

PARENT TRAUMA HISTORY AND PARENTING STYLE: RELATION TO CHILD
TRAUMA AND CHILD PSYCHOPATHOLOGY

by

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Abstract

The purpose of the current study was to further explore the relations between parent trauma, parenting behavior, child trauma, and child adjustment. The sample included 358 children (191 boys and 167 girls) and their primary caregiver (48 fathers and 310 mothers). The children's ages ranged from 10 to 17 with an average age of 13. Parent trauma was not found to be related to child trauma through parenting behaviors. Child trauma was found to mediate the relations between parenting and child adjustment. There was some evidence of parenting mediating the relation between parent trauma and child adjustment. This research underscores the importance of understanding the risk and protective factors associated with parent trauma and its influences on child trauma and adjustment as well as the importance of good parenting as a protective factor. Further, this study supports past research which highlights those pathways which lead to resilience.

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Table of Contents

List of Tables.....	vi
List of Figures.....	vii
Chapter 1 – Introduction.....	1
1.1 – Overview.....	1
1.2 – Parent Trauma History and Child Adjustment.....	2
1.3 – Parent Trauma History and Parenting Behavior.....	4
1.4 – Parenting Behavior and Child Trauma.....	7
1.5 – Child Trauma and Child Adjustment.....	8
1.6 – Parenting Behavior and Child Adjustment.....	10
1.7 – Current Project.....	12
1.8 – Hypothesis.....	14
Chapter 2 – Methods.....	15
2.1 – Participants.....	15
2.2 – Procedure.....	15
2.3 – Measures.....	16
2.3.1 – Demographic Data.....	16
2.3.2 – Childhood Trauma Questionnaire.....	16
2.3.3 – Child Monitoring.....	17
2.3.4 – Parent-Child Relationship.....	18
2.3.5 – Life Incidence of Traumatic Events (LITE).....	18
2.3.6 – Child Behavior Checklist & Youth Self Report.....	19

Chapter 3 – Results.....	20
3.1 – Descriptive Statistics.....	20
3.2 – Covariates.....	21
3.3 – Path Analyses.....	23
3.3.1 – Model 1: Child Report Model.....	23
3.3.2 – Model 2: Parent Report Model.....	27
3.3.3 – Model 3: Mixed Model.....	31
3.3.4 – Model 3: Multiple Group Mixed Model.....	34
Chapter 4 – Discussion.....	37
4.1 – The Effects of Parent Maltreatment on Parenting Behaviors.....	38
4.2 – The Effects of Parent Maltreatment on Child Adjustment.....	39
4.3 – The Effects of Parenting Behaviors on Child Trauma.....	40
4.4 – The Effects of Parenting Behaviors on Child Adjustment.....	41
4.5 – The Effects of Child Trauma on Child Adjustment.....	42
4.6 – Parent Sex Differences.....	42
4.7 – The Effects of Parent Trauma on Children.....	44
4.8 – The Mediated Effect of Parent Maltreatment on Child Trauma.....	44
4.9 – The Mediated Effect of Parenting Behaviors on Child Adjustment.....	45
4.10 – The Mediated Effect of Parent Maltreatment on Child Adjustment.....	46
4.11 – The Mediated Effect of Parent Maltreatment on Child Trauma.....	47
4.12 – Limitations.....	49
4.13 – Conclusion.....	50
References.....	52

List of Tables

Table 1 – Means, Standard Deviations, and Ranges for Parent Trauma, Parenting Behaviors, Child Trauma, and Child Adjustment.....	58
Table 2 – Correlations of Covariates with Study Variables.....	59
Table 3 – Correlations of Covariates with Main Study Variables for Mothers.....	60
Table 4 – Correlations of Covariates with Main Study Variables for Fathers.....	61
Table 5 – Correlations Among Study Variables.....	62
Table 6 – Correlations Among Study Variables by Parent Sex.....	63
Table 7 – Comparative Goodness-of-Fit of Structural Equation Models.....	64

List of Figures

Figure 1 – Overall Hypothesized Structural Equation Model for the Relations among Parent Trauma, Parenting Behaviors, Child Trauma, and Child Symptomatology.....	67
Figure 2 – Model 1: Child Report Model. Structural Equation Model for the Relations among Parent Trauma, Parenting Behaviors, Child Trauma, Child Symptomatology, Child Race, Child Age, Child Sex, and Income.....	68
Figure 3 – Model 1: Parent Report Model. Structural Equation Model for the Relations among Parent Trauma, Parenting Behaviors, Child Trauma, Child Symptomatology, Child Age, and Income.....	69
Figure 4 – Mixed Model of Emotional Abuse. Structural Equation Model for the Relations among Parent Trauma, Parenting Behaviors, Child Trauma, Child Symptomatology, Child Age, and Income.....	70
Figure 5 – Mixed Model of Physical Abuse. Structural Equation Model for the Relations among Parent Trauma, Parenting Behaviors, Child Trauma, Child Symptomatology, Child Age, and Income.....	71
Figure 6 – Mixed Model of Sexual Abuse. Structural Equation Model for the Relations among Parent Trauma, Parenting Behaviors, Child Trauma, Child Symptomatology, Child Age, and Income.....	72
Figure 7 – Mixed Model of Emotional Neglect. Structural Equation Model for the Relations among Parent Trauma, Parenting Behaviors, Child Trauma, Child Symptomatology, Child Age, and Income.....	73

Figure 8 – Mixed Model of Physical Neglect. Structural Equation Model for the Relations among Parent Trauma, Parenting Behaviors, Child Trauma, Child Symptomatology, Child Age, and Income.....74

Parent Trauma History and Parenting Style: Relation to Child Trauma and Child Psychopathology

Chapter 1 – Introduction

1.1 – Overview

Prior research has indicated that there is a strong relation between parenting behaviors, child adjustment and psychopathology. However, less is known about the roles that parent trauma and child trauma play in this relation, individually as well as in relation to one another. In order to gain a better understanding of the ways that traumatic experiences, or risk, can affect both parents and children, it is essential that these relations be explored in more detail. Research such as this lends to a better understanding of risk and resilience in children, as well as in parents, and can aid in the development of better intervention and prevention programs for at-risk families. In the current research study the relations between traumatic experiences, parenting behaviors, and child traumatic experiences and adjustment were explored.

Research in this area is limited by a lack of a unified model of these constructs. For example, research shows that parenting behavior and child traumatic life experience each independently affect adjustment. Prior research, to a limited extent, alludes to a relation between parent trauma history, such as parents' childhood abuse experience, and parenting behaviors. In addition, there is a limited and controversial body of literature related to the intergenerational transmission of violence, or vicarious trauma.

Intergenerational trauma research pertains to the concept that there may be an intergenerational cycle of maltreatment. In other words, it has been found in some research that maltreatment is likely to be present in new generations if it was present in the parent's childhood, particularly when the parent did not show positive adjustment following the trauma (Newcomb & Locke, 2001). Vicarious trauma occurs when the trauma of the parent has effects on the child,

or vice versa, despite the child never having been exposed to the trauma directly. For example, if the mother was sexually assaulted this would affect her parenting behaviors and likelihood of depression, which may affect the child, even if the child had little to no knowledge of the trauma. However, little is known about the role that parenting behavior may play in mediating the relation between parent trauma history and child trauma and/or adjustment.

The current study was intended to further explore the relations, as a whole, among parent trauma, parenting behavior (i.e. monitoring and negativity), child trauma, and child adjustment (i.e. externalizing and internalizing symptomatology). Figure 1 illustrates the hypothesized model which will be discussed in the following sections. It was expected that parent trauma is related to parenting behavior, including negativity and monitoring. Further, it was expected that parenting behavior is related to child traumatic life events which in turn are related to child adjustment outcomes. In the following sections each of the pathways will be explored including parent trauma to child adjustment, parent trauma to parenting behaviors, parenting behaviors to child trauma, child trauma to child adjustment, and parenting behaviors to child adjustment. Each of these pathways is important to creating a full picture of the relations among parent trauma, parenting behaviors, and child adjustment.

1.2 – Parent Trauma History and Child Adjustment

Parent trauma may affect children's adjustment both through their parenting behavior and through mechanisms such as vicarious trauma. Hilarski (2004), in a review of secondary trauma and posttraumatic stress disorder (PTSD), found that youth's exposure to family member's perceived trauma and subsequent trauma response was strongly related to both posttraumatic stress disorder and likelihood of substance abuse. Exposure to parent trauma and negative parent responses to trauma (such as PTSD and substance abuse) can have a dramatic effect on

children's and adolescents' mental health and adjustment. This can occur even in the absence of direct child exposure to trauma.

Some research has shown that the relation between parent trauma and child adjustment may be informed by reports from children as well as parents. For example, in a study of 206 low-income, primarily African-American families (93%) with 4- to 6- year old children, maternal victimization history was associated with mothers' reports of externalizing and internalizing symptomatology but not teachers' or children's reports of externalizing and internalizing symptomatology (Morrel, Dubowitz, Kerr, & Black, 2003). Further, maternal victimization was not related to child reports of either social competence or cognitive development. This reveals that comparing multiple informants may be important to understanding how parent trauma affects child outcomes or if parents with abuse histories are either more sensitive, or overly sensitive, to children's outcomes. In other words, it may be the case that parents who have experienced trauma may be more attentive to their child's potential trauma and adjustment. An alternate hypothesis may be that parents who have experienced trauma may over-report child adjustment problems due to the influences of their experience on their perception of their children.

Further, the effects of parent trauma may affect child adjustment either directly or indirectly. In a longitudinal study of 203 mother-child dyads, Koverola and colleagues (2005) found that maternal victimization history was related to child internalizing and externalizing behavior problems and child socialization. Further, in this study, child behaviors problems persisted from age 4 to age 8 and maternal depression was found to act as a mediator of these relations. Similarly, in a study of 419 mothers and their 6-7 year old children, mothers victimized

during both childhood and adulthood had harsher parenting practices and children showed more externalizing and internalizing behavior problems (Dubowitz et al., 2001).

Therefore, previous studies seem to indicate that whether the mother or child reports may reveal important nuances in the relation between parent trauma and child outcomes. For example, in the study just described, it is unknown whether mothers are more sensitive to potential symptomatology in their children or over-report behavior problems. Further research comparing parent and child reports is essential to developing our understanding of this relation. Those studies reviewed in this analysis illustrate the importance of further exploring the potentially far-reaching effects of parent trauma, extending even to parenting behavior and child outcomes. Further parent trauma's relation to child outcomes may vary dependent on whether parents, children, or teachers report on measures of trauma, as well as, which types of parent trauma are explored.

1.3 – Parent Trauma History and Parenting Behavior

In exploring parent-child relationships, the unique perspective and history that each parent brings to their parenting behaviors are often neglected. A parent's experiences can have dramatic effects on their parenting behavior and children's development. In this section, we will explore the ways that parent trauma history can affect parenting behavior, as well as how the links between parent trauma and parenting behavior differ depending on the types of relations between these two constructs.

Much of the research related to parent trauma history and parenting behavior has been limited to mothers who have been sexually abused or mothers currently in domestic violence situations. This leaves the research somewhat limited in that different types of traumatic

experiences in parent's history, including sexual abuse, physical or emotional abuse, or neglect, may lead to different outcomes for parents and different effects on parenting behaviors.

Research on sexually abused mothers has shown significant associations between childhood sexual abuse and several aspects of parenting, including anxiety over intimate aspects of parenting, higher overall stress as a parent, more negative self-views of parenting, higher rates of permissive parenting, difficulty establishing boundaries, higher likelihood of using physical discipline, and higher risk of physically abusing one's children (Banyard, 1997; DiLillo & Damashek, 2003; DiLillo, Tremblay, & Peterson, 2000; Douglas, 2000; Ruscio, 2001). Ruscio (2001) also found an association between mothers' childhood sexual abuse and higher rates of permissive parenting, over and above the rate of permissive parenting found among alcoholic mothers and mothers with a history of childhood physical abuse.

When exploring mothers' victimization history, as either in childhood or adulthood, higher rates of maternal depression were found. This was in turn related to harsher parenting and more behavior problems in their children. This finding was similar whether mothers were abused, physically or sexually, as children or adults. However harsher parenting and child behavior problems were significantly higher when both childhood and adulthood victimization had occurred (Dubowitz et al., 2001). Ferrari (2002) found that a history of childhood abuse, regardless of subtype as indicated by Child Trauma Questionnaire (Bernstein et al., 2003), predicted the use of verbal and physical abuse for mothers. However this was not true for fathers. Such findings indicate that there is a need to explore how relations between parent trauma and child outcomes may differ for fathers versus mothers.

It is important that studies of parents also explore fathers as well as mothers. For example, in a study of 4351 families, 135 of which had a parent with an physical or sexual abuse

history, parental abuse history was found to be a significant predictor of risk for children and was related to higher rates of poor parenting (Dixon, Browne, & Hamilton-Giachritsis, 2005; Dixon, Hamilton-Giachritsis, & Browne, 2005). This study explored both parents, or the family as a whole, but did not examine potential differences between mothers and fathers.

Newcomb and Locke (2001) have explored the intergenerational transmission of child maltreatment in a sample of 383 parents and found that child maltreatment was related to poor parenting for both mothers and fathers. Newcomb and Locke found further differences between mothers and fathers when exploring the subtypes of parent trauma including family neglect and sexual abuse. For mothers, the subtype of family neglect was related to poor parenting. For mothers, sexual abuse was related to aggressive parenting, whereas for fathers, sexual abuse was related to rejecting parenting practices. This reflects the need for research studies which explore the relation between parenting trauma and parenting behavior while also exploring the ways that type of trauma, type of parenting behavior, and informant may affect this relation. Finally, research in this area should explore the potential differences between mothers and fathers in how these pathways manifest.

Studies including both parents may indicate that in some cases mothers and fathers may not differ in the way that parenting behavior is impacted by trauma history, for example, when certain types of abuse history are present. However, it may also be the case that mothers and fathers may vary according to the type of abuse history. In the current study, fathers and mothers were explored for any potential differences between mothers and fathers as their trauma history may or may not relate to their parenting behavior. Findings in the current study may be somewhat limited however, by a small number of fathers ($n = 48$) in comparison to mothers ($n = 310$).

1.4 – Parenting Behavior and Child Trauma

While there is much research related to child trauma and its subsequent effects, little is known about the ways that parenting behaviors, such as child monitoring and parent-child negativity, may be related to child trauma and adjustment. Further research is needed to explore these two important aspects of parenting behaviors, as parent-child negativity and child monitoring may be important to predicting a child's traumatic life events. For example, the presence of positive child monitoring may be related to lower probability for children to be exposed to certain traumatic experiences. Similarly, in the presence of high parent-child negativity, children may be more likely to experience traumatic experiences, including a higher likelihood of abuse experiences.

Several research studies have, however, explored the relation between various parenting behaviors and child trauma. In a research study of 108 Palestinian boys and girls ages 11-12, Punamaki, Qouta, and Sarraj (1997) found that the more traumatic events a child had experienced related to a higher amount of negative parenting experiences. In addition, poorer perceived parenting was related to higher neuroticism and lower self-esteem among the children whereas good parenting, even in the presence of children's traumatic experience, was related to better psychological adjustment. In another study of school-age children, perception of mothers was found to be a mediator of internalizing and externalizing symptomatology in maltreated children (Toth, Cicchetti, & Kim, 2002). Maltreated children who had less positive perceptions of their mothers were more likely to exhibit higher externalizing and internalizing behavior issues. Dixon, Hamilton-Giachritsis, and Browne (2005) examined the parenting behaviors of two-parent families with newborns in which at least one of the parents had experienced sexual or physical abuse as a child. In their study of 4351 families with newborns, 135 of which were

abused parent families, intergenerational continuity of child maltreatment was largely explained (62% of the total effect) by poor parenting behaviors being present. Other predictors included parents under 21 years of age, history of mental illness or depression, and residing with a violent adult. Dixon and colleagues (2005) concluded that prevention of intergenerational transmission may be enhanced by promoting ‘positive parenting’.

The relation between parenting behavior and child trauma has been explored in a variety of ways but rarely involves a cross-information approach. Studies have explored parents’ and children’s reports but rarely compare the two. Toth, Cicchetti, and Kim (2002) explored children’s perception of mothers, whereas Punamaki and colleagues (1997) explored parenting behaviors including discipline, control, and affective involvement using child reports. Finally, Dixon and associates (2005), in their study of families with newborns, explored the parenting behaviors of positive attributes, realistic perceptions, and positive quality of care-giving behaviors through observation by trained health visitors.

Evidence from these studies indicates a potential relation between parenting behavior and child traumatic experiences, i.e. likelihood that a child will be exposed to traumatic experiences and/or have poor adjustment following traumatic experiences. However, less is known about how this relation exists and to which parenting behaviors child trauma is more strongly related. In the current study, the parenting behaviors of parent-child negativity and child monitoring were used as reported by both parent and child, in contrast to the previous studies’ data which have been collected primarily by exclusively child report, parent report, or observational data.

1.5 – Child Trauma and Child Adjustment

While there is a large body of literature regarding the relation between child traumatic experiences and child adjustment, this paper will explore a handful of research studies focusing

on child trauma as it relates to behavior problems. In order to develop a better understanding of both child trauma exposure and child adjustment, these should be understood both in a context of how they relate to each other as well as in how they relate to parenting behaviors. Whereas exposure to child trauma may be related to parent trauma history and parenting behaviors, it is also likely the case that these parenting behaviors may play an important role in child trauma as it relates to child adjustment.

Child traumatic life experiences including abuse, neglect, and natural disasters, have been linked to internalizing and externalizing symptomatology. This includes depression, anxiety disorder, personality disorders, panic attacks, higher stress levels, and negative attributional behavior (Bal, Bourdeauhuij, Crombez, & Van Oost, 2005; Kaplan et al., 1999; Lubit, Rovine, Defrancisci, & Eth, 2003; Runyon & Kenny, 2002). Externalizing and internalizing symptomatology are found particularly in children who have been physically and/or sexually abused, with symptoms frequently persisting beyond six months after the trauma occurred (Bal et al., 2005; Kaplan et al., 1999). While some studies have not indicated any sex differences in child traumas effects on child adjustment (Kaplan et al., 1999) others have revealed higher total problem behaviors among boys versus girls, higher posttraumatic symptoms among girls than boys (Lynch & Cicchetti, 1998) and higher depression in females (Runyon & Kenny, 2002). With mixed findings on the role sex differences may play in the relation between child trauma and child adjustment or behavior problems, the current study explored potential sex differences.

There is also some evidence that the number of risks, including traumatic experiences, in early childhood may be related to behavioral problems in adolescence (Appleyard, Egeland, van Dulmen, & Sroufe, 2005). Further research on the relations between various traumatic experiences and their effects on child adjustment and outcomes is needed to obtain a better

understanding of child risk and resilience. Trauma may affect children's outcomes differently depending on whether the trauma involves abuse, neglect, natural disasters, or family crises. In addition, earlier traumatic experience and/or a higher number of traumatic experiences may reveal a cumulative effect on child adjustment and psychopathology. Whereas previous studies have looked exclusively at one type of child trauma, such as child abuse, the current study explored child trauma experience through creating a cumulative score of trauma including several types of trauma across the lifespan of the child. Due to the measure used in the current study we are limited to the use of a cumulative score as opposed to exploring the subtypes of traumatic experiences. Types of traumatic experiences included in the current study are: car accidents, natural disasters, family or friend's illness or death, divorce, physical or sexual abuse, and threats.

1.6 – Parenting Behavior and Child Adjustment

Parenting behavior not only influences child trauma through parenting characteristics, but it has also been shown to influence children's psychological adjustment, both with and without the presence of traumatic experiences. Parenting behavior has been linked to child adjustment through positive parenting behaviors, which act as a protective factor in child adjustment and resilience (Toth et al., 2002). This relation is explored in the current section. Further research in this area is needed to fully understand the ways in which various parenting behaviors may affect child adjustment and behavior problems, over and above the influences of trauma on children.

As previously mentioned, in a study of youth ages 11-12, good perceived parenting was found to act as a protective factor in children's psychological adjustment by reducing their vulnerability to traumatic events (Punamaki et al., 1997). When the impact of traumatic events was evident in children in the absence of positive parenting practices, children exhibited

decreased intellectual and creative resources as well as increased psychological adjustment problems. Such findings indicate that positive parenting may potentially play a protective role in children's resources and adjustment. As explored earlier, Toth and her associates (2002) found that perceptions of mothers acted as a mediator of the relation between maltreatment and internalizing/externalizing behavior problems, with positive perceptions being related to lower behavior problems.

In a study of battered women and their 4-12 year old children, Huth-Bocks and Hughes (2008) found that parenting stress directly affected children's behavioral and emotional problems but found no evidence that parenting behaviors (including permissiveness and irritability) acted as a protective factor in this relation. This study may have shown no relationship between parenting trauma and child adjustment due to the types of parenting behaviors which were explored. It may be that certain parenting behaviors, such as parent-child negativity, parental support, and monitoring are related to children's adjustment whereas others such as permissiveness and irritability are not strongly associated with child adjustment. In a study of 37 physically abused children, ages 6-14, perceived parental support was found to be significantly negatively associated with children's reported depression (Ezzell, Swenson, & Brondino, 2000). In addition, Low & Stocker (2005) found a relation between both mothers' and fathers' parent-child hostility and their 10 year old children's internalizing problems. However, no relation with externalizing problems was indicated.

Certain parenting behaviors have also been found to act as mediators of the relationship between parent characteristics and child outcomes. In a study of 277 families with children ages 8-16, parental acceptance acted as a mediator between parental distress and child psychopathology but no association was found when using firm parental control as a mediator

(Papp, Cummings, & Goeke-Morey, 2005). The non-significant findings of Huth-Bocks and Hughes (2008) in relating the parenting behaviors of permissiveness and irritability to child adjustment illustrates the importance of exploring diverse parenting behaviors when studying the relation between parenting behaviors and child adjustment as a whole as opposed to studying exclusively a certain aspect of parenting behaviors. In general, prior investigations highlight the role parenting behaviors may play both in child adjustment and psychopathology as well as in mediating the relation between parent characteristics (such as stress, trauma history, and depression) and child outcomes.

Parenting behavior, as represented by parent-child negativity and child monitoring, was explored in the current project. It was expected that parenting behavior is related to child outcomes showing that high child monitoring and low parent-child negativity are related to better child adjustment. While there has been much research on parenting behavior as it relates to child adjustment, there is a limited body of research on these two potentially important aspects of parenting behavior specifically as they relate to child trauma and adjustment. The current project explored this relation and the ways in which it may relate to parent trauma experience as well as child trauma experience.

1.7 – Current Project

Research on parent trauma history as it relates to parenting behaviors and child adjustment, as well as on the relationship between parenting behaviors and child trauma and adjustment, is essential to informing the areas of risk and resilience. This research is important to informing not only risk and resilience as it relates to the child but also as it relates to the parent and the experiences which they bring to their parenting behavior. This study hopes to aide in the research needed to better understand these influences and how to best support positive parenting

behaviors. In addition, further knowledge is needed in understanding child trauma as it relates to child adjustment and psychopathology. Research is also needed to address the current gap in the literature in how child adjustment is influenced by parenting behavior and parent trauma experience. Research such as the proposed study lends to a better understanding of the potential effects of parent trauma on parenting behavior and child adjustment. Sex differences between male and female children were also explored with the prediction that females would show more internalizing behaviors, such as depression, and males would show more externalizing behaviors and potentially more overall behavior problems.

Prior research examining parent trauma, particularly parents' maltreatment experiences, has been limited in several ways, illuminated by Newcomb & Locke (2001), including: "(1) using case status to define subjects; (2) adopting a dichotomous perspective that does not consider the reality of maltreatment on various continua; and (3) using operational definitions that fail to differentiate between maltreatment subtypes." Another issue has been ensuring that multiple informants are used in assessing these relations (Morrel, Dubowitz, Kerr, & Black, 2003) and research in this area often being limited to mothers, but not fathers. The current project will address these limitations by including: a sample of both abused and non-abused parents, including mothers and fathers, parent's and children's reports of parenting behavior and child adjustment, and the exploration of different subtypes of parent trauma on a continuum.

The goal of the current project was to gain further knowledge of the relations between parent trauma, parenting behavior, child trauma, and child adjustment. This research highlights the impact of parent traumatic experiences on parenting behaviors and their child's trauma exposure and adjustment. Research such as this may lend important information that can be used to develop better intervention and prevention programs relating to improved parenting skills and

improved trauma recovery for parents who have been abused or experienced trauma. In addition, research on parenting behaviors and child adjustment through the pathways suggested in the current model, see Figure 1, may have important implications for children's adjustment and well-being. In other words, through obtaining a better understanding of the ways in which different parent trauma experiences and parenting behaviors may contribute to child adjustment, improvements may be made in intervention and prevention programs targeted to children at risk due to familial adversities.

1.8 – Hypothesis

It was hypothesized that parenting behavior, and in turn child trauma, would mediate the relation between parent trauma history (specifically abuse history) and child adjustment as evidenced by internalizing/externalizing symptomatology. Parent trauma history is specific to a history of abuse or neglect, including physical abuse, physical neglect, sexual abuse, emotional abuse, or emotional neglect. In this study, the proposed model hypothesized that parent trauma history would affect parenting behavior. It was expected that parent trauma history would be related to less optimal parenting behaviors characterized by high negativity and low monitoring. In addition, parenting behavior would be related to child traumatic experiences, which in turn would be predictive of child internalizing/externalizing symptomatology. Figure 1 illustrates the proposed model of the relation between parent trauma history and child adjustment as mediated by parenting behavior and child trauma. Additionally, it was expected that sex differences exist in children's adjustment, i.e. that male and female children would differ in the proposed model and its pathways. Further, it may be that the relations among the study variables differ for fathers as compared to mothers. Therefore, exploratory analyses were performed to determine if mothers

and fathers differ in the ways that the subtypes of parenting traumas influence parenting behaviors.

Chapter 2 – Method

2.1 – Participants

Participants consisted of 358 children (191 boys and 167 girls) and a primary caregiver (48 fathers and 310 mothers). The children's ages ranged from 10 to 17 with an average age of 13 ($SD = 1.92$). The data were drawn from participants from Southwestern Virginia. Of the 358 participants, 83.2% were Caucasian with the remaining 16.8% from a minority ethnic background. The mean total income of the families fell between \$35,000 and \$49,999. APA guidelines for the ethical treatment of the human subjects were followed during data collection. The original study was also approved by the IRB at the participating university prior to data collection.

2.2 – Procedure

The current study was conducted in partnership with the Roanoke County Prevention Council. Participants were recruited through research recruitment letters mailed to individuals' addresses obtained through a mailing list which was purchased from a marketing company. Recruitment was further made possible through flyers that were posted at several locations and businesses in the areas of Blacksburg, Roanoke, and Salem. Assent forms were signed by the child participants prior to the interview. In the case that a participant refused to sign the form, the interview did not take place. Parental consent was also obtained prior to the interviews, as child participants were under age. Participants were interviewed at the Virginia Tech campus or the Roanoke Higher Education Center in Roanoke according to their proximity and/or preference. Parents and children /adolescents received monetary compensation for their

participation in the study. Trained interviewers read the instructions to the participants and were present while participants filled out the questionnaires. Upon completion of the measures, participants were debriefed.

2.3 – Measures

2.3.1 – Demographic Data

This interview was completed by parents reporting on their children’s age, sex, and ethnicity. In addition, parents completed demographic information pertaining to family characteristics including family income. Sex was coded as follows: “0” = female, “1” = male; ethnicity was coded as “0” for white and “1” for non white, and family income was coded as “0” = \$ 0 per month to “15” = \$16,667 or more per month. Descriptives for all scales are included in Table 1.

2.3.2 – Childhood Trauma Questionnaire

Parent maltreatment history was assessed using the Childhood Trauma Questionnaire. The CTQ-SF (Bernstein et al., 2003) was developed as a screening measure for maltreatment histories. It is a 28 item scale with retrospective questions regarding childhood and adolescent experiences rated on a 5-point, Likert type scale with response options ranging from 1 (Never True) to 5 (Very Often True). The CTQ-SF also includes five subscales: sexual, physical, and emotional abuse, and emotional and physical neglect. For purposes of the current study, these subscales were explored to assess the ways that various types of trauma/neglect can differentially affect parenting behavior and in turn child outcomes. Subscales are created by averaging questions related to each of the five subtypes of parent maltreatment. Each subscale is comprised of five questions. On these subscales a higher score indicates a higher likelihood of having experienced maltreatment. Each item on the questionnaire begins with, “When I was growing

up...” and include questions such as “My family was a source of strength and support” (reverse scored- emotional neglect); “People in my family hit me so hard it left me with marks or bruises” (physical abuse); “I had to wear dirty clothes” (physical neglect); “People in my family said hurtful or insulting things to me” (emotional abuse); and “As a child someone tried to make me do sexual things or to watch sexual things” (sexual abuse).

The CTQ-SF has shown high levels of test-retest reliability with Cronbach’s alphas ranging from .57 to .93 according to each of the five subscales: emotional neglect ($\alpha = .68$ to .93), emotional abuse ($\alpha = .76$ to .93), physical abuse ($\alpha = .80$ to .92), sexual abuse ($\alpha = .88$ to .97), and physical neglect ($\alpha = .57$ to .80) (Locke & Newcomb, 2008; Minnes et al., 2008; Frewen et al., 2008). In the current sample test-retest reliability was high for each of the five subscales: emotional neglect ($\alpha = .90$), emotional abuse ($\alpha = .88$), physical abuse ($\alpha = .79$), sexual abuse ($\alpha = .96$), and physical neglect ($\alpha = .80$).

2.3.3 – Child Monitoring

Child monitoring was assessed using items on the adolescent version of the Assessment of Child Monitoring Scale (Hetherington & Clingempeel, 1992). This 13-item scale is answered by both parent and child on a 5-point Likert type scale ranging from 1 (Always knows) to 5 (Never knows). The child monitoring scale measures the extent to which the parent is aware of their child’s activities and friends. This scale was computed by reverse scoring all 13 questions and averaging responses to create an overall child monitoring score. On this scale a higher score indicates higher child monitoring. Sample items from the parent form include “your child’s use of tobacco,” “the extent of his/her sexual behavior,” and “your child’s intellectual interests, both in and out of school.” Each item on the parent form begins with “How much you know...” whereas the child form is answered separately for each parent/step-parent and items begin with

“How much your (step) Mother/Father knows...”. The Child Monitoring Scale has been used with children between the ages of 10 and 18 (Mekos, Hetherington, & Reiss, 1996). This measure has significantly correlated with other similar measures of parent-child interaction and has a test-retest reliability ranging from .68 to .81 (Getz & Bray, 2005). For the current sample, test-retest reliability was high for both parent and child reports with Cronbach alpha’s including: child report of mothers ($\alpha = .91$), child report of fathers ($\alpha = .93$), and parent report ($\alpha = .91$).

2.3.4 – Parent-Child Relationship

Parent-child negativity was assessed using parents’ and children’s reports on a 15-item questionnaire (Hetherington & Clingempeel, 1992). Parents and children were asked to rate aspects of their parent-child relationship on a 5-point Likert type scale, ranging from 1 (extremely) to 5 (not at all). This scale was computed by reverse scoring questions 1-7 and averaging responses to create an overall parent-child negativity score. On this scale a higher score indicates higher parent-child negativity. Sample items include: “How much do you yell at this child after you’ve had a bad day?”, and “How much does this child criticize you?”. This measure has been used with children between the ages of ten and eighteen (Mekos et al., 1996). Parent-child negativity has been shown to be reliable for parental reports (Cronbach’s alpha = .69 and .73) for maternal and paternal reports, respectively (Pike, Coldwell, & Dunn, 2005). For the current sample test-retest reliability was high for both parent and child reports with Cronbach alpha’s including: child report of mothers ($\alpha = .85$), child report of fathers ($\alpha = .80$), and parent report ($\alpha = .85$).

2.3.5 – Life Incidence of Traumatic Events (LITE)

The Life Incidence of Traumatic Events (LITE) is a 16-item assessment which was completed by both caregiver and child measuring the occurrence of negative and potentially

traumatic life events (Greenwald & Rubin, 1999). The LITE has been used to assess trauma in adolescents and includes emotional, physical, and sexual abuse and neglect. The LITE has correlated positively with assessments of PTSD symptoms and has been used with children eight and older. In the past it has been used to rate children's trauma exposure severity on a 1 to 4 scale (Greenwald & Rubin, 1999) and as a tally of the number of potentially traumatic life experiences (Hirsch, Wolford, LaLonde, Brunk, & Morris, 2007). Each item begins with "Did this ever happen to you?" If respondents answer yes, they are then asked how many times, how old they were the first time, how much it upset them then, and how much it bothers them now. Sample items include: "been in a car accident," "someone in the family died," "been in a fire," "been hit, whipped, beaten, or hurt by someone," and "been made to do sex things". A sum of traumatic experiences was created using the number of times an endorsement of having experienced one of the traumatic experiences was made. A higher score indicated higher traumatic life experiences. No reliability and validity scores are available for this measure.

2.3.6 – Child Behavior Checklist & Youth Self Report

Child behavior problems were assessed using parents' and children's reports of internalizing and externalizing symptomatology from the Child Behavior Checklist (CBCL) and Youth Self Report (YSR) (Achenbach & Rescorla, 2001). The CBCL is a 118-item questionnaire assessing caregiver perceptions of children's behavior problems and is typically used with children between 4 and 16. Problem behaviors are rated on a 3-point scale ranging from 0 (not true) to 2 (very true), these items then comprise a total score, an internalizing behaviors score, and finally an externalizing behaviors score. The internalizing scale includes withdrawn, anxious/depressed, and somatic complaints syndrome scales. The externalizing scale is comprised of aggressive and delinquent behavior scales. On these two scales a higher score

indicates higher behavior problems. The YSR is a 102-item measure that is answered by child self-report in the same manner as the CBCL and has shown similar psychometric properties on both internalizing and externalizing behaviors ($\alpha = .90$). The YSR has typically been used with children between 11 and 17. The CBCL has demonstrated strong psychometric properties on both internalizing ($\alpha = .90$) and externalizing behaviors ($\alpha = .94$) (Achenbach & Rescorla, 2001).

Chapter 3 – Results

Due to multiple reporters for variables, i.e. both parent and child, three different structural equation models were tested including Model 1: Child Report (except parent maltreatment), Model 2: Parent Report, and Model 3: Mixed Report (parent report of parent maltreatment and parenting behaviors, child report of child trauma and child symptomatology). One other mixed reporter model (parent report of parent maltreatment and child symptomatology, child report of parenting behaviors and child trauma) was tested but contributed no unique findings therefore the mixed model included here seemed the most appropriate.

3.1 – Descriptive Statistics

Descriptive statistics including means and standard deviations of all model variables are presented in Table 1. There were no variables that had skewness greater than the absolute value of 3.00 or kurtosis greater than the absolute value of 10.00 (Kline, 1998). The only exception was the parental report of child monitoring which was therefore adjusted using a log transformation prior to further data analysis. An alpha level of .05 was used for all statistical tests.

In order to determine the potential roles of both parent sex and child sex, bivariate correlations were conducted overall, by child sex, and by parent sex. Child sex bivariate

correlations yielded similar patterns and effect sizes between boys and girls. Bivariate correlations of potential covariates with study variables are presented in Table 2 for overall, Table 3 for mothers, and Table 4 for fathers. Overall bivariate correlations among study variables are presented in Table 5 and bivariate correlations among study variables by parent sex are presented in Table 6. Bivariate correlations revealed many of the expected variables to be statistically significant in their relations: correlations between emotional and physical abuse and parent-child negativity, emotional neglect and parent-child negativity, several types of parent maltreatment and child trauma, several types of parent maltreatment and symptomatology, parenting behaviors and child trauma, parenting behaviors and symptomatology, and child trauma and symptomatology.

With respect to maternal correlations, many of the expected variables were found to be statistically significant in their relations: correlations between several types of parent maltreatment and parent-child negativity, parent maltreatment and child trauma, several types of parent maltreatment and symptomatology, parenting behaviors and child trauma, parenting behaviors and symptomatology, and child trauma and symptomatology. Turning to paternal correlations, many of the expected variables were also statistically significant: parent maltreatment and child monitoring, sexual abuse and child trauma, parent maltreatment and symptomatology, parenting behaviors and child trauma, parenting behaviors and symptomatology, and child trauma and symptomatology.

3.2 – Covariates

Significant covariates were found for each of the three model types. Child report models found overall significant effects of child age, Pillai's Trace = .19, $F(5,346) = 15.80, p < .01$, income, Pillai's Trace = .04, $F(5, 346) = 2.94, p < .05$, and child race, Pillai's Trace = .03, $F(5,$

346) = 2.26, $p < .05$. More specifically, child age was significantly related to parent-child negativity, $t(350) = 4.69, p < .01$, child monitoring, $t(350) = -7.76, p < .01$, child trauma, $t(350) = 2.82, p < .01$, and child externalizing symptomatology, $t(350) = 4.18, p < .01$. Income revealed significant differences based on income related to parent-child negativity, $t(350) = -2.56, p < .05$, child trauma, $t(350) = -3.16, p < .01$, and child externalizing symptomatology, $t(350) = -2.06, p < .05$. Child sex was significantly related to child internalizing symptomatology, $t(350) = -1.90, p < .07$, and child externalizing symptomatology, $t(350) = -1.96, p = .05$. Finally, child race was significantly associated with child monitoring, $t(350) = 2.71, p < .05$ and child externalizing symptomatology, $t(350) = -2.34, p < .05$.

Parent report models revealed overall significant effects of child age, Pillai's Trace = .07, $F(5, 348) = 5.36, p < .01$, and income, Pillai's Trace = .09, $F(5, 348) = 6.59, p < .01$. More specifically, child age was significantly related to child monitoring, $t(352) = -3.35, p < .01$, and child externalizing symptomatology, $t(352) = -2.48, p < .05$. Income was significantly related to parent-child negativity, $t(352) = -2.82, p < .05$, child trauma, $t(352) = -3.95, p < .01$, child internalizing symptomatology, $t(352) = -3.78, p < .01$, and externalizing symptomatology, $t(352) = -4.70, p < .01$.

The final mixed report model, which will be the focus of the structural equation model findings, indicated overall significant effects of child age, Pillai's Trace = .08, $F(5, 348) = 6.18, p < .01$, and income, Pillai's Trace = .04, $F(5, 348) = 2.88, p < .05$. More specifically, child age was significantly related to child monitoring, $t(352) = -3.35, p < .01$, child trauma, $t(352) = 2.91, p < .05$, and child externalizing symptomatology, $t(352) = 4.17, p < .01$. Income was significantly related to parent-child negativity, $t(352) = -2.28, p < .05$, child trauma, $t(352) = -3.18, p < .01$, and child externalizing symptomatology, $t(352) = -2.06, p < .05$.

Overall, income was significantly related to child race ($p < .01$) and was also related to all five subtypes of parent maltreatment including emotional abuse ($p < .01$), physical abuse ($p < .01$), sexual abuse ($p < .01$), emotional neglect ($p < .01$), and physical neglect ($p < .01$). All of the significant covariates were retained in the main analyses in order to estimate potentially significant pathways.

3.3 – Path Analyses

The hypothesized model in Figure 1 was examined by structural equation modeling (SEM) based on maximum likelihood estimation using the AMOS 5.0 statistical program (Arbuckle, 2003). In order to know the potential effects based on various reporters, the first SEM models tested were those of Model 1: Child Report (Figure 2), with the exception of parent report of parent maltreatment, and Model 2: Parent Report (Figure 3). Following these, two mixed reporter SEMs were tested. Model 3, which will be the focus of the results and discussion, was the selected mixed model (see Figures 4-8). For each model type, five different models were tested based on the subtypes of parent maltreatment (emotional abuse, physical abuse, sexual abuse, emotional neglect, and physical neglect) as types of parent maltreatment may differ in their relations to parenting behaviors, child trauma, and child symptomatology. The RMSEA was used to assess model fit and typically a value of about .05 or less is considered an indication of close fit and a value less than .08 is considered a reasonable fit of the model (Joreskog & Sorbom, 1993; Marsh, Balla, & Hau, 1996; Schumacker & Lomax, 1996).

3.3.1 – Model 1: Child Report Model

The five child models tested (Figure 2) used parent report of parent maltreatment and child report for both measures of parenting behaviors, child trauma, and child internalizing and externalizing symptomatology. Fit indices of these models are reported in Table 7. In the model

involving emotional abuse, there were significant paths between child monitoring and child trauma ($B = -.52, SE = .19, p < .01$), child monitoring and child internalizing symptomatology ($B = -2.89, SE = .82, p < .01$) and child monitoring and child externalizing symptomatology ($B = -2.92, SE = .67, p < .01$). Significant paths were also found between parent-child negativity and child trauma ($B = .43, SE = .15, p < .01$), child internalizing symptomatology ($B = 3.02, SE = .68, p < .01$), and child externalizing symptomatology ($B = 4.78, SE = .56, p < .01$). Child trauma was significantly related to child internalizing symptomatology ($B = 1.15, SE = .23, p < .01$) and child externalizing symptomatology ($B = 1.20, SE = .19, p < .01$).

As this indicated potential mediation of the relation between both parenting behaviors and both child internalizing and externalizing symptomatology through child trauma, mediation was tested using the Sobel test (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002). Evidence of significant mediation was confirmed for mediation tests of child monitoring to both child internalizing and externalizing symptomatology through child trauma ($Z = -2.45, p < .05$; $Z = -2.58, p < .05$, respectively), as well as for mediation tests of parent-child negativity to both child internalizing and externalizing symptomatology through child trauma ($Z = 2.46, p < .05$; $Z = 2.59, p < .01$, respectively).

In the model testing physical abuse there was a significant path between parent physical abuse and parent-child negativity ($B = .12, SE = .05, p < .05$). Parent-child negativity was also related to child trauma ($B = .43, SE = .15, p < .01$), child internalizing symptomatology ($B = 2.65, SE = .68, p < .01$), and child externalizing symptomatology ($B = 4.65, SE = .56, p < .01$). Child monitoring was significantly related to child trauma ($B = -.52, SE = .19, p < .01$), child internalizing symptomatology ($B = -2.40, SE = .78, p < .01$), and child externalizing symptomatology ($B = -2.72, SE = .67, p < .01$). Additionally, child trauma was related to child

internalizing symptomatology ($B = 1.05$, $SE = .23$, $p < .01$) and child externalizing symptomatology ($B = 1.16$, $SE = .19$, $p < .01$).

Evidence of significant mediation was confirmed for mediation tests of child monitoring to both child internalizing and externalizing symptomatology through child trauma ($Z = -2.40$, $p < .05$; $Z = -2.56$, $p < .05$, respectively) as well as for mediation tests of parent-child negativity to both child internalizing and externalizing symptomatology through child trauma ($Z = 2.40$, $p < .05$; $Z = 2.57$, $p < .01$, respectively). A trend toward mediation was found for the potential indirect effects of parental physical abuse experience on child trauma through parent-child negativity ($Z = 1.73$, $p = .08$). Additionally, physical abuse was directly related to child internalizing symptomatology ($B = 1.69$, $SE = .66$, $p < .05$) and to parent-child negativity ($B = .12$, $SE = .05$, $p < .05$).

In the model for sexual abuse significant paths were found between parent-child negativity and child trauma ($B = .43$, $SE = .15$, $p < .01$), parent-child negativity and child internalizing symptomatology ($B = 2.81$, $SE = .68$, $p < .01$), and parent-child negativity and child externalizing symptomatology ($B = 4.73$, $SE = .56$, $p < .01$). Additionally, child monitoring was significantly related to child trauma ($B = -.52$, $SE = .18$, $p < .01$), child internalizing symptomatology ($B = -2.27$, $SE = .78$, $p < .01$), and child externalizing symptomatology ($B = -2.64$, $SE = .67$, $p < .01$). Child trauma was significantly related to child internalizing symptomatology ($B = 1.08$, $SE = .23$, $p < .01$) and child externalizing symptomatology ($B = 1.20$, $SE = .19$, $p < .01$). Evidence of significant mediation was confirmed for mediation tests of parent-child negativity to both child internalizing and externalizing symptomatology through child trauma ($Z = 2.42$, $p < .05$; $Z = 2.58$, $p < .01$, respectively), as well as for mediation tests of

child monitoring to both child internalizing and externalizing symptomatology through child trauma ($Z = -2.42, p < .05$; $Z = -2.59, p < .05$, respectively).

In the model for emotional neglect significant paths were found between parent-child negativity and child trauma ($B = .43, SE = .15, p < .01$), parent-child negativity and child internalizing symptomatology ($B = 3.06, SE = .68, p < .01$), and parent-child negativity and child externalizing symptomatology ($B = 4.85, SE = .56, p < .01$). Child monitoring was significantly related to child trauma ($B = -.52, SE = .19, p < .01$), child internalizing symptomatology ($B = -2.88, SE = .82, p < .01$), and child externalizing symptomatology ($B = -2.87, SE = .67, p < .01$). Child trauma was also significantly related to child internalizing symptomatology ($B = 1.16, SE = .23, p < .01$) and child externalizing symptomatology ($B = 1.22, SE = .19, p < .01$). Evidence of significant mediation was confirmed for mediation tests of parent-child negativity to both child internalizing and externalizing symptomatology through child trauma ($Z = 2.47, p < .05$; $Z = 2.59, p < .01$, respectively), as well as for mediation tests of child monitoring to both child internalizing and externalizing symptomatology through child trauma ($Z = -2.46, p < .05$; $Z = -2.58, p < .05$, respectively).

In the model for physical neglect significant paths were found between parent-child negativity and child trauma ($B = .43, SE = .15, p < .01$), parent-child negativity and child internalizing symptomatology ($B = 3.05, SE = .68, p < .01$), and parent-child negativity and child externalizing symptomatology ($B = 4.80, SE = .56, p < .01$). Child monitoring was significantly related to child trauma ($B = -.52, SE = .18, p < .01$), child internalizing symptomatology ($B = -2.88, SE = .82, p < .01$), and child externalizing symptomatology ($B = -2.91, SE = .67, p < .01$). Child trauma was also significantly related to child internalizing symptomatology ($B = 1.16, SE = .23, p < .01$) and child externalizing symptomatology ($B = 1.20, SE = .19, p < .01$). Evidence

of significant mediation was confirmed for mediation tests of parent-child negativity to both child internalizing and externalizing symptomatology through child trauma ($Z = 2.47, p < .05$; $Z = 2.59, p < .01$, respectively), as well as for mediation tests of child monitoring to both child internalizing and externalizing symptomatology through child trauma ($Z = -2.47, p < .05$; $Z = -2.59, p < .05$, respectively).

Further, for all five models child age was significantly related to parent-child negativity ($B = .09 \sim .10, SE = .02, p < .01$) and child monitoring ($B = -.12, SE = .02, p < .01$). For the child models of emotional abuse, emotional neglect, and physical neglect, child age was significantly related to child internalizing symptomatology ($B = -.70 \sim -.71, SE = .27, p < .05$). This indicates that the older a child the higher the parent-child negativity, the lower the child monitoring, and in some cases the lower the internalizing symptomatology. In all five models, child race was significantly related to child monitoring ($B = -.28 \sim -.29, SE = .08, p < .05$). This indicates that child monitoring was higher for white than for non-white families. Finally, income was significantly related to parent-child negativity ($B = -.03 \sim -.04, SE = .02, p < .05$) and child trauma ($B = -.12, SE = .05, p < .01$). This indicates that for higher incomes there is lower parent-child negativity and lower child trauma.

Overall, parent trauma was not significantly related to parenting behaviors or child symptomatology in the Child Report Model, except physical abuse. However, as stated earlier, no evidence of significant mediation of parenting behaviors was found for the link between physical abuse and child trauma.

3.3.2 – Model 2: Parent Report Model

The five parent models tested (Figure 3) used parent report for all measures. Fit indices results of these models are reported in Table 7. In the model for physical abuse a significant path

was found between parent physical abuse and parent-child negativity ($B = .10$, $SE = .05$, $p < .05$). Parent-child negativity was marginally significantly related to child trauma ($B = .31$, $SE = .17$, $p < .07$) and significantly related to child internalizing ($B = 4.22$, $SE = .76$, $p < .01$), and externalizing symptomatology ($B = 7.87$, $SE = .65$, $p < .01$). Child trauma was significantly related to child internalizing symptomatology ($B = .86$, $SE = .24$, $p < .01$) and child externalizing symptomatology ($B = .65$, $SE = .21$, $p < .01$). Evidence of significant mediation for the potential indirect effects of parent trauma on child internalizing and externalizing symptomatology through parent-child negativity was supported ($Z = 1.97$, $p < .05$; $Z = 2.08$, $p < .05$, respectively). However, indirect effects of parental physical abuse experience on child trauma through parent-child negativity ($Z = 1.39$, $p = .16$) and the indirect effects of parent-child negativity on both child internalizing and externalizing symptomatology through child trauma were not significant ($Z = 1.64$, $p = .10$; $Z = 1.59$, $p = .11$, respectively).

In the model for sexual abuse a marginally significant path was found between parent-child negativity and child trauma ($B = .31$, $SE = .17$, $p < .07$). Significant paths were found between child trauma and child internalizing symptomatology ($B = .84$, $SE = .24$, $p < .01$), child trauma and child externalizing symptomatology ($B = .62$, $SE = .20$, $p < .01$), parent-child negativity and child internalizing symptomatology ($B = 4.16$, $SE = .75$, $p < .01$), and parent-child negativity and child externalizing symptomatology ($B = 7.88$, $SE = .64$, $p < .01$). The indirect effects of parent-child negativity on both child internalizing and externalizing symptomatology through child trauma were not significant ($Z = 1.63$, $p = .10$; $Z = 1.58$, $p = .12$, respectively).

In the model for physical neglect a marginally significant path was found between parent-child negativity and child trauma ($B = .31$, $SE = .17$, $p < .07$). There were significant paths between child trauma and child internalizing symptomatology ($B = .86$, $SE = .24$, $p < .01$), child

trauma and child externalizing symptomatology ($B = .66$, $SE = .21$, $p < .01$), parent-child negativity and child internalizing symptomatology ($B = 4.23$, $SE = .75$, $p < .01$), and parent-child negativity and child externalizing symptomatology ($B = 7.91$, $SE = .65$, $p < .01$). The indirect effects of parent-child negativity on both child internalizing and externalizing symptomatology through child trauma were not significant ($Z = 1.64$, $p = .10$; $Z = 1.60$, $p = .11$, respectively).

For the model testing emotional abuse, though a direct link between parent emotional abuse and child trauma was not originally proposed, the data showed a significant path between the two according to modification indices ($\Delta\chi^2 = 14.75$, $p < .05$). Therefore this path was added in the final SEM analyses. In the model for emotional abuse significant paths were found between parent emotional abuse experience and parent-child negativity ($B = .12$, $SE = .04$, $p < .01$), parent-child negativity and child internalizing symptomatology ($B = 4.04$, $SE = .76$, $p < .01$), and parent-child negativity and child externalizing symptomatology ($B = 7.78$, $SE = .65$, $p < .01$).

Parent emotional abuse experience was directly related to child trauma ($B = .46$, $SE = .12$, $p < .01$). Additionally, child trauma was significantly related to child internalizing symptomatology ($B = .79$, $SE = .24$, $p < .01$) and child externalizing symptomatology ($B = .59$, $SE = .21$, $p < .01$). Evidence of significant mediation was confirmed for mediation tests of parent emotional abuse to both child internalizing and externalizing symptomatology through parent-child negativity ($Z = 2.80$, $p < .01$; $Z = 3.18$, $p < .01$, respectively) as well as through child trauma ($Z = 2.48$, $p < .05$; $Z = 2.28$, $p < .05$, respectively).

For the model testing emotional neglect, though a direct link between parent emotional neglect and child trauma was not originally proposed, the data showed a significant path between the two according to modification indices ($\Delta\chi^2 = 14.49$, $p < .05$). Therefore this path was added

in final SEM analyses. In the model for emotional neglect significant paths were found between parent emotional neglect experience and child trauma ($B = .26, SE = .12, p < .05$). Parent-child negativity was significantly related to parent emotional neglect experience and ($B = .08, SE = .04, p < .05$), child internalizing symptomatology ($B = 4.17, SE = .76, p < .01$), and child externalizing symptomatology ($B = 7.95, SE = .65, p < .01$). Additionally, child trauma was significantly related to child internalizing symptomatology ($B = .85, SE = .24, p < .01$) and child externalizing symptomatology ($B = .66, SE = .21, p < .01$). Mediation was partially supported for mediation tests of parent emotional neglect to both child internalizing and externalizing symptomatology through parent-child negativity ($Z = 1.90, p = .06$) and a trend towards significant mediation was found through child trauma ($Z = 1.83, p = .07; Z = 1.78, p = .07$, respectively).

Further, for all parent models child age was significantly related to child monitoring ($B = -.01, SE = .00, p < .01$) and child externalizing symptomatology ($B = -.63 \sim -.65, SE = .19, p < .01$). This indicates that the older a child is the lower the child monitoring and the lower the externalizing symptomatology. Finally, income was significantly related to child trauma ($B = -.10 \sim -.14, SE = .04, p < .01$), child internalizing symptomatology ($B = -.48 \sim -.59, SE = .19 \sim .20, p < .05$), and child externalizing symptomatology ($B = -.44 \sim -.54, SE = .16 \sim .17, p < .05$). Additionally, for the models of physical abuse, sexual abuse, and physical neglect, income showed a marginally significant relation to parent-child negativity ($B = -.02 \sim -.03, SE = .01, p < .07$). This indicates that for higher incomes there is lower child trauma, child internalizing and externalizing symptomatology, and shows some evidence that parent-child negativity is lower among higher income families.

Overall, the parent models showed some evidence of parent trauma significantly affecting parenting behaviors, child trauma, or child symptomatology directly. However, these effects differed according to the subtype of parent trauma. Physical abuse was significantly related to parent-child negativity and sexual abuse was significantly related to child externalizing symptomatology. Emotional abuse and emotional neglect were significantly related to both parent-child negativity and child trauma. No significant direct effects were found for physical neglect.

3.3.3 – Model 3: Mixed Model

The five mixed models tested (Figures 4-8) used parent report of parent trauma and parenting behaviors but child report for measures of child trauma and child symptomatology. This was to test the hypothesized model using data from multiple reporters and is the focus of this paper because it is viewed as the stronger design. In order to know if the interrelations among parent trauma, parenting behaviors, child trauma, and child symptomatology differ across parent sex, multiple group analyses were conducted. For emotional abuse, physical abuse, and sexual abuse, there were no significant differences between mothers and fathers. In the subsequent models, invariance on certain parameters was imposed to answer the question of how mothers and fathers differ in the role parent emotional and physical neglect plays. The test for invariance involved the testing of differences between mothers and fathers in the model as a whole. Model 1 was unconstrained on all parameters. In Model 2, equality constraints were imposed on all parameters except path coefficients involving demographic covariates. Fit indices results of these models are reported in Table 7.

For emotional abuse (Figure 4) the model produced $\chi^2 (7, N = 358) = 4.79$; the CFI above .90 and RMSEA of .00 with $p = .94$ for close fit indicating a reasonably good fit of the model.

For physical abuse (Figure 5) the model produced $\chi^2 (7, N = 358) = 11.00$; the CFI above .90 and RMSEA of .04 with $p = .59$ for close fit indicating a reasonably good fit of the model. For sexual abuse (Figure 6), the model produced $\chi^2 (7, N = 358) = 11.65$; the CFI above .90 and RMSEA of .04 with $p = .55$ for close fit indicating a reasonably good fit of the model. With respect to all three trauma types, the differences in χ^2 between Model 1, unconstrained, and Model 2, constrained, was not significant, as shown in Table 7, suggesting that there were no differences between mothers and fathers in relations of parent trauma to child symptomatology.

In the model for emotional abuse significant paths were found between parent emotional abuse and parent-child negativity ($B = .12, SE = .04, p < .01$) and parent-child negativity and child externalizing symptomatology ($B = 1.65, SE = .69, p < .05$). In addition there was a marginally significant path between child monitoring and child trauma ($B = -3.11, SE = 1.66, p < .07$), and significant paths between child trauma and child internalizing symptomatology ($B = 1.47, SE = .24, p < .01$), child trauma and child externalizing symptomatology ($B = 1.53, SE = .21, p < .01$), and child monitoring and child externalizing symptomatology ($B = -27.45, SE = 6.56, p < .01$). Evidence of significant mediation was supported for the potential indirect effects of parental emotional abuse experience on child externalizing symptomatology through parent-child negativity ($Z = 1.93, p = .05$). A trend toward significant mediation was found for mediation tests of child monitoring to both child internalizing and externalizing symptomatology through child trauma ($Z = -1.80, p = .07; Z = -1.82, p = .07$, respectively).

In the model for physical abuse significant paths were found between parent physical abuse and parent-child negativity ($B = .10, SE = .05, p < .05$) and parent-child negativity and child externalizing symptomatology ($B = 1.62, SE = .68, p < .05$). In addition there was a marginally significant path between child monitoring and child trauma ($B = -3.11, SE = 1.65, p <$

.07) and significant paths between child trauma and child internalizing symptomatology ($B = 1.40$, $SE = .24$, $p < .01$), child trauma and child externalizing symptomatology ($B = 1.49$, $SE = .21$, $p < .01$), and child monitoring and child externalizing symptomatology ($B = -27.78$, $SE = 6.54$, $p < .01$). The indirect effects of parental physical abuse experience on child externalizing symptomatology through parent-child negativity were not significant ($Z = 1.58$, $p = .12$). A trend toward significant mediation was found for mediation tests of child monitoring to both child internalizing and externalizing symptomatology through child trauma ($Z = -1.79$, $p = .07$; $Z = -1.82$, $p = .07$, respectively).

In the model testing sexual abuse there was a marginally significant path between child monitoring and child trauma ($B = -3.11$, $SE = 1.65$, $p < .07$). There were significant paths between child trauma and child internalizing symptomatology ($B = 1.43$, $SE = .24$, $p < .01$), child trauma and child externalizing symptomatology ($B = 1.53$, $SE = .21$, $p < .01$), and child monitoring and child externalizing symptomatology ($B = -27.81$, $SE = 6.56$, $p < .01$). A trend toward significant mediation was not found for mediation tests of child monitoring to both child internalizing and externalizing symptomatology through child trauma ($Z = -1.79$, $p = .07$; $Z = 1.82$, $p = .07$, respectively).

Further, for the three mixed models child age was significantly related to child monitoring ($B = -.01$, $SE = .00$, $p < .01$), child externalizing symptomatology ($B = .64 \sim .65$, $SE = .19$, $p < .01$), and child trauma ($B = .15$, $SE = .06$, $p < .05$). This indicates that older children experience lower child monitoring, and higher child trauma and externalizing symptomatology. Finally, income was significantly related to child trauma ($B = -.15$, $SE = .04$, $p < .01$), indicating that for higher incomes there is lower child trauma.

Overall, the mixed models showed some evidence of parent trauma significantly affecting parenting behaviors or child symptomatology directly. However, these effects differed according to subtype of parent trauma. Physical abuse was significantly related to parent-child negativity and child internalizing symptomatology and emotional abuse was significantly related to parent-child negativity. No significant direct effects were found for sexual abuse.

3.3.4 – Model 3: Multiple Group Mixed Models

Parent sex played a significant role in the mixed models for both emotional neglect (Figure 7) and physical neglect (Figure 8). In order to know if the interrelations among parent trauma, parenting behaviors, child trauma, and child symptomatology differ across parent sex, multiple group analyses were conducted. Fit indices of these models are reported in Table 7. In Table 7, Mixed-Emotional Neglect Model 1 and Mixed-Physical Neglect Model 1 were models in which all the parameters estimated were allowed to vary across two groups, fathers and mothers. This was the least restricted model among the four mixed models of emotional neglect tested. In the subsequent models, invariance on certain parameters was imposed to answer the question of how mothers and fathers differ in the role parent emotional or physical neglect plays.

The first test for invariance for both emotional and physical neglect involved the test of differences between mothers and fathers in the relations of parent trauma on child symptomatology. In Model 2, equality constraints were imposed on parameters for the regression paths between parent trauma and child symptomatology. In Model 3, differences between mothers and fathers in the relations of parenting behaviors and child symptomatology and between parent trauma and parenting behaviors were tested by imposing equality constraints on parameters for the corresponding regression paths. In Model 4, the differences between mothers and fathers in the relations of parenting behaviors and child trauma and between child trauma

and child symptomatology were tested by imposing equality constraints on parameters for the corresponding regression paths.

In the models testing emotional neglect, model 1 produced $\chi^2 (14, N = 358) = 24.92$; the CFI above .90 and RMSEA of .05 with $p = .53$ for close fit indicate a reasonably good fit of the model. Model 2 fit the data well with a $\chi^2 (16, N = 358) = 31.88$; the CFI above .90 and RMSEA of .05. The difference in χ^2 between Model 1 and Model 2 was significant $\Delta\chi^2 = 6.96, \Delta df = 2, p < .05$, suggesting significant differences between mothers and fathers in relations of parent trauma to child symptomatology. Model 3 fit the data well with a $\chi^2 (20, N = 358) = 36.01$; the CFI above .90 and RMSEA of .05. The difference in χ^2 between Model 1 and Model 3 was not significant $\Delta\chi^2 = 11.09, \Delta df = 6, p = .09$, suggesting mothers and fathers did not significantly differ in the relations of parenting behaviors and child symptomatology and between parent trauma and parenting behaviors. Model 4 fit the data well with a $\chi^2 (24, N = 358) = 39.59$; the CFI above .90 and RMSEA of .04. The difference in χ^2 between Model 1 and Model 4 was not significant $\Delta\chi^2 = 14.67, \Delta df = 10, p = .15$, suggesting that mothers and fathers did not significantly differ in relations of parenting behaviors and child trauma and between child trauma and child symptomatology. Therefore, Model 4 was the model which best represented the data and the specific differences between mothers and fathers.

In the models testing physical neglect, Model 1 produced $\chi^2 (14, N = 358) = 25.37$; the CFI above .90 and RMSEA of .05 with $p = .51$ for close fit indicate a reasonably good fit of the model. Model 2 fit the data well with a $\chi^2 (16, N = 358) = 32.16$; the CFI above .90 and RMSEA of .05. The difference in χ^2 between Model 1 and Model 2 was significant $\Delta\chi^2 = 6.78, \Delta df = 2, p < .05$, suggesting significant differences between mothers and fathers in relations of parent trauma to child symptomatology. Model 3 fit the data well with a $\chi^2 (20, N = 358) = 36.60$; the

CFI above .90 and RMSEA of .05. The difference in χ^2 between Model 1 and Model 3 was not significant $\Delta\chi^2 = 11.23$, $\Delta df = 6$, $p = .08$, suggesting mothers and fathers did not differ in relations of parenting behaviors and child symptomatology and between parent trauma and parenting behaviors between mothers and fathers. Model 4 fit the data well with a χ^2 (24, $N = 358$) = 40.38; the CFI above .90 and RMSEA of .04. The difference in χ^2 between Model 1 and Model 4 was not significant $\Delta\chi^2 = 15.00$, $\Delta df = 10$, $p = .13$, suggesting that mothers and fathers did not significantly differ in relations of parenting behaviors and child trauma and between child trauma and child symptomatology. Therefore, Model 4 was the model which best represented the data and the specific differences between mothers and fathers.

The model testing emotional neglect, for mothers and fathers, revealed significant paths between parent trauma and child monitoring ($B = -.01$, $SE = .00$, $p < .05$), between child monitoring and child externalizing symptomatology ($B = -25.37$, $SE = 6.51$, $p < .01$), as well as between parent trauma and parent-child negativity ($B = .08$, $SE = .04$, $p < .05$), and between parent-child negativity and child externalizing symptomatology ($B = 1.58$, $SE = .68$, $p < .05$). Further, parent emotion neglect was directly related to child externalizing symptomatology for fathers only ($B = 2.90$, $SE = 1.32$, $p < .05$). Evidence of significant mediation was supported for the mediation test of parent trauma to child externalizing symptomatology through child monitoring ($Z = 1.95$, $p = .05$). However, the indirect effects of parent trauma on child externalizing symptomatology through parent-child negativity were not significant ($Z = 1.51$, $p = .13$).

Overall, the fathers' models, but not mothers', showed some evidence of parent trauma significantly affecting child symptomatology directly. Emotional neglect and physical neglect were significantly, or marginally significantly, related to child externalizing symptomatology (B

= 2.90, SE = 1.32, $p < .05$; B = 4.70, SE = 2.53, $p < .07$, respectively) for fathers only. For both mothers and fathers, parent emotional neglect was significantly related to child monitoring (B = -.01, SE = .00, $p < .05$) and parent-child negativity (B = .08, SE = .04, $p < .05$).

There was no evidence of potential mediation for physical neglect. However, for both mixed neglect models child age was significantly related to child monitoring (B = -.01, SE = .00, $p < .01$), child externalizing symptomatology (B = .69 ~ .71, SE = .21, $p < .01$), and child trauma (B = .15, SE = .06, $p < .05$) for mothers only. This indicates that for older children there is lower child monitoring, and higher child externalizing symptomatology and child trauma according to mother-child pairs. Income was significantly related to child trauma (B = -.13, SE = .05, $p < .01$; B = -.45, SE = .14, $p < .01$, respectively) for mothers and fathers in both neglect models. This indicates that for higher incomes there is lower child trauma.

Chapter 4 – Discussion

The purpose of the current study was to investigate the relations among parent maltreatment, parenting behavior, child trauma, and child adjustment. This research highlights the potential impact of parent maltreatment experiences on parenting behaviors and their child's trauma exposure and adjustment, as well as the effects of parenting behaviors on children's trauma exposure and adjustment. It was hypothesized that parenting behavior, and in turn child trauma, would mediate the relation between parent maltreatment history and child adjustment as evidenced by internalizing/externalizing symptomatology. Additionally, it was hypothesized that parenting behavior would influence child trauma which would in turn influence child adjustment. Partial support for the hypotheses was found in that: 1.) parent-child negativity mediated the relation between parent maltreatment and child externalizing symptomatology for the mixed model of emotional abuse, for the parent report models of emotional and physical abuse, and the

mediation of parent-child negativity was also found for the parent report model of emotional neglect for both internalizing and externalizing symptomatology, 2.) parent-child negativity, only mediated the relation between parent maltreatment and child trauma for parent physical abuse in the child report model, and 3.) child trauma mediated the relations between parenting behaviors and child adjustment for all child models, for parent-child negativity in the parent report models of physical neglect and physical and sexual abuse, and for child monitoring in the mixed models of emotional, physical, and sexual abuse and for the mixed model of emotional neglect to externalizing symptomatology only.

4.1 – The Effects of Parent Maltreatment on Parenting Behaviors

In this study, it was expected that parent maltreatment history would be related to less optimal parenting behaviors characterized by high negativity and low monitoring. For the mixed models, as well as the parent report models, emotional abuse, physical abuse, and emotional neglect were positively related to parent-child negativity. For the child report models, this hypothesis was supported by significant positive relations between physical abuse and parent-child negativity. Additionally in the mixed model, emotional neglect was negatively related to child monitoring. This indicates that parents who experienced physical abuse, emotional abuse, and/or emotional neglect are more likely to report higher levels of parent-child negativity, and parents with emotional neglect are more likely to show poor monitoring of their children.

This finding is consistent with previous research indicating harsher parenting, higher use of verbal abuse, and higher overall poor parenting for parents who had experienced child maltreatment (Dixon, Hamilton-Giachritsis et al., 2005; Dubowitz et al., 2001; Ferrari, 2002; Newcomb & Locke, 2001). Thus parent maltreatment experience was supported as a predictor of poor parenting, particularly with high parent-child negativity. However, it may be the case that

other factors are facilitating this relation such as parent adjustment after trauma, parent depression, or other aspects of the parent-child relationship such as attachment (Ezzel et al., 2000; Hilarski, 2004). There is some evidence that this relation may vary not only by parent maltreatment type but also by amount or severity of parent maltreatment (Dixon, Hamilton-Giachritsis et al., 2005; Dubowitz et al., 2000; Ferrari, 2002; Newcomb & Locke, 2001).

4.2 – The Effects of Parent Maltreatment on Child Adjustment

Further, for the mixed models, as well as the child report models, parents' childhood physical abuse experience was positively related to their children's internalizing symptomatology. Additionally, for fathers emotional neglect was related to child externalizing symptomatology. For the parent report, a positive relation existed between parent maltreatment and child externalizing symptomatology for sexual abuse only. The current findings are consistent with prior research in that parent trauma was mainly related to child adjustment indirectly through factors such as parenting behaviors or maternal depression (Hilarski, 2004; Dubowitz et al., 2001). This hypothesis was partially supported by mediation analyses that will be discussed later. Past research has supported a relation between parent maltreatment history and parenting behaviors. For example, sexually abused mothers have higher rates of permissive parenting (Ruscio, 2001). Additionally, childhood abuse in parents has been related to higher verbal and physical abuse for mothers (Ferrari, 2002), poorer parenting (including lower acceptance and higher rejection) for mothers, and rejecting parenting practices for fathers (Newcomb & Locke, 2001). This can be seen in that parents are influenced by their own experiences and, particularly in cases where parents do not recover following maltreatment, this experience is likely to affect their parenting behaviors.

Alternatively, it may be that parent maltreatment's relation to child symptomatology occurs primarily through other factors such as those mentioned earlier (i.e. parent characteristics, other parenting behaviors, or parent overall trauma type including adult victimization). It may also be the case that the reporter matters in the predicting of this relation. In the current study it was physical abuse that was found to be related to child symptomatology in all reporter type models; however, other research has indicated that this relation existed for mothers' report but not teachers' (Morrel et al., 2003). It may be that parents are more sensitive to these relations than other observers. However, the current findings do lend some support to this relation not being simply over-reporting of child adjustment problems by parents with maltreatment histories as it was also found for child report and mixed report models.

In the present study parent-child negativity and child monitoring were explored as these reflect two potentially strong predictors of parenting quality. Parent-child negativity, which includes more arguing, disagreements, and criticism between the parent and child, represents a possible risk factor for children which can be indicative of poor overall parenting. On the other hand, child monitoring represents a potential protective factor for children, in that when parents know more about what their children are doing and there is greater parent-child communication it is likely related to better overall parenting. Both of these parenting behaviors, which were evidenced to be equally indicative of child trauma and adjustment, lend to a clearer picture of parenting quality as it is related to child adjustment.

4.3 – The Effects of Parenting Behaviors on Child Trauma

Parenting behavior was predicted to be related to child traumatic experiences, and partial support for this hypothesis was found. For the mixed models, emotional abuse, physical abuse, and sexual abuse revealed marginally significant negative relations between child monitoring

and child trauma. For the child report, all five parent maltreatment models indicated significant negative relations between child monitoring and child trauma as well as significant positive relations between parent-child negativity and child trauma. For parent report models, physical abuse, sexual abuse, and physical neglect models revealed marginally significant positive relations between parent-child negativity and child trauma. The current findings support the potential role of parenting on child trauma as either a protective factor in the case of good parenting or a risk factor in the case of poor parenting. While little is known about the role of parental child monitoring in relation to child trauma, it is reasonable to expect that high child monitoring would act as a protective factor against child trauma. However, prior research does support the role of parent-child negativity as a risk factor for child trauma (Punamaki et al., 1997). Other parenting behaviors may further clarify the potential relation of parenting to child trauma, such as communication, attachment, children's perception of parents, and parenting style (Dixon, Hamilton-Giachritsis et al., 2005; Punamaki et al., 1997).

4.4 – The Effects of Parenting Behaviors on Child Adjustment

Parenting behaviors were expected to predict child internalizing and externalizing symptomatology such that parents with lower child monitoring would have children with higher symptomatology and parents with higher parent-child negativity would have children with higher symptomatology. This hypothesis was partially supported for all model types. For the mixed models, all five maltreatment types revealed that for parents with lower monitoring there was higher child externalizing symptomatology, further for parents with higher parent-child negativity children exhibited higher externalizing symptomatology. For the parent and child models, parents with lower child monitoring had children with higher internalizing and externalizing symptomatology in all five models. Additionally, parents with higher parent-child

negativity had children with higher levels of internalizing and externalizing symptomatology in all five models. This lends further support to parenting behaviors, including child monitoring and parent-child negativity significantly predicting child symptomatology, particularly for child externalizing symptomatology.

4.5 – The Effects of Child Trauma on Child Adjustment

Child trauma was hypothesized to be predictive of higher internalizing and externalizing symptomatology. This hypothesis was supported in all fifteen models. The significant impact of child trauma on child internalizing and externalizing adjustment has been heavily supported throughout the literature. Child trauma has been associated with internalizing symptomatology (Bal et al., 2005; Kaplan et al., 1999) and externalizing symptomatology (Lynch & Cicchetti, 1998; Runyon & Kenny, 2002). The current study lends support to the relation between trauma and symptomatology in children. However, it is important to note that the relation between child trauma and child adjustment may be influenced by protective and risk factors such as parenting stress (Huth-Bocks & Hughes, 2008), and perceived parental support (Ezzell et al., 2000) in children's environments. In other words, for children who have experienced trauma, good parenting may act as a protective factor which fosters positive adjustment whereas poor parenting may act as a risk factor which increases child symptomatology following trauma. Additionally, for children the effects of child trauma on child adjustment may differ according to type and severity of traumas children have experienced (Appleyard et al., 2005; Bal et al., 2005; Kaplan et al., 1999).

4.6 – Parent Sex Differences

There were no child sex differences in the proposed relations among any pathways. Rather, potential parent sex differences were partially supported for the direct relations between

emotional and physical neglect and child symptomatology. In particular, parents with emotional neglect experience had children exhibiting higher levels of externalizing symptomatology, and fathers with physical neglect experience had children exhibiting higher levels of externalizing symptomatology. In the existing literature, findings on differential influences of parent maltreatment on child adjustment for mothers and fathers are mixed and insufficient, though it has been found that for fathers sexual abuse experience was related to rejecting parenting practices, whereas for mothers it was related to aggressive parenting (Newcomb & Locke, 2001). In the current study, physical neglect was related to child adjustment for fathers only, indicating that physical neglect experienced by fathers may be more influential on child adjustment, though further research is needed to explore why this difference exists. This study's findings suggested that father's physical neglect experiences were not only directly predictive of child externalizing symptomatology, but also had indirect effects on child externalizing symptomatology mediated by child monitoring. Fathers who experienced physical neglect seemed to be poorer in monitoring their children. However, it may be that parent maltreatment characteristics, such as timing, severity, and duration, are also influential in how maltreatment experience influences child adjustment and not necessarily solely attributable to parent sex differences. Alternatively, mothers and fathers may differ in coping factors implemented following a trauma and those coping differences may be what determine the effect parent trauma will have on children (Ferrari, 2002; Newcomb & Locke, 2001).

Prior research has shown sex differences in that boys were more likely to exhibit externalizing symptomatology whereas girls were more likely to exhibit higher posttraumatic symptoms (Lynch & Cicchetti, 1998) and depression (Runyon & Kenny, 2002). Little research has been done on the differences between parents in influencing child adjustment when there is a

history of parent maltreatment; however some research has indicated that mothers and fathers differed in the influences of sexual abuse experience on parenting practices in that mothers exhibited higher aggressive parenting, whereas fathers exhibited higher rejecting parenting behaviors (Newcomb & Locke, 2001). The current findings are consistent with past research which revealed parent maltreatment history to be related to higher verbal and physical abuse for mothers but not fathers (Ferrari, 2002). The current study extends prior findings by demonstrating differences between mothers and fathers in the influences of different types of parent maltreatment on parenting behaviors.

4.7 – The Effects of Parent Trauma on Children

Several studies have shown that the influences of parent maltreatment history on children differ according to the type of parent maltreatment (Dixon, Browne et al., 2005; Dixon, Hamilton-Giachritsis et al., 2005; Newcomb & Locke, 2001). However, less is known about why some types of parent maltreatment influence parenting behaviors and child adjustment whereas others do not, particularly as most parent maltreatment research has focused on abuse rather than neglect. The current findings suggest that neglect may have longer lasting effects on parent adjustment and psychopathology and thereby may be more likely to play an influential role in parenting and children's adjustment than abuse.

4.8 – The Mediated Effect of Parent Maltreatment on Child Trauma

It was hypothesized that parenting behaviors would mediate the relations between parent maltreatment and child trauma. This hypothesis was not supported; however, there was evidence of a trend toward significance ($p = .08$) for parent physical abuse in the child model. No other models or maltreatment types revealed significant mediated effects of parent maltreatment on child trauma through parenting behaviors. This finding indicates that parent maltreatment may

not necessarily be related to likelihood of child trauma experience through poor parenting behaviors.

Previous findings have supported the role of parenting behaviors, namely harsh parenting and overall poor parenting (Dixon et al., 2005; Dubowitz et al., 2001), in mediating the relations of parent maltreatment history to child trauma. It is likely that mediation by parenting behavior depends on the type of parenting behavior being examined as well as the types of parent and child trauma experience. Parent characteristics and adjustment, such as parent age and education or parent depression and stress (Dixon, Hamilton-Giachritsis et al., 2005; Dubowitz et al., 2001) would likely further inform this relation and may act as alternative mediators of the potential intergenerational transmission of trauma.

4.9 – The Mediated Effect of Parenting Behaviors on Child Adjustment

Child trauma was expected to mediate the relations between parenting behaviors and child internalizing and externalizing symptomatology. According to the mixed models, parents with a physical, sexual, or emotional abuse history were more likely to show poorer child monitoring and their children were in turn more likely to exhibit higher internalizing and externalizing symptomatology. Further, parents who experienced emotional neglect were more likely to have poorer monitoring which in turn was related to higher child trauma and higher child externalizing symptomatology. Support for this hypothesis was found in all of the child models for both parenting behaviors of parent-child negativity and child monitoring to both types of symptomatology. However, mediation was not found for the parent models.

Child trauma's effects on child adjustment are well supported in the literature. Little research has been done to examine the role of child trauma as mediating the relation between parenting behaviors and child symptomatology. However, this mediation was supported in

majority of the models tested in the current study which is congruent with some past research demonstrating the influences of parenting behaviors on child adjustment as protective factors (Punamaki et al., 1997) or risk factors in the case of parenting behaviors such as parenting stress (Huth-Bocks & Hughes, 2008). According to prior research though, it is more likely that child trauma itself influences child adjustment directly and that parenting behaviors would act as potential protective or risk factors moderating the relation between child trauma and child adjustment (Punamaki et al., 1997; Toth et al., 2002). It is likely the case that parenting behaviors, child trauma, and child adjustment are related; however, further research should be done to determine the direction and exact roles of these relations. For example, while good parenting behaviors may reduce the risk of children experiencing trauma, it may also be the case that good parenting reduces child symptomatology for those children who do experience trauma.

4.10 – The Mediated Effect of Parent Maltreatment on Child Adjustment

It was also expected that parenting behaviors may mediate the relation between parent maltreatment and child internalizing and externalizing symptomatology. Some previous research suggested that parent trauma can negatively affect children's adjustment (Hilarski, 2004; Morrel et al., 2003). For the mixed models, parents who experienced emotional abuse were more likely to have higher parent-child negativity which in turn related to children who exhibited higher externalizing symptomatology. This hypothesis was not supported for the child models but was supported for the parenting models of emotional and physical abuse through parent-child negativity to both types of symptomatology. For the parent models, parents who experienced emotional neglect were more likely to have higher parent-child negativity which in turn related to their children exhibiting higher externalizing and internalizing symptomatology. This lends evidence to the potential influences of parent trauma on child outcomes although some research

indicates that this influence depends on many other factors such as youth exposure to parent trauma, parent trauma response, substance abuse, parental depression, and later adult victimization (Dubowitz et al., 2001; Hilarski, 2004). The mediated effects of parent trauma on child adjustment through parenting behaviors may be highly dependent on protective and risk factors for children, such as children's self esteem, emotion regulation, and coping skills (Kim & Cicchetti, 2004, 2009).

4.11 – The Mediated Effect of Parent Maltreatment on Child Trauma

Though parent maltreatment was not expected to be directly related to child trauma, two of the parent models indicated a direct relationship between parent maltreatment and child trauma. As this relation was found, potential mediation of parent maltreatment to child symptomatology through child trauma was explored and found to be significant for emotional abuse and showed a trend toward significance ($p = .07$) for emotional neglect for both types of symptomatology. This indicates that for some types of parent maltreatment there may be direct influences on child trauma which would in turn affect child internalizing and externalizing symptomatology. Research findings on the intergenerational transmission of violence, or trauma, are quite mixed and inconclusive. It seems evident from prior research that the transmission of trauma from parent to child is a complex pathway which does not necessarily occur, i.e. in some cases parent trauma does not lead to increased child trauma, and in the cases where intergenerational transmission of trauma does occur it is largely influenced by other protective and risk factors in the family environment (Hilarski, 2004; Ferrari, 2002; Newcomb & Locke, 2001).

The overall two-step mediation model (see Figure 1) of parent maltreatment to parenting behaviors to child trauma to child adjustment was supported for only the child reported physical

abuse model. In this model, overall poorer parenting, i.e. higher parent-child negativity and lower child monitoring, were related to higher child trauma which in turn was related to higher child externalizing and internalizing symptomatology. Additionally, parents who experienced physical abuse were more likely to have higher parent-child negativity which in turn was related to higher rates of trauma for children. Some prior research has indicated that any type of parent maltreatment experience is predictive of the use of verbal and physical abuse (Ferrari, 2002), and neglect is related to poorer parenting (Newcomb & Locke, 2001). It has also been shown that physically abusive parents lack impulse control and are prone to overreact to stressful stimuli (Milner, 2000); this may make physically abused parents more vulnerable to poorer parenting behaviors. In addition, physically abused parents may have lacked in opportunities to model positive parenting and therefore may suffer in parenting skills. Research should be done to better understand the differential ways that parental maltreatment characteristics, (including cumulative maltreatment, severity, and age of onset), can affect parenting behaviors and child adjustment.

Future research should be done to clarify the relations between parent maltreatment, parenting behaviors, child trauma, and child adjustment. It may be that these variables are all related; however, the relations may occur in very different patterns, such as parenting behaviors acting as a moderator between child trauma and child adjustment. In other words, just as good parenting can protect children from traumatic experiences it may also act as a protective factor for fostering good adjustment in children who have experienced trauma. Additionally, these relations may vary according to other environmental protective and risk factors such as other parenting behaviors, support networks, family systems, or parent psychopathology. On the other hand, parent maltreatment may, in cases where parents have appropriate adjustment following maltreatment, not play a role in parenting behaviors or child trauma experience and adjustment.

4.12 – Limitations

The results of this study are promising; however, several caveats should be noted. First, it should be noted that causal claims cannot be made about the relations and mediations supported. Second, it should also be noted that a common issue with trauma research is the use of retrospective report; this issue was also present in the current study. Third, this study's findings also may not be generalized to a large variety of races due to the lack of diversity in the current sample. Future research should further explore the roles of the factors explored in the current study in various races and cultures. Fourth, this study is limited by a lack of information on the potential roles of diverse aspects of trauma experiences. Parent maltreatment was not explored for the potential cumulative effects of having experienced more than one maltreatment type, or the potential effects of other types of parent trauma such as adult victimization, or according to severity of trauma. It is possible that relatively low levels of parent trauma experience may have limited significant findings in the current analyses. Additionally, child trauma was not explored further according to type and psychometrics have not been validated for the child trauma measure (LITE). The effects of trauma can be influenced by types, timing/age of onset, amount/cumulative effects, duration, and those protective factors used in coping with trauma. This study was limited in that parent trauma was simply explored by maltreatment type and child trauma was represented solely by a frequency score of a variety of trauma types. Further, this study explored trauma's effects in a normative sample and therefore the findings may not be generalizable to a clinical sample. Future research should explore the effects of parent trauma in a clinical sample as well as according to severity of parent maltreatment.

Fifth, a similar problem exists for those measures of parenting behavior which were limited to child monitoring and parent-child negativity. There are a plethora of factors which

lend to parenting quality not limited to monitoring or negativity though these two factors do provide a good picture of parenting. Additionally, it would be beneficial to explore the roles of trauma characteristics for both parents and children in relation to each other, parenting behaviors, and child adjustment. In line with that, parenting behaviors should be extended to include the many various parenting characteristics including discipline, communication, attachment, parenting stress and psychopathology, and warmth. Sixth, it should also be noted that it would be beneficial in future studies to further analyze how these dynamics may change according to the development of the child. Future research would also benefit from exploring these factors using a longitudinal design. All measures were completed via self report by parents and children. Therefore there may be possible reporter errors for both parents' and children's reports of parenting behaviors and child symptomatology as these may be influenced by the family and individual perceptions. Other means of assessing these measures could include teacher report, experimental tasks, or observation.

4.13 – Conclusion

Despite these limitations, this study does highlight the importance of research on the risk and protective factors associated with parent maltreatment and its influences on child trauma and adjustment. The lack of mediation of parent maltreatment to child trauma through parenting behavior implies that future research should be conducted to determine other possible ways in which the potential intergenerational transmission of trauma may occur. This is particularly important in light of past research indicating that children may be at a higher risk of trauma when the parents have a victimization history (Dubowitz et al., 2001). As correlations existed between parent maltreatment and child trauma it is essential that further research determines how this

transmission does occur. Additionally, the current findings support the need for intervention and prevention efforts tailored to at-risk youth who have parents with maltreatment histories.

As child trauma was a significant mediator of the relations between parenting behaviors and child symptomatology it is essential that prevention efforts work towards promoting better parenting behaviors as these are likely a protective factor for at-risk children and youth. This is supported by findings in the current study of parenting behaviors playing a role in the relation between parent trauma and child adjustment. Further, positive coping behaviors should be promoted in both parents and children in at-risk families in order to reduce the potential child symptomatology following traumatic experiences. Overall, it was found that parent maltreatment and child adjustment are related through parenting behaviors, including child monitoring and parent-child negativity, or child trauma experience. This study supports past research which emphasizes the importance of good parenting as a protective factor. Additionally, the current study lends support to the need to explore pathways of resilience in parents who have experienced trauma or maltreatment, or in children who are at risk. The findings of some significant indirect or direct relations between parent maltreatment and child adjustment indicate the need for further research on the complex ways in which protective and risk factors (including parenting behaviors, parent psychopathology, and child coping) influence both parents and children. The findings from this study enhance our understanding of the ways in which healthy development can be promoted for at-risk children, as well as the potential for unhealthy development involving parent and child trauma.

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Table 1

Means, Standard Deviations, and Ranges for Parent Trauma, Parenting Behaviors, Child Trauma, and Child Adjustment

Measure	Mean	SD	Range
Emotional Abuse (CTQ-P)	1.85	0.93	1.00-4.80
Physical Abuse (CTQ-P)	1.52	0.73	1.00-5.00
Sexual Abuse (CTQ-P)	1.49	1.04	1.00-5.00
Emotional Neglect (CTQ-P)	1.95	0.90	1.00-5.00
Physical Neglect (CTQ-P)	1.31	0.57	1.00-5.00
Child Monitoring (CMS-P)	0.66	0.07	0.03-0.70
Parent-child Negativity (PCN-P)	2.15	0.65	1.00-4.00
Child Monitoring (CMS-C)	4.51	0.65	1.15-5.00
Parent-child Negativity (PCN-C)	1.97	0.75	1.00-4.86
Child Trauma (LITE-P)	4.19	2.05	0-11
Child Trauma (LITE-C)	4.56	2.15	1-12
Externalizing (YSR-C)	49.25	9.48	29-76
Internalizing (YSR-C)	51.27	10.09	27-81
Externalizing (CBC-P)	49.74	10.07	33-79
Internalizing (CBC-P)	53.01	10.01	33-80

Notes. N = 358, CTQ = Child Trauma Questionnaire, LITE = Life Incidence of Traumatic Events, YSR = Youth Self Report, CBC = Child Behavior Checklist, CMS = Child Monitoring Scale, PCN = Parent-child Negativity, C = Child Report, P = Parent Report.

Table 2

Correlations of Covariates with Study Variables

Measures	EA (CTQ- P)	PA (CTQ- P)	SA (CTQ- P)	EN (CTQ- P)	PN (CTQ- P)	CMS- P	PCN-P	CMS- C	PCN-C	LITE- P	LITE- C	Ext (YSR- C)	Int (YSR- C)	Ext (CBC- P)	Int (CBC- P)
Child Sex	-.06	-.08	-.07	-.07	-.03	-.10	.03	-.05	-.03	.06	-.04	.08	.08	.09	.04
Child Age	-.02	-.08	-.08	.02	-.01	-.17**	-.01	-.35**	.23**	.04	.13*	.19**	.01	-.14**	-.07
Parent Sex	-.16**	-.06	-.14*	-.12*	-.06	-.09	-.05	-.02	-.11*	-.11*	-.08	-.04	-.08	-.02	-.09
Income	-.27**	-.21**	-.28**	-.26**	-.28**	.00	-.12*	.10	-.13*	-.19**	-.18**	-.14**	-.11*	-.24**	-.21**
Child Race	.15	.35*	.57**	.17	.02	.03	.20	.14	.10	-.37*	.29*	.24	.18	.16	.20

Notes. $N=358$. EA = Emotional Abuse, PA = Physical Abuse, SA = Sexual Abuse, EN = Emotional Neglect, PN = Physical Neglect, Ext = Externalizing Symptomatology, Int = Internalizing Symptomatology.

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

Table 3

Correlations of Covariates with Main Study Variables for Mothers

Measures	EA (CTQ- P)	PA (CTQ- P)	SA (CTQ- P)	EN (CTQ- P)	PN (CTQ- P)	CMS- P	PCN-P	CMS- C	PCN-C	LITE- P	LITE- C	Ext (YSR- C)	Int (YSR- C)	Ext (CBC- P)	Int (CBC- P)
Child Sex	-.04	-.08	-.04	-.06	-.03	-.11*	.08	-.07	-.01	.10	.00	.12*	.10	.15*	.08
Child Age	-.02	-.06	-.08	.05	.01	-.18**	-.01	-.32**	.25**	.03	.13*	.20**	.02	-.13*	-.06
Income	-.26**	-.21**	-.28**	-.26**	-.28**	-.03	-.10	.10	-.10	-.19**	-.15**	-.10	-.10	-.24**	-.20**
Child Race	.08	.14*	.21**	.11	.14*	.03	-.01	-.16**	.03	.02	.07	.13*	.11	.01	.01

Notes. $N = 310$. EA = Emotional Abuse, PA = Physical Abuse, SA = Sexual Abuse, EN = Emotional Neglect, PN = Physical Neglect, Ext = Externalizing Symptomatology, Int = Internalizing Symptomatology.

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

Table 4

Correlations of Covariates with Main Study Variables for Fathers

Measures	EA (CTQ- P)	PA (CTQ- P)	SA (CTQ- P)	EN (CTQ- P)	PN (CTQ- P)	CMS- P	PCN-P	CMS- C	PCN-C	LITE- P	LITE- C	Ext (YSR- C)	Int (YSR- C)	Ext (CBC- P)	Int (CBC- P)
Child Sex	-.09	-.02	-.26	-.00	.01	.06	-.34*	.17	-.05	-.17	-.27	-.15	-.01	-.34*	-.13
Child Age	-.19	-.32*	-.24	-.32*	-.26	-.13	.01	-.56**	.05	.03	.14	.13	-.04	-.23	-.23
Income	-.16	-.23	-.12	-.13	-.10	.46**	-.30*	.19	-.35*	-.09	-.48**	-.49**	-.24	-.23	-.19
Child Race	.15	.35*	.57**	.17	.02	.03	.20	.14	.10	-.37*	.29*	.24	.18	.16	.20

Notes. $N = 48$. EA = Emotional Abuse, PA = Physical Abuse, SA = Sexual Abuse, EN = Emotional Neglect, PN = Physical Neglect, Ext = Externalizing Symptomatology, Int = Internalizing Symptomatology.

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

Table 5

Correlations Among Study Variables

Measures	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. EA(CTQ-P)														
2. PA(CTQ-P)	.61**													
3. SA(CTQ-P)	.42**	.40**												
4. EN(CTQ-P)	.74**	.55**	.37**											
5. PN(CTQ-P)	.60**	.53**	.42**	.66**										
6. CMS-P	-.06	-.02	.03	-.09	-.08									
7. PCN-P	.20**	.13*	.08	.13*	.10	-.10*								
8. CMS-C	-.00	.02	-.02	.01	-.03	.24**	-.19**							
9. PCN-C	.11*	.12*	.04	.11*	.09	-.08	.29**	-.29**						
10. LITE-P	.26**	.11*	.15**	.17**	.08	-.07	.12*	-.08	.03					
11. LITE-C	.11*	.16**	.17**	.10	.14**	-.13*	.11*	-.24**	.23**	.27**				
12. Ext (YSR-C)	.12*	.15**	.08	.06	.12*	-.28**	.18**	-.39**	.51**	.15**	.41**			
13. Int (YSR-C)	.08	.18**	.13*	.05	.06	-.09	.06	-.26**	.31**	.07	.33**	.60**		
14. Ext (CBC-P)	.25**	.17**	.20**	.14**	.15**	-.20**	.56**	-.11*	.25**	.23**	.21**	.31**	.20**	
15. Int (CBC-P)	.20**	.06	.11*	.12*	.04	-.18**	.32**	-.08	.13*	.24**	.14**	.17**	.24**	.58**

Notes. $N=358$. EA = Emotional Abuse, PA = Physical Abuse, SA = Sexual Abuse, EN = Emotional Neglect, PN = Physical Neglect, Ext = Externalizing, Int = Internalizing.

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

Table 6

Correlations Among Study Variables by Parent Sex

Measures	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. EA (CTQ-P)	-	.62**	.40**	.74**	.60**	-.06	.19**	-.01	.09	.26**	.11	.10	.07	.25**	.18**
2. PA (CTQ-P)	.40**	-	.40**	.55**	.53**	.01	.12*	.02	.09	.12*	.16**	.12*	.16**	.15**	.03
3. SA (CTQ-P)	.44**	.50**	-	.36**	.42**	.03	.07	-.02	.03	.16**	.17**	.06	.12*	.19**	.10
4. EN (CTQ-P)	.67**	.55**	.39**	-	.65**	-.07	.11*	-.00	.08	.18**	.08	.01	.02	.12*	.08
5. PN (CTQ-P)	.60**	.39**	.20	.75**	-	-.06	.09	-.03	.09	.09	.15**	.11	.07	.15*	.01
6. CMS- P	-.38**	-.40**	-.13	-.40**	-.38**	-	-.08	.24**	-.07	-.05	-.12*	-.27**	-.09	-.17**	-.17**
7. PCN-P	.18	.23	.24	.26	.12	-.35*	-	-.19**	.27**	.14*	.07	.16**	.05	.56**	.31**
8. CMS- C	-.01	-.02	-.04	.05	.06	.27	-.17	-	-.30**	-.08	-.22**	-.38**	-.28**	-.12*	-.10
9. PCN-C	.18	.32*	.05	.25	.03	-.27	.52**	-.24	-	.02	.20**	.50**	.27**	.26**	.14*
10. LITE-P	.07	-.03	-.30*	-.03	-.09	-.30*	-.01	-.13	.05	-	.26**	.16**	.07	.22**	.23**
11. LITE-C	.06	.18	.15	.21	-.01	-.30*	.42**	-.39**	.41**	.24	-	.39**	.31**	.18**	.11
12. Ext (YSR-C)	.33*	.36*	.24	.38**	.26	-.41**	.32*	-.43**	.57**	.07	.57**	-	.61**	.32**	.19**
13. Int (YSR-C)	.17	.39**	.13	.26	-.07	-.24	.16	-.16	.60**	-.04	.41**	.48**	-	.20**	.26**
14. Ext (CBC-P)	.31*	.37*	.30*	.32*	.19	-.49**	.54*	-.01	.19	.28	.37**	.20	.14	-	.56**
15. Int (CBC-P)	.33*	.27	.18	.37**	.26	-.29*	.37*	.10	.03	.31*	.32*	.02	.04	.70**	-

Notes. $N = 358$. Correlations of mothers are above the diagonal and correlations of fathers are below the diagonal.

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

Table 7

Comparative Goodness-of-Fit of Structural Equation Models

Model Label	Absolute Goodness-of-Fit				Test of Close-Fit		Step-Down Goodness-of-Fit		
	<i>df</i>	χ^2	<i>p</i> (exact)	CFI	RMSEA	<i>p</i> (close)	Δdf	$\Delta\chi^2$	<i>p</i> (d)
Child- Emotional Abuse	17	24.60	.10	.99	.04	.77			
Child- Physical Abuse	18	42.24	.00	.96	.06	.20			
Child- Sexual Abuse	18	52.90	.00	.94	.07	.04			
Child- Emotional Neglect	17	26.98	.06	.98	.04	.68			
Child- Physical Neglect	17	28.53	.04	.98	.04	.62			
Parent- Emotional Abuse	6	7.11	.31	1.00	.02	.75			
Parent- Physical Abuse	7	10.25	.18	.99	.04	.64			
Parent- Sexual Abuse	7	11.66	.11	.99	.04	.55			
Parent- Emotional Neglect	6	7.57	.27	1.00	.03	.72			
Parent- Physical Neglect	7	7.23	.41	1.00	.01	.84			
<i>Mixed- Emotional Abuse</i>									
Model 1: Unconstrained	14	18.30	.19	.99	.03	.82			
<i>Mixed-Emotional Abuse</i>									
Model 2: Constrained	26	33.90	.14	.98	.03	.91	12	15.60	.21
Model 1 versus Model 2									
<i>Mixed- Physical Abuse</i>									
Model 1: Unconstrained	14	24.90	.04	.97	.05	.53			
<i>Mixed-Physical Abuse</i>									
Model 2: Constrained	26	44.24	.01	.95	.04	.64	12	19.34	.08
Model 1 vs. Model 2									
<i>Mixed- Sexual Abuse</i>									
Model 1: Unconstrained	14	25.79	.03	.97	.05	.49			
<i>Mixed-Sexual Abuse</i>									
Model 2: Constrained	26	34.61	.12	.98	.03	.90	12	8.82	.72
Model 1 vs. Model 2									
<i>Mixed- Emotional Neglect</i>									
Model 1: Unconstrained	14	24.92	.04	.97	.05	.53			
<i>Mixed- Emotional Neglect</i>									
Model 2: Equal Parent Trauma on Child Adjustment	16	31.88	.01	.96	.05	.40	2	6.96	<.05
Model 1 vs. Model 2									

<i>Mixed- Emotional Neglect</i>									
Model 3: Equal Parenting on Child Adjustment and Parent Trauma on Parenting	20	36.01	.02	.96	.05	.54	6	11.09	.09
Model 1 vs. Model 3									
<i>Mixed- Emotional Neglect</i>									
Model 4: Parenting on Child Trauma and Child Trauma on Child Adjustment	24	39.59	.02	.96	.04	.67	10	14.67	.15
Model 1 vs. Model 4									
<i>Mixed- Physical Neglect</i>									
Model 1 (Unconstrained)	14	25.37	.03	.97	.05	.51			
<i>Mixed-Physical Neglect</i>									
Model 2: Equal Parent Trauma on Child Adjustment	16	32.16	.01	.95	.05	.39	2	6.78	<.05
Model 1 vs. Model 2									
<i>Mixed- Physical Neglect</i>									
Model 3: Equal Parenting on Child Adjustment and Parent Trauma on Parenting	20	36.60	.01	.95	.05	.51	6	11.23	.08
Model 1 vs. Model 3									
<i>Mixed- Physical Neglect</i>									
Model 4: Parenting on Child Trauma and Child Trauma on Child Adjustment	24	40.38	.02	.95	.04	.64	10	15.00	.13
Model 1 vs. Model 4									

Note: df = degrees of freedom; $p(\text{exact})$ = probability of an exact fit to the data; CFI = Comparative Fit Indices; RMSEA = root mean square error of approximation; $p(\text{close})$ = probability of a close fit to the data; Δdf = difference in df ; $\Delta\chi^2$ = difference in likelihood ratio tests; $p(d)$ = probability of the difference tests.

Figure Captions

Figure 1. Overall Hypothesized Model.

Figure 2. Overall Child Model. Structural Equation Model.

Figure 3. Overall Parent Model. Structural Equation Model.

Figure 4. Mixed Model of Emotional Abuse. Structural Equation Model.

Figure 5. Mixed Model of Physical Abuse. Structural Equation Model.

Figure 6. Mixed Model of Sexual Abuse. Structural Equation Model.

Figure 7. Mixed Model of Emotional Neglect. Structural Equation Model.

Note: Mothers are on left, fathers are on right.

Figure 8. Mixed Model of Physical Neglect. Structural Equation Model.

Note: Mothers are on left, fathers are on right.

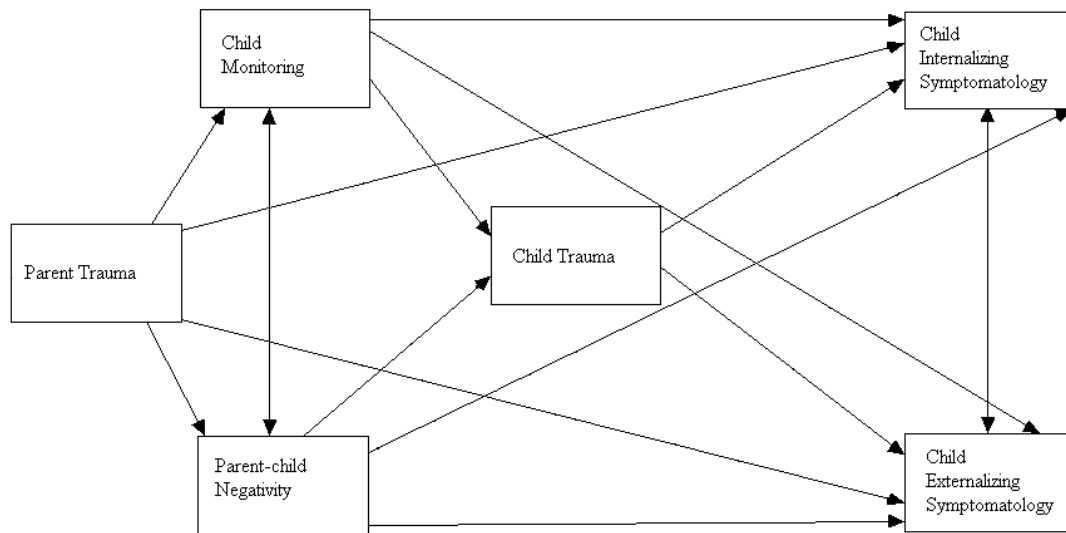


Figure 1. Overall Hypothesized Structural Equation Model for the Relations among Parent Trauma, Parenting Behaviors, Child Trauma, and Child Symptomatology.

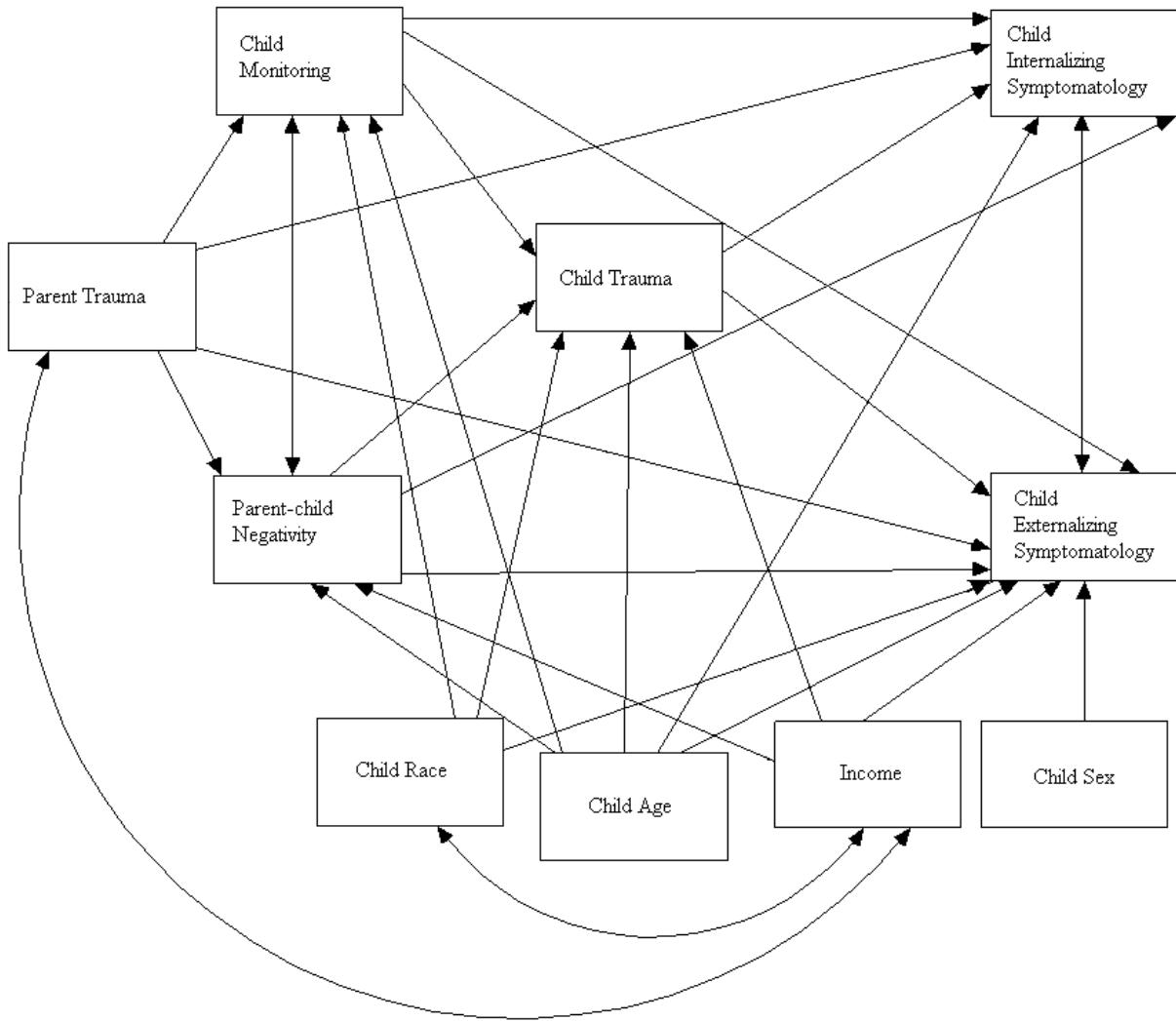


Figure 2. Model 1: Child Report Model. Structural Equation Model for the Relations among Parent Trauma, Parenting Behaviors, Child Trauma, Child Symptomatology, Child Race, Child Age, Child Sex, and Income. The Child Age to Internalizing Symptomatology path was only present for Physical Abuse and Emotional and Physical Neglect.

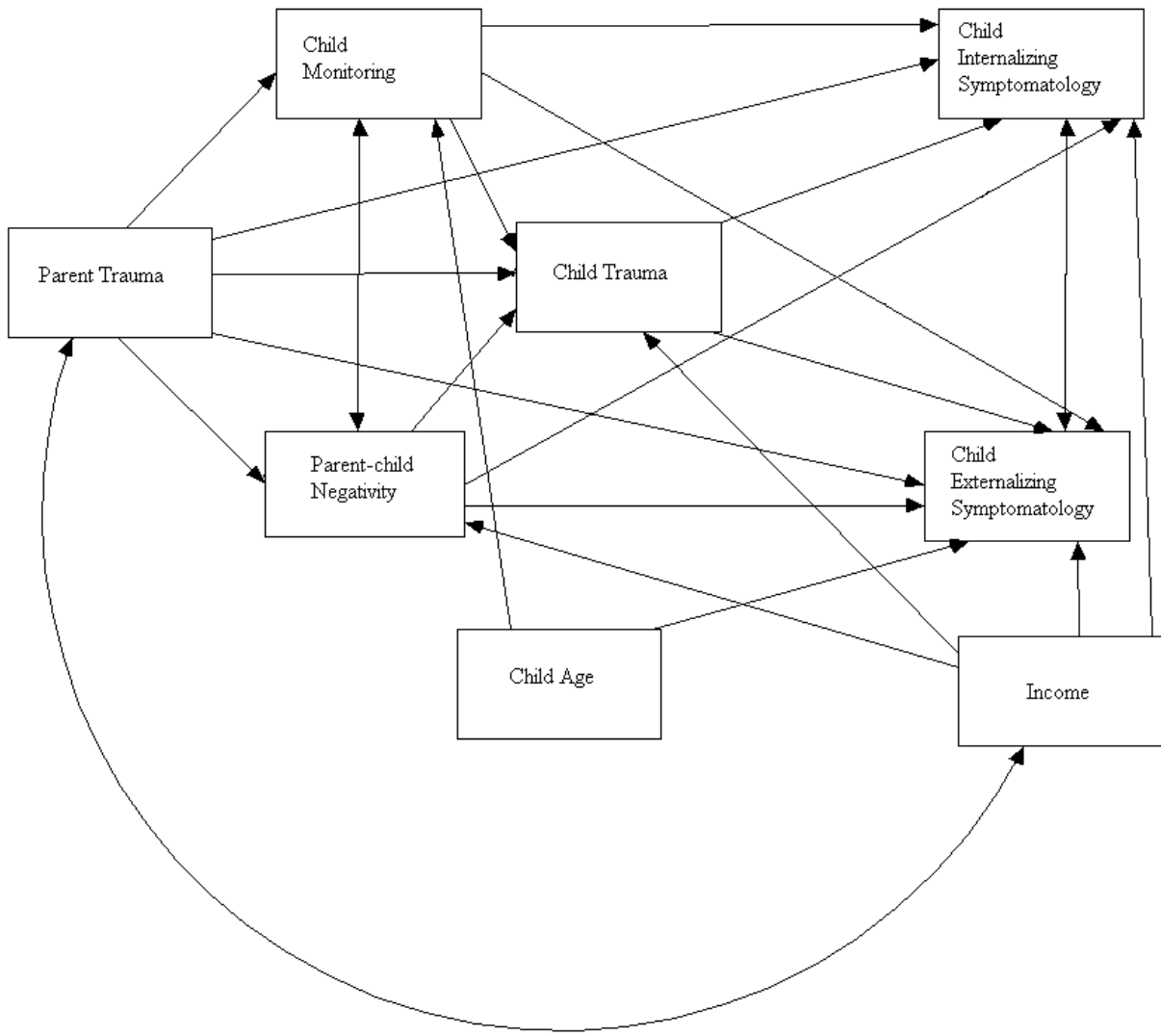


Figure 3. Model 1: Parent Report Model. Structural Equation Model for the Relations among Parent Trauma, Parenting Behaviors, Child Trauma, Child Symptomatology, Child Age, and Income. The Direct Path between Parent Trauma and Child Trauma was only present for Emotional Abuse and Emotional Neglect.

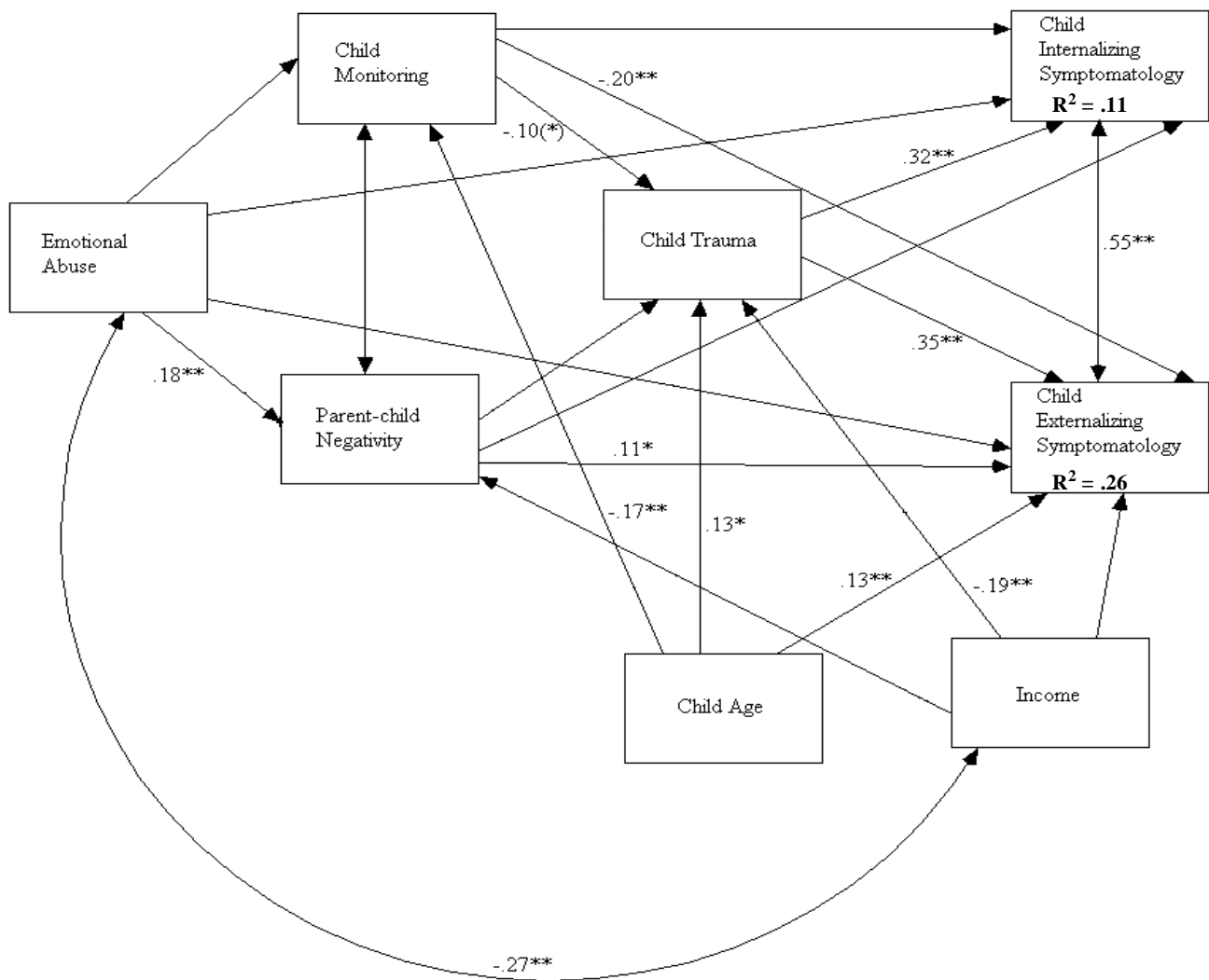


Figure 4. Mixed Model of Emotional Abuse. Structural Equation Model for the Relations among Parent Trauma, Parenting Behaviors, Child Trauma, Child Symptomatology, Child Age, and Income.

Note: Only parameters for significant paths are reported.

** $p < .01$ * $p < .05$, (*) $p < .10$

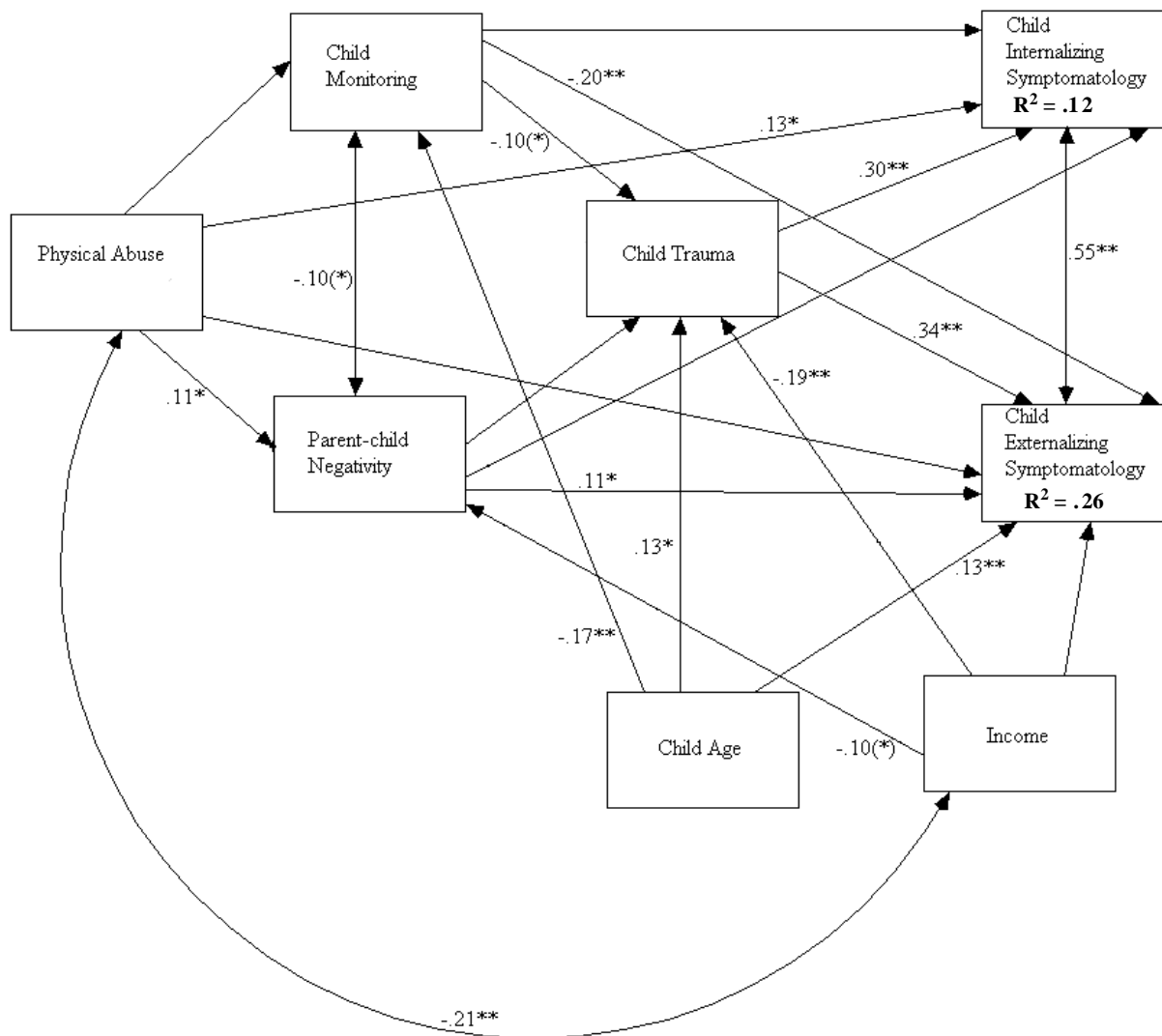


Figure 5. Mixed Model of Physical Abuse. Structural Equation Model for the Relations among Parent Trauma, Parenting Behaviors, Child Trauma, Child Symptomatology, Child Age, and Income.

Note: Only parameters for significant paths are reported.

** $p < .01$ * $p < .05$, (*) $p < .10$

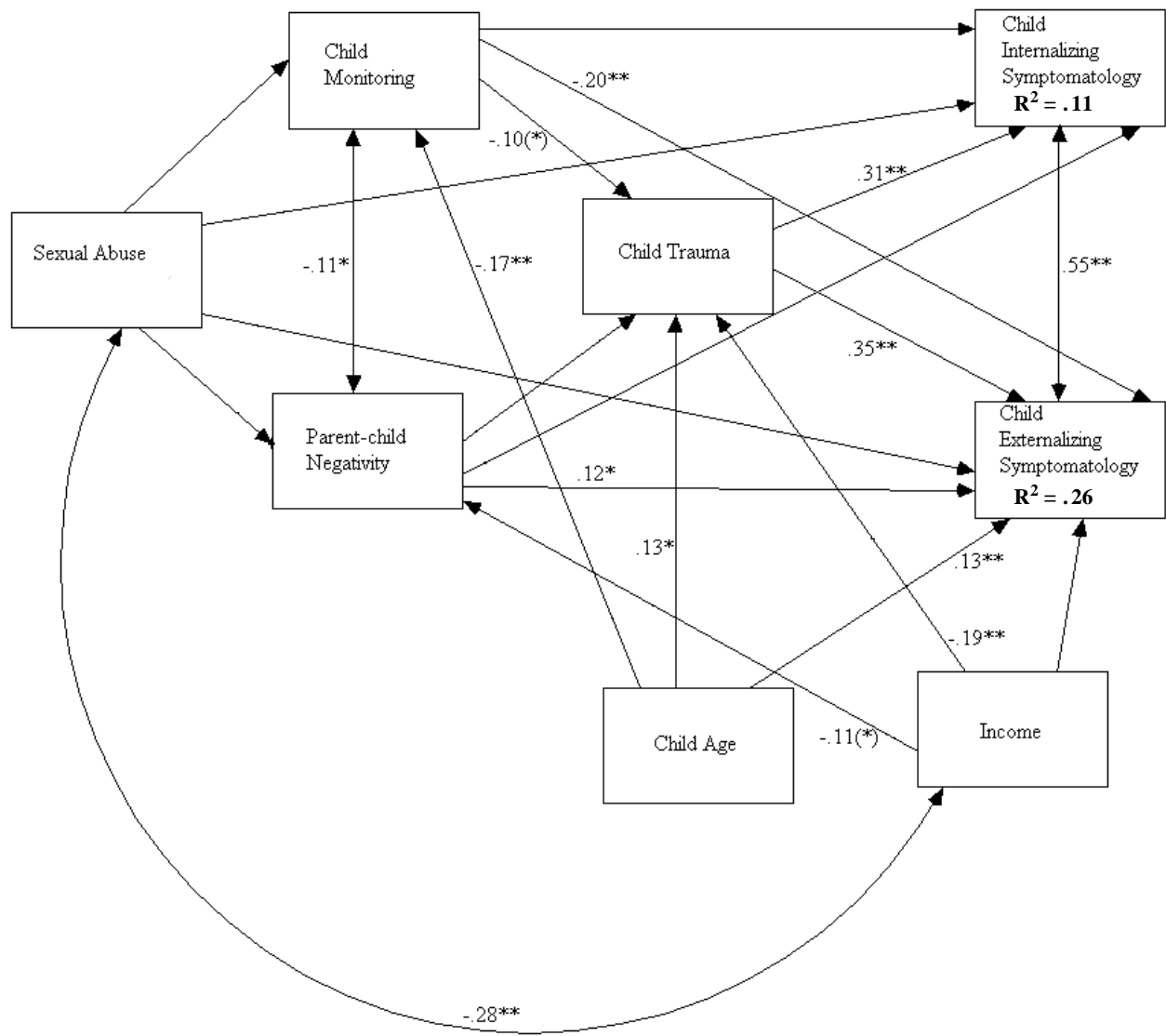


Figure 6. Mixed Model of Sexual Abuse. Structural Equation Model for the Relations among Parent Trauma, Parenting Behaviors, Child Trauma, Child Symptomatology, Child Age, and Income. Note: Only parameters for significant paths are reported. $** p < .01$ $* p < .05$, $(*) p < .10$

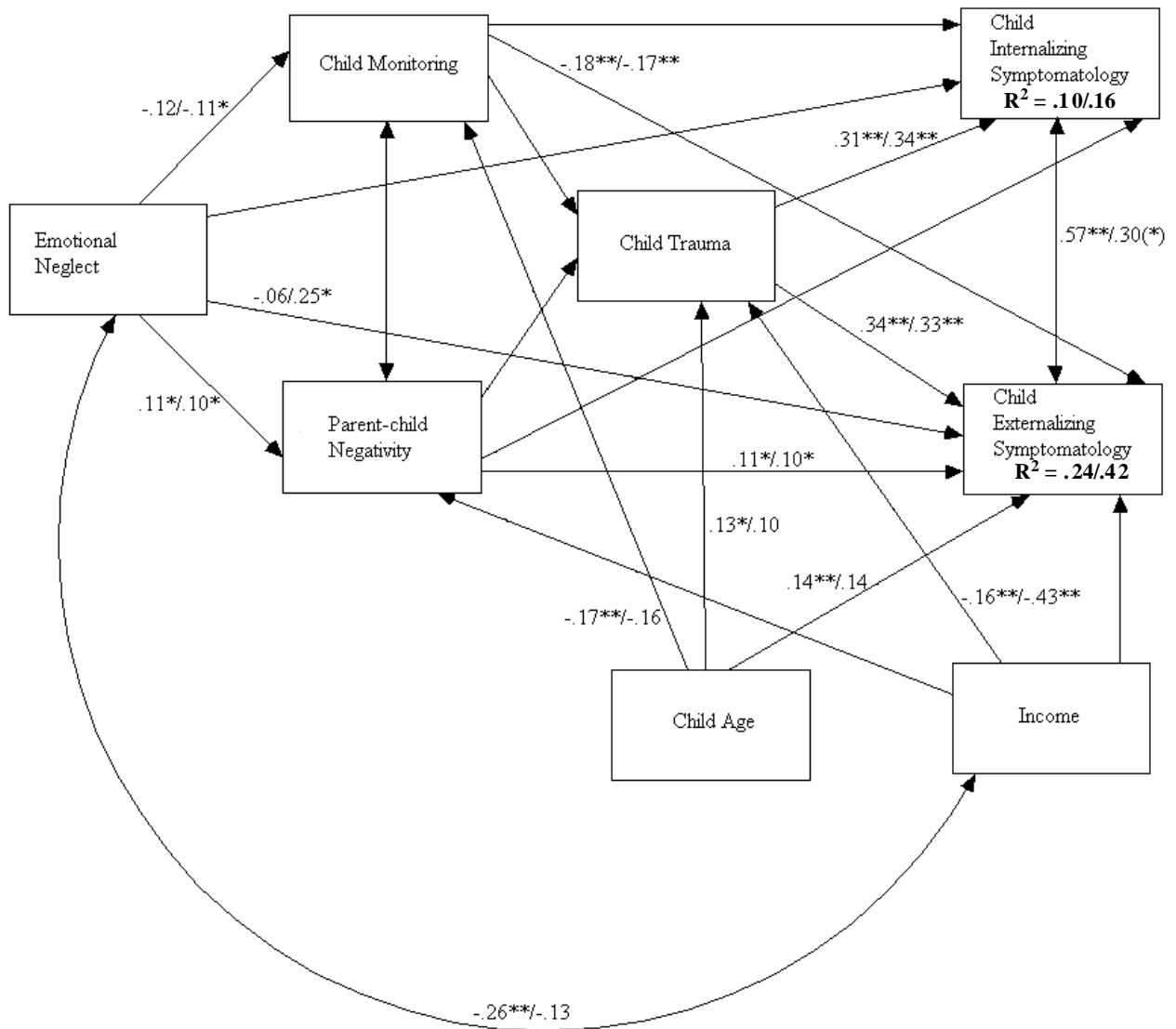


Figure 7. Mixed Model of Emotional Neglect. Structural Equation Model for the Relations among Parent Trauma, Parenting Behaviors, Child Trauma, Child Symptomatology, Child Age, and Income. Note: Only parameters for significant paths are reported. Mothers are on left, fathers are on right. $** p < .01$ $* p < .05$, $(*) p < .10$

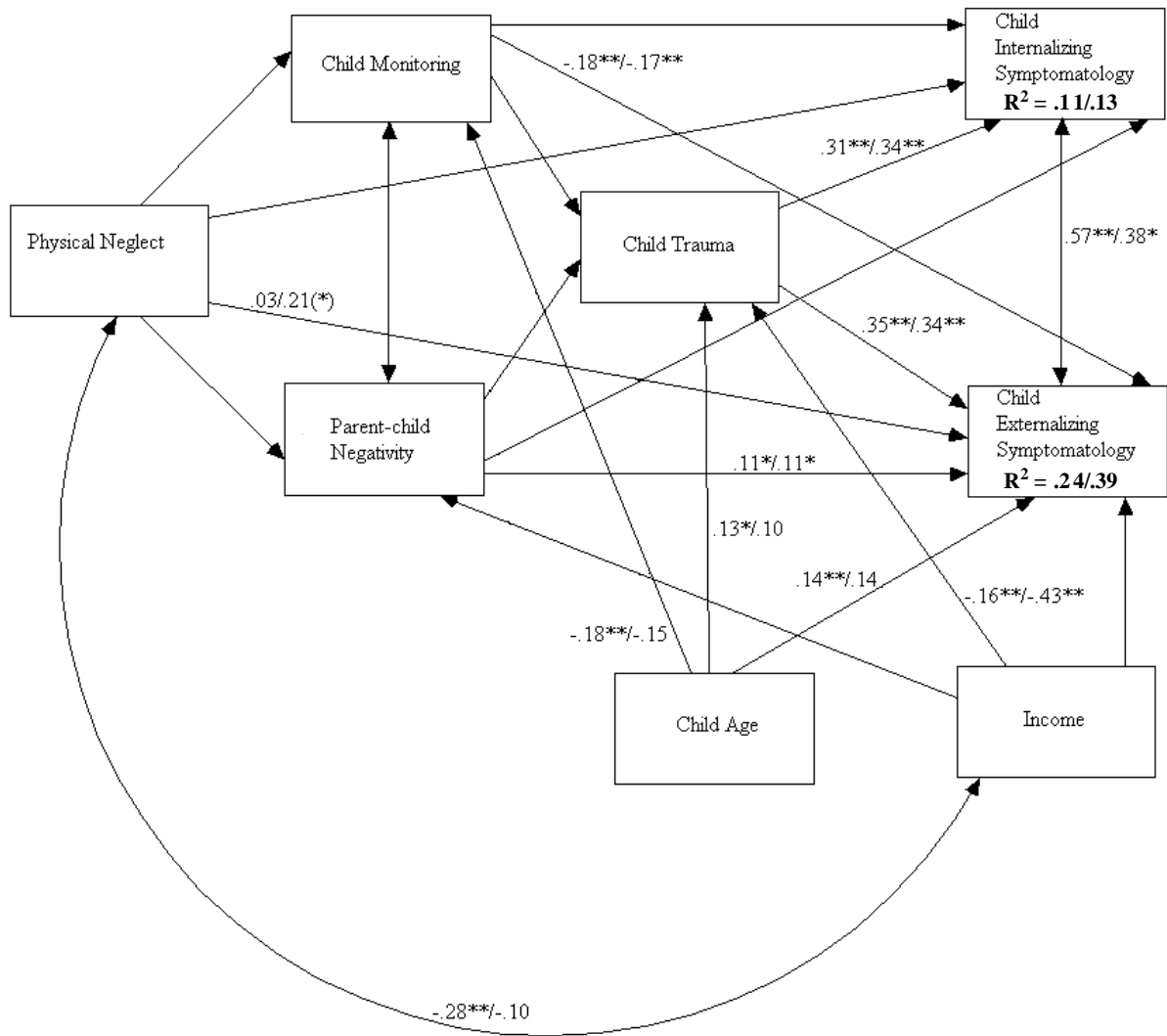


Figure 8. Mixed Model of Physical Neglect. Structural Equation Model for the Relations among Parent Trauma, Parenting Behaviors, Child Trauma, Child Symptomatology, Child Age, and Income.

Note: Only parameters for significant paths are reported. Mothers are on left, fathers are on right.

** $p < .01$ * $p < .05$, (*) $p < .10$