveness (Horowitz, 1986). While, individuals experience intense negative emotional responses, they also report difficulty experiencing and expressing emotions; otherwise known as emotional numbing (Litz & Gray, 2002). Efforts are made to avoid memories or feelings associated with the trauma.

Studies linking a history of maternal interpersonal violence exposure to adverse parenting practices have found that post-traumatic symptomatology can negatively affect a parent's functioning and ability to parent effectively (Appleyard & Osofsy, 2003). PTSD symptomatology disrupts the mother-child relationship because the difficulties these mothers have managing their own affective state interferes with effectively disciplining their children. This often leads to an escalation in conflict and possibly abusive acts (Reid, 1986; Reid, Patterson, & Loeber, 1982). It also creates a chaotic family environment (Davidson, Smith, & Kudler, 1989a) and higher levels of irritability (Jordan, Marmar, Fairbank, Schlenger, Kulka, Hough, & Weiss, 1992).

PTSD diagnosis has been linked to aggressive parenting in multiple studies. One study found that women who exhibit high levels of emotional arousal in the face of adverse child behaviors are more likely to react with aggression (Smith & O'Leary, 1995). Findings of maternal parenting aggression in connection with maternal PTSD were replicated in other studies as well (Samuelson & Cashman, 2008; Famularo, Fenton, Kinscherff, Ayoub, & Barnum, 1994). In a two generational study of the transmission of abuse with 109 parent-child dyads, Pears and Capaldi (2001) found that, compared to

parents with no PTSD diagnosis, PTSD symptomatology in traumatized parents significantly predicted the reenactment of abuse with their own children.

A more recent study further confirmed the impact of maternal PTSD on parental aggression. Cohen et al., (2008) determined that mothers with PTSD, who had a history of childhood physical and sexual abuse, were significantly more likely to engage in negative parenting practices including psychological aggression, punitiveness, physical abuse potential, and general physical discipline.

There is also an emerging body of literature that describes parenting difficulties in individuals with combat related PTSD (Ruscio, Weathers, King, & King, 2002; Berz et al., 2008; Jordan et al., 1992; Gold, Taft, Keehn, King, King, & Samper, 2007). One recent study (Samper, Taft, King, & King, 2004) investigated the relationship between PTSD symptoms and general parenting satisfaction as measured by the following five criteria: self-assessment of parental efficacy, level of enjoyment in parenting, perception of the quality of the parent-child relationship, satisfaction with how their children were “turning out,” and perceived problems with their children.

They found that total PTSD severity scores as well as avoidance and emotional numbing symptoms were significantly associated with elevated levels of parenting dissatisfaction. This was true even after controlling for other co-morbid difficulties including major depression, substance abuse, and partner violence. These findings indicate that a parent’s difficulty tapping into her own emotional experience and that of her child creates adverse barriers in the parent-child relationship. Although the hyperarousal and reexperiencing symptoms did not reach statistical significance in this

study (Samper et al., 2004), there was a small to medium effect size, indicating that these factors also likely influence the challenges a traumatized parent faces in raising children.

A growing body of literature examines the effects of PTSD symptomatology on specific aspects of parenting. Studies have investigated the impact of parental competency, distress, and the impact of distorted maternal mental representations of their child. A growing body of research found that PTSD criteria C (avoidance and numbing) and D (hyperarousal) predicted decreased levels of competency (Berz et al., 2008; Ford & Fournier, 2007; Ruscio, 2002). In a study on the effects of domestic violence, Chemtob & Carlson (2004) found that maternal trauma exposure interfered with a mother's ability to appropriately respond to her child. In general, mothers with PTSD were more reactive and impulsive when relating to their children.

Schechter and colleagues (Schechter, et al., 2005; Schechter, Coates, Kaminer, Coats, Zeanah, Davies, Schonfeld, Marshall, Liebowitz, Trabka, McCaw, & Myers, 2008; Schechter, Willheim, Hinojosa, Scholfield-Kleinman, Turner, McCaw, Zeanah, & Myers, 2010) examined the relationship between PTSD diagnosis and parenting difficulties from an attachment perspective. They confirm that PTSD symptoms interfere with other crucial aspects of parental functioning. In a study of inner-city traumatized women with PTSD, 59% of these women reported that their toddler was one of the three biggest stressors in their life (Schechter et al., 2008). Maternal stress was particularly increased when the child engaged in temper tantrums.

In a more recent study Schechter and colleagues (2005) explored the effects of PTSD and maternal reflective functioning on maternal mental representations of her child and their relationship. Building on previous attachment research that linked the quality of

maternal mental representations to parenting abilities and child attachment security, this important study aimed to better understand the psychological variables that influenced a traumatized mother's ability to parent. They found that severity of PTSD was significantly associated with maternal distorted mental representations of her child. They concluded that, within the context of attachment, PTSD as mediated or moderated by distorted maternal mental representations, may be a risk factor for the transmission of aggression.

Their most recent study (Schechter et al., 2010) examined a mother's ability to engage with her child on a task requiring joint attention. They found that maternal PTSD symptoms significantly correlated with a mother's perception that her parent-child interactions were dysfunctional. They also found that for women with higher levels of PTSD, her young child was significantly more likely to spend more time trying to engage his mother, following a separation and a reunion. This suggests that these women are emotionally disrupted by the negative emotions that a separation elicits in her child, and she is unable to reengage. The child's negative affects may trigger his mother's heightened coping strategies, forcing her to attend to her dysregulated state at the expense of soothing her child.

### *Alexithymia*

Measuring levels of alexithymic symptoms is a method for examining maternal difficulties with processing and articulating emotional cues (Teten, Miller, Bailey, Dunn, & Kent 2008). Alexithymia literally means "without words for emotion" or "no words for mood." In psychoanalytic theory an alexithymic individual could be described as lacking in psychological mindedness.

More recently researchers have refined the concept, framing it as a disorder of affect regulation reflecting deficits in cognitive and interpersonal regulation of emotions (Taylor, Bagby, & Parker, 1997). The three areas alexithymic individuals are impaired include difficulty identifying feelings, difficulty expressing feelings and a tendency toward external versus internal thinking (Bagby, Parker, & Taylor, 1994b). There is a marked disturbance in the capacity for symbolization, which is most noticed in their style of communication where they appear unable to use symbolic language to put inner psychological experiences into words (Nemiah & Sifneos, 1970). Across these findings, individuals had difficulty noticing and making use of their inner attitudes, feelings, wishes, and drives. This difficulty in creating a symbolic affective language for physiological states disrupts the ability to regulate emotional states. With limited responses available, they are more apt to action than reflection.

Although alexithymia, as a concept, was coined by Sifneos in 1972 in response to his work with patients who exhibited classical psychosomatic diseases (Taylor, 1984), Krystal noticed a similar phenomenon in war veterans with severe posttraumatic stress and Holocaust survivors (1968). Although there is some controversy as to the etiology of alexithymia, developmental experiences and neurophysiological factors are now known to play a role (Taylor, 1984). For example, alexithymia has been linked to many forms of trauma including child sexual abuse, neglect and emotional abuse (for review see Joukamaa, Luutonen, Von Reventlow, Patterson, Karlsson, & Salokangas 2008), insecure attachment (Troisi, D'Argenio, Peracchio, & Petti, 2001; Montebanocci, Codispoti, Baldaro, & Rossi, 2004; De Rick & Vanheule, 2006), and failures in attachment (Krystal, 1997).

In studies comparing a psychiatric and primary care population, alexithymia was associated with a history of child abuse, even when controlling for general psychopathology (Joukamaa, et al., 2008; Berenbaum, 1996). In a study of somatization disorder, 90% of the 99 women interviewed reported some type of child abuse, while 80% reported sexual abuse either as a child or an adult (Pribor, Yutzy, Dean, & Wetzel, 1993). In another study (Nash, Hulsey, Sexton, Harralson, & Lambert, 1993), levels of somatization were significantly increased in adult female survivors of sexual abuse. Other studies link alexithymia with less overtly traumatic experiences, such as family climate. For example, problematic family dynamics such as family expressiveness, family psychopathology, uncomfortability with negative emotions, and lack of feeling safe have been linked to alexithymia (Lumley, et al., 1996; Berenbaum, 1994).

Krystal (1991) describes how alexithymia is a dissociative defensive strategy used by individuals to ward off traumatized emotional knowledge. Bucci (1997) describes how somatization is the result of dissociation among the sub-symbolic (sensory, somatic, visceral, and motor) and symbolic (fantasy or imagery) components of the emotion schemas. In other words, the dissociation occurs between the description of affect and the experience of affect (Irwin & Melbin-Helberg, 1997). Consequently, stress-induced arousal is directly transformed into somatic dysfunction without psychic elaboration on the experience (Nemiah, 1996; Nemiah, 2000), leaving the individual without words to describe her emotional experience.

Alexithymia is also linked with interpersonal difficulties and aggression. For example, alexithymia has been significantly linked to non-assertive social functioning and other interpersonal problems, including being cold and distant (Vanheule, Desmet,

Meganck, & Bogaerts, 2007) and impaired emotional coping (Lane et al., 2000). In a study of sexual aggression, alexithymia was significantly linked to juvenile sexual offenders compared to a control group (Moriarty, Stough, Tidmarsh, Eger, & Dennison, 2001). It has also been linked to adult violent offenders in a comparison study of a non-offending sample (Keltikangas-Jarvinen, 1982).

A recent study (Teten et al., 2008) investigated the ways in which alexithymic qualities influence impulsive aggression, defined as “explosive onset, confusion during verbal or physical attack and remorse following outburst” (p. 824). They suggest that alexithymia is “a trauma-related emotional awareness deficit, marked by verbal and emotional characteristics” that “may fail to inhibit aggressive outbursts among impulsive aggressors, via its effect on language” (p. 824). In their study of veterans with PTSD, they found that alexithymia was significantly associated with impulsive aggression. These findings support the theory that traumatized individuals who experience difficulties with identifying, interpreting and communicating appropriate emotional responses in the face of environmental triggers, are likely to respond with aggression. The relationship between alexithymia and impulsive aggression is supported by a recent study using a large non-clinical sample of undergraduate students (Fossati, Acquarini, Feeney, Borroni, Grazioli, Giarolli, Franciosi, & Maffei, 2009). This study also identified mediation effect of alexithymia on the relationship between insecure attachment styles and impulsive aggression.

Despite these findings, the effects of alexithymia appear not to have been studied in relation to parenting abilities or the cycle of violence. Research supports the necessity of examining alexithymia in relation to parental aggression as a next step. Since

alexithymia has also been linked with other forms of interpersonal difficulties, examining maternal alexithymia in relation to emotion dysregulation in the next generation is an equally important subject to pursue.

### *Aggressive Parenting and Child Outcomes*

The literature on the influence of maternal characteristics on child internalizing and externalizing behavioral problems is vast. Within this research, there is a proliferation of studies that link parental aggression to a range of psychiatric difficulties in their children (Youngblade & Belsky, 1989). This is true of observational studies, maternal report and teacher report. Moreover, this link has been found in children of all ages and across socioeconomic status.

Externalizing behavioral problems are one very common response to child maltreatment. While investigating maternal factors contributing to a child's behavioral problems, McElroy and Rodriguez (2008) found a significant correlation between elevated maternal abuse potential and high levels of behavioral problems in their 5-12 year old children. George & Main (1979) reported that abused toddlers were more physically and verbally aggressive with peers and caregivers, and more avoidant of other children when compared to matched control toddlers. In this same study and another (George & Main, 1979; Schindler & Arkowitz, 1986), it was determined that abused children comply with their mothers less often than do children who are interacting with non-abusing mothers.

Children in abusive families have also displayed more aggressive behavior than did children from either neglectful or control families (Burgess and Conger, 1977). Similar data were reported (Reid & Taplin, 1977) based on home observations of abusive

families compared to deviant, but non-abusive families. This study further determined that children from abusive families displayed higher levels of aversive behavior compared to children from non-abusive households. In another comparison study involving children receiving psychiatric services, there were higher levels of aggression in the abused and neglected children, compared with non-abused children (Rogeness, Amrunga, Macedo, Harris, & Fisher 1986).

These findings were replicated in non-clinical settings as well. Abused and neglected children were rated higher by their teachers for behavioral problems compared to non-maltreated children (Reidy, 1977). Teachers rated children from abusive families as displaying more negative behavior than did control children (Salzinger, Kaplan, Pelcovitz, Samit, & Krieger, 1984). While mothers rated their adolescents who had been abused and/or neglected as higher in conduct-disordered problems compared to non-maltreated adolescents (Williamson, Borduin, & Howe, 1991).

The link between maternal aggression and a child's internalizing behavioral problems is established, but somewhat more controversial. Numerous studies show that compared to control groups of non-abused children, abused and neglected children suffer from depression (Kashani & Carlson, 1987; Kazdin, Moser, Colbus, & Bell, 1985). Adolescent males exposed to victimization exhibit higher levels of suicide risk (Deykin & Buka, 1994), while risk for depression has been found to be three times higher in adolescents with a victimization history referred for chemical dependency compared to a non-referred group (Deykin, Alpert, & McNamara, 1985). Further, higher levels of anxiety are found in adolescents with a history of physical abuse compared to non-abused children (Bernstein, 1989). In a study of adolescent Moroccan immigrants in the

Netherlands, parent-child conflicts were significantly associated with internalizing behavioral problems (Stevens, Vollebergh, Pels, & Crijnen, 2005). Yet in the Rogeness et al., (1986) study, more non-abused and non-neglected girls receiving psychiatric treatment were diagnosed with dysthymia than were abused or neglected girls. Despite some conflicting research, most studies find high co-morbidity of internalizing and externalizing symptoms in maltreated children (Stevens et al., 2005). For example, the effects of cumulative violence exposure (witnessing domestic violence and experiencing physical maltreatment) compared to witnessing domestic violence alone in children resulted in an increase in behavioral problems compared to those with less violence exposure (Kernic, Wolf, Holt, McKnight, Huebner, & Rivara, 2003). These children were also more than twice as likely to have a borderline to clinical level score on the internalizing behavior scale, and three times as likely to have an externalizing score in the borderline to clinical level compared to a representative normative CBCL sample. This was also significantly associated with the child's externalizing behavioral problems and overall behavioral problems on the CBCL.

#### *Affect Dysregulation and Child Outcomes*

Other research directly links maternal disorders of emotion regulation with adverse child outcomes. Many studies indicate that non-aggressive parenting difficulties are also related to adverse child outcomes. Correlation studies have shown that a child's externalizing behavioral problems are positively related to parental distress levels (Bigras La Freniers, & Dumas, 1996). Observations of parent-child interactions confirm that distressed parents exhibit less consistent and effective parenting skills, which results in children exhibiting more frequent and severe behavior problems (Patterson, 1988). A

related study (Fite, Stoppelbein, & Greening, 2008) investigated parental stress factors contributing to psychopathic traits in children ages 6-12 who were admitted to a psychiatric inpatient unit. They found that level of parental stress, as measured by the Parenting Stress Index (PSI), which measures competence and attachment, was significantly related to their child's elevated scores of callous/unemotional features on the Antisocial Process Screening Device (APSD). Further, parents who reported attachment difficulties with their children reported children with higher scores on the APSD.

Despite the vastness of the emotion regulation literature, there is a dearth of studies investigating the direct effects of PTSD and alexithymia on adverse child outcomes. One study on the Gulf War examined the direct impact of parental PTSD on child behavioral problems. This study found that for Kuwaiti children whose fathers fought in the Gulf War, both maternal and paternal PTSD diagnosis predicted adverse child outcomes including depression (Al-Turkait & Ohaeri, 2008). It is clear that additional research is necessary to determine whether disorders of emotion regulation directly impact children in the next generation.

### **Conclusion and Study Hypotheses**

In sum, this study aimed to understand the mechanisms by which adverse outcomes are transmitted through the generations, specifically between mothers and children. Overall it was expected that maternal childhood exposure to interpersonal violence would adversely impact her pre- to early-adolescent child, as measured by internalizing and externalizing behavioral problems. Within this context, it was expected that maternal aggression would mediate this relationship. It was expected that maternal disorders of emotion regulation would further mediate the relationship between maternal

childhood IPV exposure and aggressive parenting practices. It was also expected that disorders of emotion regulation would independently mediate the relationship between maternal childhood IPV exposure and adverse child outcomes. These variables were chosen because of the dearth of research that exists examining these variables within one research study.

These questions are supported by theory suggesting that children learn about the boundaries of their minds, expectations of the world and relationships with other's through the lens their mother's object world and psychic development. Identification with the aggressors of her past, and her tendency to become easily emotionally dysregulated in the face of conflicts that naturally arise during the process of raising a child, create the psychic conditions within which adverse outcomes are transmitted. Examining these variables within the context of mothers and their pre- to early-adolescent children is especially salient since these children are entering a naturally volatile developmental stage.

1. It is hypothesized that maternal trauma history is significantly and directly associated with child behavioral problems, however:
2. It is further hypothesized that the relationship between maternal trauma history and child behavioral problems is mediated sequentially by several variables in the following way (see Figure 1):
  - a. Maternal aggression mediates the relationship between maternal trauma history and behavioral problems in her child.
  - b. Alexithymia mediates the relationship between maternal trauma history and behavioral problems in her child.

- c. The presence or absence of a lifetime PTSD diagnosis mediates the relationship between maternal trauma history and behavioral problems in her child.
- d. The relationship between maternal trauma history and behavioral problems in her child is sequentially mediated, first by alexithymia and then maternal aggression.
- e. The relationship between maternal trauma history and behavioral problems in her child is sequentially mediated, first by the presence or absence of a history of PTSD diagnosis and then maternal aggression.

## CHAPTER 3: METHODS

### Participants

This study was a secondary analysis of data collected from a cross-sectional and cross-generational study designed to examine associations among maternal impairments (substance abuse, general psychopathology, neuropsychological functioning), child-rearing deficits (parenting deficits, child neglect, child physical/ sexual abuse), and adverse child outcomes (self-regulation deficits, aggressive behavior, and substance use). The principal investigator was Dr. Denise Hien, formerly of the Department of Psychiatry at St. Luke's-Roosevelt Hospital Center (SLRHC). Participants were recruited through the OB/ GYN clinic at SLRHC, a large urban hospital serving a primarily poor, minority population in New York City. During the 5-year study period, a total of 506 women presenting for treatment at the OB/ GYN clinic were screened for study inclusion. The final sample consisted of 176 pairs of mothers and pre- or early-adolescent children.

### Procedures

#### *Setting*

The data were collected at the Women's Health Project, a clinic and research program directed by Dr. Hien. It is located in a suite annexed to the main SLRHC complex on 114th Street. The suite includes a main waiting area and seven offices, two of which served as interviewing rooms for the research program.

#### *Recruitment Process*

The site was chosen based on previous research in which it was found to serve a population who are at high risk for negative life events, violence, and psychopathology, with adequate variability and generalizability (Hien & Honeyman, 2000). Prior studies

conducted at the SLRHC site have indicated that 75% of residents live at or below the poverty level (Leite, 2000; Leite & Hien, 2000). Subjects were recruited through the distribution of flyers and in-person by staff during bi-weekly visits to the clinic. Periodic advertisements were also placed in a New York metro-area newspaper.

Potential participants were required to complete a brief screening to determine eligibility. Both mother and child participated in the study. The mother completed an initial 3 hour interview and then returned on a second occasion with her child. Participant reimbursement was \$100 per family and roundtrip travel expenses. Mothers with more than one child in the 9-15 age range were instructed to bring in the child randomly selected by staff at completion of the screening. Selection of the 9-15 age range for children was based on the goal of the larger study to examine the consequences of maternal impairment and parenting on adverse child outcomes, including initiation of substance use, which tends to occur during pre- or early-adolescent years.

Inclusion criteria were (a) age of participant between 18 and 55 years, (b) at least one child aged 9 to 15 years, with the exception of one child who was 8 years and 11 months. All children had been living with their mother for at least the past 6 months, and (c) willingness to participate in approximately 6 hours of interviews for the mother and 3 hours for the child. Exclusion criteria included (a) a clear history of severe organic symptomatology, (b) active AIDS, (c) history of head trauma to mother or child, (d) any serious physical ailment or chronic disease which would prevent participation in interviewing, and (e) diagnosis of a psychotic or bipolar disorder.

## Measures

Mothers were administered measures of trauma exposure, emotion regulation, crystallized intelligence, psychiatric functioning, substance abuse and other aspects of functioning during their first interview. During the second interview with the child, mothers were administered parenting measures and asked questions about the child's emotional functioning. Simultaneously the child met with another interviewer to complete measures of psychiatric functioning, parenting experiences, neurocognitive ability and trauma exposure.

### *Maternal Trauma History*

A trauma composite was created following the method described by Banyard et al. (2003). We chose to use this index as it includes five main types of lifetime interpersonal trauma exposure and because its use allowed direct comparison to previous results in this area. The first three components of the score are childhood traumas, events occurring prior to age 18, including sexual abuse (defined as rape, attempted rape, or made to perform any type of sexual act through force, coercion, or threat of harm), physical abuse (defined as being attacked, hit, slapped, beaten up, or kicked), and witnessing violence (defined as witnessing sexual and/or physical abuse). The fourth and fifth components are adult experiences after age 18, including partner violence (defined as being pushed, grabbed, slapped, the recipient of a thrown object, punched, hit, choked, beaten up, slammed against a wall, burned, or kicked by a partner), and sexual assault (defined as rape, attempted rape, or made to perform any type of sexual act through force, coercion, or threat of harm). These five types of interpersonal trauma were coded as present or absent, and then the number of trauma types experienced was summed,

resulting in a trauma composite score with a possible range of 0 to 5. For the present study, only the first three subtypes of childhood IPV were assessed and coded. Two measures were used to create this composite.

*The Life Events Checklist of the Clinician Administered PTSD Scale (CAPS-LEC; Blake, Weathers, Nagy, Kaloupek, Gusman, Charney, & Keane, 1995).* The CAPS-LEC was used to assess type, frequency, and ages of traumatic exposure. This list assesses 19 traumatic events that may have occurred in childhood or adulthood. They fall into both interpersonal (e.g., physical assault, sexual assault) and noninterpersonal (e.g., natural disaster, fire or explosion, transportation accident) categories.

*The Conflict Tactics Scale–2 (CTS-2; Straus, Hamby, Boney-McCoy, & Sugarman, 1996).* The CTS-2 has been widely used cross-culturally with minority populations. In this study, it is used to assess adult partner violence using the Physical and Sexual Assault subscales. The Physical Assault subscale includes 12 items that range in intensity from grabbing to assault with a knife or gun. The Sexual Assault subscale includes 7 items that range in intensity from, insisted on having sex to, used force to have sex. The CTS-2 is an updated version of the CTS, a widely used scale with established validity, reliability, and factor structure (Straus, 1990). Alpha reliability for the CTS-2 is 0.86 for Physical Assault and 0.87 for Sexual Assault. (Straus et al., 1996).

#### *Maternal Aggression*

*The Child Abuse Potential Inventory (CAPI, Form VI) (Milner, Gold, & Wimberley, 1986).* The CAP Inventory is a 160-item, self-report questionnaire that assesses risk for child physical abuse. It has a third grade readability level and is answered in an agree-disagree forced choice format. The 77-item physical child abuse

scale assesses distress, rigidity, unhappiness, problems with child and self, problems with family, and problems from others. There are three validity scales which detect faking-good, faking-bad, and random response profiles. Two additional scales assess ego-strength and loneliness. For this study, the overall score was used. Elevated CAPI scores have been consistently associated with problems in parent-child interactions and are risk factors of both concurrent and future physical abuse (Milner, 1994). Demographic variables including age, race, marital status and level of income were not significantly correlated with CAPI scores (Stringer & La Greca, 1985). Kuder-Richardson-20 reliability estimates ranged from 0.92 to 0.95 for a variety of similar and dissimilar populations. Test-retest reliability was 0.75 for a 3-month interval, 0.83 for a 1-month interval, 0.90 for a 1-week interval and 0.91 for a 1-day interval (Milner, 1994).

*Parent Child Conflict Scales (CTSPC)* (Straus, Hamby, Boney-McCoy, Sugarman, 1998). The CTSPC is an updated version of the Conflict Tactics Scale (mentioned above), but modified for use in parent-child relationship. The CTS and the CTSPC are fundamentally the same, but the CTSPC is altered to directly address conflict tactics a parent uses with a child. The CTSPC has three scales: Non-violent discipline, Psychological aggression, and Physical assault. The physical assault scale can be divided into minor physical assault and severe physical assault. Only the low severity physical assault subscale and the non-violent discipline scales were used. The very severe physical assault questions were not administered for ethical considerations to protect confidentiality of research participants. Indices of violence are anchored in the past year.

Prevalence scores are derived by coding all responses with a 0 or 1 dichotomy to indicate whether a disciplinary tactic was ever used. Chronicity scores measure how

often in the past year a tactic was used among those who used it at all. For the current study, a modified version of the chronicity score that includes participants who did not use the tactic during the past year was used. Thus, our chronicity scores included all participants, and the lowest possible score was 0. Internal reliability of the CTSPC has been shown to be adequate (overall Physical Assault scale = 0.55, Psychological Aggression = 0.60, Non-violent Discipline = 0.70). The internal consistency of the measure declines as the discipline tactics become more severe, which is a reflection of the increased rarity of the events that each scale measures. Straus (1979) provided reliability and construct validity, convergent and divergent validity data of the original CTS scale, which has been extensively used with parent-child relations.

*The Parental Punitiveness Scale (PPS; Epstein & Komorita, 1965).* The PPS is a 21-item self-report measure that assesses parental disciplinary style and potential for parental violence. Using a Likert-type scale the respondent was required to estimate her most frequent response to her children's misbehavior in a number of hypothetical situations including, verbal aggression, physical aggression, and indirect aggression toward parents, other authorities, siblings, or peers. The scale offers a description of seven discipline techniques ranging in degree of punitiveness from doing nothing to severe physical punishment. The scale was coded by a summed total severity score, with a lower score indicating more severe punishments. Previous studies have shown high punitiveness scores to be significantly correlated with more child welfare involvement and use of maladaptive coping (Hien & Honeyman, 2000). In addition to investigating the overall score, this study also assessed the frequency with which mother's endorse the statement: "do nothing."

*Maternal Disorders of Emotion Regulation*

*Toronto Alexithymia Scale (TAS-20)* (Bagby, Parker, & Taylor, 1994b). The TAS-20 is comprised of 20 items. Responses to each item are made on a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree). The items of the TAS-20 are distributed over three factorially-determined scales. The Difficulty Identifying Feelings subscale is an index of respondents' difficulty in identifying an experience as an affective state; for example, respondents may have difficulty in distinguishing sadness from anxiety, or distinguishing any affective state from the accompanying bodily sensations. The Difficulty Describing Feelings subscale relates to participants' capacity to name and to depict their feelings verbally. The Externally-Oriented Thinking scale is a measure of the extent to which respondents relate more to objective events than to psychological processes. The score on each of the TAS-20 subscales is the sum of the ratings on the component items. The reliability of the scales was satisfactory (Cronbach's alpha = .66 to .78; Three week test-retest reliability was .77; Bagby, Parker & Taylor, 1994). The TAS-20's convergent, discriminant, and concurrent validity has been documented by Bagby, Taylor, and Parker (1994), and its factorial structure has been comprehensively cross-validated (Bagby, Taylor, and Parker, 1994b; Parker, Bagby, Taylor, Endler, & Schmitz, 1993).

*Structured Clinical Interview for DSM-IV for Substance Abuse Comorbidity (SCID-SAC; Spitzer, Williams, Gibbon, & First, 1992)*. The SCID-SAC version was used to assess Post-Traumatic Stress Disorder according to the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV; American Psychiatric Association, 1994). The SCID is a widely used semi-structured clinician-administered

interview. The SCID-SAC is a modified version of the SCID developed for detection of Axis I disorders among substance abusers based on life history. Field trials with the SCID-SAC version have shown good inter-rater and test-retest reliability (Nunes, Quitkin, Donovan, Deliyannides, Ocepek-Welikson, & Koenig, 1998). Data on the presence or absence of PTSD and on current and lifetime occurrences were collected.

Diagnosis was determined by the Structured Clinical Interview for DSM-III-R/IV (SCID), which was conducted by experienced assessors who were doctoral candidates with at least a master's degree. On the SCID interview, assessors were required to have at least a .70 level of agreement with expert trainer diagnostic ratings. Reliability of the SCID diagnostic interview was determined by having an expert trainer review 20% of randomly chosen taped interviews. In addition, assessors received ongoing weekly supervision from a clinical psychologist to ensure standardized administration of the SCID interview.

#### *Child Behavioral Problems*

*Child Behavior Checklist for ages 4-18 years (CBCL) (Achenback & Edelbrock, 1991) (Informants = Mother and Teacher).* The CBCL is designed to record, in a standardized format, children's behavioral problems as reported by their parents or parent surrogates. Items are grouped in 8 syndromes: Withdrawn, Somatic Complaints, Anxious/Depressed, Social Problems, Thought Problems, Attention Problems, Delinquent Behavior and Aggressive Behavior. We assessed an over all score (CBCL-Total). Test-retest reliability ratings of behavior problems averaged 0.74. Construct validity was established with the Conners Parent Questionnaire, 0.91 and the Quay-Peterson Revised Behavior Problem Checklist, 0.92 for total problems (Lowe, 1998).

## Data Analysis

1. Descriptive analyses (means, standard deviations, frequency counts) were conducted to describe the sample in terms of demographic and background variables, and to examine the range of scores on dependent and independent variables. These analyses helped to determine whether there were any significant associations between demographic or background variables and any of the proposed mediators or outcome variables. Variables with significant associations were considered for use as possible covariates.
2. Hypotheses were tested using a bootstrapping method to test a multiple mediational model (Preacher & Hayes, 2008). Total, direct, and indirect (mediational) effects were estimated using this method to determine the strength and direction of the associations proposed in the model depicted in Figure 1.

## CHAPTER 4: RESULTS

### Data Analysis

Data were analyzed using SPSS version 19 and MPlus version 6. To explore the potential process by which maternal violence exposure affects their children's problem behavior, we first examined bivariate relationships among the variables, then specified all possible single mediator models. We also tested more complex sequential mediator models. For example, we tested whether alexithymia and then maternal aggression together mediated the relationship between the independent and dependent variables.

### Demographic Results

The original sample included 192 mother-child pairs. Due to missing data, the final analysis was conducted on 147 pairs of mothers and children. Nine mothers did not complete the Life Events Checklist so their history of childhood interpersonal violence exposure is unknown. Nine mothers did not complete the SCID-SAC PTSD measure, 14 mothers did not complete the Toronto Alexithymia-20 measure, 13 mothers did not complete the Conflict Tactics Scale (psychological and physical aggression) measures, 13 mothers did not complete the Parental Punitiveness measure, 11 mothers did not complete the Child Abuse Potential Inventory measure, and 45 children are missing the Child Behavior Checklist-Total scores.

The mothers ranged in age from 23 to 52, with a mean of 37.4 years ( $SD = 6.7$ ). Their children ranged in age from 9 to 15 with a mean of 11.5 years ( $SD = 1.87$ ), although there was one child 8 years and 11 months of age. The children were split evenly between males (51.1%) and females (48.9%). Over 90% of the mothers indicated they were a racial/ethnic minority, with 70.9% ( $n = 129$ ) identified as African American

and 24.7% ( $n = 45$ ) identified as Hispanic. The average annual income for the mothers was \$15,932. While incomes ranged from \$2,216 to \$72,000 per year with a standard deviation of  $\pm$  \$12,508, 90% of participants had incomes at or below \$30,542.

More than half of the women indicated they were single (53.0%). Of the rest, 15.8% indicated they were married, 8.8% indicated that they lived with a partner, 19.7% indicated they were divorced, and 2.2% indicated they were widowed. More than half of the women (60.4%) indicated that they lived alone. The mean number of children in the home was 2.4 ( $SD = 1.36$ ) while the mean number of people living in the house was 3.14 ( $SD = 1.77$ ). Slightly more than one-third of the women (39.8%) indicated that at some point they had an open case with the Department of Child Welfare, while 9.4% reported a currently open case.

In terms of education, 6.0% of the women completed college, 40.4% completed some college, 21.9% were high school graduates, and 31.7% had less than a high school education. Almost half (46.4%) of the women worked full-time, 25.1% worked part-time, 11.5% were unemployed, 9.3% were homemakers, and 4.9% were either retired or disabled. See Table 1 for a full summary of maternal demographic results. See Table 2 for a full summary of child demographic results.

### Descriptive Statistics

Results of the preliminary analyses, descriptive statistics, and the findings related to the hypotheses are presented below. As a first analytical step, means and standard deviations are reported for all variables. Skewness and kurtosis were also examined to check for normality. Table 3 displays a full summary of the skewness and kurtosis for

each variable. Where available, comparisons to normative data or indications of the clinical significance of the scores were made.

#### *Childhood Interpersonal Violence Exposure (CIPV)*

Over half (55.2%) of the women (n = 101) reported at least one exposure to physical or sexual violence. A dichotomous yes/no response was used to determine maternal CIPV exposure (physical abuse, sexual abuse, witnessing violence). Using a dichotomous variable was preferable to analyzing the type and number of violent exposures, as this study was focused on understanding the general experience of exposure to violence, not the type or frequency. Preliminary analyses indicated that all women who witnessed violence had also personally experienced sexual and/or physical abuse. Since witnessing violence overlaps entirely with experiencing violence, analysis was only conducted on whether a participant endorsed either physical or sexual abuse during childhood.

#### *Child Behavior Checklist-Total (CBCL-T)*

The CBCL-T scores range was within expectable levels (23-82), with a mean of 54.54 (S.D.=10.57) and was normally distributed (see Table 3). These scores represent an expected level and distribution for this sample type (McFarlane et al., 2003).

#### *Mediating Variables*

Means, standard deviations, skewness, and kurtosis for all mediating variables were examined. Descriptive statistics reveal that the mean standard score for mediating and dependent variables are as follows: Toronto Alexithymia Scale (TAS-20) (n=179) is 45.14 (S.D.=11.98), Parental Punitiveness Scale (PPS) (n=179) is 107.10 (S.D.=14.35), Conflict Tactics Scale-Physical Abuse (CTS-Phys) (n=179) is 2.00 (S.D.=4.48), Conflict

Tactics Scale-Psychological Abuse (CTS-Psych) (n=179) is 9.00 (S.D.=5.99), Child Abuse Potential (CAPI) (n=181) is 159.01 (S.D.=95.29), Child Behavior Checklist Total Score (CBCL-T) (n=147) is 54.54 (S.D.=10.57), and Aggression Factor Score (AFS) (n=176) is 0 (S.D.=1) (see Table 3).

All variables are normally distributed except the Parental Punitiveness Scale (PPS) where kurtosis was highly elevated and slightly skewed, and Conflict Tactics Scale-Physical Abuse, which was very slightly skewed and slightly kurtotic, neither of which effect the parametric statistics. Further analysis of PPS data indicated that six scores were outliers. Five women reported PPS scores lower than 73, and one woman reported a score of 165, all of which are significantly beyond the mean score and standard deviation. However, since the hypothesis tests utilized bootstrapping analyses, normally distributed data is not necessary and no transformations were conducted.

#### *PTSD Diagnosis*

Lifetime history of PTSD diagnosis was assessed using a dichotomous yes/no variable. Using this method, 29.5% (n = 54) of the mothers met criteria for lifetime diagnosis of PTSD.

#### *Correlations Among the Independent Variable, Mediating Variables, and Dependent Variables*

Two-tailed Pearson correlations were conducted among the independent variable and all mediating variables. The independent variable (maternal CIPV exposure) was significantly associated with lifetime diagnosis of PTSD ( $r=.22$ ,  $p < 0.01$ ), Conflict Tactics Scale-Physical Aggression (CTS-Physical Aggression) ( $r=.20$ ,  $p < 0.01$ ), and the Child Abuse Potential Inventor (CAPI) ( $r=.25$ ,  $p < 0.01$ ). Lifetime diagnosis of PTSD

was also significantly correlated with the CAPI ( $r=.29, p < 0.01$ ). The CAPI was significantly associated with the dependent variable, Child Behavior Checklist-Total (CBCL-T) ( $r=.23, p < 0.01$ ). The Toronto Alexithymia Scale-20 (TAS) was significantly negatively associated with CTS-Physical Aggression ( $r=-.16, p < 0.05$ ), the CAPI ( $r=.58, p < 0.01$ ), and CBCL-T ( $r=.21, p < 0.05$ ). CTS-Physical Aggression was significantly associated with Conflict Tactics Scale-Psychological Aggression (CTS-Psychological Aggression) ( $r=.49, p < 0.05$ ) and CBCL-T scores ( $r=.18, p < 0.01$ ). See Table 4 for a full summary of Pearson correlations for each variable.

#### *Reliability*

Cronbach alpha coefficients were computed to determine the internal consistency of the scales. The Cronbach's alpha reliabilities are acceptable for the Conflict Tactics Scale-Psychological Aggression at .73 and the Conflict Tactics Scale-Physical Aggression at .58, while they are good for the Toronto Alexithymia-20 Scale at .81, and excellent for the Child Abuse Potential Inventory at .93, the Parental Punitiveness Scale at .90, and the Child Behavior Checklist Total Score at .93. See Table 5 for a full summary of Cronbach alpha coefficients for each variable.

#### *Associations Among Demographic Variables*

Analyses were conducted to examine demographics in relation to the independent, dependent, and mediating variables in order to determine whether any demographic variables should be used as covariates.

#### *Maternal Demographics*

##### *Maternal Age*

Pearson correlations between maternal age and the dependent and mediator variables were conducted. One association was significant. There was a significant

negative association between maternal age and Conflict Tactics Scale-Physical Abuse, such that younger maternal age was significantly associated with higher levels of physical aggression ( $r=.213$ ,  $p < .004$ ). Maternal age was used as a covariate in the analyses. See Table 6 for a full summary of the maternal age Pearson correlations.

#### *Maternal Race/Ethnicity*

Two chi-square analyses indicated that maternal race/ethnicity was not significantly related to the dependent variable (maternal CIPV exposure) or lifetime PTSD diagnosis. See Table 7 for a full summary of these maternal race/ethnicity chi-square analyses. One way analyses of variances (ANOVA) indicated that maternal race/ethnicity was not significantly related to the dependent or any mediating variables. See Table 8 for a full summary of these chi-square analyses.

#### *Marital Status*

A chi-square analysis indicated that maternal marital status was not significantly associated with lifetime PTSD diagnosis ( $\chi^2$  (df = 5, N = 183) = 7.85,  $p = .16$ ).

A one-way analysis of variances (ANOVA) indicated that maternal marital status was significantly associated with the dependent variable, Child Behavior Checklist-Total (CBCL-T) ( $p < .05$ ), but it was not significantly associated with any mediating variable. See Table 9 for a full summary of the marital status ANOVA. Tukey post hoc comparisons revealed that children of mothers in a sustained conjugal situation were significantly more likely to have elevated CBCL-Total scores compared to mothers who are widowed. The mean CBCL-T scores of children whose mothers are in a sustained conjugal situation was 62.2 (SD=12.6) (n=6), while the mean CBCL-T scores of children

whose mothers are widowed was 40.7 (SD=11.5) (n=3). The significant difference is likely due to the small n size and is unlikely to have influenced the outcome.

### *Maternal Education*

A chi-square analysis indicated that maternal education level was not significantly associated with the independent variable, maternal CIPV exposure. A chi-square analysis indicated that maternal education level was not significantly associated with lifetime PTSD diagnosis. Using one-way analyses of variances (ANOVA), maternal education was not associated with any other mediating variable, except with scores on the Child Abuse Potential Inventory (CAPI) ( $F=0.977$ ,  $df = 3, 143$ ,  $p < .05$ ). See Table 10 for a full summary of the maternal education ANOVA. Maternal education was not associated with the dependent variable. Results revealed that mothers who attended college or graduated from college had significantly lower CAPI scores than those who did not complete high school. See Table 11 for a full summary of the multiple comparisons analysis of maternal education and CAPI. Maternal education was used as a covariate in the tests of hypotheses.

### *Child Demographics*

#### *Gender*

A chi-square analysis determined that no significant relationship exists between child's gender and the independent variable, maternal CIPV exposure. A chi-square was conducted to examine the relationship between child gender and maternal lifetime PTSD diagnosis (Table 12). As expected, there was no significant association. Using an independent samples t-test to examine associations between child's gender and other mediating variables no significant relationships emerged (Table 13). Using an

independent samples t-test to examine associations between child's gender and the dependent variable (Child Behavior Checklist-Total scores), no significant relationship emerged. See Table 13 for a full summary of the chi-square analyses for child's gender.

### *Child's Age*

Pearson correlations between child's age and the independent and mediator variables were conducted. One association was significant. There was a negative association with the Conflict Tactics Scale-Physical Aggression, such that younger child's age was associated with higher levels of maternal physical aggression ( $r = -.213$ ,  $p < .01$ ). Child's age was used as a covariate in the analyses. See Table 14 for a full summary of the Pearson correlations for child's age.

### *Summary of analysis for potential demographic covariates*

Younger maternal age was significantly associated with higher Child Abuse Potential Inventory (CAPI) scores ( $r = .213$ ,  $p < .004$ ). Younger child age was significantly associated with higher levels on the maternal Conflict Tactics Scale-Physical Aggression ( $r = -.213$ ,  $p < .01$ ). Higher maternal education was significantly correlated with lower Child Abuse Potential Inventory scores. These factors were controlled for in the analysis as covariates.

### Model Testing

The bootstrapping method was used for hypothesis testing. Bootstrapping does not require assumptions of normality as it generates probability distributions from the data itself and is recommended for small sample sizes. Bootstrapping involves repeatedly randomly sampling observations with replacement from the data set to compute the desired statistic in each resample. Ten thousand bootstrapping re-samples

provided an approximation of the sampling distribution of the statistic of interest (Preacher & Hayes, 2008). To appropriately examine the hypotheses of this study and to determine the best fitting model, multiple theoretical models were examined. The following section will describe the three sets of analyses that were conducted as a result.

### Model One

Total, direct, and indirect (mediational) effects, were estimated using this method to determine the strength and direction of the associations. The mediators in this analysis included: 1) Parental Punitiveness Scale (PPS); 2) Conflict Tactics Scale-Physical Aggression (CTS-PHYS); 3) Conflict Tactics Scale-Psychological Aggression (CTS-PSYCH); 4) Child Abuse Potential Inventory (CAPI); 5) Lifetime PTSD diagnosis; 6) Toronto Alexithymia Scale-20 (TAS-20). See Figure 1 for a review of the paths involved in Model One.

This analysis tested whether the independent variable, maternal CIPV exposure, was significantly associated with the dependent variable, Child Behavior Checklist—Total (CBCL-T) scores of her child. This model also tested whether the aggression mediators: Child Abuse Potential Inventory (CAPI), Conflict Tactics Scale-Physical Aggression (CTS-Phys), Conflict Tactics Scale-Psychological Aggression (CTS-Psych), Parental Punitiveness Scale (PPS), mediated this relationship. Further, this model examined the degree to which emotion regulation, defined as Lifetime PTSD diagnosis and alexithymia, mediated this relationship. Finally, the model tested the question of whether the affect dysregulation mediators and maternal aggression mediators sequentially mediated the relationship between maternal CIPV exposure and the CBCL-T scores of her child (see Figure 1).

In these initial analyses, maternal demographic characteristics, including maternal age and maternal education, which have been linked to psychological health and parenting among adolescent mothers (Luster, 1998; Reis, 1989) were controlled for in this analysis. Child's age was also controlled for in this analysis. Direct effects, single mediator indirect effects, multiple mediator indirect effects and total effects are reported. The following section reports the statistics for the significant findings and reports non-significant paths. Non-significant and significant statistical findings are reported together in Table 15.

### Direct Effects

#### *Hypothesis One*

*Maternal trauma history is significantly related to adverse child outcomes.*

Analysis of hypothesis 1 revealed no significant direct relationship (path c) between the independent and dependent variables (maternal CIPV exposure and CBCL-T scores of her child) ( $\beta = 0.001$ ; 95% CI:-0.532 to 0.506,  $p > .05$ ) (see Table 15). Indirect effect sizes using a dichotomous independent variable are as follows: .02=a small effect; .15=a medium effect size; .40=large effect size There was a small effect size for this hypothesis (.001) for this path. This finding does not support the first hypothesis.

Earlier statistical mediation theories presumed that in order for mediation to occur, there must be a significant direct relationship (Baron and Kenny, 1986). However, analyses of indirect effects can be conducted in the absence of a significant direct effect based on more recent developments in statistical methodology that support the validity of this analysis (Zhao & Lynch, 2010). A significant indirect path can occur despite a non-significant direct path, due to competitive or complementary mediation effects. For

example, if there are numerous factors that contribute to the transmission of maladjustment, aggressive parenting being one of these, it is possible that, when combining the sum of the indirect effects and their contributions are of opposite signs, they cancel each other out and create a non-significant direct effect. It is also possible that multiple mediators exist and it is only through these mediators that the relationship between maternal CIPV and maladjustment in the second generation is true (Zhao & Lynch, 2010). From this perspective, despite a non-significant direct effect, analyses of hypothesis two were conducted to determine the significance of the indirect effects.

### *Hypothesis Two*

*The relationship between maternal trauma history and behavioral problems in her child is mediated in the following ways:*

- a. Maternal aggression mediates the relationship between maternal trauma history and behavioral problems in her child.*
- b. Alexithymia mediates the relationship between maternal trauma history and behavioral problems in her child.*
- c. The presence or absence of a lifetime PTSD diagnosis mediates the relationship between maternal trauma history and behavioral problems in her child.*
- d. The relationship between maternal trauma history and behavioral problems in her child is sequentially mediated, first by alexithymia and then maternal aggression.*
- e. The relationship between maternal trauma history and behavioral problems in her child is sequentially mediated, first by the presence or absence of a history of PTSD diagnosis and then maternal aggression.*

*Child Behavior Checklist Total (CBCL-T)*

CBCL-T scores were significantly related to the Parental Punitiveness Scale scores ( $\beta_{d4}$ : -0.169; 95% CI: -0.324 to -0.042,  $p < .05$ ). The dependent variable (CBCL-T scores) was not significantly related to any other mediator (see Table 15).

*Child Abuse Potential Inventory (CAPI)*

CAPI scores were significantly related to two other mediators. CAPI scores were significantly related to the Toronto Alexithymia-20 scores ( $\beta_{b3} = 0.915$ ; 95% CI: 0.700 to: 1.131,  $p < .05$ ). CAPI scores were significantly related to lifetime PTSD diagnosis ( $\beta_{b7} = 0.668$ ; 95% CI: 0.223 to 1.093,  $p < .05$ ). CAPI scores were not significantly related to the independent variable (maternal CIPV exposure) or the dependent variable (CBCL-T scores) (see Table 15).

*Parental Punitiveness Scale (PPS)*

PPS scores were not significantly related to the independent variable (maternal CIPV exposure), the dependent variable (CBCL-T scores), lifetime PTSD diagnosis, or the Toronto Alexithymia-20 scale) (see Table 15).

*Conflict Tactics Scale - Physical Abuse (CTS-Phys)*

CTS-Phys scores were significantly related to the independent variable (maternal CIPV exposure) ( $\beta_{a3} = 0.863$ ; 95% CI: 0.130 to 1.650,  $p < .05$ ). CTS-Phys scores were not significantly related to the dependent variable (CBCL-T scores), lifetime PTSD diagnosis, or the Toronto Alexithymia-20 scale (see Table 15).

*Conflict Tactics Scale - Psychological Aggression (CTS-Psych)*

CTS-Psych scores were significantly related to the independent variable (maternal CIPV exposure) ( $\beta_{a4} = 1.193$ ; 95% CI: 0.535 to 1.854,  $p < .05$ ). CTS-Psych scores were

significantly related to the Toronto Alexithymia-20 scale ( $\beta_{b_2} = -0.345$ ; 95% CI: -0.637 to -0.057,  $p < .05$ ). CTS-Psych scores were not significantly related to the dependent variable (CBCL-T scores) or lifetime history of PTSD diagnosis (see Table 15).

#### *Toronto Alexithymia Scale-20 (TAS-20)*

TAS-20 was not significantly related to the independent variable (maternal CIPV exposure) or the dependent variable (CBCL-T scores) (see Table 15).

#### *Lifetime PTSD Diagnosis*

Lifetime PTSD diagnosis was significantly related to the independent variable (maternal CIPV exposure) ( $\beta_{a_2} = 0.522$ ; 95% CI: 0.014 to 1.062,  $p < .05$ ). It was not significantly related to the dependent variable (CBCL-T scores) (see Table 15).

### Indirect and Specific Indirect Effects

#### *Single Mediator*

#### *Hypothesis 2a*

*Maternal aggression mediates the relationship between maternal trauma history and adverse child outcomes in the second generation.*

No significant indirect effect on the relationship between the independent variable (maternal CIPV) and the dependent variable (CBCL-T scores) was found for any maternal aggression variable: Child Abuse Potential Inventory (CAPI), Conflict Tactics Scale-Psychological Aggression (CTS-Psych), Conflict Tactics Scale-Physical Aggression (CTS-Phys), Parental Punitiveness Scale (PPS). There was a small effect size for all maternal aggression variables: 1) CAPI: -.004; 2) CTS-Psych: .057; 3) CTS-Phys: 0.049; 4) PPS: .049 (see Table 15). This finding fails to support this aspect of the second hypothesis.

*Hypothesis 2b*

*Alexithymia mediates the relationship between maternal trauma history and adverse child outcomes in the second generation.*

Level of maternal alexithymia did not exert a significant indirect effect on the relationship between the independent variable (maternal CIPV exposure) and the dependent variable (CBCL-T scores). There was a small effect size for this hypothesis (-.031) (see Table 15). This finding does not support this aspect of the second hypothesis.

*Hypothesis 2c*

*The presence or absence of a lifetime PTSD diagnosis mediates the relationship between maternal trauma history and adverse child outcomes in the second generation.*

Lifetime PTSD diagnosis did not exert a significant indirect effect on the relationship between the independent variable (maternal CIPV exposure) and the dependent variable (CBCL-T scores). There was a medium effect size for this hypothesis (.189) (see Table 15). This effect size, in combination with an insignificant indirect effect, may be due to the small sample size in relation to the number of mediators. This finding fails to support this aspect of the second hypothesis.

*Two Mediators**Hypothesis 2d*

*The relationship between maternal trauma history and behavioral problems in her child is sequentially mediated, first by alexithymia and then maternal aggression.*

The test of this sequential mediation was not significant, failing to support this hypothesis (see Table 15). All sequential mediation paths for this hypothesis had small effect sizes: Alexithymia followed by: 1) Conflict Tactics Scale-Psychological

Aggression: .003; 2) Child Abuse Potential Inventory: .001; 3) Conflict Tactics Scale-Physical Aggression: .002; 4) Parental Punitiveness Scale: .001) These findings fail to support this aspect of the second hypothesis.

#### *Hypothesis 2e*

*The relationship between maternal trauma history and behavioral problems in her child is sequentially mediated, first by the presence or absence of a history of PTSD diagnosis and then maternal aggression.*

The test of this sequential mediation path was not significant, failing to support this hypothesis (see Table 15). All sequential mediation paths for this hypothesis had small effect sizes: Lifetime PTSD Diagnosis followed by: 1) Conflict Tactics Scale-Psychological Aggression: .007; 2) Conflict Tactics Scale-Physical Aggression: -.002; 3) Child Abuse Potential Inventory: -.002; 4) Parental Punitiveness Scale: .008. These findings fail to support this aspect of the second hypothesis.

#### Conclusion of Model One

No direct relationship emerged between the independent variable (maternal CIPV exposure) and the dependent variable (CBCL-T scores), failing to support hypothesis one. Significant bivariate relationships emerged. The presence of maternal exposure to CIPV was significantly associated with lifetime PTSD diagnosis, and elevated Conflict Tactics Scale-Psychological Aggression and Physical Aggression scores. Lifetime PTSD diagnosis was significantly associated with elevated Child Abuse Potential Inventory scores. Alexithymia was significantly associated with elevated Child Abuse Potential Inventory scores and Conflict Tactics Scale-Psychological Aggression. Parental Punitiveness was significantly associated with elevated CBCL-scores.

Although these individual relationships were significant, no significant indirect effects emerged along any of the hypothesized paths, failing to support hypothesis two. The lack of mediation was, in part, the result of low power in the initial hypothesis testing. Therefore additional analyses were conducted to investigate whether reducing the number of variables would increase the power of the findings.

From this perspective, the four maternal aggression variables were submitted to factor analysis to produce an overall aggression variable. The aggression measures were first analyzed for intercorrelations. Conflict Tactics Scale-Physical Abuse (CTS-Phys) scores were significantly related to Conflict Tactics Scale-Psychological Aggression (CTS-Psych) scores ( $\beta = 1.646$ ; 95% CI: 1.164 to 2.349,  $p < .05$ ). CTS-Phys scores were significantly related to Parental Punitiveness Scales (PPS) scores ( $\beta = -0.763$ ; 95% CI: -1.402 to -0.248,  $p < .05$ ). CTS-Psych scores were significantly correlated with PPS scores ( $\beta = -0.810$ ; 95% CI: -1.286 to -0.314,  $p < .05$ ). Child Abuse Potential Inventory (CAPI) scores were significantly related to CTS-Psych scores ( $\beta = 0.663$ ; 95% CI: 0.154 to 1.272,  $p < .05$ ). CAPI scores were significantly related to PPS ( $\beta = -0.508$ ; 95% CI: -1.014 to -0.153,  $p < .05$ ). The results indicated that these variables are measuring significantly similar constructs.

Next, a principal components factor analysis with quartimax rotation was conducted on the CAPI, CTS-Psych, CTS-Phys, PPS, forcing one factor. It was normally distributed. This factor explained 44.46% of the variability in the original scales. Reducing the number of mediating variables from six to three (aggression factor, lifetime PTSD diagnosis, alexithymia), this factor score was then used to test the same model in a second set of analyses. The results are described below.

## Model Two

A second round of analyses was then conducted to examine all aspects of the hypotheses using the aggression factor as a new mediating variable. This significantly increased the power of the analysis, while maintaining the integrity of the original hypotheses. Direct effects, single mediator indirect effects, multiple mediator indirect effects and total effects are reported as follows. Bootstrapping was again employed to test this multiple mediation analysis. Since neither maternal age nor child age was associated with the aggression factor, they were not added as covariates in this analysis. This second model produced some significant findings including significant indirect effects between the independent variable, mediating variables, and dependent variable. See Figure 2 for a review of the hypothesized paths.

### Direct Effects

#### *Hypothesis One*

*Maternal trauma history is significantly related to adverse child outcomes.*

The direct effect (path c) was not significant. For a full review of the findings for this model, see Table 16. This finding fails to support the first hypothesis. However, as in model one, analyses of the indirect effects were examined for significance, in the absence of a significant indirect effect, based on more recent developments in statistical methodology that support the validity of this analysis (Zhao & Lynch, 2010).

#### *Aggression Factor*

The Aggression Factor was significantly associated with the independent variable (maternal CIPV exposure) ( $\beta_{a_3} = 0.403$ ; 95% CI: 0.122 to 0.671  $p < .05$ ) and the

dependent variable (CBCL-T scores) ( $\beta_{d3} = 0.289$ ; 95% CI: 0.149 to 0.435,  $p < .05$ ) (see Table 16).

#### *Toronto Alexithymia Scale – 20 (TAS)*

The TAS was significantly associated with the dependent variable (CBCL-T scores) ( $\beta_{d1} = 0.181$ ; CI: 0.068 to 0.298,  $p < .05$ ). The TAS was not significantly associated with the aggression factor or the independent variable (maternal CIPV exposure) (see Table 16).

#### *Lifetime PTSD Diagnosis*

Lifetime PTSD diagnosis was significantly associated with the independent variable (maternal CIPV exposure) ( $\beta_{a2} = 0.615$ ; 95% CI: 0.275 to 0.965,  $p < .05$ ). Lifetime PTSD diagnosis was not significantly associated with the aggression factor or the dependent variable (CBCL-T scores) (see Table 16).

#### Indirect Effects

##### *Single Mediator*

##### *Hypothesis 2a*

*Maternal aggression mediates the relationship between maternal trauma history and adverse child outcomes in the second generation.*

The Aggression Factor exerted a significant indirect effect on the relationship between the independent variable (maternal CIPV exposure) and the dependent variable (CBCL-Total) ( $\beta_{a3d3} = 0.041$ ; 95% CI: 0.031 to 0.210,  $p > .05$ ). Using the aggression factor, there was a very large effect size for the maternal aggression path (1.165). This finding supports this aspect of the second hypothesis.

*Hypothesis 2b*

*Alexithymia mediates the relationship between maternal trauma history and adverse child outcomes in the second generation.*

Level of maternal alexithymia did not exert a significant indirect effect on the relationship between the independent variable (maternal CIPV exposure) and the dependent variable (CBCL-T scores) (See Appendix B). There was a medium effect size for this path (.190). This effect size, in combination with an insignificant indirect effect, may be due to the small sample size in relation to the number of mediators. This finding fails to support this aspect of the second hypothesis.

*Hypothesis 2c*

*The presence or absence of a lifetime PTSD diagnosis mediates the relationship between maternal trauma history and adverse child outcomes in the second generation.*

Lifetime PTSD diagnosis did not exert a significant indirect effect on the relationship between the independent variable (maternal CIPV exposure) and the dependent variable (CBCL-T scores) (see Table 16). However, there was a medium effect size for this path (.231). This effect size, in combination with an insignificant indirect effect, may be due to the small sample size in relation to the number of mediators. This finding fails to support this aspect of the second hypothesis.

*Two Mediators*

There were no significant indirect effects for the two mediator hypotheses. The total indirect effect for this analysis was not significant (See Appendix B).

*Hypothesis 2d*

*The relationship between maternal trauma history and behavioral problems in her child is sequentially mediated, first by alexithymia and then maternal aggression.*

The test of this sequential mediation was not significant and there was a small effect size (-.007) (See Appendix B). This finding fails to support this aspect of the second hypothesis.

*Hypothesis 2e*

*The relationship between maternal trauma history and behavioral problems in her child is sequentially mediated, first by the presence or absence of a history of PTSD diagnosis and then maternal aggression.*

The test of this sequential mediation path was not significant, failing to support this hypothesis (See Appendix B). This path was insignificant and there was a small to medium effect size (.141). This finding fails to support this aspect of the second hypothesis.

#### Summary of Model Two

No direct relationship emerged between the independent variable (maternal CIPV exposure) and the dependent variable (CBCL-T scores) failing to support Hypothesis One. Significant bivariate relationships emerged. The maternal aggression factor was significantly associated with the independent variable (maternal exposure to CIPV) and the dependent variable (CBCL-T scores). Lifetime PTSD diagnosis was significantly associated with the independent variable (maternal exposure to CIPV). Alexithymia was significantly associated with the dependent variable (CBCL-T scores).

By reducing the number of variables, this analysis revealed a significant indirect relationship between the independent variable (maternal CIPV exposure) and the dependent variable (CBCL-Total scores) via the aggression factor, supporting the first part of Hypothesis Two. Although a medium effect size emerged along the single mediation paths for both lifetime PTSD diagnosis and alexithymia, the indirect effects were not significant in either analysis. These findings failed to support the second part of Hypothesis Two.

### Model Three

A third round of exploratory analyses was conducted based on significant findings from the second round of analyses. This simple mediation post-hoc analysis, using the bootstrapping method, was conducted to further examine the first component of the second hypothesis: whether the maternal aggression factor mediated the relationship between maternal CIPV exposure and behavioral problems in her child. Since maternal age, child age, nor maternal education was associated with the aggression factor, they were not added as covariates in this analysis.

This model was supported. For a full review of the findings for this model, see Table 17. The direct effect (path c) was also not significant. The aggression factor significantly associated with the independent variable (maternal CIPV exposure) ( $\beta_a = 0.448$ ; 95% CI: 0.208 to 0.684,  $p > .05$ ). The aggression factor was significantly associated with the dependent variable (CBCL-T scores) ( $\beta_b = 2.869$ ; 95% CI: 1.382 to 4.338,  $p > .05$ ). The total indirect effect was also significant ( $\beta_{a_1b_1} = 0.538$ ; 95% CI: 2.505 to 1.286,  $p > .05$ ), supporting the hypothesis that aggressive parenting exerts a

significant indirect effect on the relationship between maternal CIPV exposure and behavioral problems in her child. The effect size of this indirect effect was large (.538).

In addition, the proportion of the total effect (the entire relationship between maternal exposure to childhood interpersonal violence and behavioral problems in her child) that was mediated by maternal aggression can be explained by the equation  $[ab / (ab + c')]$ . Using this equation, the proportion of the total effect that was mediated by maternal aggression was .68. This indicates that 68% of the relationship between the independent and the dependent variable is accounted for by maternal aggression (See Appendix C and Figure 3). These findings support this post-hoc analysis of hypothesis two.

#### Summary of Model Three

The findings of this final post-hoc analysis indicate no significant direct relationship exists between the independent variable (maternal CIPV exposure) and the dependent variable (behavioral problems in her child), failing to support hypothesis one. However, this can be explained by the significance found in hypothesis two. Sixty-eight percent of the relationship between maternal exposure to CIPV and behavioral problems in her early- to pre-adolescent child were accounted for by aggressive parenting practices, supporting hypothesis two.

## CHAPTER 5: DISCUSSION

The intergenerational transmission of trauma theory proposes that parents with a history of trauma “pass on” the negative emotions and behaviors to their children either through children’s direct exposure to parental distress or through parents’ detached, harsh or even abusive behavior toward the child (Schwerdtfeger & Goff, 2007). While intuitively clear, there is little empirical research that explores the processes involved. Understanding the contributing pathways is crucial for therapeutic interventions that aim to stem this transmission and to free parents and children from carrying the burden of long past terror.

This study sought to address this gap by examining whether there is empirical evidence that the negative effects of maternal exposure to childhood IPV are transmitted across generations, and if so, how they are transmitted. It also sought to bridge the gap between 1) the proliferation of research linking early exposure to interpersonal violence with later difficulties in emotion regulation and aggressive parenting practices, and 2) the countless studies on how aggressive parenting practices adversely impacts the social, emotional and cognitive development of children. This study hypothesized that aggressive parenting practices and maternal emotion regulation difficulties would mediate the relationship between a mother’s exposure to childhood IPV and her child’s internalizing and externalizing behaviors along multiple paths.

### Summary of Findings

Results partially support the idea that parents who experienced violence in their childhood may repeat this pattern with their own children. While no direct relationship emerged between a mother’s history of childhood IPV and behavior problems in her

children, findings strongly support the view that the detrimental effects of trauma exposure early in a mother's life indirectly increases the risk of passing along negative relational patterns to subsequent generations (Thompson, 2007; Morrell & Murray 2003; Pears & Capaldi, 2001; Roberts et al., 2004; Koverola et al., 2005; Noll, 2009; Kaufman & Zigler, 1988; Widom, 1989). Only the aggressive parenting factor exerted a significant indirect effect on the relationship between maternal CIPV and maladjustment in her child. However, the maternal aggression accounted for roughly two-thirds of this relationship. With such a significant proportion of the transmission of maladjustment accounted for by maternal aggression, it is crucial to understand the psychological and interpersonal contexts within which these traumatized mothers engage in higher levels of aggression toward their children. It is equally important to understand her child's experience of this aggression. Interventions focused on stemming the transmission of maladjustment across generations should focus on understanding these aggressive acts and their meaning for both mother and child.

Both a lifetime PTSD diagnosis and alexithymia failed to significantly impact the relationship between maternal exposure to childhood interpersonal violence and behavioral problems in her child, as single mediators and as sequential mediators through maternal aggression. However, in model one, maternal alexithymia was significantly associated with elevated levels of abuse potential and psychological aggression. While a lifetime PTSD diagnosis was significantly associated with elevated levels of abuse potential. Further, in model two, where fewer mediators allowed for greater power in the analysis, alexithymia was significantly associated with elevated behavioral problems in her child.

The results of this study provide some important links for understanding the cycle of maltreatment. They also reveal a multitude of unanswered questions about the role of risk and protective factors in the transmission of aggression. Given the data supporting many of the relationships contained within the original model, it is likely that the lack of statistical significance in the original model is due to the large number of mediators in relation to the sample size, and at least in part, to the use of self-report measurements that capture broad psychological experiences, instead of more clinically specific and sensitive measures. The following sections will explore the broad methodological challenges that emerged, other factors contributing to the complexity of the cycle of maladjustment, and the significant findings from the post-hoc analysis. This discussion will also highlight areas for future research.

#### Hypothesis One

No significant direct relationship emerged between mother's exposure to childhood IPV and child maladjustment in the second generation. While this finding is unexpected, it highlights the complex nature of how maladjustment is transmitted across generations. According to the cumulative risk model (Rutter, 1989) the transmission of adversity is dependent on a "chain of experiences" (p. 323) that occurs throughout the mother's childhood, and not a single factor or act of violence. Community studies of populations exposed to IPV also suggest that individuals differ considerably in their vulnerability to symptom development and the extent to which their early onset symptoms persist and interfere with later interpersonal functioning (McFarlane & Yehuda, 1996; Norris, 1992; Norris, Friedman, Watson, Byrne, Diaz, & Kaniasty, 2002). Those with symptoms that persist differ in the nature, duration, and intensity of their

symptoms, interpretations of their experience, and the avenues they pursue to secure symptom relief (Harvey, 2007).

In light of this complexity, the lack of findings in the first hypothesis supports decades of developmental psychopathology research on the complicated relationship between the experiences of one generation and those of the next. Some contributing factors are supported by the results of this study, while others can only be hypothesized. For example, the conceptualization of the proposed model, while complex and encompassing, lacked the specificity needed to unpack important details of how early exposure to violence gets transmitted across generations. In addition, the measurements used to reflect the model further obscured these important details. For example, the measurements used for maternal exposure to childhood interpersonal violence and child maladjustment were not able to capture the specificity and richness of experiences in both mother and child.

In this study, exposure to childhood IPV was assessed as a dichotomous yes/no variable, so that mothers who experienced a single mildly traumatic incident of interpersonal violence in later childhood, and mothers who experienced early, chronic, and severe interpersonal violence, were rated equally. However, chronic IPV, a closer relationship with the perpetrator, and earlier-onset exposure are thought to be associated with greater levels of emotion dysregulation as well as greater negative self-other representations compared to single-event violence, and those perpetrated by non-family members. The problems associated with using a dichotomous independent variable will be discussed further below.

There are also several limitations to using the mother-reported CBCL as the only

measurement of child maladjustment. This method of data collection is subject to the mother's understanding of the questions, her willingness to accurately share with the interviewer, and her ability to interpret her child's behavior within the context of healthy and adverse developmental adaptations, given her child's age and the context of his life.

In addition to the limitations of self-reporting, the CBCL measures a limited scope of child maladjustment. While the more recent version of the CBCL/6-18 was updated to more closely reflect DSM-IV nosology (Achenbach, Dumenci, & Rescorla, 2003), studies comparing the CBCL used in this study to the DSM conceptualization, show only modest overlap and reveal the lack of specificity in the CBCL for identifying specific disorders (Jensen, Salzberg, Richters, & Watanabe, 1993; Kasius, Ferdinand, van den Berg, & Verhulst, 1997). As will be described throughout the discussion, the CBCL as a single outcome variable, like many of the measurements in this study, lacks the specificity that could help untangle the complex nature of how a mother's early experiences of violence transmits to her children.

Beyond issues of measurement, other factors contribute to how a mother's early experiences translate into the well-being of her child. For example, the literature on resilience in the face of trauma (e.g., Garmezy, Masten, & Tellegen, 1984; Werner, 1992) shows that some mothers may have additional internal resources that protect her from transmitting her early traumatic experiences to her children. The term resilience is derived from the Latin word *resilire*, which means to "spring back" (Gerwitz, Forgatch, & Wieling, 2008) and in the context of childhood trauma, it is usually defined by two conditions: the presence of adequate child functioning, and the child's context of adverse circumstances (Masten, 2001).

According to Harvey (2007), “resilience is evident when a given event has little or no deleterious impact, presumably because the individual is able to mobilize internal resources that existed pre-trauma, while positive or adversarial growth is manifest post-trauma in a higher level of functioning that has been wrested from a struggle to overcome the devastation of trauma” (p.14). It involves the process of coming to fully own one’s experiences by making meaning of them and ultimately accepting the reality of their existence in the past. This allows for a shift to a level of functioning wherein the individual neither denies their experience, nor do they continually relive it. However, the ability of an individual to “spring back” from early interpersonal violence is dependent on a myriad of factors and must be closely examined to understand the unique experiences, as well as the strengths and vulnerabilities of each individual.

Protective factors consistently associated with psychological growth and resilience in the aftermath of IPV exposure includes a secure attachment relationship and greater social support in place at the time of exposure (Egeland & Sroufe, 1988; Hunter & Kilstrom, 1979; Milner, Robertson, & Rogers, 1990). How a mother’s relationship with her own mother developed in the face of childhood IPV may be a key factor in determining how well she can integrate her experiences of violence and whether she is at risk of passing along her traumatic memories in the form of aggressive parenting. The nature of her mother’s response to the violence, as well as her ability to contain and modulate her and her daughter’s distress, if she was not the perpetrator, gets woven into the fabric of her daughter’s experience, bolstering her resources or compounding the violence.

A close attachment relationship has been found in several studies to protect against

the negative effects of IPV, break the cycle of violence (Slade, Sadler, & Mayes, 2005b; Zuravin, McMillen, DePanfilis, & Risley-Curtiss, 1996), and promote resiliency (Masten, 1994). For example, the quality of the caregiver relationship significantly predicts problem-solving abilities in toddlers exposed to violence, as well as their age-appropriate competencies later in childhood, peer relations in middle childhood (Carlson, Jacobvitz, & Sroufe, 1995), and positive youth development during adolescence (Aceves & Cookston, 2007; Allen, Moore, Kuperminc, & Bel, 1998; Simons, Paternite, & Shore, 2001). The strength of this relationship also helps to promote competence, agency and empowerment, crucial skills for coping with later adversity (Cowen, 1994). As a parent, these skills allow a mother to maintain a sense of presence, while also protecting her from becoming overwhelmed by unresolved distress in her past.

Although quite speculative, some mothers in the present study may have benefited from close relationships with their own mothers who were able to “monitor, set limits, encourage skill development, problem solve, and be positively involved in their lives” (Gerwitz, 2008, p.181). If they were able to integrate the negative affective experiences into their psyche in meaningful and containing ways, these mothers would have access to a greater array of interpersonal skills to navigate the range of emotions and behaviors their children display. This flexibility would protect them from engaging in aggressive parenting practices, despite any history of trauma exposure. Their child’s emotions and behaviors will not threaten their defensive structures, thereby allowing them to respond to their child as he is, instead of as a character from their unresolved past. Moreover, under distress these women would be able to draw upon the comfort and safety found within their early attachment relationship and provide a similar haven for their children.

Despite the importance of early maternal care as a protective factor in the cycle of maltreatment, in its absence, there are innumerable opportunities to address early adversity. Other important relationships including a therapeutic relationship, close ties to other family members or mentors, and positive intimate relationships during adulthood all provide the chance to integrate early violence. Some of these women might have benefited from greater amounts of resilience and post-traumatic growth.

The lack of a direct relationship between maternal exposure to childhood IPV and child maladjustment leaves many unanswered questions. On the one hand, this finding does not support the body of literature that shows an increase risk of maladjustment to children of traumatized mothers. It elucidates the complexity of this relationship and the importance of examining, with greater specificity than this study allowed, the processes involved.

In support of this complexity, and long established theoretical and clinical wisdom, this study supports the transmission of maladjustment through negative relational patterns that are transmitted to the mother through physical or sexual violence and then transmitted to her children through elevated levels of psychological and physical aggression. This speaks to the idea that it is the internal, psychological processes embedded within the parent-child relationship that causes harm, not the direct experience of trauma per se. Children respond to their environments in ways that reflect how they are being seen and understood, initially by their closest family members and then later by the community and an array of intersecting cultural phenomena. It is within these contexts that self-regulation and styles of relating get transmitted to each generation. Additional research on the psychological mechanisms within the mother, and interactions

between mother and child, that elevate her levels of aggression would further elucidate the process of transmission.

### Hypothesis 2

It was predicted that the relationship between maternal exposure to CIPV and behavioral problems in her child would be mediated by aggressive parenting and emotion dysregulation in multiple ways. It was first hypothesized that aggressive parenting would mediate this relationship. It was next hypothesized that emotion regulation (alexithymia and lifetime PTSD diagnosis), would mediate this relationship. It was also hypothesized that this relationship would be sequentially mediated first by emotion dysregulation (alexithymia and lifetime PTSD diagnosis,) and second by aggressive parenting. The following section will first examine the impact of aggressive parenting as a single mediator. This will be followed by an exploration of the impact of emotion dysregulation on aggressive parenting and on the entire model.

#### *Maternal Aggression as a Single Mediator*

Post-hoc analyses support the hypothesis that aggressive parenting practices exert a significant indirect effect on the relationship between maternal exposure to CIPV and behavioral problems in her child. This study expands on a small but growing body of literature linking aggressive parenting practices to a history of interpersonal violence in mothers and behavioral problems in the next generation (Mitchell, Lewin, Rasmussen, Horn & Joseph, 2011; Milner, Hlasey, & Fultz, 1995; Thompson, 2007; Morrel, Dubowitz, Kerr, & Black, 2003). For example in previous studies, verbally aggressive disciplinary practices have been linked to the relationship between a history of maternal victimization and reports of their young child's behavior problems (Morrel et al., 2003),

while maternal psychological aggression has been linked to the relationship between mothers' experiences of childhood victimization and their young children's behavior problems (Thompson, 2007).

This study expands on earlier findings with younger children by showing the link between violence experienced in a mother's childhood and maladjustment in her child exists in older children as well. It suggests that this distress, in the mother, her child, and their relationship, may persist throughout the years. This distress is detrimental to her child's well being, as the affective and behavioral difficulties these children exhibit, apparent on the eve of adolescence, take on pressing need for intervention. The need to address the behavioral problems is paramount, as childhood internalizing and externalizing behavioral problems are associated with a host of long-term challenges including anti-social personality disorder, criminal offenses, chronic anxiety, chronic depression, aggression, poorer physical health, and substance abuse (Sourander, Jensen, Davies, Niemelä, Elonheimo, Ristkari, Helenius, Sillanmäki, Piha, Kumpulainen, Tamminen, Moilanen, & Almqvist, 2007; Clingempeel, & Glenn Britt, Henggeler, 2008).

Since this study did not differentiate between early experiences of physical and sexual abuse, additional research is needed to determine whether these findings support the perspective that it is not the particular form of violence experienced that determines whether transmission occurs, but whether abuse occurred in any form. Or whether different types of abuse create different levels and types of maladjustment. Either way, maltreatment of a child has a way of transforming, depending on the unique circumstances within each generation so that physical assaults and emotional abuse in one generation can take the form of emotional abuse and neglect in the next generation.

Mothers risk perpetuating the negative psychological outcomes and behaviors when they have internalized these aggressive interactions, regardless of the type of violence experienced.

Previous studies confirmed this by showing a lack of consistency in abuse type across generations and within generations. For example, mothers who were sexually abused as children have high rates of perpetrating maltreatment in general, while sexual abuse is only a small percentage of the abuse experienced by the second generation (Pianta, Egeland, & Erickson, 1989; Zuravin, et al., 1996). For these mothers, there is also evidence that they continue to maltreat their children throughout their childhood, while their manner in doing so does not remain consistent (Pianta et al., 1989).

Childhood sexual abuse creates a wide variety of long-term adversities including difficulty with social relationships, intimate relationships, mood disorders and substance abuse. It is also associated with more negative views of parenting and a higher likelihood of using force during parent-child conflict (Banyard, 1997). Further, although mothers are less likely to directly sexually abuse their children, they may be more likely to place their children in risky situations, provide less opportunity to negotiate emotional states, and view their children more negatively.

Taken together, these variables create a variety of circumstances within which a mother will perceive the parent-child relationship as one of greater adversity with more opportunity for hostile encounters. These difficulties arise not because of the particular act of violence the mother experienced in her childhood, but because of the ways in which that violence altered her view of relationships of unequal power which plays out in the parent-child relationship. Thus, intervention should focus not on preventing a

particular act, but on preventing the harmful pattern of relating that a mother risks bestowing upon her child. It is these relational patterns that continue to put each generation of children at risk.

In sum, while this study confirms the contribution of aggressive parenting to child maladjustment, the one-third proportion of unexplained variance highlights that additional factors contribute to the increased risk in children of victimized mothers. Other risk factors in mothers known to influence long term adjustment and the ability to separate past experiences from present stressors include younger age at exposure to violence, chronicity of violence, more severe forms of violence, increased number of violent events, lack of social support, insecure attachment relationships, difficult individual temperament, and closer relationship to the perpetrator (Belsky, 1984; Gewirtz, 2008).

Except for differences in temperament, these factors fall into the broad category of family factors associated with disorganization and chaos. These “secondary adversities” (Pynoos, Ritzmann, Steinberg, Goenjian, & Priscearu, 1996) may foster the conditions in which childhood trauma-related psychopathology are left unresolved, significantly influencing a child’s developing view of himself, others, and his self-other relations. As consistently strong correlates of ineffective parenting practices (Patterson & Capaldi, 1991; Patterson & Dishion, 1988) these challenges also contribute to the cycle of maladjustment across generations.

#### *Emotion Dysregulation as a Mediator*

Since parenting difficulties encompass more than aggressive parenting practices, emotion dysregulation was predicted to mediate, in multiple ways, the relationship

between maternal exposure to CIPV and behavioral problems in her children. Contrary to expectations, neither lifetime diagnosis of PTSD nor alexithymia significantly mediated the relationship between maternal CIPV exposure and behavioral problems in her children. Nor did they sequentially mediate this relationship along with aggressive parenting. However, significant individual relationships emerged which are worthy of noting. While alexithymia was not significantly associated with maternal exposure to CIPV, it was significantly associated with psychological aggression, elevated abuse potential, and child behavioral problems. Lifetime PTSD diagnosis was not significantly associated with her child's behavioral problems. However, it was significantly associated with maternal CIPV exposure and elevated child abuse potential.

Using a dichotomous yes/no variable for examining exposure to childhood interpersonal violence likely contributed to these lack of findings. A recent study (Ehring & Quack, 2010) found that individuals who experienced chronic, early onset (prior to age fourteen) IPV exhibited higher levels of emotion dysregulation, when compared to all other groups including non-traumatized controls, victims of late-onset IPV, and those who experienced other forms of violence at any age. Given these findings, additional information about the nature of violence experienced by women in this study is crucial for understanding its impact on emotion regulation difficulties and how this might cause maladjustment in their children.

The cut off age for early exposure IPV is also particularly worthy of examination as this study used 18 years of age, while many researchers use age 14 as the cutoff (Ehring & Quack, 2010). This study justified using 18 years of age because it legally differentiates minors from adults, and this age cutoff differentiates individuals with

greater social and financial independence, in addition to the option of living apart from one's family. However, from a developmental perspective it may be theoretically more useful to use age 14 as a cut-off. The internal object world of a younger child is more apt to be altered by the experience of interpersonal violence, while the cognitive, social and emotional skills achieved by mid-adolescence offer greater protection against the detrimental effects of CIPV. It is possible that the variable ages of CIPV exposure for women in this study influenced the outcome. Lowering the definition of early exposure to age 14 or younger might offer a different picture.

For example, early CIPV exposure is generally considered a crucial component in the development of alexithymia (Ehring & Quack, 2010). This suggestion is based on a model of increasingly complex verbal, symbolic and emotional development, where alexithymia represents the lower end of a continuum of emotional functioning in the general population, rather than a specific dimension of emotional processing (Mattila et al., 2010, Parker et al., 2008). Given that maternal alexithymia was significantly correlated with elevated CBCL scores in her child, it is feasible that by lowering the cutoff age for early CIPV exposure, a significant relationship between alexithymia and maternal CIPV exposure may emerge. In turn, maternal alexithymia may in fact mediate the relationship between a mother's history of early interpersonal violence and behavioral problems in her children.

The following section will examine the concept of emotion dysregulation and its relation to childhood IPV exposure, lifetime PTSD diagnosis, and alexithymia. The section will conclude by examining the hypotheses findings for lifetime PTSD diagnosis and alexithymia independently.

### *The Concept of Emotion Regulation*

Emotion dysregulation as a theoretical concept was used to capture the overall problems associated with both PTSD and alexithymia, and was hypothesized to be a driving force in the transmission of maladjustment across generations. While the literature suggests that emotion dysregulation influences the transmission of maladjustment in a variety of ways, there is little consensus as to what constitutes emotion dysregulation; and also the ways in which other variables, including PTSD and alexithymia overlap or differ from it conceptually.

While this study used Thompson's (1994) widely accepted model of emotion regulation, the term is broadly defined and has been operationalized in numerous ways. Other useful definitions include Kring and Werner's (2004) definition and Gratz and Roemer's (2004) definition, which each focus on slightly different aspects of a comprehensive system of regulation. While PTSD and alexithymia exhibit features of emotion dysregulation, additional research should clarify the relationship between these symptoms constellations and the concept of emotion dysregulation. It may be that lifetime diagnosis of PTSD and alexithymia fail to capture the complexity of emotion regulation difficulties that result specifically from chronic exposure to violence (Ehring & Quack, 2010) or those aspects of emotion regulation most crucial to parenting.

Prevalence data has found that other types of dysregulation are associated with traumatic exposure (Ackerman, Newton, McPherson, Jones, & Dykman, 1998). For example, aggression is frequently considered an outcome of emotion dysregulation (e.g., Allwood, Bell-Dolan, & Husain, 2002; Garbarino & Kostelny, 1996; Jouriles, McDonald, Spiller, Norwood, Swank, & Stephens 2001) and is a behavior that tends to persist for

years (Jouriles et al., 2001). In light of these studies, all mediating variables in this study conceptually fall within the range of emotion dysregulation symptoms, further complicating the relationship between the concept theoretically, and its manifestations, both diagnostically and behaviorally.

Self-reported problems with emotion regulation were also strongly associated with functional impairment beyond PTSD symptom severity in a clinical population of women who had experienced early onset IPV (Cloitre, Miranda, Stovall-McClough, & Han, 2005). While in a study of parenting, compared to controls, mothers sexually abused as children differed in their feelings about parenting (Cole, Woogler, Power, & Smither, 1992). Overall these mothers felt, “less confident and less emotionally controlled as parents” (p. 247). It appears that these mothers lack trustworthy internal models for appropriate discipline, affection and general caregiving. It is also likely that they tend to interpret their child’s behaviors as reenactments of their past, instead of responding directly to their child’s needs. This tendency in turn promotes similar behaviors in their children, increasing the risk of maltreatment and perpetuating the cycle.

In numerous studies, low levels of parental warmth and responsiveness have been firmly linked with externalizing behavioral problems in children (Wakschlag & Hans 1999; Johnston, Murray, Hinshaw, Pelham, & Hoza, 2002, Walton & Flouri, 2010), while parental psychological and behavioral control have been linked to both externalizing and internalizing problems (Caron, Weiss, Harris, & Catron, 2006). Neither of which are related to PTSD or alexithymia. Without examining more specifically the details of the mother’s experiences it is difficult to fully understand how early violence impacts a mother’s ability to regulate her emotions long term. While the factors contributing to

behavioral problems in children are vast; his mother's psychology being one of many.

*Alexithymia as a Mediator*

Alexithymia failed to mediate the relationship between maternal exposure to CIPV and behavioral problems in her children. Alexithymia and maternal aggression also failed to sequentially mediate this relationship. While alexithymia was not significantly associated with maternal exposure to CIPV, there was a significant positive association between maternal alexithymia scores and elevated CBCL scores in her child, which had not been previously documented in the literature. These findings are not unexpected, given that mothers scoring high on the TAS-20 would exhibit low levels of empathy, including difficulty with perspective taking, which would adversely impact this relationship. These mothers would also struggle to maintain warm and positive feelings, have more negative self-perceptions, and have more negative internal working models of self and others (Sonnby-Borgstrom, 2009).

Alexithymic individuals are also found to be impaired in their ability to recognize non-verbal emotional communication, suggesting that alexithymia involves verbal processing difficulties and difficulty identifying and processing emotional context (Lane, Sechrest, Riedel, Shapiro, & Kaszniak, 2000). These findings have grave implications for the mother-child relationship. A mother high in alexithymic processing would be unable to appropriately and empathically respond to her child's needs, creating an environment where the child does not experience being seen, understood or appropriately responded to. This would in turn adversely impact his internal world and therefore his behavior, paving the way for a tendency toward higher levels of emotional negativity and emotional reactivity.

Significant correlations also emerged in the initial analyses between alexithymia and both psychological aggression and physical abuse potential, while no significant relationship emerged in subsequent analyses using the aggression factor. The lack of a consistent relationship with maternal aggression is interesting. However, since the aggression factor accounted for 45% of the original measures, it is likely alexithymia was associated with aspects of psychological aggression and abuse potential that was not accounted for in the aggression factor.

This finding confirms previous studies that established the association between alexithymia and aggression. Alexithymia has been significantly correlated with impulsive aggression in veteran populations (Tetan, et al., 2008; Fossati et al., 2009). Alexithymia was also significantly related to aggression in a clinically referred sample of adolescents (Manninen, Therman, Suvisaari, Ebeling, Moilanen, Huttunen, & Joukamaa, 2011).

Although impulsive aggression is a somewhat different construct from aggressive parenting, there are marked similarities, in that aggressive parenting also tends to occur in the moment of heated conflict or when unwanted affect arises. Given their difficulty identifying emotional states, it is possible that alexithymic mothers do act out behaviorally, as their children reportedly do. However, given their affective difficulties, these mothers may be inaccurate reporters of their own experience with parenting.

This lack of consistent correlation may be due to mothers high in alexithymic qualities being inaccurate reporters of their own aggressive practices. It is also possible that other variables influence this relationship. For example, neither the TAS-20 nor the aggressive parenting factor assessed levels of impulsivity or goal directed behavior.

However given that individuals high in alexithymic qualities are impaired in their ability to symbolize emotional states and would therefore be more vulnerable to acting out their emotions through impulsive behaviors, it is possible that levels of impulsivity influence the relationship between aggressive parenting practices and maternal childhood IPV exposure, or the relationship between alexithymia and maternal childhood IPV exposure.

*Relationship between Emotion Dysregulation and Maternal CIPV Exposure*

*Lifetime Diagnosis of PTSD as a Mediator*

Lifetime PTSD diagnosis failed to mediate the relationship between maternal exposure to CIPV and behavioral problems in her children. Lifetime PTSD diagnosis and maternal aggression also failed to sequentially mediate this relationship. However, lifetime PTSD diagnosis was significantly associated with maternal exposure to interpersonal violence, contributing to the robust and well-established data on this relationship. Lifetime PTSD diagnosis was also significantly associated with child abuse potential in model one.

This relationship contributes to the findings in an earlier study of this same population (Cohen, Hien, Batchelder, 2008) where the presence of a PTSD diagnosis was significantly associated with an increase in a mother's harsh parenting practices. It is also interesting to note that while this relationship emerged in model one, lifetime PTSD diagnosis was not significantly associated with the maternal aggression factor in model two. The lack of a consistent relationship with aggression is interesting. However, since the aggression factor accounted for 45% of the original measures, it is likely that lifetime PTSD diagnosis was associated with aspects of child abuse potential that were not accounted for in the aggression factor.

While there is a substantial body of literature linking a current PTSD diagnosis with parenting difficulties, in an extensive review, no studies emerged regarding the impact of lifetime diagnosis of PTSD on parenting or child outcomes. While studies on the impact of a current PTSD diagnosis differed in their outcome measures, it has been significantly linked to less maternal warmth (Barrett, 2010), maternal aggression (Gold, et al., 2007), decreased parenting satisfaction (Baynard, Williams, & Siegel, 2003), an insensitivity to emotional cues (Gibb, Schofield, & Coles, 2009), chaotic family functioning (Davidson, Smith, & Kudler, 1989), irritability (Jordan et al., 1992), and increasing the likelihood of abusive behavior (Rossman, Bingham, & Emde, 1997). This relationship has also been found in studies examining the impact of the presence of PTSD on father's ability to parent. A higher rate of violence in fathers toward other family members was found in families of Vietnam veterans with a current PTSD diagnosis, when compared to families of veterans without the disorder (Jordan et al., 1992).

When looked at from a more dimensional perspective, PTSD symptoms have repeatedly been found to contribute to the difficulties mothers have using appropriate emotional modeling. While one study (Ammerman, Putnam, Chard, Stevens, & Ginkel, 2012) failed to find an association between PTSD diagnosis and both parenting impairments and behavioral difficulties, PTSD symptom severity and symptom type was significantly associated with these variables. This confirms previous studies (Ruscio et al., 2002; Samper et al., 2004; Muzik, Marcus, & Flynn, 2009) that link PTSD symptoms of avoidance and emotional numbness with an increase in physical punishment, criticism and scolding, and greater difficulty understanding their child's needs.

In a qualitative study (Muzik et al., 2009), new mothers with PTSD were reluctant

to discuss their traumatic memories and denied that they had any negative effects on their lives. Given that these mothers have particular difficulties with negative emotions, it may be speculated from the findings, that these mother had fewer resources to manage negative parent-child interactions and therefore tended to respond with greater harshness or restrictions. These difficulties would also interrupt the mother-child bonding process as these mothers would be inclined to avoid any affective or behavioral reminders of their traumas.

Given the consistency of studies in linking a PTSD diagnosis with parental aggression and child maladjustment, it is possible that the lack of a consistent association between lifetime diagnosis of PTSD and aggressive parenting in the current study was due in part to the lack of specificity caused by using a categorical variable that did not take into account chronicity, symptom severity, or symptom type. This possibility will be further discussed in the limitations section. While studies on how the presence of a maternal PTSD diagnosis impacts parenting and the adjustment of young children, it is reasonable to suppose that if a mother continued to experience PTSD symptoms as her child was entering adolescence, they would significantly impact her child's development in a very direct way, beyond any aggressive parenting practices.

#### Study Limitations

Although the present study adds to the body of literature on the ways in which early exposure to IPV transmits across generations, several limitations must be taken into account including some conceptual and methodological challenges. Many of the study's limitations were mentioned throughout the discussion. Below is a review of these limitations.

In general, this study used a theoretical model that offered a broad view of the relationship between maternal CIPV and behavioral problems in her child. However, in doing so, it did not take into account many nuances known to impact risk and resilience in children exposed to IPV, parenting abilities, and adversity across generations. For example, the use of a dichotomous variable for assessing maternal CIPV exposure failed to capture the aspects of childhood interpersonal violence that are shown to impact the long term outcomes of survivors. These variables include age at exposure, relationship to the perpetrator, chronicity and severity of violence. Accounting for these experiences would offer a more nuanced understanding of the types of adversity that lead to greater difficulties and a greater risk of transmitting adversity across generations. For example, using age 18 to determine childhood IPV exposure in the mothers may also have compromised the theoretical position of this study as a mother's internal object world has stabilized by adolescence compared to early childhood when they are still forming. Lowering the cutoff age to 14 may have more closely aligned the methodology with the theoretical model.

Using lifetime PTSD diagnosis and alexithymia to assess emotion dysregulation may be a further limitation of this study. These two variables may fail to capture the complexity of emotion regulation difficulties resulting from chronic exposure to violence (Ehring & Quack, 2010) or those aspects most crucial to parenting. Prevalence data suggests that other types of dysregulation including mood and anxiety disorders are commonly associated with traumatic exposure (Ackerman, Newton, McPherson, Jones, & Dykman, 1998), as well as, high rates of externalizing problems such as aggression (e.g., Allwood, Bell-Dolan, & Husain, 2002; Garbarino & Kostelny, 1996; Jouriles et al.,

2001).

Using a categorical variable to assess any diagnosis of PTSD across the lifespan, instead of a more dimensional variable that accounted for the chronicity and severity of symptoms, created methodological and theoretical challenges that interfered with the basic question of how PTSD is related to the other study variables. Since this study did not assess the chronicity or severity of their lifetime PTSD diagnosis, mothers with chronic, transient, and no current PTSD symptoms were rated equal to one another.

In addition, a dichotomous yes/no variable failed to capture the variable PTSD symptomatology. Documenting the intensity and frequency of PTSD symptoms, as well as how each symptom cluster impacts functioning is crucial for understanding how pervasively the disorder interferes with parenting. A PTSD diagnosis can manifest in a variety of ways so that two distinct symptom constellations can receive a PTSD diagnosis while the interpersonal effects may vastly differ. Some mothers who endorsed a PTSD diagnosis may avoid confrontation and disengage from their children during times of conflict, while others may be highly reactive and aggressive. This variation makes assessing the impact of lifetime PTSD diagnosis on both aggressive parenting and general family climate a challenge. A more specific exploration of symptomatology and chronicity would provide more information about the ways in which PTSD may act as a mediator. Given these associations, assessing for current PTSD and symptom severity would provide greater insight into this relationship compared to using a lifetime diagnosis.

Given that nearly 10% of the mothers currently had an open case with child protective services and over one-third had a history of involvement with child protective

services, it is possible these mothers underreported their level of aggressive parenting practices, out of concern for attracting increased attention from authorities. For ethical and reporting reasons extreme forms of aggressive parenting practices were not directly assessed and we cannot report on the direct relationship between maternal exposure to childhood IPV and maternal violence toward her own children. While focusing on behavioral problems in her child, it can be assumed that if aggressive parenting practices indirectly effects the transmission of maladjustment across generations, more harsh and punitive abusive practices would as well. However, without directly assessing these practices, we cannot generalize to all types of aggressive parenting including harsh physical punishment, sexual abuse, and neglect.

The sample was also comprised primarily of an urban, low income and minority sample and cannot be generalized to the larger population. Since all mothers were poor, it is unclear how economic stressors contributed to the findings. Given the complexity of the theoretical model, the small sample size also limited the statistical power of this study. The medium to large effect size of lifetime PTSD diagnosis as a single mediator, without a significant  $p$  value, is one indication of this limitation.

The limitations of the mother reported CBCL as the single outcome variable measuring child maladjustment are also worthy of reflection. This method of data collection is subject to the mother's understanding of the questions, her willingness to accurately share with the interviewer, and her ability to interpret her child's behavior within the context of healthy and adverse developmental adaptations, given her child's age and the context of his life. Again, given the level of familiarity these mothers had with child protective services, it is possible these mothers underreported their child's

behavioral problems out of concern for attracting increased attention from authorities.

The CBCL also measures a limited scope of child maladjustment. While the more recent version of the CBCL/6-18 was updated to more closely reflect DSM-IV nosology (Achenbach, Dumenci, & Rescorla, 2003), studies comparing the CBCL used in this study, show only modest overlap with DSM conceptualization, and reveal the lack of specificity in the CBCL for identifying specific disorders (Jensen, Salzberg, Richters, & Watanabe, 1993; Kasius, Ferdinand, van den Berg, & Verhulst, 1997). Taken together, this measurement may not provide a thorough enough understanding of the ways that maternal CIPV exposure and aggressive parenting adversely affect her children.

An additional limitation of this study is that this data was collected at a single point in time. As a result, the cross-sectional nature of the data does not allow for examination of changes over time or for mediators of change. Longitudinal studies are needed for these purposes. Prospective data would further help account for biases in reporting.

The exclusive reliance on maternal self-report measures is an important limitation of this study. The retrospective nature of self-report measure for CIPV exposure and lifetime diagnosis of PTSD is a particular limitation. A mother's response to difficult questions may have been influenced by her willingness or ability to disclose accurate information about her history, her parenting, and her child's behavior. Bias from using the same reporter for the independent and dependent variables is increasingly recognized as a substantial problem (Knutson, Schartz, & Zaidi, 1991). For instance, parents may be unwilling to admit that they are engaging in abusive practices toward their children, either because of fear of intervention by outside authorities or because of social

desirability biases. Recalling events from the distant past may have interfered with a participant's ability to accurately recall past experiences. Numerous studies have also suggested that assessing alexithymia by self-report is inherently flawed (Lane, Ahern, Schwartz, & Kaszniak, 1997; Lundh, Johnsson, Sundqvist, & Olsson, 2002). Individuals with deficits in emotional processing and verbalization are unable to adequately report, on a self-report measure, their level of emotional awareness. A clinical interview would more sensitively address a mother's level of alexithymia and provide a more sound and nuanced understanding of her emotional difficulties.

#### Future Research

While this study confirmed an important path in the ways by which early childhood violence gets transmitted across generations, it showed that factors contributing to the adjustment of children with traumatized mothers are extremely complicated. One important risk factor is an increased risk of engaging in a variety of aggressive parenting practices, which is strongly associated with childhood behavioral problems. This study expanded the body of literature that focuses on the transmission of maladjustment between mothers and their young children by showing that these aggressive relational patterns continue into later childhood and place the children at continued risk. In addition to these contributions, this study exposed many areas for additional research. Each step along the path from maternal CIPV exposure to maladjustment in her children should be examined in greater detail.

First, this study should be replicated with additional and more diverse families in terms of race/ethnicity and socioeconomic status to examine the impact of these variables on parenting practices. Additionally, the data collection method should involve clinical

observations of both mothers and children to gain a more nuanced understanding of their well-being and relationship. Additionally, teacher's ratings of the child would provide a more objective view of the child's behaviors. This would be an important contribution as studies rarely utilize sources beyond the mother's report of a child's adjustment, despite the potential for bias (Levendosky, Huth-Bocks, Shapiro, & Semel, 2003; Sternberg, Baradaran, Abbott, Lamb, & Guterman 2006).

Additionally, examining details of a mother's exposure to interpersonal violence, including her age when it occurred, the chronicity of the violence, and her relationship to the perpetrator, would provide a more in-depth understanding of how different types of IPV influence aggressive parenting, emotion dysregulation and the transmission across generations. A more detailed investigation of PTSD, including the chronicity, symptom severity and symptom clusters would be useful for understanding the ways in which PTSD contributes to the intergenerational transmission of maladjustment. While using a clinician-based interview of alexithymia would provide a more accurate and sensitive understanding of the quality of emotional awareness in these mothers. Additionally, investigating other aspects of emotion dysregulation including impulsivity, empathy, anger, and difficulties with perspective taking could provide additional material for understanding the key components of emotion dysregulation that get transmitted through generations as a result of childhood IPV exposure.

Another crucial area of inquiry is the investigation of a mother's relationship with her mother, the social support she experienced during childhood, and her attachment status. The strength of this relationship has been repeatedly linked to resilience in the face of adversity (e.g., Egeland, Jacobvitz, & Sroufe, 1988; Hunter & Kilstrom, 1979;

Milner et al., 1990; Slade, et al., 2005b; Zuravin, et al., 1996). These studies show that mothers with a more secure attachment to their mothers and more flexible internal working models are able to more sensitively respond to their children's needs despite any history of CIPV exposure. This is particularly important given that it is the internal ways of relating that get transmitted and that attachment research clearly shows how these patterns initially develop within the context of the caregiver-child relationship.

The caregiver relationship is also crucial in the overall development of emotion regulation (Calkins & Hill, 2007; Lieberman, Van Horn, & Ozer, 2005; Cole, Michel, & Teti, 1994). Caregivers not only model emotional responses to a variety of situations, but they also validate their child's emotions, help the child understand and label emotional states, and transform bodily sensations into language that can be shared and contained by the caregiver. This process speaks to how types of emotion regulation strategies get passed across generations via the mother-child relationship, with emotion dysregulation manifesting in a variety of ways including internalizing and externalizing behavioral problems.

Given that attachment status and the general caregiving relationship are strongly linked to child emotional health and regulatory abilities (Cloitre, Stovall-McClough, Zorbas, & Charuvastra 2008; Slade, 2005a), it is also possible that PTSD and alexithymia impact a mother's ability to bond with and relate to her child, which in turn adversely impacts her child's emotional health. The presence of maternal PTSD has been significantly associated with aspects of disorganized and insecure attachments and what are called "secure base distortions" in children (Schechter & Willheim, 2009). Conversely, a mother's attachment status has been shown to predict whether she develops

PTSD (Declercq & Willemsen, 2010; Dieperink, 2001). In addition, alexithymia is significantly associated with insecure attachment styles in adult populations (Besharat, 2010). Examining attachment status in these mother-child dyads and its relationship to maternal PTSD diagnosis and alexithymia may provide a clearer picture of any indirect relationship between maternal exposure to childhood IPV and her child's behavior.

A recent study identified significant mediation effects of alexithymia on the associations between insecure attachments and impulsive aggression (defined as a dispositional trait combining impulsive and aggressive features) (Fossati, 2009). They suggest that deficits in mentalization are the cause. Mentalization, a concept similar to alexithymia, is a skill that allows one to interpret others' minds and link internal states with behaviors (Slade, 2006; Fonagy, Gergely, Jurist, & Target, 2002; Jurist, 2005), and is assessed via a clinical interview. At least two of the three alexithymia domains, namely, difficulty identifying feelings, and difficulty describing feelings, correspond closely to the elements of mentalized affectivity, which involve identifying affects, processing affects, and expressing affects (Jurist, 2005).

A mother's inability to mentalize keeps her from understanding the links between her internal states and her actions, and it prevents her from accurately labeling and interpreting her child's experiences. This in turn creates a deficit in her child's ability to symbolize and describe affective experiences, leaving him vulnerable to acting out feelings and responding ineffectively to others. On the other hand, a developed capacity for parental reflective functioning allows a mother hold her child's state of mind in their mind (Slade, 2005) so that the child's intentions and internal states are known. It allows a parent to empathize with and more sensitively relate to their child even in times of

distress (Slade, 2008). In high-risk mothers who have experienced chronic interpersonal violence, focusing attention on developing a mother's capacity to keep her baby "in mind," significantly reduced the likelihood of transmitting adversity to the next generation (Slade, et al., 2005b).

Difficulty in mentalization capacities may explain the significant association between maternal alexithymia and her child's behavioral problems. However a clinical interview would provide a more thorough analysis. Focusing attention on the attachment status of the mother and the child might also clarify the relationships between alexithymia and the dependent and independent variables, and the impact of emotion dysregulation on the transmission of maladjustment. Schechter and colleagues (2005) also explored the effects of maternal reflective functioning and PTSD on maternal mental representations of her child and their relationship. They found that the severity of PTSD was directly related to the level of maternal distorted representations of her child. They concluded that, within the context of attachment, PTSD as mediated or moderated by distorted maternal mental representations, might be a risk factor for the transmission of aggression.

These studies provide important insight into the risk and protective factors contributing to the transmission of maladjustment across generations. However, given that these pathways are complex and varied, it will be important to further examine the relationship between attachment, mentalization, alexithymia and PTSD as they relate to maternal CIPV exposure and the well being of subsequent generations. This endeavor is critical for stemming the transmission of maladjustment through early prevention efforts with new mothers, and for understanding the impact of this transmission on older

children, where later intervention may be necessary.

### Clinical and Policy Implications

The present study shows that aggressive parenting, frequently documented in traumatized mothers with young children, is also found in mothers of older children and may therefore be present throughout the child's life and significantly contributes to behavioral problems in later childhood. This cycle is at risk of continuing generation after generation as these children, like their mothers, internalize and then transmit the experience of being both victim and aggressor.

The most effective means of stemming this transmission is with preventative measures taken with first-time pregnant mothers. Screening for histories of early IPV exposure during routine prenatal care may be an important means of identification. A critical next step is to offer effective treatment for those with unresolved trauma histories, especially those most at risk due to other factors known to increase the risk of maladjustment: being young, single, and impoverished mothers. Putting such programs in place is crucial not only for addressing the needs of individual women and their children, but from a public health perspective. Preventing the transmission of aggression has broad implications for rates of poverty, crime, and incarceration rates. A stronger and healthier population also creates a stronger work force and greater tax revenue for the country as a whole. Two programs aimed at altering the transmission of adversity have been implemented with such new mothers: *Minding the Baby* (MTB; Slade, et al., 2005b; Sadler et al., 2006, Sadler et al., 2013) and the nurse home visitation program (Nurse-Family Partnership, NFP; Olds, 2002a; Olds, Robinson, & O'Brien, 2002b; Olds, Hill, O'Brien, Racine, & Moritz, 2003). It is worth examining the similarities and differences

of these programs.

NFP (Olds, Eckenrode, Henderson, Kitzman, Powers, & Cole, 1997) grew from a longitudinal, multi-site, comparison group research study developed to address the intergenerational transmission of adversity with at-risk new mothers. The program employs nurse practitioners to make home visits with young pregnant women, using a protocol aimed at providing emotional support and psycho-education around issues of prenatal risk factors (substance abuse, high levels of stress and access to obstetrical care), and early parental life course trajectories (paternal involvement, envisioning a positive life for themselves, birth control, education). Nurses attempt to engage the larger family network to provide additional support, and facilitate an examination of life plans and goals, helping them to achieve small goals that they can build upon with larger achievements. A final component of this program aims to review with mothers their childhoods, in order to facilitate reflection on how they wish to care for their own children in light of their early experiences.

The NFP (Olds et. al., 1997) program visits mothers throughout their pregnancy and continues to visit throughout the first two years of the child's life, then follows up when children are 15 years old. While results show significant differences in levels of aggressive parenting practices at 2 years between the control group and the nurse visitation group, these differences disappeared at the 15-year follow-up. However, a more detailed analysis revealed that within the home visitation group, the program significantly impacted poor single women.

Significant differences were found for these mothers in terms of more positive life course, less number of subsequent births, and less time on welfare. In contrast to the

comparison group, at age 15, the children of these mothers also reported fewer instances of running away, fewer arrests and convictions, fewer lifetime sexual partners, less consumption of alcohol. These children also exhibited fewer behavioral problems. While this study did not reveal the levels of difficulties these children experienced when compared to the general population, it is evident that the support of a caring professional was quite beneficial to those mothers most in need. Without other sources of support, these women benefited from receiving general emotional support and assistance with accessing necessary health care, securing economic resources, and pursuing job opportunities.

Despite the positive long-term outcomes for the most economically disadvantaged, this intervention has some notable limitations. For example, since there was no long term, between group differences in the prevention of child maltreatment or in the rate of household domestic violence, it is possible that the risks of transmitting adversity were not sufficiently met by this particular protocol. Domestic violence in particular was not addressed during the home visits and subsequent analyses revealed that the level of domestic violence in the household moderated the impact of the program on preventing child abuse or neglect across the 15 year period of study.

As the present study shows, it is critical to evaluate a mother's history of exposure to early interpersonal violence and her ability to adequately parent her child. For mothers who have experienced traumatic interpersonal stress, it is necessary to provide more in depth and focused therapeutic work to address the negative relational patterns that influence a mother's ability to adequately care for her child. These factors may not have been adequately taken into account by the NHV program. Nor was this program able to

address the entrenched harmful relational patterns that play out in traumatized mothers. Finally, intensive clinical training is necessary to address harmful internal working models. The level of clinical training that nurse practitioners receive was likely not sufficient to effectively intervene with the complexity of these women's lives.

Another program, *Minding the Baby* (MTB) (Slade, et al., 2005b), also aims to break the cycle of violence with young at risk mothers. This intervention specifically addresses the internal and psychological processes involved in parenting, in combination with addressing the concrete and physical needs of these mother in terms of living situation, adequate food, health care, vocational planning, stress reduction, and psycho-education. MTB conceptualized difficulties in parenting as specifically related to a mother's inability to hold her baby in mind, or mentalize about her baby's experience, as they have been unable to hold their own experiences in mind.

As stated, MTB's goal is to "help mothers acknowledge that the baby has a body and a mind of his own, and to learn - as a function of this awareness - to tolerate and regulate the child's internal states" (Slade, 2005b, p. 83). Their process involves the clinician holding the mother's experiences in mind so that she has the experience, for the first time, of being known. In doing so, this allows her to feel safe enough to become curious about her child's unique body and mind. By addressing the internal psychological mechanisms that contribute to maternal aggression, this program directly protects families from the intergenerational transmission of adversity. By keeping in mind the source of the mother's aggression, i.e. her own unacknowledged fears, they also model for the mother a curiosity about the emotions underlying behaviors, while promoting a model of acceptance and openness.

Since aggression from these mothers so clearly emerges from their unresolved experiences of violence, helping these mothers to resolve their early interpersonal traumas is the most practical and effective method for reducing their aggressive parenting practices and protecting their children from continuing this cycle of adversity. What this study also importantly illustrates is that if therapists are able hold the painful and dissociated aspects of the parent in mind, they will be more successful in helping the parent to more sensitively and empathically respond to their child.

In sum, the effects found for some of the mothers in the NHV program show a significant benefit in terms of reduced welfare costs, criminal justice expenditures, and an increase in tax revenues. This far outweighs the \$8,000 per family that it cost to implement the NHV program. Given these findings, if a program such as MTB, which addresses the concrete needs of these mothers and her ability to mentalize about her baby's needs, is implemented on a larger scale, the financial and social benefits to our society would be even greater and more far-reaching.

While treating new mothers is the most effective solution, frequently these mothers do not receive adequate assistance during this critical time. It is only when these children enter school and their symptoms begin to manifest as academic, social and legal difficulties, do they come to the attention of their community. Given the findings in the present study, namely that mothers who act aggressively toward their children will raise children who also have difficulty modulating and expressing negative emotions, it is critical to design interventions that specifically focus on the appropriate modulation and communication of emotional states of these older children. As was shown in the MTB program, by addressing the underlying relational patterns, the behavioral and relational

difficulties will shift to patterns of healthier emotional regulation and greater relatedness. This work would ideally be conducted in combination with parent work.

One promising program with a similar foundation to MTB, is the SMART program (Fearon, Target, Sargent, Williams, McGregor, Bleiberg, & Fonagy 2006). It is a mentalization-based treatment for adolescents and their families where the children and their parents learn to become curious about each other's' emotions and means of expressing the emotions that underlie their behaviors. Relational areas that need particular focus with older children and their parents include helping mothers assume a position of trusted authority, while providing a safe space for the child to explore his emerging independence within the context of his continued dependence on his family. This is especially important on the eve of adolescence, as these dyads will be facing critical issues around separation, autonomy, and authority all of which will influence the child's trajectory and life path.

### Concluding Remarks

This study sought to examine links between mother's exposure to childhood interpersonal violence and maladjustment in their pre- to early-adolescent children in a sample of urban at-risk families. While it was confirmed that maternal aggression plays a critical role in perpetuating maladjustment, a number of other interesting questions regarding risk and protective factors emerged, including the ways in which maternal emotion regulation and related disorders influence this transmission. Multi-generational examination of these variables is critical to unpacking the processes involved, as it is by looking closely at the experiences of both parents and children that we can map the psychic effects of trauma in one generation onto the psychological adjustment in the next.

A deep understanding of contributing risk and protective factors will most effectively shape prevention, intervention, and policy decisions aimed at stemming the intergenerational effects of interpersonal violence.

## APPENDIX A

## Table of Quantitative Results

Table 1. Maternal Demographic Characteristics (N = 147)

Demographic Variables	Means (S.D.) or Percent	Range
<i>Maternal Age</i>	37.4 (6.4)	23-52
<i>Marital Status:</i>		
% Married	15.8	NA
% Single	53.0	NA
% Divorced	19.7	NA
% Widowed	2.2	NA
% Other	8.8	NA
% Missing	4.7	NA
<i>Race:</i>		
% African American	70.9	NA
% Hispanic	24.7	NA
% Caucasian	4.2	NA
% Missing	5.2	NA
<i>Education:</i>		
% some high school or less	31.7	NA
% High school grad/GED	21.9	NA
% Some college/college grad	46.4	NA
% Missing	4.7	NA
<i>Annual Income</i>	\$15,932 (\$12,508)	\$2,216-\$72,000
<i>Number of children in house</i>	2.4 (1.36)	0-8
<i>People living in house</i>	3.14 (1.77)	0-13
<i>Child Welfare Involvement</i>		
% with History of Open Case	39.8	NA
% with Current Open Case	9.4	NA
<i>Working:</i>		
% Full-Time	46.4	NA
% Part-Time	25.1	NA
% Unemployed	11.5	NA
% Homemakers	9.3	NA
% Retired / Disabled	4.9	NA

Table 2. Child Demographic Characteristics (N=147)

Demographics	Means (S.D.) or Percent	Range
<i>Age</i>	11.5 (1.87)	8-15
<i>Gender</i>		
% Male	51.1	NA
% Female	48.9	NA

Table 3. Frequencies, Means, Skewness, Kurtosis for Mediating and Dependent Variables

Measure	N	Range	Mean (SD)	Skewness (-1 to 1)	(SE)	Kurtosis	(SE)
TAS-20	178	20-75	45.14 (11.98)	0.171	(0.182)	-0.545	0.362
PPS	179	31-147	107.10 (14.35)	-1.717	(0.182)	5.907	0.361
CTS-Phys	179	0-20	2.00 (4.48)	1.492	(0.182)	1.892	0.361
CTS-Psych	179	0-24	9.00 (5.99)	0.202	(0.182)	-0.883	0.361
CAPI	181	10-236	159.01 (95.29)	0.63	(0.181)	-0.44	0.359
AFS	176	-2.06 - 3.26	0 (1)	0.555	(0.183)	0.014	0.364
CBCL-T	147	23-82	54.54 (10.57)	-0.208	(0.200)	0.132	0.397

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

*Note.* TAS=Toronto Alexithymia Scale; CTS-Phys=Conflict Tactics Scale-Physical Aggression; CTS-Psych=Conflict Tactics Scale-Psychological Aggression; PPS=Parental Punitiveness Scale; CAPI=Child Abuse Potential Inventory; AFS=Aggression Factor Score CBCL-T=Childhood Behavior Checklist Total Scores.

Table 4. Pearson Correlations among the Independent Variable, CIPV, and the Mediating Variables

Measure	CIPV	TAS	PTSD	CAPI	CTS- PHYS	CTS- PSYCH	AFS
TAS	.044						
PTSD	<b>.222**</b>	.135					
CAPI	<b>.245**</b>	<b>.583**</b>	<b>.294**</b>				
CTS- Phys	<b>.199**</b>	<b>-.157*</b>	.111	-.016			
CTS- Psych	.117	-.111	-.007	.114	<b>.487*</b>		
AFS	.153	.001	-.723	<b>.380**</b>	<b>.760**</b>	<b>.808**</b>	
CBCL: Total	.092	.205*	.067	<b>.228**</b>	<b>.199*</b>	<b>.175*</b>	<b>.306**</b>

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

*Note.* TAS=Toronto Alexithymia Scale; CTS-Phys=Conflict Tactics Scale-Physical Aggression; CTS-Psych=Conflict Tactics Scale-Psychological Aggression; PPS=Parental Punitiveness Scale; CAPI=Child Abuse Potential Inventory; AFS=Aggression Factor Score CBCL-T=Childhood Behavior Checklist Total Scores.

Table 5. Reliability for Mediating and Dependent Variables

Measure	Chronbach's alpha
TAS	0.81
CAPI	0.93
PPS	0.90
CTS-Psych	0.58
CTS-Phys	0.73
CBCL-T	0.93

*Note.* TAS=Toronto Alexithymia Scale; CTS-Phys=Conflict Tactics Scale-Physical Aggression; CTS-Psych=Conflict Tactics Scale-Psychological Aggression; PPS=Parental Punitiveness Scale; CAPI=Child Abuse Potential Inventory; AFS=Aggression Factor Score CBCL-T=Childhood Behavior Checklist Total Scores.

Table 6. Pearson Correlation of Maternal Age with all Dependent and Mediating Variables

Measure	N	Mother's Age	
		Pearson Correlation	Sig. (2-tailed)
PTSD - Lifetime Diagnosis	183	-.098	.185
TAS	178	-.016	.830
CTS-Phys	179	.213	.004*
CTS-Psych	179	.015	.839
PPS	179	.138	.066
CAPI	181	-.071	.343
AFS	176	-0.120	0.113
Maternal CIPV Exposure	183	-.046	.533
CBCL - Total	147	.004	.964

\* $p < .05$  (two-tailed)

*Note.* TAS=Toronto Alexithymia Scale; CTS-Phys=Conflict Tactics Scale-Physical Aggression; CTS-Psych=Conflict Tactics Scale-Psychological Aggression; PPS=Parental Punitiveness Scale; CAPI=Child Abuse Potential Inventory; AFS=Aggression Factor Score CBCL-T=Childhood Behavior Checklist Total Scores.

Table 7. Chi-square analyses of Maternal Race/Ethnicity and Lifetime Diagnosis of PTSD

Maternal Race/ Ethnicity	Ever had a diagnosis of PTSD		Total N
	NO N (%)	YES N (%)	
Hispanic	32 (71.1)	13 (28.9)	45
African American	92 (71.3)	37 (28.7)	129
White	5 (62.5)	3 (37.5)	8
Total	129 (100.0)	53 (100.0)	182

*Note:*  $\chi^2$  (df = 2, N = 182) = .285,  $p = .867$

Table 8. Analysis of Variance (ANOVA) for Race/Ethnicity with all Dependent and Mediating Variables

Measure	F (df, df)	<i>p</i>
TAS	1.943 (2, 174)	0.146
CTS-Psych	0.255 (2, 175)	0.775
CTS-Phys	2.573 (2, 175)	0.079
PPS	0.892 (2, 175)	0.413
CAPI	2.281 (2, 177)	0.105
AFS	1.063 (2, 174)	0.348
CBCL-T	0.736 (2, 143)	0.481

*Note.* TAS=Toronto Alexithymia Scale; CTS-Phys=Conflict Tactics Scale-Physical Aggression; CTS-Psych=Conflict Tactics Scale-Psychological Aggression; PPS=Parental Punitiveness Scale; CAPI=Child Abuse Potential Inventory; AFS=Aggression Factor Score CBCL-T=Childhood Behavior Checklist Total Scores.

Table 9. Analysis of Variance for Maternal Marital Status with all Dependent and Mediating Variables

Measure	F (df, df)	<i>p</i>
TAS	0.748 (5, 127)	0.877
CTS – Phys	0.759 (5, 175)	0.580
CTS - Psych	0.232 (5, 173)	0.948
PPS	0.198 (5, 173)	0.963
CAPI	1.136 (5, 175)	0.343
AFS	0.171 (5, 175)	0.973
CBCL - Total	2.750 (5, 141)	0.021*

\* $p < .05$

*Note.* TAS=Toronto Alexithymia Scale; CTS-Phys=Conflict Tactics Scale-Physical Aggression; CTS-Psych=Conflict Tactics Scale-Psychological Aggression; PPS=Parental Punitiveness Scale; CAPI=Child Abuse Potential Inventory; AFS=Aggression Factor Score CBCL-T=Childhood Behavior Checklist Total Scores.

Table 10. Analysis of Variance for Maternal Education with all Dependent and Mediating Variables

Measure	<i>F</i> (df, df)	<i>p</i>
TAS	0.220 (1, 181)	0.640
CTS-Psych	1.965 (3, 175)	0.121
CTS-Phys	1.889 (3, 175)	0.133
PPS	0.534 (3, 175)	0.660
CAPI	2.813 (3, 177)	0.041*
AFS	1.917 (3, 175)	0.129
CBCL-T	0.977 (3, 143)	0.405

\* $p < .05$

*Note.* TAS=Toronto Alexithymia Scale; CTS-Phys=Conflict Tactics Scale-Physical Aggression; CTS-Psych=Conflict Tactics Scale-Psychological Aggression; PPS=Parental Punitiveness Scale; CAPI=Child Abuse Potential Inventory; AFS=Aggression Factor Score CBCL-T=Childhood Behavior Checklist Total Scores.

Table 11. Multiple Comparisons Analysis of Maternal Education and CAPI

Maternal Education Comparison	Mean Difference	Std. Error	Sig.	
1 Some HS	2 HS Grad	-5.086	19.509	0.994
	3 some college	31.469	16.545	0.231
	4 College	63.450	30.917	0.173
2 HS Grad	1 some HS	5.086	19.509	0.994
	3 some college	36.556	18.577	0.204
	4 College	68.536	32.050	0.145
3 Some College	1 some HS	-31.469	16.545	0.231
	2 HS Grad	-36.556	18.577	0.204
	4 College	31.980	30.337	0.718
4 College Grad	1 some HS	-63.450	30.917	0.173
	2 HS Grad	-68.536	32.050	0.145
	3 some college	-31.980	30.337	0.718

Table 12. Cross Tabulation for Child Gender and PTSD Diagnosis

Child Gender	Ever had a diagnosis of PTSD	
	NO N (%)	YES N (%)
Male	63 (67.7)	30 (32.3)
Female	66 (74.2)	23 (25.8)
Total	129 (100.0)	53 (100.0)

Note:  $\chi^2$  (df = 1, N = 182) = .907,  $p = .341$

Table 13. Difference in Variables Based on Child Gender (T-Test)

Measure	Female		Male		t	df	p
	M	(SD)	M	(SD)			
TAS-20	44.87	(10.78)	45.16	(12.98)	-0.164	175	0.870
CTS-Psych	9.22	(6.28)	10.15	(5.68)	-1.04	177	0.300
CTS-Phys	3.5	(4.54)	3.64	(4.44)	-2.14	177	0.831
PPS	106.82	(15.24)	107.4	(13.43)	0.273	177	0.785
CAPI	156.68	(92.53)	159.88	(98.01)	-0.225	178	0.822
AFS	-0.046	(1.00)	0.048	(1.00)	-0.621	174	0.535
CBCL-T	53.69	(-11.93)	55.33	(-9.14)	-0.93	131.08	0.354

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

Note. TAS=Toronto Alexithymia Scale; CTS-Phys=Conflict Tactics Scale-Physical Aggression; CTS-Psych=Conflict Tactics Scale-Psychological Aggression; PPS=Parental Punitiveness Scale; CAPI=Child Abuse Potential Inventory; AFS=Aggression Factor Score CBCL-T=Childhood Behavior Checklist Total Scores.

Table 14. Pearson Correlation for Child's Age on Independent, Dependent and Mediating Variables

Measure	N	Child's Age	
		Pearson Correlation	Sig. (2-tailed)
Lifetime PTSD Diagnosis	182	-0.051	0.491
TAS	177	0.079	0.297
CTS-Psych	179	0.095	0.206
CTS-Phys	179	-0.213*	0.004
PPS	179	-0.050	0.510
CAPI	180	0.105	0.162
AFS	176	-0.016	0.830
Maternal CIPV Exposure	182	0.012	0.868
CBCL - Total	147	-0.052	0.531

\*  $p < .01$  (2-tailed)

*Note.* TAS=Toronto Alexithymia Scale; CTS-Phys=Conflict Tactics Scale-Physical Aggression; CTS-Psych=Conflict Tactics Scale-Psychological Aggression; PPS=Parental Punitiveness Scale; CAPI=Child Abuse Potential Inventory; AFS=Aggression Factor Score CBCL-T=Childhood Behavior Checklist Total Scores.

APPENDIX B.  
Tables Of Hypothesis Testing

Table 15. Model One Summary of Paths

Effect	Path Segment	Estimate	95% Confidence Interval	
			Lower	Upper
<b>Direct Effects</b>				
Independent Variable (CIPV) to Alexithymia & PTSD				
IV (CIPV) to M1 (TAS)	a <sub>1</sub>	-0.176	-0.586	0.233
IV (CIPV) to M2 (PTSD)	a <sub>2</sub>	0.522	0.015	1.062*
Independent Variable (CIPV) to Aggression Measures				
IV (CIPV) to M3 (CTS-PHYS)	a <sub>3</sub>	0.863	0.130	1.650*
IV (CIPV) to M4 (CTS-PSYCH)	a <sub>4</sub>	1.193	0.535	1.854*
IV (CIPV) to M5 (CAPI)	a <sub>5</sub>	0.629	-0.088	1.263
IV (CIPV) to M6 (PPS)	a <sub>6</sub>	-0.288	-0.833	0.338
Alexithymia & PTSD to Aggression Measures				
M1 (TAS) to M3 (CTS-PHYS)	b <sub>1</sub>	-0.254	-0.529	0.017
M1 (TAS) to M4 (CTS-PSYCH)	b <sub>2</sub>	-0.345	-0.637	-0.057*
M1 (TAS) to M5 (CAPI)	b <sub>3</sub>	0.915	0.700	1.131*
M1 (TAS) to M6 (PPS)	b <sub>4</sub>	-0.027	-0.204	0.187
M2 (PTSD) to M3 (CTS-PHYS)	b <sub>5</sub>	-0.093	-0.584	0.311
M2 (PTSD) to M4 (CTS-PSYCH)	b <sub>6</sub>	0.296	-0.146	0.759

Effect	Path Segment	Estimate	95% Confidence Interval	
			Lower	Upper
M2 (PTSD) to M5 (CAPI)	b <sub>7</sub>	0.668	0.223	1.093*
M2 (PTSD) to M6 (PPS)	b <sub>8</sub>	-0.094	-0.444	0.251
Aggression Measures to Dependent Variable (CBCL)				
M3 (CTS-PHYS) to DV (CBCL-T)	d <sub>1</sub>	0.047	-0.073	0.144
M4 (CTS-PSYCH) to DV (CBCL-T)	d <sub>2</sub>	0.048	-0.085	0.174
M5 (CAPI) to DV (CBCL-T)	d <sub>3</sub>	-0.006	-0.246	0.165
M6 (PPS) to DV (CBCL-T)	d <sub>4</sub>	-0.169	-0.324	-0.042*
Alexithymia & PTSD to Dependent Variable (CBCL)				
M1 (TAS) to DV (CBCL-T)	d <sub>5</sub>	0.177	-0.080	0.503
M2 (PTSD) to DV (CBCL-T)	d <sub>6</sub>	0.363	-0.038	0.731
Indirect/Mediating Effects				
Single Mediator				
IV (CIPV) to M1 (TAS) to DV (CBCL-T)	a <sub>1</sub> d <sub>5</sub>	-0.031	-0.216	0.024
IV (CIPV) to M2 (PTSD) to DV (CBCL-T)	a <sub>2</sub> d <sub>6</sub>	0.189	-0.009	0.668
IV (CIPV) to M3 (CTS-PHYS) to DV (CBCL-T)	a <sub>3</sub> d <sub>1</sub>	0.041	-0.031	0.210
IV (CIPV) to M4 (CTS-PSYCH) to DV (CBCL-T)	a <sub>4</sub> d <sub>2</sub>	0.057	-0.071	0.277

Effect	Path Segment	Estimate	95% Confidence Interval	
			Lower	Upper
IV (CIPV) to M5 (CAPI) to DV (CBCL-T)	$a_5d_3$	-0.004	-0.171	0.114
IV (CIPV) to M6 (PPS) to DV (CBCL-T)	$a_6d_4$	0.049	-0.031	0.209
Two Mediators				
IV (CIPV) to M2 (TAS) to M3 (CTS-PHYS) to DV (CBCL-T)	$a_1b_1d_1$	0.002	-0.001	0.034
IV (CIPV) to M2 (TAS) to M4 (CTS-PSYCH) to DV (CBCL-T)	$a_1b_2d_2$	0.003	-0.002	0.040
IV (CIPV) to M1 (TAS) to M5 (CAPI) to DV (CBCL-T)	$a_1b_3d_3$	0.001	-0.034	0.085
IV (CIPV) to M1 (TAS) to M6 (PPS) to DV (CBCL-T)	$a_1b_4d_4$	-0.001	-0.019	0.004
IV (CIPV) to M2 (PTSD) to M3 (CTS-PHYS) to DV (CBCL-T)	$a_2b_5d_1$	-0.002	-0.054	0.005
IV (CIPV) to M1 (PTSD) to M4 (CTS-PSYCH) to DV (CBCL-T)	$a_2b_6d_2$	0.007	-0.004	0.087
IV (CIPV) to M2 (PTSD) to M5 (CAPI) to DV (CBCL-T)	$a_2b_7d_3$	-0.002	-0.163	0.055

Effect	Path Segment	Estimate	95% Confidence Interval	
			Lower	Upper
IV (CIPV) to M2 (PTSD) to M6 (PPS) to DV (CBCL-T)	a <sub>2</sub> b <sub>8</sub> d <sub>4</sub>	0.008	-0.010	0.067
Direct Effect				
IV (CIPV) to DV (CBCL-T)	c	0.001	-0.532	0.506

\*p=< .05

*Note.* TAS=Toronto Alexithymia Scale; CTS-Phys=Conflict Tactics Scale-Physical Aggression; CTS-Psych=Conflict Tactics Scale-Psychological Aggression; PPS=Parental Punitiveness Scale; CAPI=Child Abuse Potential Inventory; AFS=Aggression Factor Score CBCL-T=Childhood Behavior Checklist Total Scores.

Table 16. Model Two Summary

Effect	Path Segment	Estimate	95% Confidence Interval	
			Lower	Upper
Direct Effects				
Independent Variable (CIPV) to Alexithymia & PTSD				
IV (CIPV) to M1 (TAS)	a <sub>1</sub>	1.050	-1.841	3.998
IV (CIPV) to M2 (PTSD)	a <sub>2</sub>	0.615	0.274	0.964*
Independent Variable (CIPV) to Aggression Factor				
IV (CIPV) to M3 (AGG)	a <sub>3</sub>	0.403	0.122	0.671*
Alexithymia & PTSD to Aggression Factor				
M1 (TAS) to M3 (AGG)	b <sub>1</sub>	-0.002	-0.012	0.007
M2 (PTSD) to M3 (AGG)	b <sub>5</sub>	0.079	-0.083	0.238
Aggression Factor to Dependent Variable (CBCL)				

Effect	Path Segment	Estimate	95% Confidence Interval	
			Lower	Upper
M3 (AGG) to DV (CBCL-T)	d <sub>3</sub>	2.892	1.486	4.345*
Alexithymia & PTSD to Dependent Variable (CBCL)				
M1 (TAS) to DV (CBCL-T)	d <sub>1</sub>	0.181	0.068	0.298*
M2 (PTSD) to DV (CBCL-T)	d <sub>2</sub>	0.375	-1.526	2.315
Indirect/Mediating Effects				
Single Mediator				
IV (CIPV) to M1 (TAS) to DV (CBCL-T)	a <sub>1</sub> d <sub>1</sub>	0.190	-0.265	0.931
IV (CIPV) to M2 (PTSD) to DV (CBCL-T)	a <sub>2</sub> d <sub>2</sub>	0.231	-0.907	1.624
IV (CIPV) to M3 (AGG) to DV (CBCL-T)	a <sub>3</sub> d <sub>3</sub>	1.165	0.411	2.440*
Two Mediators				
IV (CIPV) to M2 (TAS) to M3 (AGG) to DV (CBCL-T)	a <sub>1</sub> b <sub>1</sub> d <sub>3</sub>	-0.007	-0.122	0.019
IV (CIPV) to M2 (PTSD) to M3 (AGG) to DV (CBCL-T)	a <sub>2</sub> b <sub>2</sub> d <sub>3</sub>	0.141	-0.084	0.621
Direct Effect				
IV (CIPV) to DV (CBCL-T)	c	0.227	-2.678	3.121

\*p<.05

Note. TAS=Toronto Alexithymia Scale; CTS-Phys=Conflict Tactics Scale-Physical Aggression; CTS-Psych=Conflict Tactics Scale-Psychological Aggression; PPS=

Parental Punitiveness Scale; CAPI=Child Abuse Potential Inventory; AFS=Aggression Factor Score CBCL-T=Childhood Behavior Checklist Total Scores.

Table 17. Model Three Summary

Effect	Path Segment	Estimate	95% Confidence Interval	
			Lower	Upper
<b>Direct Effects</b>				
Independent Variable (CIPV) to Aggression Factor				
IV (CIPV) to M1 (AGF)	a <sub>1</sub>	0.448	0.208	0.684*
Aggression Factor to Dependent Variable (CBCL)				
M1 (AGF) to DV (CBCL-T)	b <sub>1</sub>	2.869	1.382	4.338*
<b>Indirect/Mediating Effects</b>				
IV (CIPV) to M1 (AGF) to DV (CBCL-T)	a <sub>1</sub> b <sub>1</sub>	0.538	2.505	1.286*
<b>Direct Effect</b>				
IV (CIPV) to DV (CBCL-T)	c	0.606	-2.616	3.282

\*p< .05

Note. TAS=Toronto Alexithymia Scale; CTS-Phys=Conflict Tactics Scale-Physical Aggression; CTS-Psych=Conflict Tactics Scale-Psychological Aggression; PPS=Parental Punitiveness Scale; CAPI=Child Abuse Potential Inventory; AFS=Aggression Factor Score CBCL-T=Childhood Behavior Checklist Total Scores.

Note: Neither SPSS nor MPlus provides Total Effect Confidence Intervals for model three analysis. However, the coefficient=1.994; SE=1.810; t value=1.102; p=0.272.

Figure 1: Model One Paths

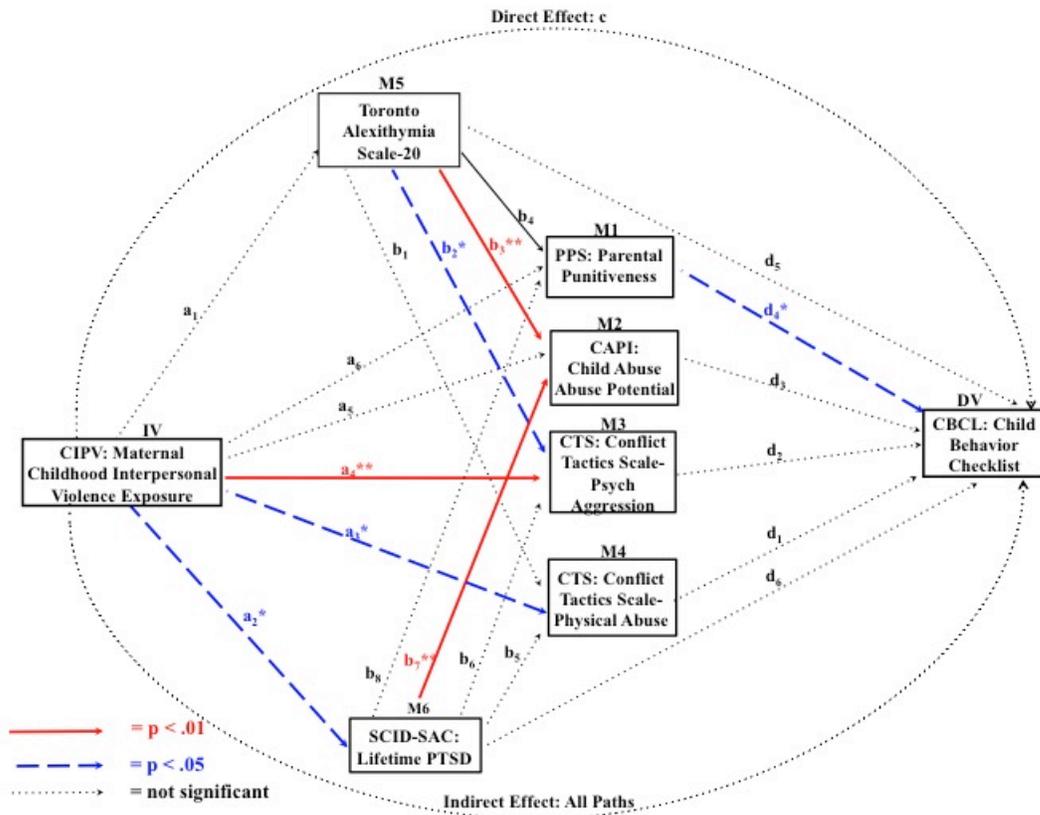


Figure 2: Model Two Paths

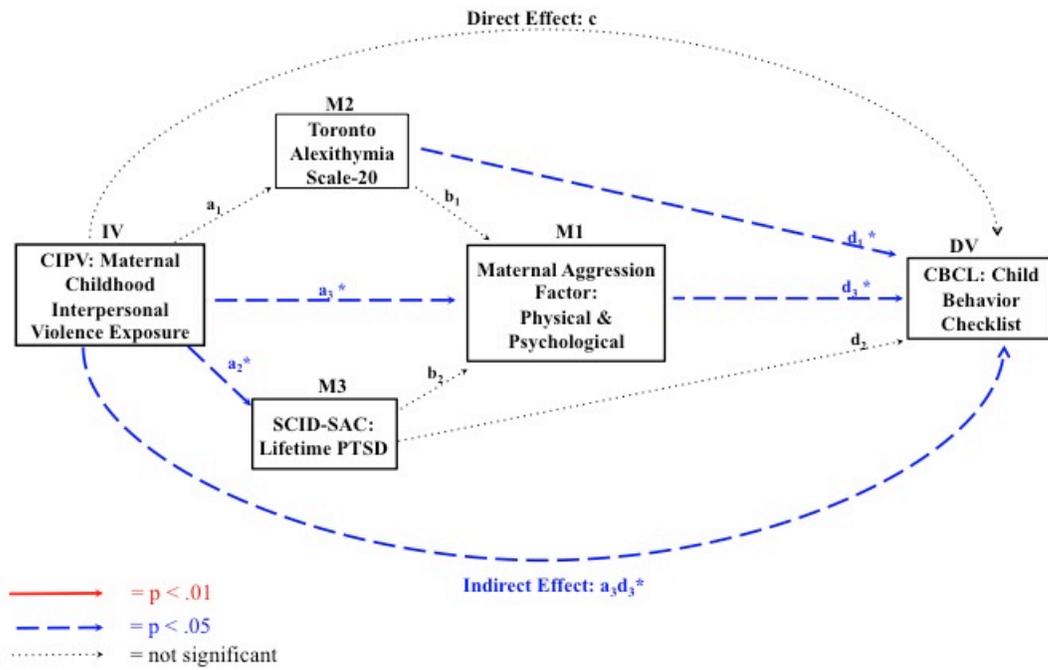
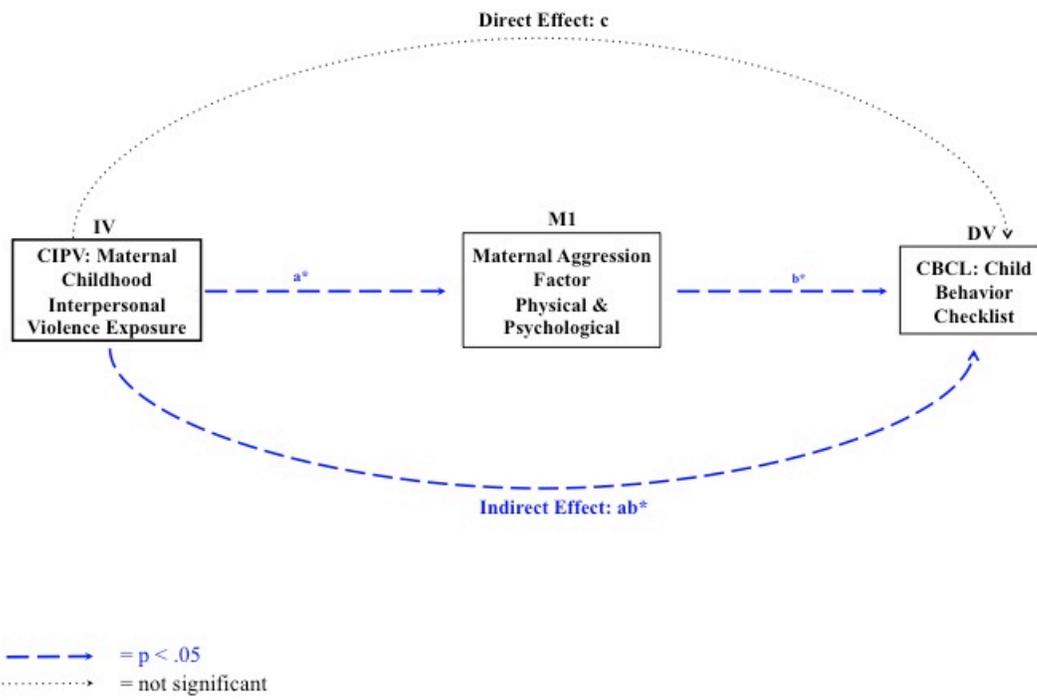


Figure 3: Model 3 Paths



## REFERENCES

- Aceves, M. J., & Cooston, J. T. (2007). Violent victimization, aggression, and parent-adolescent relations: Quality parenting as a buffer for violently victimized youth. *Journal of Youth and Adolescence*, Vol 36, pp. 635-647.
- Achenbach, T.M., Edelbrock, C. (1991). *Manual for the Child Behavior Checklist and Revised Behavior Profile*. VT: University of Vermont Department of Psychiatry.
- Ackerman, P.T., Newton, J.E., McPherson, W.B., Jones, J.G., & Dykman, R.A. (1998). Prevalence of post traumatic stress disorder and other psychiatric diagnoses in three groups of abused children (sexual, physical, and both). *Child Abuse and Neglect*, Vol 22, pp. 759-774.
- Achenbach, T.M., Dumenci, L., & Rescorla, L.A. (2003). DSM-oriented and empirically based approaches to constructing scales from the same item pools. *Journal of Clinical Child and Adolescent Psychology*, 32, 328-340.
- Ackerman, P.T., Newton, J.E., McPherson, W.B., Jones, J.G., & Dykman, R.A. (1998). Prevalence of post traumatic stress disorder and other psychiatric diagnoses in three groups of abused children (sexual, physical, and both). *Child Abuse and Neglect*, Vol 22, pp. 759-774.
- Alexander, P.C. (1992). Application of attachment theory to the study of sexual abuse. *Journal of Consulting and Clinical Psychology*, Vol 602, pp. 185-195.
- Allen, J.P., Moore, C., Kuperminc, G., & Bell, K. (1998). Attachment and adolescent psychosocial functioning. *Child Development*, Vol 69, pp. 1406-1419.
- Allwood, M.A., Bell-Dolan, D., & Husain, S.A. (2002). Children's trauma and adjustment reactions to violent and nonviolent war experiences. *Journal of the American Academy of Child and Adolescent Psychiatry*, Vol 41, pp. 450-457.
- Al-Turkait, Fawziyah A., Ohaeri, J.U. (2008). Psychopathological status, behavior problems, and family adjustment of Kuwaiti children whose fathers were involved in the first Gulf War. *Child and Adolescent Psychiatry and Mental Health*, Vol 2, pp. 1-12.
- American Psychiatric Association (1994). *Diagnostic and statistical manual of mental health disorders (4th ed)*. Washington DC: Author.
- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders (Revised 4th ed., text rev.)*. Washington, DC: Author.
- Ammerman, R.T., Putnam, F.W., Chard, K.M., Stevens, J., Van Ginkel, J.B. (2012). PTSD in depressed mothers in home visitation. *Psychological Trauma: Theory, Research, Practice, and Policy*, Vol 4:2, pp. 186-195.
- Appleyard, K., Osofsky, J.D. (2003). Parenting after trauma: Supporting parents and caregivers in the treatment of children impacted by violence. *Infant Mental Health Journal*, Vol 24:2, pp. 111-125.
- Bagby, M.R., Parker, J.D.A., Taylor, G.J. (1994a). The twenty-item Toronto Alexithymia Scale: I. Item selection and cross-validation of the factor structure. *Journal of Psychosomatic Research*, Vol 38:1, pp. 23-32.
- Bagby, M.R., Taylor, G.J., Parker, J. (1994b). The twenty-item Toronto Alexithymia Scale: II. Convergent, discriminant, and concurrent validity. *Journal of Psychosomatic Research*, Vol 38(1), pp. 33-40.

- Banyard, V.L., Williams, L.M., Siegel, J.A. (2003). The Impact of Complex Trauma and Depression on Parenting: An Exploration of Mediating Risk and Protective Factors. *Child Maltreatment*, Vol 8:4, pp. 334-349.
- Banyard, V.L. (1997). The impact of childhood sexual abuse and family functioning on four dimensions of women's later parenting. *Child Abuse & Neglect*, Vol 21:11, pp. 1095-1107.
- Baron, R.M., & Kenny, D.A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, Vol 51, 1173-1182.
- Barrett, B. (2010). Childhood sexual abuse and adulthood parenting: The mediating role on intimate partner violence. *Journal of Aggression, Maltreatment & Trauma*, Vol 19, pp. 323– 346.
- Belsky, J. (1984). The determinants of parenting: A process model. *Child Development*, Vol 55:1, pp. 83-96.
- Berenbaum, H., Irvin, S. (1996). Alexithymia, anger, and interpersonal behavior. *Psychotherapy and Psychosomatics*, Vol 65:4, pp. 203-208.
- Bernstein G.A., Garfinkel B.D., Hoberman H.M. (1989). Self-reported anxiety in adolescents. *American Journal of Psychiatry*, Vol 146:3, pp. 384-386.
- Berz, J.B., Taft, C.T., Watkins, L.E. (2008). Monson, Candice M. Associations between PTSD symptoms and parenting satisfaction in a female veteran sample. *Journal of Psychological Trauma*, Vol 7(1), pp. 37-45.
- Besharat, M.A. (2010). Attachment styles and alexithymia. *Psychological Research*, Vol 12:3-4, pp. 63-80.
- Bigras M., La Freniers PJ., Dumas JE. (1996). Discriminant validity of the parent and child scales of the parenting stress index. *Early Education and Development*, 7:167-178.
- Blake, D.D. Weathers, F.W., Nagy, L.M., Kaloupek, D.G., Gusman, F.D., Charney, D., & Keane, T.M. (1995). The development of a clinician-administered PTSD scale. *Journal of Traumatic Stress*, Vol 8, pp. 75-90.
- Boney-McCoy, S., & Finkelhor, D. (1996). Is youth victimization related to trauma symptoms and depression after controlling for prior symptoms and family relationships? A longitudinal, prospective study. *Journal of Consulting and Clinical Psychology*, Vol 64, pp. 1406-1416.
- Bowlby, J. (1973). *Attachment and loss: Vol 2. Separation: Anxiety and anger*. New York: Basic Books.
- Breslau, N., Kessler, R.C., Chilcoat, H.D., Schultz, L.R., Davis, G.C., Andreski, P. (1998). Trauma and posttraumatic stress disorder in the community: the 1996 Detroit Area Survey of Trauma. *Archives of General Psychiatry*, Vol 55, pp. 626-632.
- Brett, E.A. (1996). Traumatic stress: The effects of overwhelming experience on mind, body, and society. Van der Kolk, Bessel A. (Ed.); McFarlane, Alexander C. (Ed.); Weisaeth, Lars (Ed.); pp. 117-128. New York, NY, US: Guilford Press.
- Brewin, C.R., Andrews, B., Valentine, J.D. (2000). Meta-Analysis of Risk Factors for Posttraumatic Stress Disorder in Trauma-Exposed Adults. *Journal of Consulting & Clinical Psychology*, Vol 68, Issue 5, pp. 748-766.

- Bucci, W. (1997). Symptoms and symbols: A multiple code theory of somatization. *Psychoanalytic Inquiry*, Vol 17:2, pp. 151-172.
- Burgess, R., Conger, R. (1977). Family interaction patterns related to child abuse and neglect: some preliminary findings. *Child Abuse and Neglect*, Vol 1, pp.269-277.
- Calkins, Susan D. Hill, Ashley. (2007). Caregiver Influences on Emerging Emotion Regulation: Biological and Environmental Transactions in Early Development. In: *Handbook of emotion regulation*. Gross, James J. (Ed.); New York, NY, US: Guilford Press, pp. 229-248.
- Carlson, E., Jacobvitz, D., & Sroufe, L. A. (1995). A developmental investigation of inattentiveness and hyperactivity. *Child Development*, Vol 66, pp. 37-54.
- Carlson, V., Cicchetti, D., Barnett, D., Braunwald, K. (1989). Disorganized/disoriented attachment relationships in maltreated infants. *Developmental Psychology*, Vol 25:4, Jul, pp. 525-531.
- Carmen, E.H., Rieker, P.P., Mills, T. (1984). Victims of violence and psychiatric illness. *The American Journal of Psychiatry*, Vol 141:3, pp. 378-383.
- Caron, A., Weiss, B., Harris, V., & Catron, T. (2006). Parenting behavior dimensions and child psychopathology: specificity, task dependency, and interactive relations. *J Clin Child Adolesc Psychol*. Vol 35:1, pp. 34-45.
- Chemtob, C.M., Carlson, J.G. (2004). Psychological Effects of Domestic Violence on Children and Their Mothers. *International Journal of Stress Management*, Vol 11(3), pp. 209-226.
- Clingempeel, G.W., Britt, SC., Henggeler, S.W. (2008). Beyond treatment effects: Comorbid psychopathologies and long-term outcomes among substance-abusing delinquents. *American Journal of Orthopsychiatry*, Vol 78:1, pp. 29-36.
- Cloitre, M., Miranda, R., Stovall-McClough, K. C., & Han, H. (2005). Beyond PTSD: Emotion regulation and interpersonal problems as predictors of functional impairment in survivors of childhood abuse. *Behavior Therapy*, Vol 36, pp. 119-124.
- Cloitre, M., Stovall-McClough, C., Zorbas, P., & Charuvastra, A. (2008). Attachment organization, emotion regulation, and expectations of support in a clinical sample of women with childhood abuse histories. *Journal of Traumatic Stress*, 21, pp. 282-289.
- Cohen, L. R., Hien, D. A., & Batchelder, S. (2008). The impact of cumulative maternal trauma and diagnosis on parenting behavior. *Child Maltreatment*, Vol 13, pp. 27-38.
- Cole, P. M., Woolger, C., Power, T. G., & Smith, K. D. (1992). Parenting difficulties among adult survivors of father-daughter incest. *Child Abuse & Neglect*, Vol 16, pp. 239-249.
- Cole, P.M., Michel, M.K., Teti, L.O. (1994). The development of emotion regulation and dysregulation: A clinical perspective. *Monographs of the Society for Research in Child Development*, Vol 59:2-3, pp. 73-100, 250-283.
- Cowen, E. L. (1994). The enhancement of psychological wellness: Challenges and opportunities. *American Journal of Community Psychology*, Vol 22:4, pp. 149-177.

- Craig, C.D., Sprang, G. (2007). Trauma exposure and child abuse potential: Investigating the cycle of violence. *American Journal of Orthopsychiatry*, Vol 77:2, pp. 296-305.
- Davidson, J., Smith, R., & Kudler, H. (1989). Familial psychiatric illness in chronic posttraumatic stress disorder. *Comprehensive Psychiatry*, Vol 30, pp. 339-445.
- Davidson, J., Smith, R., Kudler, H. (1989). Validity and reliability of the DSM-III criteria for posttraumatic stress disorder: Experience with a structured interview. *Journal of Nervous and Mental Disease*, Vol 177:6, pp. 336-341.
- Davies, J. (2000). Descending the therapeutic slopes—slippery, slipperier, slipperiest: Commentary on papers by Barbara Pizer and by Glen O. Gabbard. *Psychoanalytic Dialogues*, Vol 10(2), pp. 219-229.
- De Rick, A., & Vanheule, S. (2006). The relationship between perceived parenting, adult attachment style and alexithymia in alcoholic inpatients. *Addictive Behaviors*, Vol 31, pp. 1265-1270.
- Deblinger, E., McLeer S.V., Atkins M.S., Ralphe D., Foa, E. (1989). Post-traumatic stress in sexually abused physically abused and nonabused children. *Child Abuse and Neglect*, Vol 13, pp. 403-408.
- Declercq, F., Vanheule, S., Deheegher, J. (2010). Alexithymia and posttraumatic stress: Subscales and symptom clusters. *Journal of Clinical Psychology*, Vol 66:10, pp. 1076-1089.
- Deykin, E.Y., Alpert, J.J., McNamara, J.J. (1985). Depressive illness among chemically dependent adolescents. *The American Journal of Psychiatry*, Vol 142:11, pp. 1299-1303.
- Deykin, E.Y., Buka, S.L. (1994). Suicidal ideation and attempts among chemically dependent adolescents. *American Journal of Public Health*, Vol 84:4, pp. 634-639.
- Dieperink, M., Leskela, J., Thuras, P., Engdahl, B. (2001). *American Journal of Orthopsychiatry*, Vol 71:3, pp. 374-378. Attachment style classification and posttraumatic stress disorder in former prisoners of war.
- Egeland, B., Jacobvitz, D., & Sroufe, L. A. (1988). Breaking the cycle of abuse. *Child Development*, Vol 59, pp. 1080-1088.
- Ehring, T., & Quack, D. (2010). Emotion regulation difficulties in trauma survivors: The role of trauma type and PTSD symptom severity. *Behavior Therapy*, Vol 41:4, pp. 587-598.
- Epstein, R., Komotorita, S.S. (1965). The development of a scale of parental punitiveness toward aggression, *Child Development*, Vol 36:1, pp. 130-142.
- Fairbairn, W.R.D. (1943), The repression and the return of bad objects. In: *Psychoanalytic Studies of the Personality*. London: Routledge & Kegan Paul, 1952, pp. 59-81.
- Fairbairn, W.R. (1946). Object-Relationships and Dynamic Structure. *International Journal of Psycho-Analysis*, Vol 27, pp. 30-37.
- Famularo, R., Fenton, T., Kinscherff, R., Ayoub, C., & Barnum, R. (1994). Maternal and child posttraumatic stress disorder in cases of child maltreatment. *Child Abuse & Neglect*, Vol 18, pp. 27-36.

- Fearon, P., Target, M., Sargent, J., Williams, L.L., McGregor, J., Bleiberg, E., Fonagy, P. (2006). Short-term mentalization and relational therapy (SMART): An integrative family therapy for children and adolescents. In: *The handbook of mentalization-based treatment*. Allen, Jon G. (Ed.); Fonagy, Peter (Ed.); Hoboken, NJ, US: John Wiley & Sons Inc, pp. 201-222.
- Feeny, N.C., Zoellner, L.A., Fitzgibbons, L.A., Foa, E.B. (2000). Exploring the Roles of Emotional Numbing, Depression, and Dissociation in PTSD. *Journal of Traumatic Stress*, Vol 13:3, pp. 489-498.
- Ferenczi, S. (1933). Confusion of tongues between adults and the child. In: *Final Contributions to the Problems and Methods of Psycho-Analysis*, ed. M. Balint (trans. E. Mosbacher). London: Karnac Books, 1980, pp. 156-167.
- Fite, P.J., Stoppelbein, L., Greening, L. (2008). Parenting stress as a predictor of age upon admission to a child psychiatric inpatient facility. *Child Psychiatry and Human Development*, Vol 39:2, pp. 171-183.
- Fletcher, K.E., (1996). Childhood posttraumatic stress disorder. In: E.J. Mash, & R. Barkley (Eds.), *Child psychopathology* (pp. 242-276). New York: Guilford Press.
- Fonagy, P., Gergely, G., Jurist, E., & Target, M. (2002). *Affect regulation, mentalization and the development of the self*. New York: Other Press.
- Fonagy, P., Steele, M., Moran, G., Steele, H., Higgitt, A. (1993). Measuring the ghost in the nursery: An empirical study of the relation between parents' mental representations of childhood experiences and their infants' security of attachment. *Journal of the American Psychoanalytic Association*, Vol 41:4, pp. 957-989.
- Ford, J. D., & Fournier, D. (2007). Psychological trauma, post-traumatic stress disorder, and health-related functioning of low income urban women receiving community mental health services for severe mental illness. *Journal of Psychiatric Intensive Care*, 3(1), 27-34.
- Fossati, A., Acquarini, E., Feeny, J.A., Borroni, S., Grazioli, F., Giarolli, L.E., Franciosi, G., Maffei, C. (2009). Alexithymia and attachment insecurities in impulsive aggression. *Attachment & Human Development*, Vol 11(2), pp. 165-182.
- Fraiberg, S., Adelson, E., Shapiro, V. (1975). Ghosts in the nursery. A psychoanalytic approach to the problems of impaired infant-mother relationships. *Journal of the American Academy of Child & Adolescent Psychiatry*, Vol 14:3, pp. 387-421.
- Frankel, J. (2002). Exploring Ferenczi's concept of identification with the aggressor: Its role in trauma, everyday life, and the therapeutic relationship. *Psychoanalytic Dialogues*, Vol 12:1, pp.101-139.
- Freud, Anna. (1937). *The ego and the mechanisms of defence* (Cecil Baines, Trans.). London: Hogarth. (Original work published 1936)
- Garbarino, J. (2001). An ecological perspective on the effects of violence on children. *Journal of Community Psychology*. Special issue: The impact of violence on children at home, community, and national levels, Vol 29:3, pp. 361-378.
- Garbarino, J., & Kostelny, K. (1996). The effects of political violence on Palestinian children's behavior problems: A risk accumulation model. *Child Development*, Vol 67, pp. 33-45.

- Garmezy, N., Masten, A. S., & Tellegen, A. (1984). The study of stress and competence in children: A building block for developmental psychopathology. *Child Development*, Vol 55, pp. 97–111.
- George C., Main M. (1979). Social interactions of young abused children: approach avoidance and aggression. *Child Development*, Vol 50, pp. 306-318.
- Gewirtz, A., Forgatch, M., Wieling, E. (2008). Parenting Practices as Potential Mechanisms for Child Adjustment Following Mass Trauma. *Journal of Marital and Family Therapy* April 2008, Vol 34:2, pp. 177–192
- Gibb, B. E., Schofield, C. A., & Coles, M. E. (2009). Reported history of childhood abuse and young adults' information-processing biases for facial displays of emotion. *Child Maltreatment*, Vol 14, pp. 148– 156.
- Gold, J.I., Taft, C.T., Keehn, M.G., King, D.W., King, L.A., Samper, R.E. (2007). PTSD symptom severity and family adjustment among female Vietnam veterans. *Military Psychology*, Vol 19(2), pp. 71-81.
- Gratz, K. L., & Roemer, L. (2004). Multidimensional assessment of emotion regulation and dysregulation: Development, factor structure, and initial validation of the Difficulties in Emotion Regulation Scale. *Journal of Psychopathology and Behavioral Assessment*, Vol 26, pp. 41–54.
- Harvey, M.R. (2007). Towards an ecological understanding of resilience in trauma survivors: Implications for theory, research, and practice. *Journal of Aggression, Maltreatment & Trauma*, Vol 14(1-2), pp. 9-32.
- Herman, J.L. (1992a). Complex PTSD: A Syndrome in Survivors of Prolonged and Repeated Trauma. *Journal of Traumatic Stress*, Vol 5:3, pp. 377-391.
- Herman, J.L. (1992b). *Trauma and recovery*. New York: Basic books.
- Hien, D., Honeyman, T. (2000). A closer look at the drug abuse–maternal aggression link. *Journal of Interpersonal Violence*, Vol 15:5, pp. 503-522.
- Horowitz, M.J. (1986). Stress-response syndromes: A review of posttraumatic and adjustment disorders. *Hospital & Community Psychiatry*, Vol 37:3, pp. 241-249.
- Hunter, R. S., & Kilstrom, N. (1979). Breaking the cycle in abusive families. *American Journal of Psychiatry*, Vol 136, pp. 1320-1322.
- Irwin, H.J., Melbin-Helberg, EB. (1997). Alexithymia and dissociative tendencies. *Journal of Clinical Psychology*, Vol 53:2, pp. 159-166.
- Jaffe, P., Wolfe, D.A., Wilson, S., Zak, L. (1986). Emotional and physical health problems of battered women. *The Canadian Journal of Psychiatry / La Revue Canadienne de Psychiatrie*, Vol 31:7, 625-629.
- Jensen, P. S., Salzberg, A. D., Richters, J. E., & Watanabe, H. K. (1993). Scales, diagnoses, and child psychopathology: I. CBCL and DISC relationships. *Journal of the American Academy of Child and Adolescent Psychiatry*, Vol 32, pp. 397-406.
- Johnston, C., Murray, C., Hinshaw, S. P., Pelham, W. E., & Hoza, B. (2002). Responsiveness in interactions of mothers and sons with ADHD: Relations to maternal and child characteristics. *Journal of Abnormal Child Psychology*, Vol 30, pp. 77-88.

- Jordan, B. K., Marmar, C. R., Fairbank, J. A., Schlenger, W.E., Kulka, R.A., Hough, R.L., Weiss, D.S. (1992). Problems in families of male Vietnam veterans with posttraumatic stress disorder. *Journal of Consulting and Clinical Psychology*, Vol 60:6, pp. 916-926.
- Joukamaa, M., Luutonen, S., Von Reventlow, H., Patterson, P., Karlsson, H., Salokangas, R. (2008). Alexithymia and childhood abuse among patients attending primary and psychiatric care: Results of the RADEP Study. *Psychosomatics: Journal of Consultation Liaison Psychiatry*, Vol 49:4, pp. 317-325.
- Jouriles, E.N., McDonald, R., Spiller, L., Norwood, W. D., Swank, P. R., Stephens, N., Ware, H., Buzy, W. (2001). Reducing conduct problems among children of battered women. *Journal of Consulting and Clinical Psychology*, 69, 774-785.
- Jurist, Elliot L. (2005). Mentalized Affectivity. *Psychoanalytic Psychology*, Vol 22:3, pp. 426-444.
- Kashani, J.H., Carlson, G.A. (1987). Seriously depressed preschoolers. *American Journal of Psychiatry*, Vol 144:3, pp. 348-350.
- Kasius, M. C., Ferdinand, R. F., van den Berg, H., & Verhulst, F. C. (1997). Associations between different diagnostic approaches for child and adolescent psychopathology. *Journal of Child Psychology and Psychiatry*, 38, 625-632
- Kaufman, J., Zigler, E.F. (1987). Do abused children become abusive parents? *Annual Progress in Child Psychiatry & Child Development*, pp. 591-600.
- Kazdin, A.E., Moser, J., Colbus D., Bell, R. (1985). Depressive symptoms among physically abused and psychiatrically disturbed children. *Journal of Abnormal Psychology*, Vol 94(3), pp. 298-307.
- Keltikangas-Järvinen, L. (1982). Alexithymia in violent offenders. *Journal of Personality Assessment*, Vol 46:5, pp. 462-467.
- Kernic, M.A., Wolf, M.E., Holt, V.L., McKnight, B., Huebner, C.E., Rivara, F.P. (2003). Behavioral problems among children whose mothers are abused by an intimate partner. *Child Abuse & Neglect*, Vol 27:11, pp. 1231-1246.
- Kiser, L. J., Ackerman, B. J., Brown, E., Edwards, N. B., McColgan, E., Pugh, R., & Pruitt, D. B. (1988). Post-traumatic stress disorder in young children: A reaction to purported sexual abuse. *Journal of the American Academy of Child & Adolescent Psychiatry*, Vol 27:5, pp. 645-649.
- Kiser, L.J., Ackerman, B.J., Brown, E., Edwards, N.B., McColgan, E., Pugh, R., Pruitt, D.B. (1988). Posttraumatic stress disorder in young children: a reaction to purported sexual abuse. *Journal of the American Academy of Child and Adolescent Psychiatry*, 27, 645-649.
- Klein, M. (1930). The importance of symbol-formation in the development of the ego. *The International Journal of Psychoanalysis*, Vol 11, pp. 24-39.
- Klein, M. (1957). Envy and Gratitude. In *Envy and Gratitude and Other Works, 1946-1963*, (Vol 3, pp. 176-235). London: Hogarth, 1975.
- Knutson, J. F. Schartz, H. A., Zaidi, L.Y. (1991). Victim risk factors in the physical abuse of children. ; *In: Targets of violence and aggression*. Baenninger, Ronald (Ed.); Oxford, England: North-Holland, pp. 103-157.

- Koverola, C., Papas, M.A., Pitts, S., Murtaugh, C., Black, M.M., Dubowitz, H. (2005). Longitudinal Investigation of the Relationship Among Maternal Victimization, Depressive Symptoms, Social Support, and Children's Behavior and Development. *Journal of Interpersonal Violence*, Vol 20:12, pp. 1523-1546.
- Kring, A.M., Werner, K.H. (2004) Emotion Regulation and Psychopathology. *In: The regulation of emotion*. Philippot, Pierre (Ed.); Feldman, Robert S. (Ed.); Mahwah, NJ, US: Lawrence Erlbaum Associates Publishers. pp. 359-385.
- Krystal, H. (1968). *Massive Psychic Trauma*. New York: Int. Univ. Press.
- Krystal, H. (1978a). Trauma and affects. *Psychoanalytic Study of the Child*, Vol 33, pp. 81-116.
- Krystal, H. (1978b). Self-representation and the capacity for self-care. *Annual of Psychoanalysis*, Vol 6, pp. 209-246.
- Krystal, H. (1991). Integration and self-healing in post-traumatic states: A ten year retrospective. *American Imago*, Vol 48:1, pp. 93-118.
- Krystal, H. (1997). *In: Essential papers on addiction*. Yalisove, Daniel L. Self representation and the capacity for self care. (Ed.); New York, NY, US: New York University Press, pp. 109-146.
- Krystal, H. (1997). Late life effects of trauma: Adult catastrophic and infantile type. *Journal of Geriatric Psychiatry*, Vol 30:1, pp. 61-82.
- Lane, R.D., Sechrest, L., Reidel, R., Weldon, V., Kaszniak, A., Schwartz, G.E. (1996). Impaired verbal and nonverbal emotion recognition in alexithymia. *Psychosomatic Medicine*, Vol 58, pp. 203-10.
- Lane, R.D. Sechrest, L., Riedel, R., Shapiro, D.E., Kaszniak, A.W. (2000). Pervasive emotion recognition deficit common to alexithymia and the repressive coping style. *Psychosomatic Medicine*, Vol 62(4), pp. 492-501.
- Lane, R.D., Ahern, G.L., Schwartz, G.E., Kaszniak, A.W. (1997). Is alexithymia the emotional equivalent of blindsight? *Biological Psychiatry*, Vol 42:9, pp. 834-844.
- Leite, T.P. (2000). Cultural Differences in the coping resources of Caribbean, Latina, and African-American women. Doctoral Dissertation, Gordon F. Derner Institute for Advanced Psychological Studies, Adelphi University.
- Leite, T.P., Hien, D.A. (2000). Cultural and ethnic diversity in coping mechanisms of inner-city minority women. Unpublished manuscript. Adelphi University.
- Levendosky, A.A., Huth-Bocks, A.C., Shapiro, D.L., & Semel, M.A. (2003). The impact of domestic violence on the maternal-child relationship and preschool-age children's functioning. *Journal of Family Psychology*, Vol 17, pp. 275-287.
- Lieberman, A. F., Van Horn, P., & Ozer, E. J. (2005). Preschooler witnesses of marital violence: Predictors and mediators of child behavior problems. *Developmental Psychopathology*, Vol 17, pp. 385-396.
- Lieberman, A.F., Knorr, K. (2007). The impact of trauma: A development framework for infancy and early childhood. *Psychiatric Annals*, Vol 37:6, pp. 416-422.
- Lieberman, A.F. Padrön, E., Van Horn, P., Harris, W.W. (2005). Angels in the nursery: The intergenerational transmission of benevolent parental influences. *Infant Mental Health Journal*, Special issue: Angels in the nursery. Vol 26:6, pp. 504-520.

- Litz, B.T., Gray, M.J. (2002). Emotional numbing in posttraumatic stress disorder: Current and future research directions. *Australian and New Zealand Journal of Psychiatry*, Vol 36:2, pp. 198-204.
- Livingston, R. (1987). Sexually and physically abused children. *Journal of the American Academy of Child and Adolescent Psychiatry*, Vol 26, pp. 413-415.
- Lowe, L. A. (1998). Using the child behavior checklist in assessing conduct disorder: Issues of reliability and validity. *Research on Social Work Practice*, Vol 8:3, pp. 286-301.
- Lumley, M. A., Mader, C., Gramzow, J., & Papineau, K. (1996). Family factors related to alexithymia characteristics. *Psychosomatic Medicine*, Vol 58, pp. 211-216.
- Lundh, L.G., Johnsson, A., Sundqvist, K., Olsson, H. (2002). Alexithymia, memory of emotion, emotional awareness, and perfectionism. *Emotion*, Vol 2:4, pp. 361-379.
- Luster, T. (1998). Individual differences in the caregiving behavior of teenage mothers: An ecological perspective. *Clinical Child Psychology and Psychiatry*, Vol 3:3, 341-360.
- Lyons-Ruth, K. (2006). The Interface Between Attachment and Intersubjectivity: Perspective from the Longitudinal Study of Disorganized Attachment. *Psychoanalytic Inquiry*, Vol 26:4, pp. 595-616.
- Lyons-Ruth, K., Block, D. (1996). The Disturbed Caregiving System: Relations among Childhood Trauma, Maternal Caregiving, and Infant Affect and Attachment. *Infant Mental Health Journal*, Vol 17:3, pp. 77-95.
- Main, M., Cassidy, J. (1988). Categories of response to reunion with the parent at age 6: Predictable from infant attachment classifications and stable over a 1-month period. *Developmental Psychology*, Vol 24:3, pp. 415-426.
- Main, M., Hesse, E. (1990). Parents' unresolved traumatic experiences are related to infant disorganized attachment status: Is frightened and/or frightening parental behavior the linking mechanism? In: *Attachment in the preschool years: Theory, research, and intervention*. Greenberg, Mark T. (Ed.); Cicchetti, Dante (Ed.); Cummings, E. Mark (Ed.); Chicago, IL, US: University of Chicago Press, pp. 161-182.
- Manninen, M., Therman, S., Suvisaari, J., Ebeling, H., Moilanen, I., Huttunen, M., Joukamaa, M., (2011). Alexithymia is common among adolescents with severe disruptive behavior. *Journal of Nervous and Mental Disease*, Vol 199(7), pp. 506-509.
- Masten A.S. (1994). Resilience in individual development: Successful adaptation despite risk and adversity. In M.C. Wang & E. Gordon (Eds.), *Educational resilience in inner city America: Challenges and prospects* (pp. 3-25). Hillsdale, NJ: Lawrence Erlbaum.
- Masten, A. S. (2001). Ordinary magic. Resilience processes in development. *American Psychologist*, 56, 227-238.
- Mattila, A. K., Keefer, K. V., Taylor, G. J., Joukamaa, M., Jula, A., Parker, J. D. A., & Bagby, R. M. (2010). Taxometric analysis of alexithymia in a general population sample from Finland. *Personality and Individual Differences*, Vol 49:3, pp. 216-221

- Mcelroy, E.M., Rodriguez, C.M. (2008). Mothers of children with externalizing behavior problems: Cognitive risk factors for abuse potential and discipline style and practices. *Child Abuse & Neglect*, Vol 32:8, pp. 774-784.
- Mcfarlane, J.M., Groff, J.Y., O'Brien, J.A., Watson, K. (2003). Behaviors of children who are exposed and not exposed to intimate partner violence: an analysis of 330 black, white, and Hispanic children. *Pediatrics*. Vol 112, pp. 202-207.
- Mcfarlane, A.C., & de Yehuda, R. (1996). Resilience, vulnerability and the course of posttraumatic reactions. In B. A. Van der Kolk, A. C. Mcfarlane, & L. Weisaeth (Eds.), *Traumatic stress: The effects of overwhelming experience on mind, body and society* (pp. 155-181). New York: Guilford Press.
- McLeer, S.V., Deblinger, E., Atkins, M.S., Foa, E.B., Ralphe, D.L. (1988). Post-traumatic stress disorder in sexually abused children. *Journal of the American Academy of Child and Adolescent Psychiatry*, Vol 27, pp. 650-654.
- McLeer, S.V., Deblinger, E.B., Henry, D., Orvaschel, H. (1992). Sexually abused children at high risk for post-traumatic stress disorder. *Journal of the American Academy of Child & Adolescent Psychiatry*, Vol 31:5, pp. 875-879.
- Milner, J.S., Hlasey, L.B., & Fultz, J. (1995). Empathic responsiveness and affective reactivity to infant stimuli in high- and low-risk for physical child abuse mothers. *Child Abuse & Neglect*, Vol 19, pp. 767-780.
- Milner, J. S., Gold, R. G., & Wimberley, R. C. (1986). Prediction and explanation of child abuse: cross-validation of the Child Abuse Potential Inventory. *Journal of Consulting and Clinical Psychology*, Vol 54, pp. 865-866.
- Milner, J. S., Robertson, K. R., & Rogers, D. L. (1990). Childhood history of abuse and adult child abuse potential. *Journal of Family Violence*. Vol 5(1), pp. 15-34.
- Milner, J. S., Thomsen, C. J., Crouch, J. L., Rabenhorst, M. M., Martens, P. M., Dyslin, C. W., et al. (2010). Do trauma symptoms mediate the relationship between childhood physical abuse and adult child abuse risk? *Child Abuse and Neglect*, Vol 34, pp. 332-334.
- Milner, Joel S. (1994). Assessing physical child abuse risk: The Child Abuse Potential Inventory. *Clinical Psychology Review*, Vol 14:6, pp. 547-583.
- Mitchell, S.A. (1998). Aggression and the endangered self. *Psychoanalytic Inquiry*. Special issue: Aggression: Contemporary controversies, Vol 18:1, pp. 21-30.
- Mitchell, S. J., Lewin, A., Rasmussen, A., Horn, I. B., & Joseph, J. G. (2011). Maternal distress explains the relationship of young African Americans mothers' violence exposure with their preschoolers' behavior. *Journal of Interpersonal Violence*, 26, 580-603.
- Montebarocci, O., Codispoti, M., Baldaro, B., Rossi, N. (2004). Adult attachment style and alexithymia. *Personality and Individual Differences*, Vol 36:3, pp. 499-507.
- Moriarty, N., Stough, C., Tidmarsh, P., Eger, D., Dennison, S. (2001). Deficits in emotional intelligence underlying adolescent sex offending. *Journal of Adolescence*, Vol 24(6), pp. 743-751.
- Morrel, T. M., Dubowitz, H., Kerr, M. A., & Black, M. M. (2003). The effect of maternal victimization on children: A cross-informant study. *Journal of Family Violence*, Vol 18, pp. 29-41.

- Morrell, J., & Murray, L. (2003). Parenting and the development of conduct disorder and hyperactive symptoms in childhood: A prospective longitudinal study from 2 months to 8 years. *Journal of Child Psychology and Psychiatry*, Vol 44, pp. 489-508.
- Muzik, Maria Marcus, Sheila M. Flynn, Heather A. (2009). Psychotherapeutic treatment options for perinatal depression: Emphasis on maternal-infant dyadic outcomes. *Journal of Clinical Psychiatry*, Vol 70(9), pp. 1318-1319.
- Nash, M.R., Hulsey, T.L., Sexton, M.C., Harralson, T.L., Lambert, W. (1993). Long-term sequelae of childhood sexual abuse: Perceived family environment, psychopathology, and dissociation. *Journal of Consulting and Clinical Psychology*, Vol 61:2, pp. 276-283.
- Nemiah, J., Sifneos, P. (1970). Affect and fantasy in patients with psychosomatic disorders. In: Hill O, editor. *Modern trends in psychosomatic medicine - 2*. London: Butterworths. pp. 26-34.
- Nemiah, J.C. (1996). Alexithymia: Present, past—and future? *Psychosomatic Medicine*, Vol 58(3), pp. 217-218.
- Nemiah, J.C. (2000). A psychodynamic view of psychosomatic medicine. *Psychosomatic Medicine*, Vol 62:3, pp. 299-303.
- Newcomb, M.D., Locke, T.F. (2001). Intergenerational cycle of maltreatment: a popular concept obscured by methodological limitations. *Child Abuse & Neglect*, Vol 25:9, pp.1219-1239.
- Nolan, T.M., Bond, L., Adler, R., Littlefield, L., Birleson, P., Marriage, K., Mawdsley, A., Salo, R., Tonge, B.J., (1996). Child Behaviour Checklist classification of behaviour disorder. *Journal Of Paediatrics And Child Health*, Vol 32:5, pp. 405-411.
- Noll, J.G., Trickett, P.K., Harris, W.W., Putnam, F.W. (2009). The cumulative burden borne by offspring whose mothers were sexually abused as children: Descriptive results from a multi-generational study. *Journal of Interpersonal Violence*, Vol 24, pp. 424-449.
- Norris, F. H. (1992). Epidemiology of trauma: Frequency and impact of different potentially traumatic events on different demographic groups. *Journal of Consulting and Clinical Psychology*, Vol 60, pp. 409-418.
- Norris, Fran H. Friedman, Matthew J. Watson, Patricia J. Byrne, Christopher M. Diaz, Eolia Kaniasty, Krzysztof. (2002). 60,000 disaster victims speak: Part I. An empirical review of the empirical literature, 1981-2001. *Psychiatry: Interpersonal and Biological Processes*, Vol 65:3, pp. 207-239.
- Nunes, E., Quitkin, F., Donovan, S., Deliyannides, D., Ocepek-Welikson, K., Koenig, T., et al. (1998). Imipramine treatment of opiate dependent patients with depressive disorders: A placebo-controlled trial. *Archives of General Psychiatry*, Vol 55, pp. 153-160.
- Olds, D. L., Hill, P. L., O'Brien, R., Racine, D., & Moritz, P. (2003). Taking preventive intervention to scale: The nurse-family partnership. *Cognitive and Behavioral Practice*, Vol 10, pp. 278-290.
- Olds, D. L., Robinson, J., O'Brien, R., et al. (2002). Home visiting by paraprofessionals and by nurses: A randomized, controlled trial. *Pediatrics*, Vol 110:3, pp. 486-496.

- Olds, D., Eckenrode, J., Henderson, C., Kitzman, H., Powers, J., Cole, R., et al. (1997). Long-term effects of home visitation on maternal life course and child abuse and neglect: 15-year follow-up of a randomized trial. *Journal of American Medical Association*, Vol 278, pp. 637-643.
- Olds, David L. (2002). Prenatal and infancy home visiting by nurses: From randomized trials to community replication. *Prevention Science*, Vol 3:3, pp. 153-172.
- Parker, J. D. A., Bagby, R. M., Taylor, G. J., Endler, N. S., & Schmitz, P. (1993). Factorial validity of the 20-item Toronto Alexithymia Scale. *European Journal of Personality*, Vol 7, pp. 221-232.
- Parker, K.V. Keefer, G.J. Taylor, R.M. Bagby. (2008). Latent structure of the alexithymia construct: A taxometric investigation. *Psychological Assessment*, Vol 20, pp. 385-396
- Patterson, G., & Capaldi, D. (1991). Antisocial parents: Unskilled and vulnerable. In P. Cowan & M. Hetherington (Eds.), *Family transitions* (pp. 195-218). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.
- Patterson, G.R. (1988). Stress: A change agent for family process. In N. Garnezy, & M. Rutter (Eds.), *Stress, coping, and development in children* (pp. 235-264). Baltimore, MD: Johns Hopkins University Press.
- Pears, K.C., Capaldi, D.M. (2001). Intergenerational transmission of abuse: a two-generational prospective study of an at-risk sample. *Child Abuse & Neglect*, Vol 25, pp.1439-1461.
- Petty, C.R., Rosenbaum, J.F., Hirshfeld-Becker, D.R., Henin, A., Hubley, S., LaCasse, S., Faraone, S.V., Biederman, J. (2008). The child behavior checklist broad-band scales predict subsequent psychopathology: A 5-year follow-up. *Journal of Anxiety Disorders*, Vol 22, pp. 532-539.
- Pianta, R., Egeland, B., & Erickson, M. F. (1989). The antecedents of maltreatment: Results of the Mother-Child Interaction Research Project. In D. Cicchetti & V. Carlson (Eds.), *Child maltreatment: Theory and research on the causes and consequences of child abuse and neglect* (pp. 203-253). New York: Cambridge University Press.
- Preacher, K.J., & Hayes, A.F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavioral Research Methods*, Vol 40, pp. 879-891.
- Pribor, E.F., Yutzy, S.H., Dean, J.T, Wetzel, R.D. (1993). Briquet's syndrome, dissociation, and abuse. *The American Journal of Psychiatry*, Vol 150:10, pp. 1507-1511.
- Pynoos, R. S., Ritzmann, R. F., Steinberg, A. M., Goenjian, A., & Prisecaru, I. (1996). A behavioral animal model of posttraumatic stress disorder featuring repeated exposure to situational reminders. *Biological Psychiatry*, Vol 39, pp. 129-134.
- Reid, J. (1986). Social-interactional patterns in families of abused and nonabused children. In C. Z. Waxler, E. M. Cummings, & R. Iannotti (Eds.), *Altruism and aggression: Biological and social origins*, pp. 238-255.
- Reid, J.B., Patterson, G.R., & Lorber, R. (1982). The abused child: Victim, instigator, or innocent bystander? In D. Bernstein (Ed.), *Response Structure and Organization*. Lincoln: University of Nebraska Press, pp. 47-68.

- Reid, J.B., Taplin, P.S. (1977). Changes in parent consequences as a function of family intervention. *Journal of Consulting and Clinical Psychology*, Vol 45:6, pp. 973-981.
- Reidy, T.J. (1977). The aggressive characteristics of abused and neglected children. *Journal of Clinical Psychology*, Vol 33, pp.1140-1145.
- Reis, J. (1989). A comparison of young teenage, older teenage, and adult mothers on determinants of parenting. *Journal of Psychology: Interdisciplinary and Applied*, Vol 123:2, pp. 141-151.
- Roberts, R., O'Connor, T., Dunn, J., Golding, J. (2004). The effects of child sexual abuse in later family life; mental health, parenting and adjustment of offspring. *Child Abuse & Neglect*, Vol 28(5), p525-545.
- Rogeness, G.A., Amrung, S.A., Macedo, C.A., Harris, W.R., Fisher, C. (1986). Psychopathology in abused or neglected children. *Journal of the American Academy of Child Psychiatry*, Vol 25:5, pp.659-665.
- Rossmann, B., Bingham, R., & Emde, R. (1997). Symptoms and adaptive functioning for children exposed to normative stressors, dog attack, and parental violence. *Journal of the American Academy of Child and Adolescent Psychiatry*, Vol 36, pp.1089-1097.
- Ruscio, A.M., Weathers, F. W., King, L.A., & King, D.W. (2002). Male war-zone veterans' perceived relationships with their children: The importance of emotional numbing. *Journal of Traumatic Stress*, Vol 15, pp. 351– 357.
- Rutter, M. (1989). Intergenerational continuities and discontinuities in serious parenting difficulties (pp. 317-348). In D. Cicchetti & V. Carlson (eds.), *Child maltreatment: Theory and research on the causes and consequences of child abuse and neglect*. New York: Cambridge University Press.
- Sadler, Lois S. Slade, Arietta Mayes, Linda C. (2006). Minding the baby: A mentalization-based parenting program. In: *The handbook of mentalization-based treatment*. Allen, Jon G. (Ed.); Fonagy, Peter (Ed.); Hoboken, NJ, US: John Wiley & Sons Inc, pp. 271-288.
- Salzinger, S., Kaplan, S., Pelcovitz, D., Samit, C., Krieger, R. (1984). Parent and teacher assessment of children's behavior in child maltreating families. *Journal of the American Academy of Child Psychiatry*, Vol 23, pp. 458-464.
- Samper, R. E., Taft, C. T., King, D. W., & King, L. A. (2004). Posttraumatic stress disorder symptoms and parenting satisfaction among a national sample of male Vietnam veterans. *Journal of Traumatic Stress*, Vol 17, pp. 311– 315.
- Samuelson, K.W., Cashman, C. (2008). Effects of intimate partner violence and maternal posttraumatic stress symptoms on children's emotional and behavioral functioning. *Journal of Emotional Abuse*, Vol 8:1-2, pp. 139-153.
- Schechter, D.S., Coates, S.W., Kammer, T., Coots, T., Zeanah, C.H., Davies, M., Schonfeld, I.S., Marshall, R.D., Liebowitz, M.R., Trabka, K.A., Mccaw, J.E., Myers, M.M. (2008). Distorted maternal mental representations and atypical behavior in a clinical sample of violence-exposed mothers and their toddlers. *Journal of Trauma & Dissociation*, Vol 9:2, pp. 123-147.

- Schechter, D.S., Coats, T., Zeanah, C.H., Davies, M., Coates, S.W., Trabka, K.A., Marshall, R.D., Liebowitz, M.R., Myers, M.M. (2005). Maternal mental representations of the child in an inner-city clinical sample: Violence-related posttraumatic stress and reflective functioning. *Attachment & Human Development*, Vol 7:3, pp. 313-331.
- Schechter, D.S., Davis, B.E. (2007). Parenting in a time of crisis. *Psychiatric Annals*, 37:6, p. 423-428.
- Schechter, D.S., Willheim, E., Hinojosa, C., Scholfield-Kleinman, K., Turner, J.B., McCaw, J., Zeanah, C.H., Myers, M.M. (2010). Subjective and Objective Measures of Parent-Child Relationship Dysfunction, Child Separation Distress, and Joint Attention. *Psychiatry*, 73:2: 130-145.
- Schechter, D.S.; Coats, T., Zeanah, C.H., Davies, M., Coates, S.W., Trabka, K.A., Marshall, R.D., Liebowitz, M.R., Myers, M.M. (2005). Maternal mental representations of the child in an inner-city clinical sample: Violence-related posttraumatic stress and reflective functioning. *Attachment & Human Development*, Vol 7:3, pp. 313-331.
- Schechter, D.S. Willheim, E. (2009). Disturbances of attachment and parental psychopathology in early childhood. *Child and Adolescent Psychiatric Clinics of North America*, Vol 18:3, pp. 665-686.
- Schindler F., Arkowitz H. (1986). The assessment of mother-child interactions in physically abusive and nonabusive families. *Journal of Family Violence*, Vol 1, pp. 247-257.
- Schore, A.N. (2010). Relational trauma in infancy: Psychoanalytic, attachment and neuropsychological contributions to parent–infant psychotherapy. Baradon, Tessa (Ed.); pp. 19-47. New York, NY, US: Routledge/Taylor & Francis Group.
- Schore, J.R.; Schore, A.N. (2008). Modern attachment theory: The central role of affect regulation in development and treatment. *Clinical Social Work Journal*, Vol 36:1, Mar, pp. 9-20.
- Schwerdtfeger, K. L., & Goff, B. S. N. (2007). The intergenerational transmission of trauma: Exploring mother-fetus prenatal attachment. *Journal of Traumatic Stress*, Vol 20, pp. 39-51.
- Shabad, P. (1993). Repetition and Incomplete Mourning: The Intergenerational Transmission of Traumatic Themes. *Psychoanalytic Psychology*, Vol 10(1), pp. 61-75.
- Simons, K., Paternite, C., & Shore, C. (2001). Quality of parent/adolescent attachment and aggression in young adolescents. *The Journal of Early Adolescence*, Vol 21, pp. 182-203.
- Slade, A. Parental reflective functioning: An introduction. (2005a). *Attachment & Human Development*, Vol 7:3, pp. 269-281.
- Slade, A., Sadler, L.S., Mayes, L.C. (2005b). Minding the Baby: Enhancing Parental Reflective Functioning in a Nursing/Mental Health Home Visiting Program. In: *Enhancing early attachments: Theory, research, intervention, and policy*. Berlin, Lisa J. (Ed.); Ziv, Yair (Ed.); Amaya-Jackson, Lisa (Ed.); Greenberg, Mark T. (Ed.); New York, NY, US: Guilford Press, pp. 152-177.

- Slade, A. Reflective parenting programs: Theory and development. (2006). *Psychoanalytic Inquiry*, Vol 26:4, pp. 640-657.
- Smith, A.M., O'Leary, S.G. (1995). Attributions and arousal as predictors of maternal discipline. *Cognitive Therapy and Research*, Vol 19:4, pp. 459-471.
- Sonnby-Borgström, M. (2009). Alexithymia as related to facial imitation, mentalization, empathy, and internal working models-of-self and -others. *Neuropsychoanalysis*, Vol 11, pp.111-128.
- Sourander, A., Jensen, P., Davies, M., Niemelä, S., Elonheimo, H., Ristkari, T., Helenius, H., Sillanmäki, L., Piha, J., Kumpulainen, K., Tamminen, T., Moilanen, I., Almqvist, F. (2007). Who is at greatest risk for adverse long-term outcomes? The Finnish From a Boy to a Man study. *Journal of the American Academy of Child & Adolescent Psychiatry*, Vol 46:9, pp. 1148-1161.
- Spitzer, R.L., Williams, J.B., Gibbon, M., & First, M.B. (1992). The Structured Clinical Interview for DSM-III-R (SCID). I: History, rationale, and description. *Arch. Gen. Psychiatry*, Vol 49:8, pp. 624-629.
- Sternberg, K.J. Baradaran, L.P., Abbott, C.B., Lamb, M.E., & Guterman, E. (2006). The type of violence, age, and gender differences in the effects of family violence on children's behavior problems: A mega-analysis. *Developmental Review*, Vol 26, pp. 89-112.
- Stevens, G.W.J.M., Vollebergh, W.A.M., Pels, T.V.M., Crijnen, A.A.M. (2005). Predicting internalizing problems in Moroccan immigrant adolescents in the Netherlands. *Social Psychiatry Psychiatric Epidemiology*, Vol 40, pp. 1003-1011.
- Straus, M. A., Hamby, S. L., Boney-mccoy, S., & Sugarman, D. B. (1996). The revised conflict tactics scale (CTS2): Development and preliminary psychometric data. *Journal of Family Issues*, Vol 17, pp. 283-316.
- Straus, M.A., Hamby, S.L., Finkelhor, D., Moore, D.W., & Runyan, D. (1998). Identification of child maltreatment with the Parent-Child Conflict Tactics Scales: Development and psychometric data for a national sample of American parents. *Child Abuse and Neglect*, Vol 22, pp. 249-270.
- Straus, M.A. (1979). Measuring intrafamily conflict and violence: The Conflict Tactics (CT) Scales. *Journal of Marriage & the Family*, Vol 41:1, pp. 75-88.
- Straus, M.A. (1990). The Conflict Tactics Scale and its critics: An evaluation and new data on validity and reliability. In M.A. Straus & R.J. Gelles, *Physical violence in American families: Risk factors and adaptations to violence in 8,145 families* (pp. 49-73). New Brunswick, NJ: Transaction Publishing.
- Stringer, S.A., la Greca, A.M. (1985). Correlates of child abuse potential. *Journal of Abnormal Child Psychology: An official publication of the International Society for Research in Child and Adolescent Psychopathology*, Vol 13:2, pp. 217-226.
- Taylor, G.J. (1984). Alexithymia: Concept, Measurement, and Implications for Treatment. *The American Journal of Psychiatry*. Vol 141, pp. 725-732.
- Taylor, G.J., Bagby, M.R., Parker, J.D.A. (1997). *Disorders of affect regulation: Alexithymia in medical and psychiatric illness*. New York, NY, US: Cambridge University Press.
- Terr L.C. (1991). Childhood Traumas: An outline and overview. *The American Journal of Psychiatry*, Vol 148:1, pp. 10-20.

- Teten, A.L., Miller, L.A., Bailey, S.D., Dunn, N.J., Kent, T.A. (2008). Empathic deficits and alexithymia in trauma-related impulsive aggression. Special issue: Impulsivity and the law, *Behavioral Sciences & the Law*, Vol 26:6, pp. 823-832.
- Thompson, R. (2007). Mothers' violence victimization and child behavior problems: Examining the link. *American Journal of Orthopsychiatry*, Vol 77, pp. 306-315.
- Thompson, Ross A. (1994). Emotion regulation: A theme in search of a definition. *Monographs of the Society for Research in Child Development*, Vol 59:2-3, pp. 25-52.
- Troisi, A., D'Argenio, A., Peracchio, F., Petti, P. (2001). Insecure attachment and alexithymia in young men with mood symptoms. *Journal of Nervous and Mental Disease*, Vol 189:5, pp. 311-316.
- Van der Kolk, B.A. (1988). The Trauma Spectrum: The interaction of biological and social events in the genesis of the trauma response. *Journal of Traumatic Stress*, Vol 1:3, pp. 273-290.
- Van der Kolk, B.A. (1989). The Compulsion to Repeat the Trauma. *Psychiatric Clinics of North America*, Vol 12: 2, pp. 389-411.
- Van der Kolk, B.A., Pelcovitz, D., Roth, S., Mandel, FS., mcfarlane, A., Herman, JL. (1996). Dissociation, Somatization, and Affect Dysregulation: The Complexity of Adaptation to Trauma. *American Journal of Psychiatry*, Vol 153:7, 83-93.
- Van der Kolk, BA. (2005). Developmental Trauma Disorder: Toward a Rational Diagnosis for Children with Complex Trauma Histories. *Psychiatric Annals*, Vol 35:5, pp. 401-408.
- Van der Kolk, Bessel A., Fislser, Rita E., (1994). Childhood abuse and neglect and loss of self-regulation. *Bulletin of the Menninger Clinic*, Vol 58:2, pp. 145-168.
- Vanheule, S., Desmet, M., Meganck, R., & Bogaerts, S. (2007). Alexithymia and interpersonal problems. *Journal of Clinical Psychology*, Vol 63, pp. 109-117.
- Wakschlag, L.S., & Hans, S.L. (1999). Relation of maternal responsiveness during infancy to the development of behavior problems in high-risk youths. *Developmental Psychology*, Vol 35, pp. 569-579.
- Walton, A., Flouri, E. (2010). Contextual risk, maternal parenting and adolescent externalizing behaviour problems: The role of emotion regulation. United Kingdom: Wiley-Blackwell Publishing Ltd., Vol 36:2, pp. 275-284.
- Werner, E. E. (1992). The children of Kauai: Resiliency and recovery in adolescence and adulthood. *Journal of Adolescent Health*, Vol 13, pp. 262-268.
- Widom, C.S. (1989). The cycle of violence. *Science*, Vol 244:4901, pp. 160-166.
- Williamson, J., Borduin, C., Howe, B. (1991). The ecology of adolescent maltreatment: a multilevel examination of adolescent physical abuse sexual abuse and neglect. *Journal of Consulting and Clinical Psychology*, Vol 59, pp. 449-457.
- Winnicott, D.W. (1945). Primitive emotional development. In D.W. Winnicott, *Through pediatrics to psychoanalysis* (1965). London: Routledge.
- Winnicott, D.W. (1960a). The theory of the parent-infant relationship. *International Journal of Psycho-Analysis*, Vol , pp. 585-595.

- Winnicott, D.W. (1960b). Ego distortions in terms of true and false self. In D.W. Winnicott, *The maturational processes and the facilitating environment* (1965). New York: International Universities Press.
- Winnicott, D.W. (1967). Mirror-role of mother and family in child development. In D.W. Winnicott, *Playing and reality* (1971). London: Tavistock Publications.
- Wolfe, D.A., Sas, L., Wekerle, C., (1994). Factors associated with the development of post-traumatic stress disorder among child victims of sexual abuse. *Child Abuse and Neglect*, Vol 18, pp. 37-50.
- Youngblade, L.M., Belsky, J. (1989). Child maltreatment, infant-parent attachment security, and dysfunctional peer relationships in toddlerhood. *Topics in Early Childhood Special Education*, Vol 9:2, pp. 1-15.
- Zhao, X., Lynch, J.G., Chen, Q. (2010) Reconsidering Baron and Kenny: Myths and truths about mediation analysis. *Journal of Consumer Research*, Vol 37:2, pp. 197-206.
- Zuravin, S.J., McMillen, C., DePanfilis, D., & Risley-Curtiss, C. (1996). The intergenerational cycle of child maltreatment: Continuity versus discontinuity. *Journal of Interpersonal Violence*, Vol 11, pp. 315-334.