ABSTRACT

LEWIS, KRISTEN MICHAELA. The Link Between Parenting and Child Socioemotional and Academic Adjustment in Physically Abused Children: Moderating Factors of Maternal Depression and Child Perceptions of Parenting. (Under the direction of Dr. Mary Haskett.)

One purpose of this study was to explore the importance of mothers’ parenting behavior in the academic and socioemotional adjustment of physically abused children. A second goal was to explore the conditions under which the relation between mothers’ parenting behavior and adjustment of abused children existed and was strongest (i.e., examination of moderating factors). Specifically, the study was designed to examine the degree to which maternal depressive symptoms and children’s perceptions of maternal warmth interact with observed parenting behavior to predict socioemotional and academic adjustment. Participants were 80 mother-child dyads (mothers N=72; children N=80) extracted from a larger study examining maltreated children’s transition from preschool into first grade. Children ranged in age from 5-7 years old and were identified through the Department of Human Services (DHS) as having substantiated cases of physical abuse. Families meeting inclusion criteria visited the lab for 2-3 hours and completed a series of measures. In the current study, parenting behavior was coded among six dimensions during a 21 minute, structured parent-child interaction task. In addition, mothers completed a psychological screening measure with a depression scale. Children completed a puppet interview about perceptions of their mother’s warmth/sensitivity at home. Finally, the child’s classroom teacher completed measures of socioemotional and academic adjustment. It was hypothesized that observed maternal controllingness and insensitivity during parent child interactions would be associated with poorer socioemotional and academic adjustment. It was
also predicted that maternal depression and child perceptions of maternal warmth would interact with parenting behavior in prediction of child adjustment.

As hypothesized, controllingness was related to academic adjustment. Specifically, mothers who displayed more hostile, negative, dominating, and intrusive behaviors during interactions with their children had children who received higher ratings of academic maladjustment by teachers. None of the other hypotheses were supported. In order to explore several questions that arose subsequent to the tests of hypotheses, a series of post hoc analyses were conducted. Post hoc analyses revealed a significant interaction between child perceptions of maternal structure and controllingness in prediction of socioemotional adjustment. Specifically, those children who perceived their mothers as low in structure experienced higher problem behavior scores as a function of maternal controllingness. Results are discussed in terms of the importance of parenting behavior in understanding child outcomes in maltreated children.
The Link Between Parenting and Child Socioemotional and Academic Adjustment in Physically Abused Children: Moderating Factors of Maternal Depression and Child Perceptions of Parenting

by
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BIOGRAPHY

Kristen Lewis received her Bachelor’s degree in Psychology with a minor in Spanish at North Carolina State University in 2003. In 2005, she completed her Master’s at the University of North Carolina at Wilmington where she researched the impact of race and age on childhood depression. At that time, Kristen was also a lead researcher on a large grant evaluating the effectiveness of community agencies in promoting positive mental health. In 2006, she entered the doctoral program in School Psychology at North Carolina State University. While completing her doctorate, Kristen served as a lead researcher on a federally-funded grant investigating variables impacting maltreated children’s transition from preschool to kindergarten. Kristen presented five posters at the North Carolina Psychology conference in addition to co-authoring two published articles and a book chapter related to child physical abuse. For five years, she also served as the primary instructor for several psychology courses, including Introduction to Psychology, Social Psychology, Abnormal Psychology, and Learning and Motivation. Kristen completed her internship in Wake County Public Schools, and hopes to obtain a job as a school psychologist upon graduating with a clinical interest in early intervention. In 2009, Kristen had a little boy, and enjoys every moment with her sweet little toddler and wonderful husband.
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CHAPTER ONE

Introduction

The Federal Child Abuse Prevention and Treatment Act (2003) defines child maltreatment as: “any recent act or failure to act on the part of a parent or caretaker which results in death, serious physical or emotional harm, sexual abuse or exploitation” or “an act or failure to act which presents an imminent risk of serious harm” (Child Welfare Information Gateway, 2008). In 2006, there were over 900,000 substantiated cases of child maltreatment. Of these cases, approximately 1,500 children died from injuries associated with abuse and/or neglect (Center for Disease Control and Prevention, 2008). True rates of fatalities may be even higher, as some researchers and practitioners believe cases of child fatality due to abuse or neglect may be underreported (Child Welfare Information Gateway, 2008; Crume, DiGuiseppi, Byers, Sirotnak, & Garrett, 2002). Given the incredible economic and human strain associated with child maltreatment, researching this population is important in guiding social policy, prevention, and intervention/treatment efforts (Kaufman & Cicchetti, 1989).

Child maltreatment has been linked to a host of negative consequences for children; constructs of particular interest in this study were maltreated children’s socioemotional adjustment and academic adjustment. In general, using multidimensional questionnaires of socioemotional adjustment, researchers have found maltreated children to display higher levels of internalizing and externalizing problems compared to nonmaltreated children, particularly in the school environment (e.g., Kaufman & Cicchetti, 1989; Kinard, 1995; Shonk & Cicchetti, 2001; Toth, Cicchetti, Macfie, Rogosch, & Maughan, 2000). Some
researchers also report maltreated children to have lower grades, more discipline referrals, more behavior problems, higher retention rates, and lower social and academic competence (e.g., Eckenrode, Laird, & Doris, 1993; Leiter & Johnson, 1994; Rogosch & Cicchetti, 1994).

Understanding potential predictors of the negative outcomes of abuse discussed above is an increasing focus of research. One potential predictor is the parenting behavior of abusive parents. Most researchers have explored group differences in parenting behavior of maltreating and nonmaltreating parents and these studies indicate that maltreating parents tend to display more negative behaviors and less sensitivity and warmth when interacting with their children (e.g., Egeland, Breitenbucher, & Rosenberg, 1980; Kavanagh, Youngblade, Reid, & Fagot, 1988; Mash, Johnston, & Kovitz, 1983). Researchers have not yet examined the specific link between parenting behavior and socioemotional and academic adjustment for samples of maltreated children. Therefore, one goal of the present research was to explore the importance of parenting behavior in the academic and socioemotional adjustment of physically abused children.

A second goal of the proposed research was to explore the conditions under which the relation between parenting behavior and adjustment of abused children existed and was strongest. Despite evidence suggesting that maltreated children tend to experience poor adjustment, many children are resilient to the negative effects of abuse, displaying adequate mental health and academic and social competence (e.g., Jaffee & Gallop, 2007). Understanding protective and risk factors associated with child maltreatment may help researchers and clinicians to better understand the mechanisms by which abuse leads to
negative consequences for some children, and most importantly, to inform intervention efforts (Collishaw, Pickles, Messer, Rutter, Shearer, & Maughan, 2007).

One way to examine protective and risk factors is to explore moderators of the relation between the parenting context and adjustment of maltreated children. Moderating factors are considered to change the strength or the direction of the relation between two variables. It is likely that not all maltreated children whose parents display negative parenting will experience socioemotional and academic maladjustment. Therefore, the present study was designed to explore two potential protective factors, parent mental health functioning and child perceptions of parenting behavior, for child maladjustment. Specifically, the study was designed to examine the degree to which parental depressive symptoms and children’s perceptions of parental warmth interacted with observed parenting behavior to predict socioemotional and academic adjustment in a sample of physically abused children.

Most studies to date have examined the main effects of maternal depression on child outcomes using samples of abused children and control groups (e.g., Kinard, 1995; Haskett, Allaire, Kreig, & Hart, 2008; Svedin, Wadsby & Sydsio, 1996). Some researchers find that, in samples of abused children, parental depression does predict child maladjustment; other researchers do not find a relation between mother’s depression and teacher reports of child behavior (e.g., Takei, Yamashita, & Yoshida, 2006). As Haskett and colleagues suggested, depression may exacerbate the negative effects of abuse (e.g., child maladjustment) under certain conditions (2008). Therefore, it is important to examine maternal depression as a moderating variable.
The second moderating variable considered in this study was children’s perceptions of their parents’ caregiving. This potential moderator was chosen because, although researchers have explored the relation between child perceptions of parenting and child adjustment in normative samples (e.g., Morris, Steinberg, Sessa, Avenevoli, Silk, & Essex, 2002; Sessa, Avenevoli, Steinberg, & Morris, 2001), few studies examine the role of perceptions of maltreated children, specifically. In addition, researchers have not investigated the interacting effects of child perceptions and parenting behavior in predicting child adjustment. Based on research with nonmaltreated children (e.g., Anan & Barnett, 1999; Gaylord-Harden, 2008; Silk, Sessa, Morris, Steinberg, & Avenevoli, 2004), it is reasonable to expect that children’s perceptions of their parents will moderate the effects of parenting behavior in maltreated children. For example, the relation between negative parenting and child maladjustment might be stronger in children holding negative perceptions of their parent’s behavior. If that is the case, interventions targeting child perceptions may be valuable in preventing maladjustment of abused children.

In sum, decades of research have been devoted to studying the deleterious effects of child maltreatment, particularly social, emotional, and academic maladjustment. However, most researchers have failed to consider predictors of individual differences in child adjustment in maltreated samples. Ultimately, understanding predictors of maladjustment as well as protective factors should help to inform intervention efforts. The proposed model considered multiple perspectives on the child’s parenting environment (i.e., that of the parent, the child, and an outside observer) and the teacher’s perspective on the child’s adjustment. By considering multiple perspectives, the study used an ecological framework
(Bronfenbrenner, 1979), specifically exploring factors in both the child’s microsystem and mesosystem. Because abuse occurs in a context of multiple factors related to the child and the child’s immediate and distal environments, an ecological perspective should better inform prevention and early intervention efforts for children at risk for maladjustment (Seng & Prinz, 2008).

The section to follow begins with brief definitions of child physical abuse as well as a literature review of the immediate and long-term effects of child maltreatment, with a focus on socioemotional and academic maladjustment. Next, characteristics of parenting behavior of abusive parents are explored, as well as the effects of parenting behavior on socioemotional and academic adjustment. Finally, a review of the literature supporting maternal depression and child perceptions of parenting behavior as potential moderating factors is provided.

Due to the complexity of the model, the reader may benefit from a brief explanation of the variables of interest. First, in examining parenting behavior, researchers have used a host of terms to describe positive and negative features of parenting behavior (described in more detail later); the current study focused on two dimensions of parenting behavior: “insensitivity” and “controllingness,” and each of these predictors were explored separately. Child outcomes explored included the teacher’s perspective of both socioemotional adjustment (externalizing and internalizing behaviors) and academic adjustment; each of these outcome variables were explored separately. Finally, moderating variables included maternal depressive symptoms, often termed “depression” in the literature review, and child perceptions of their mother’s parenting behavior (defined as perceptions of parental
warmth/sensitivity). Please see Figure 1 in Appendix A for a visual display of the described model.
CHAPTER TWO

Literature Review

Child Physical Abuse Defined

Although the Federal Child Abuse Prevention and Treatment Act (2003) provides a general definition of child maltreatment, individual states are responsible for creating their own definitions of physical, sexual, and emotional abuse and neglect. In general, most states define child physical abuse as physical injury as a result of punching, beating, kicking, biting, shaking, throwing, stabbing, choking, hitting, burning, or otherwise harming a child, regardless of whether the caretaker intended to hurt the child (Child Welfare Information Gateway, 2008). In the state of North Carolina, according to general statute § 7B-101, physical abuse is defined as:

Any child less than age 18 whose parent, guardian, custodian, or caretaker: inflicts or allows to be inflicted upon the child a serious physical injury by other than accidental means; creates or allows to be created a substantial risk of serious physical injury to the child by other than accidental means; uses or allows to be used upon the child cruel or grossly inappropriate procedures or cruel or grossly inappropriate devices to modify behavior (Child Welfare Information Gateway, 2008).

On average, physical abuse constitutes 20% of child maltreatment cases and is cited in approximately one-quarter of reported child fatalities. Given the prevalence and incredible economic and human strain associated with child maltreatment, it is important to research this population in order to inform social policy, prevention, and intervention/treatment efforts (Kaufman & Cicchetti, 1989).
Many researchers have found maltreated children to display more externalizing behaviors (e.g., aggression) than nonmaltreated children, and given the abused child’s exposure to physical violence, it is not surprising this is the case (e.g., Cicchetti & Toth, 1995; Dykman et al., 1997; Kaplan, Pelcovitz, & Labruna, 1999; Kinard, 1995; Wodarski, Kurtz, Gaudin, & Howing, 1990). In most of these investigations, behavior ratings were obtained in a school or school-like setting and findings of externalizing problems appear most robust for physically abused children compared to sexually abused, emotionally abused, and neglected children (Kaufman & Cicchetti, 1989; Rogosch & Cicchetti, 1994). For example, Kaufman and Cicchetti (1989) devised a six-week summer day camp for 5-11 year old maltreated (physical abuse, neglect, and/or emotional abuse) and demographically matched nonmaltreated children. At the end of camp days, counselors completed a brief behavior rating scale measuring children’s prosocial, aggressive, and withdrawn behavior; in addition, children completed a peer nomination survey to measure how students were perceived by their peers. Counselors rated maltreated children as lower on prosocial skills, and children scoring the highest in aggression on the peer nomination survey were significantly more likely to have a history of physical abuse than children scoring lowest on peer-reported aggression.

In more recent years, investigators have consistently used validated, multidimensional questionnaires to obtain behavior ratings in the school setting. For example, Shonk and Cicchetti (2001) obtained counselor measures of behavior during the summer camp and
teacher ratings of child behavior during the actual school year. Researchers averaged the scores for the counselors’ and teachers’ ratings and replicated prior findings; that is, maltreated children were rated higher in externalizing behavior problems compared to nonmaltreated children. In another study using the same measure of behavior problems, Toth and colleagues (2002) found that over half (56%) of maltreated preschoolers but only 5% of nonmaltreated preschoolers scored in the clinical range on the externalizing scale of the teacher report form of the Child Behavior Checklist (CBCL) (Achenbach & Rescorla, 2001).

In addition to the development of behavior problems as an immediate consequence of maltreatment, a large body of literature links child maltreatment with risk for later externalizing problems, particularly violence and delinquency (for review see Maas, Herrenkohl, & Sousa, 2008). Developing one’s own proclivity for violence after being a victim of child abuse is referred to by some researchers as the intergenerational “cycle of violence,” and a history of childhood physical abuse is associated with violent behavior and externalizing problems in adolescence and adulthood, further perpetuating the intergenerational violence cycle (Maas et al., 2008). In a recent review of the literature on child maltreatment and violence in youth, Maas and colleagues noted that an early history of physical abuse may be the most consistent predictor of youth violence—illustrated by large-scale longitudinal studies examining predictors of adolescent aggression and violence (e.g., Farrington, 1989; Herrenkohl, Herrenkohl, & Egolf, 1994).

**Socioemotional Adjustment: Internalizing Problems**

As a group, maltreated children also have experienced higher levels of internalizing problems, including social withdrawal, depression, anxiety, somatic complaints, and suicidal
ideation than nonmaltreated children (e.g., Kaufman & Cicchetti, 1989; Salzinger, Feldman, Hammer, & Rosario, 1991; Shonk & Cicchetti, 2001; Sternberg et al., 1993; Wolfe & Mosk, 1983). For example, in a sample of physically abused, neglected, and nonmaltreated children, physically abused children were rated by parents as having more internalizing problems of depression and withdrawal compared to nonmaltreated and neglected children (Wodarski et al., 1990). Similarly, Toth, Manly, and Cicchetti (1992) found physically abused children displayed more social withdrawal and depressive symptoms than neglected and nonmaltreated children. In a subsequent study, Toth and colleagues found 35% of maltreated children and 0% of nonmaltreated children obtained scores in the clinical range on internalizing behaviors of the CBCL (2000). In addition to internalizing problems as a short-term consequence of maltreatment, there is also evidence that a history of child maltreatment is related to internalizing problems in adolescence and adulthood (e.g., Kaplow & Widom, 2007; Moylan, Herrenkohl, Sousa, Tajima, Herrenkohl, & Russo, 2010).

**Academic Adjustment**

In a recent review, Stone (2007) noted that researchers have consistently found associations between child maltreatment and poor educational performance, although many of these studies fail to examine the mechanisms and conditions by which this association occurs (e.g., Leiter & Johnson, 1994). In general, maltreated children, compared to nonmaltreated children, tend to display lower test scores and poorer grades, have higher retention rates, and are rated by teachers as working below grade level and displaying more behavior problems in school (e.g., Eckenrode et al., 1993; Leiter & Johnson, 1994).
To illustrate, Wodarski and colleagues (1990) examined academic outcomes of children and adolescents who had been physically abused, neglected, or had experienced no maltreatment. School performance variables included an index of overall school adjustment consisting of (a) scores on a standardized achievement test and a statewide reading test, (b) final grades in language and math, and (c) teacher ratings of behavior problems. Controlling for socioeconomic status, abused and neglected children scored lower than comparison children on the composite index of school adjustment. Maltreated groups scored lower on the math portion of the standardized achievement test, and teachers reported maltreated children to be working and learning at below-average level compared to “typical” students. In terms of grade retention, over half of the maltreated children had repeated one or more grades compared to approximately 20% of the comparison children.

In two larger-scale studies, researchers replicated findings related to academic performance of maltreated children (Eckenrode et al., 1993; Leiter & Johnson, 1994). Eckenrode and colleagues recruited a sample of approximately 400 maltreated children and matched them on gender, school, grade, neighborhood, and classroom with approximately 400 nonmaltreated children in the community. Maltreated children performed significantly below nonmaltreated peers on standardized tests of reading and math, had lower grades, were more likely to repeat a grade, and had more discipline referrals and suspensions. In another large scale study, Leiter and Johnson (1994) compared school performance of over 2,000 school-aged maltreated children with approximately 400 comparison children, including a comparison sample of children recruited from social services who had not experienced any substantiated form of maltreatment but were living in an adverse home environment (e.g.,
extreme poverty). Maltreated children scored lower on cognitive achievement tests, received lower grades, and had higher dropout rates and retention rates than the general comparison sample, even after controlling for a host of potentially confounding variables. However, when compared to the social services sample, maltreated children differed little on school performance measures.

In summary, although maltreatment may exert negative effects on a child by impairing a wide range of abilities, particularly socioemotional and academic adjustment, little is known about sources of individual differences among this group of vulnerable children. Because maltreatment occurs within an ecological framework, characteristics of the parent and the parent-child relationship may provide valuable information in understanding the impact of abuse on children’s adjustment (Seng & Prinz, 2008).

**Parenting Behavior and Children’s Functioning**

Over the years, one of the most significant topics in the developmental literature has been the role of parenting in a child’s immediate and long-term development. Investigators have examined many dimensions of parenting behavior, including sensitivity, warmth, harsh discipline, control, and intrusiveness. In spite of the use of a wide variety of labels for parenting behavior across studies, most investigations reduce behavioral observation data to positive and negative dimensions (e.g. Barnett, Deng, Mills-Koonce, Willoughby, & Cox, 2008; Propper et al., 2008). In the proposed study, sensitivity and controllingness will be the positive and negative dimensions of parenting examined. Across studies, many labels have been used for these two parent dimensions. Other labels for sensitivity include warmth, acceptance, nurturance, and responsiveness. Controlling behavior has been referred to as
demanding behavior, harshness, intrusiveness, and limit setting. In the literature review below, the terms used are those of the investigators of the individual studies and thus communicate their preferred terms for parenting behaviors.

**Parenting of Nonabusive Parents**

Beginning with Baumrind’s (1967) studies of parenting styles, positive and negative parenting dimensions have received a great deal of attention among researchers and theorists (Chen, Liu, & Li, 2000; Wolfe & Mosk, 1983). A number of studies find a relation between various parenting behaviors and child socioemotional adjustment (e.g., Chen et al., 2000; Deater-Deckard, Ivy, & Petrill, 2006; Palmer & Hollin, 2001; Pettit, Bates, & Dodge, 1993). For example, Chen and colleagues measured parental warmth via child report and found that maternal warmth predicted children’s subsequent social competence and teacher-rated loneliness and depression. Pettit and colleagues (1993) observed parental warmth via structured parent-child interactions and found that positive parental involvement predicted lower levels of teacher-rated externalizing behavior problems in kindergarten and first grade; in contrast, negative-coercive parenting predicted increases in ratings of externalizing problems from kindergarten to first grade.

Research with normative samples of children and their families also suggests that positive parenting strategies are related to better academic performance; however, this research is sparse compared to the research on socioemotional adjustment. In addition, most studies have examined the relation between parenting behavior and academic adjustment in samples of high school students and their families (e.g., Gray & Steinberg, 1999; Paulson, 1994). The current hypotheses were informed by this research even though this study will be
conducted with younger children. In general, parental acceptance, nurturance, responsiveness, demandingness, nonpunative punishment (i.e., guidance/positive discipline), and consistency have been referred to by researchers as authoritative parenting practices (Baumrind, 1967; Maccoby & Martin, 1983). Authoritative parenting has been associated with positive child outcomes, including high academic achievement defined by high grades, high standardized test scores, and academic competence (e.g., Dornbusch, Ritter, Leiderman, Roberts, & Fraleigh, 1987; Steinberg, Elmen, & Mounts, 1989). Mattanah (2001) was the only study found in a comprehensive literature search that examined the relation between observed parenting behavior and academic outcomes in a young sample of children and their parents. Observed limit setting (i.e., maintaining and following through on rules) and child reports of autonomy (i.e., noncoercive, democratic discipline and the encouragement of individuality) were associated with greater academic competence. In the proposed study, parental “controllingness” during interactions with children is one dimension of parenting that could be considered the opposite of autonomy-granting.

In sum, studies with normative samples indicate a relation between observed parenting behavior and socioemotional adjustment. However, the relation between observed parenting behavior and academic adjustment has a smaller evidence-base. Further, the specific relation between observed insensitive parenting behavior and academic functioning has yet to be examined in younger samples of children. In addition, no studies have examined this relation in maltreated children. Based on the results from normative samples, it is reasonable to ask if insensitive parenting would be related to maltreated children’s academic functioning. Therefore, this issue remains a research question in the current proposal, as there
is not enough support in the literature to form a directional hypothesis about the relation between insensitive parenting behavior and academic adjustment in maltreated children. The following sections outline what we do know about the behavior of abusive parents, according to observational data, as well as the relation of abusive parenting to child outcomes.

*Observed Parenting of Abusive Parents*

Many researchers have found that abusive parents have harsh and insensitive parenting styles (e.g., Lau, Valeri, McCarty, & Weisz, 2006). Studies using observational methods to measure the behavior of maltreating parents compared to normative samples of parents find that, overall, parents with a history of maltreating tend to exhibit low levels of positive behavior and high rates of negative behavior towards their children (e.g., Alessandri, 1992; Dadds, Mullins, McAllister, & Atkinson 2003; Kavanagh et al., 1988; Lau et al., 2006). For example, in an early publication, the parenting behavior of physically abusive and non-maltreating parents was compared during a short “play and clean-up” interaction task (Kavanagh et al., 1988). Abusive parents spent significantly less time engaged in positive parenting acts (e.g., instruction, positive comments, joining in play, talking with child) compared to nonabusive parents. In a more recent study (Lau et al., 2006), physically abusive and comparison parents were observed during three interaction tasks with their children (i.e., teaching, planning, and conflict). Results showed that abusive parents displayed more emotionally controlling behavior (e.g., criticism, guilt, intrusiveness) and less supportive behavior (e.g., praise, encouragement, affection) than comparison parents.

Recently, Wilson, Rack, Shi, and Norris (2008) conducted a meta-analysis of 30 studies that involved comparisons of maltreating parents and non-maltreating parents during
observed interactions with their children. Parent behavior was grouped into three categories: positivity, aversiveness, and involvement. Positivity included positive affect such as laughter, approval, positive physical touch, and verbal praise. Aversiveness included negative affect such as anger, disapproval, humiliation, and verbal threats. Finally, involvement included behaviors such as responsiveness, engagement, cooperation, and interest in the child (Wilson et al., 2008). Results of the meta-analysis indicated that mean effect sizes for group differences in rates of the three categories of parent behavior were moderate. As expected, maltreating parents displayed more aversive behavior, less positivity, and less involvement than nonmaltreating parents. Although the meta-analysis was an important contribution to the understanding of parenting behavior of abusive parents, less is known about the relation between observed parenting behavior and child outcomes within samples of abused children.

*Observed Parenting of Abusive Parents and the Relation to Child Adjustment*

There is evidence from a small number of studies, comparing the observed parenting of both maltreated and non-maltreated children, that the quality of parenting of abusive caregivers may be related to child maladjustment. Herrenkohl and colleagues (1994) studied a large group of young children, some of which had a history of physical abuse. Mothers completed an interview about their discipline tactics and observers rated mother’s behavior during mother-child interactions in the child’s home; teachers completed behavior rating scales of the child’s cognitive, emotional, and social functioning. The quality of the mother’s behavior, including both negative (hostile) and positive (warm) behavior, was related to child functioning. Specifically, mothers of lower functioning children were rated as displaying less positive behavior and more negative behavior during the interactions. These findings
illustrate a relation between mother’s behavior (i.e., level of hostility and warmth) and teacher reports of abused children’s cognitive, emotional, and social functioning.

Haskett and colleagues (2008) examined whether maternal sensitivity predicted social adjustment in a sample of physically abused and nonabused children. Sensitivity was measured via observation of parent behavior during three structured parent-child interaction tasks: a free play task, a teaching task, and a frustration task. Sensitivity reflected parent’s support and responsiveness to the child’s physical and emotional needs and included such behaviors as scaffolding tasks and adjusting to the child’s mood. Teachers completed rating scales of children’s social adjustment. Results indicated that both abused and nonabused children whose parents demonstrated high levels of sensitivity and warmth were rated by teachers as less aggressive and as having more prosocial skills compared to children of parents lacking in sensitivity. Haskett and colleagues suggested that sensitivity might buffer the harsh effects of physical abuse on children’s social adjustment.

Although harsh and insensitive parenting is a known risk factor for child adjustment problems among both abused and nonabused children, there might be factors that protect abused children from negative outcomes. In a review of protective factors and predictors of diversity in the adjustment of abused children, Haskett, Nears, Sabourin Ward, and McPherson (2006) outlined characteristics linked to individual differences in maltreated children’s adjustment. Some of these factors include factors related to the child (e.g., views of the self and self-regulatory processes), family (e.g., family coherence and stability), and outside influences (e.g., peer relationships). Of particular relevance to the current study are
family factors that might moderate the relation between parenting behavior and child adjustment - maternal depression and child cognitions.

*Maternal Depressive Symptoms as a Moderator of the Relation between Mothers’ Parenting Behavior and Child Adjustment*

*Maternal Depressive Symptoms in Nonabused Samples*

A large body of literature links high levels of maternal depression with negative child adjustment such as difficult temperament and poor self-regulatory abilities, school and behavior problems, and low levels of self-esteem and social competence (e.g., Beauchaine, Webster-Stratton, & Reid, 2005; Cicchetti, Rogosch, & Toth, 1998; Cummings & Davies, 1994; Downey & Coyne, 1990; Goodman & Gotlib, 1999; Gotlib & Lee, 1996). To illustrate, Kim-Cohen, Moffitt, Taylor, Pawlby, and Caspi (2005) examined the link between maternal depression and children’s antisocial behavior in a large sample of young children. They found that children of mothers who were depressed during the child’s first 5 years of life had significantly elevated levels of antisocial behavior (e.g., delinquent behavior; aggression) at age 7, according to both parent and teacher reports. In another longitudinal study, investigators examined the relation between maternal depression and toddler socio-emotional problems (Carter, Garrity-Rokous, Chazan-Cohen, Little, & Briggs-Gowan, 2001). Mother-child dyads were followed from pregnancy until 30 months postpartum. Depression was measured at multiple time-points, and at 30 months, mothers completed an assessment of their child’s socioemotional adjustment. Investigators found that prenatal and postpartum depressive symptoms predicted higher rates of internalizing and externalizing behavior problems.
The aforementioned studies illustrate two fairly recent examples of investigations designed to longitudinally examine the relation between maternal depression and child outcomes in normative samples of parents and children. Although a large body of literature spanning several decades links higher levels of maternal depression with poorer child adjustment (for an early review see Downey & Coyne, 1990), to date, no investigations have gone further by examining the interaction of parenting behavior and depression in predicting child outcomes. In the following section, a review of the literature supporting a link between maternal depression and negative child outcomes in samples of maltreated children is provided.

**Maternal Depressive Symptoms in Abused Samples**

Abusive mothers tend to show higher rates of maternal depression than nonabusive mothers (e.g., Chaffin, Kelleher, & Hollenberg, 1996; Egami, For, Greenfield, & Crum, 1996; Mammen, Kolko, & Pikonis, 2002). Few investigations, however, have examined the relation between maternal depression and adjustment of abused children. Of those that do, findings are inconsistent. For example, Svedin and colleagues (1996) found that women displaying higher rates of depressive symptoms were more likely to have substantiated cases of abuse or neglect and their children tended to display more behavior problems in the school setting. However, Kinard (1995) found that maternal depression was not related to teacher ratings of child behavior in an abused sample. Similarly, Takei and colleagues (2006) found no relation between maternal depression and teacher reports of internalizing or externalizing behavior problems for abused or for nonabused children. Takei and colleagues suggested that the link between abused children’s behavior problems and maternal depression was likely
very complicated, involving interacting dimensions including the “contributions of parenting and parent-child interactions” (Takei et al., 2006, pg. 214).

Although findings are mixed regarding links between maternal depression and poor child adjustment among abused children, depression could serve to exacerbate the relation between negative parenting and child adjustment problems. In other words, even if there are not robust main effects of depression on child outcomes, depression could serve as a moderator. Haskett and colleagues (2008) were the first to examine depression as a moderator of abuse status and child outcomes and found no interaction between abuse status and maternal depressive symptoms in prediction of teacher ratings of child adjustment. The authors noted several reasons for the null findings including a lack of variability in depressive symptoms (most parents did not have elevated levels of depression). They also noted that “depression might exacerbate the effects of abuse only under certain conditions and future explorations of the role of depression in outcomes for abused children should be directed toward identifying those conditions” (Haskett et al., 2008, pg. 574).

It should be noted that the research question addressed in Haskett et al.’s (2008) publication was somewhat different than that of the current study. Similar to much of the extant literature on the negative effects of abuse, Haskett and colleagues explored group differences (i.e., the independent variable was abuse status [abusive versus nonabusive parents]) in child outcomes. Rather than exploring group differences, this study will explore severity of symptoms of depression as a moderator of parenting behavior and child outcomes in a sample consisting entirely of maltreated children. It is expected that under conditions of high maternal depression, there will be a stronger relation between negative parenting
behavior and child maladjustment. In the following section, another potential moderator of the relation between maternal behavior and child adjustment is considered—child perceptions of maternal behavior.

**Child Perceptions of Maternal Behavior as a Moderator of the Relation between Mothers’ Parenting Behavior and Child Adjustment**

**Relevance of child perceptions**

Ramey (2002), in her conceptualization of parent and child perceptions, suggested that perceptions are important to a family’s functioning and to a child’s developmental course. Further, Dunn (1993) asserts that researchers should consider child perceptions of parent behavior because perceptions may influence how children not only respond to their parents, but how well they interact with other children and adjust in the academic setting. Studies dating back to the 1940s have attempted to measure child reports of parenting behavior (for an early review see Goldin, 1969) because children’s perceptions provide unique information about parenting. In fact, many investigators have demonstrated discrepancies in parent and child reports of parenting behavior (e.g., Gonzales, Cauce, & Mason, 1996; Pierce & Klein, 1982). Therefore, researchers suggested the importance of multi-informant reports, including that of the young child, to understand parental behavior (Sessa et al., 2001).

**Child Perceptions in Nonabused Samples**

Nonmaltreated children’s perceptions of their parents’ caregiving have been shown to be related to children’s teacher-rated internalizing and externalizing problems (e.g., Anan & Barnett, 1999; Fincham, Beach, Arias, & Brody, 1998; Morris et al., 2002; Silk et al., 2004)
and academic adjustment (e.g., Gaylord-Harden, 2008; Pelegrina, Garcia-Linares, & Casanova, 2003). To illustrate, Gaylord, Kitzmann, and Coleman (2003) measured the relation between parent and child views of parental support, covert control, and discipline, as well as young children’s internalizing and externalizing problems (as reported by teachers) and peer ratings of likeability. Overall, mothers perceived themselves as more supportive than did children, and mother-child discrepancies pertaining to discipline tactics were related to internalizing behavior problems. In addition, child reports about mothers were more predictive of children’s peer acceptance than were maternal reports of their own behavior.

Child Perceptions in Abused Samples

Abused children’s perceptions of their mothers should be considered because these perceptions may predict child outcomes above and beyond that of actual parenting behaviors. For example, children could experience harsh parenting yet demonstrate positive socioemotional and academic adjustment because they view their parent’s behavior as acceptable- or even positive. As Kolko, Brown, and Berliner (2002) assert, it is important to establish how perceptions affect the outcome of traumatic experience because, unlike static variables such as the previous abusive experience itself, perceptions can be targeted and corrected during intervention with the child. In addition, children likely differ in their perceptions of the abusive experience. For example, there is evidence that the meaning of physical punishment varies by culture (e.g., Deater-Deckard & Dodge, 1997) such that there tends to be wider acceptance of physical punishment in the African American community compared to European American communities (e.g., Deater-Deckard & Dodge, 1997; Deater-Deckard, Dodge, Bates, & Pettit, 1996; Heffer & Kelley, 1987; Straus & Stewart,
Furthermore, the cultural normative context in which spanking occurs changes the meaning of the discipline to the child (Lansford, Deater-Deckard, Dodge, Bates, & Pettit, 2004). Specifically, when spanking is administered in a context in which it is not viewed as normal or accepted, the child might interpret the parent’s behavior as rejecting, and thus go on to experience maladjustment. This process has been used to explain the finding that European American children are more negatively impacted than African American children (e.g., Lansford et al., 2004) by their parents’ spanking.

A few researchers have examined the moderating and/or mediating role of maltreated children’s perceptions of parenting on internalizing and externalizing disorders. Toth and Cicchetti (1996) used a self-report scale to identify relatedness—operationally defined as children’s views of their relationship with their mother in terms of emotional quality (e.g., “When I am with my mother I feel loved”) and psychological proximity-seeking (“I wish my mother understood me better”). Relatedness moderated the effects of maltreatment on children’s school functioning such that nonmaltreated children reporting optimal or secure relatedness exhibited higher levels of academic functioning, better emotional regulation, and fewer externalizing behavior problems than maltreated children reporting insecure patterns of maternal relatedness. In a more recent study, Alink, Cicchetti, Kim, and Rogosch (2009) found children’s perceptions of their relationship with their mother moderated the link between emotion regulation and behavior of maltreated children. Specifically, emotion regulation served as a mediator between maltreatment status and internalizing and externalizing behaviors, but only for children with lower relatedness scores. In another
study, Toth, Cicchetti, and Kim (2002) found that children’s self-reported perceptions of parent behavior mediated the relation between maltreatment and teacher-reported internalizing and externalizing behavior problems. Specifically, maltreated children with less positive perceptions of their mothers exhibited more socioemotional maladjustment than nonmaltreated children. The researchers concluded that having positive perceptions of the parent-child relationship may have a “buffering effect” for maltreated children. The authors further suggested that altering child perceptions of parenting might be critical in working with maltreated children because those perceptions might affect child adjustment just as much as actual parent behavior (Toth et al., 2002).
CHAPTER THREE

Statement of the Problem

Although deleterious effects of maltreatment are well documented, few studies have investigated individual differences in adjustment among abused children. Because maltreatment occurs within a complex family context, there are likely to be wide differences in the experiences of maltreated children. By examining mother’s parenting behavior experienced by maltreated children, one can more fully understand factors associated with differential child outcomes. Although negative parenting is a very strong predictor of poor outcomes for young children, there are likely factors that moderate this link, even for maltreated children. Prior research indicates that two potential moderators are maternal depression and children’s perceptions of their parents’ caretaking behavior. An examination of these potential factors affecting the relation between parenting behavior and child outcomes is warranted and the main goal of the present study. Specific research hypotheses and questions follow.

Hypotheses

Main Effects

1. Observed maternal behavior will be significantly related to teacher ratings of child socioemotional adjustment

1a) High maternal controllingness will be associated with high teacher ratings of socioemotional adjustment problems.

1b) High maternal insensitivity will be associated with high teacher ratings of socioemotional adjustment problems.
2. Observed maternal behavior will be significantly related to teacher ratings of child academic adjustment.

- High maternal controllingness will be associated with low teacher ratings of academic adjustment.

**Interactions**

3. Maternal reports of symptoms of depression will serve as a moderator of the link between observed maternal behavior and teacher ratings of child socioemotional adjustment. There will be a statistically significant interaction between negative maternal behavior and depression in prediction of child socioemotional adjustment.

3a) Under conditions of higher depression, the relation between controllingness and socioemotional maladjustment will be stronger than under conditions of lower depression.

3b) Under conditions of higher depression, the relation between insensitivity and socioemotional maladjustment will be stronger than under conditions of lower depression.

4. Maternal reports of symptoms of depression will serve as a moderator of the link between observed parent behavior and teacher ratings of child academic adjustment. There will be a statistically significant interaction between negative maternal behavior and depression in prediction of child academic adjustment. Specifically, under conditions of higher depression, the relation between controllingness and academic maladjustment will be stronger than under conditions of lower depression.
5. **Child perceptions** of maternal warmth will serve as a moderator of the link between observed maternal behavior and a child’s **socioemotional adjustment**. There will be a statistically significant interaction between negative parenting and child perceptions in prediction of child **socioemotional adjustment**.

5a) Under conditions of higher child perceptions of warmth, the relation between **controllingness** and **socioemotional maladjustment** will be weaker than under conditions of lower warmth perceptions.

5b) Under conditions of higher child perceptions of warmth, the relation between **insensitivity** and **socioemotional maladjustment** will be weaker than under conditions of lower warmth perceptions.

6. **Child perceptions** of maternal warmth will serve as a moderator of the link between parent behavior and a child’s **academic adjustment**. There will be a statistically significant interaction between negative parenting and child perceptions in prediction of child **academic adjustment**. Specifically, under conditions of greater warmth perceptions, the relation between **controllingness** and **academic maladjustment** will be weaker than under conditions of lower warmth perceptions.

*Research Questions*

1. Is there a significant correlation between observed maternal insensitivity and teacher ratings of academic adjustment?

2. Is there a significant interaction between depression and insensitivity in prediction of academic functioning?
3. Is there a significant interaction between child perceptions of mothers’ parenting and insensitivity in prediction of academic functioning?
CHAPTER FOUR

Method

Participants

Participants were 80 children and mothers from a larger sample of 96 physically abused children and their mothers. All mothers were the abusers. The purpose of the larger study was to examine maltreated children’s transition from preschool into first grade. Criteria for inclusion in the larger study included (a) a substantiated report of physical abuse within the prior 12 months, (b) confirmation that the child/parent dyad was living in the same home at the time of enrollment in the study, (c) an absence of sexual abuse of the child, and (d) child age between 4-7 years. In the larger study, most dyads were enrolled prior to the child’s kindergarten entry. Dyads were assessed again in kindergarten and first grade, for a total of three time points. For the current study, the children’s kindergarten (n = 22) or first grade (n = 58) data were used because measures of academic adjustment were not administered at the preschool assessment. The time-point (kindergarten or first grade) containing the most complete data was chosen for analyses. If both time points contained the same amount of complete data points, the first grade data point was chosen.

In addition, if parents had more than one child, siblings were included in analyses. Eight parents had multiple children (7 parents had 2 children and 1 parent had 3 children). Siblings were included in analysis because each parent-child dyad offered a unique contribution to the study. In order to test for independence of observations in families having multiple children, correlation analyses were conducted between sibling pairs and all study variables. There was sufficient justification to maintain sibling pairs in further analyses.
because only the BSI (depression) measure was significantly correlated ($r = .89$), and mothers’ depression would not be expected to vary between sibling pairs.

Five father-child dyads were excluded from analyses. In addition, eleven dyads from the larger data set were dropped because only the preschool data were available. The sample included 80 mother-child dyads (mothers $N = 72$; children $N = 80$). Children ranged in age from 5-7 years old, with most being African American ($n = 59; 74\%$) and male ($n = 52; 65\%$) (see Table 1).

**Procedures**

Participants in the larger study were identified through the Department of Human Services (DHS) as having substantiated cases of physical abuse. Those who met the research inclusion criteria were sent a letter informing them of the study and providing them with contact information. Interested parents called the research office, were screened for participation, and completed a 20-30 minute psychosocial interview to gather background information. In addition, parents were informed about the purpose and procedures of the study and were given an explanation of what to expect when they arrived at the university-based clinic.

To encourage participation, transportation to the data collection site and childcare were provided. In exchange for participation, each parent received $70 and a book of local resources; children received a bag of educational materials and a toy. Parent participants were also entered into a monthly drawing for an additional $50 gift certificate when they scheduled their appointment. To encourage families to participate in all three study time-points, returning families received $80 for the kindergarten assessment and $90 for the first
grade assessment. After obtaining parental consent, verbal assent was obtained from the child. Undergraduate research assistants, supervised by a graduate student, administered all measures with parents and children. Undergraduate research assistants were not aware of the families’ involvement with the Department of Human Services or their substantiated history of abuse. Procedures were approved by the university institutional review board.

For the parent-child interaction, all interactions were videotaped via an unobtrusive camera installed in a clock. The first interaction consisted of a “free play” session in which the child and parent were instructed to play in a room with age-appropriate materials (e.g., markers, paper, blocks). In the second interaction, the “instructions” task, parents were asked to follow a list of three instructions (i.e., play with their child; tell their child to clean up; and tell their child to play independently while the parent read a magazine). In the third interaction, the “teaching/frustration” segment,” parents were instructed to help their child complete two age-appropriate puzzles without touching the puzzle pieces; a timer was set for 7 minutes to increase the sense of urgency.

Coding of videotaped parent behavior was conducted by undergraduate research assistants who did not collect data. The coder first watched the videotaped parent-child interaction while taking notes of parent/behaviors, assigned a score for each of the six parent behaviors, and watched the tape a second time to verify the scores. Ratings were based on quality and quantity of interactions. Research assistants were trained on the coding system using practice videotapes that were not part of the current study. They received a comprehensive training manual and were trained in small groups until each trait was scored reliably (80% interrater agreement with the trainer). Once trained, approximately 25% of the
interactions were coded by two coders to assess interrater agreement (calculated by intra-class correlations).

**Measures**

Some families were not able to complete all measures due to late arrival for data collection, the need to leave early, or the inability to complete certain measures. The number of participants completing each measure is included in Table 2.

*Parenting behavior.* Parenting behavior was examined using an observational measure of parent-child interactions (PCI). The PCI measured parent behavior in three, 7-min structured interactions. Parenting behavior was coded from videotapes using a version of the Qualitative Ratings of Parent-Child Interactions/Young Family Interaction Coding System (YFICS) (Cox & Paley, 1997), originally designed and developed as a triadic or whole-family level (i.e., mother-father-child) coding system for use with families with children ages 2-3 years old. The system has been adapted for use with families with older children (i.e., by adapting tasks to be age-appropriate) (Paley, Cox, & Kanoy, 2001). The six parenting dimensions coded were Positive Regard for the Child, Negative Regard for the Child, Sensitivity, Intrusiveness, Detachment, and Flatness of Affect. Detachment was coded, but not used in analyses due to low internal consistency. Positive regard for the child was frequency and intensity of verbal or physical warmth and positive expression (e.g. smiles, hugs) toward the child. Negative regard was frequency and intensity of verbal or physical hostile, negative behaviors (e.g., name-calling, pushing away). Sensitivity was the degree to which parent behavior was responsive and reciprocal, according to the child’s needs. Intrusiveness described the degree to which parents’ behavior dominates the interaction in
such a way that the child was not allowed to follow his or her own interests, needs, and desires. Finally, flatness of affect represented the degree to which the parent lacked animation in demeanor and behavior; a parent with flat affect might have a blank, impassive facial expression, and/or a flat tone in vocal expression and body movements. The six parenting dimensions were coded on a scale of 1 (Not at All Characteristic) to 7 (Highly Characteristic). Thus, the higher the score, the more characteristic the behavior was of the observed parent. Once coded, a factor analysis was conducted which reduced the parenting dimensions into two factors—an “Insensitivity” factor (factor 1), comprised of Positive Regard, Sensitivity, and Flatness of Affect and a “Controllingness” factor (factor 2), comprised of Intrusiveness and Negative Regard. Thus, insensitivity was operationalized as a low score on factor 1 (i.e., a low score represents insensitivity) and controllingness was operationalized as a high score on factor 2 (i.e., a high score represents controllingness). A more detailed description of both coding and data reduction procedures are described in the Procedures and Results sections of this document, respectively.

The coding system has been used in prior studies of young maltreated children in the same age range as the proposed study (e.g., H askett et al., 2008). Intra-class correlations (ICC) coefficients were calculated in the current study to determine interrater reliability for 25% of the PCI sessions. The following ICC coefficients were obtained: Positive Regard r = .75; Negative Regard r = .65; Sensitivity r = .72; Intrusiveness r = .64; and Flatness of Affect r = .69. In terms of internal consistency, in the current study, adequate internal consistencies were found (ranging from r = .64 on Sensitivity at Time 3 to r = .80 on Negative Regard at Time 2). In support of validity of the coding system, cluster analysis of abusive
parents’ scores on the parenting dimensions revealed clinically meaningful subgroups of abusive parents (Haskett, Smith Scott, & Sabourin Ward, 2004).

**Academic adjustment.** A subscale of the Social Skills Rating System (SSRS; Gresham & Elliott, 1990) was used as a measure of academic adjustment. The SSRS is a norm-referenced rating scale designed to measure three areas of functioning: social skills, problem behaviors, and academic competence. In the current study, the academic competence scale of the elementary teacher form was used. To complete the SSRS, teachers rated the child’s academic competence according to nine items that address academic performance, overall motivation, parental encouragement to succeed, intellectual functioning, and overall classroom behavior. Items are rated on a 5-point scale (1= Lowest 10%, 2=Next Lowest 20%, 3=Middle 40%, 4=Next Highest 20%, 5=Highest 10%), and standard scores and percentile ranks by grade and gender were derived. For purposes of this study, standard scores by grade were used.

The SSRS standardization sample consisted of over 4,000 children. Developers and other investigators (Campbell, Matestic, von Stauffenberg, Mohan, & Kirchner, 2007; Pedersen, Worrell, & French, 2001) have reported excellent internal consistency for the academic competence subscale (i.e., $r = .93 - .98$). Four-week test-retest (stability) reliability was established by having teachers rate the same students four weeks after initial ratings; stability was high for the academic competence subscale ($r = .93$). In addition, researchers have found strong support for criterion and construct validity of the measure (Gresham & Elliott, 1990). In a review of six social skills rating scales, Demary and colleagues (1995) concluded that the SSRS had excellent support for validity, particularly the teacher form.
Flanagan, Alfonso, Primavera, Povall, and Higgins (1996) examined the relation between the SSRS and the Behavior Assessment System for Children (Reynolds & Kamphaus, 2004) and found support for the convergent validity of the SSRS.

Socioemotional adjustment: Child behavior. Child behavior was measured using the Child Behavior Checklist, Teacher Report Form (CBCL-TRF; Achenbach & Rescorla, 2001). The CBCL-TRF is a 113-item questionnaire administered to teachers of children ages 6-18 and provides a measure of children’s competencies and behavioral/emotional problems. Teachers indicated how true each item is for the child now or within the past 6 months using the following scale: 0 = not true; 1 = somewhat or sometimes true; 2 = very true or often true. The T-score for the Total Problems scale was used in the current study.

The CBCL-TRF is a widely used and psychometrically sound instrument (Shonk & Cicchetti, 2001). Achenbach and Rescorla (2001) reported excellent alpha coefficients for the Internalizing ($\alpha = .90$), Externalizing ($\alpha = .95$), and Total Problems ($\alpha = .97$) scales. In a recent study, Shonk and colleagues (2001) found adequate interrater agreement for externalizing ($r = .85$) and internalizing behaviors ($r = .64$) for a sample that included maltreated children. In addition, developers reported excellent content and discriminative validity of the measure, and the CBCL-TRF has been shown to correlate with psychiatric diagnoses (Achenbach & Edelbrock, 1984).

Maternal depressive symptoms. The Brief Symptom Inventory (BSI; Derogatis, 1993) is a 53-item self-report symptom inventory used to reflect parents’ current emotional health and is a shorter version of the Symptom Checklist 90-R (Derogatis, 1975). Parents are presented with a list of 53 “problems that people sometimes have” and are asked to indicate
on a 4-point scale (0=Not at all, 1=A little bit, 2=Moderately, 3=Quite a bit, 4=Extremely) how much that problem distressed them within the last 7 days. The measure yields scores for nine primary symptom dimensions and three global indices. In the current study, the Depression dimension (6 items) was used.

The BSI standardization sample consisted of 719 psychiatric outpatients. Developers reported adequate internal consistency of .85 on the Depression scale (Derogatis, 1993). Other studies also have noted adequate internal consistencies (e.g., Croog et al., 1986; Aroian & Patsdaughter, 1989). Test-retest reliability on the Depression subscale is reported as .84 (Derogatis, 1993). In terms of validity, there is high convergence between BSI scales and clinical scales of the Minnesota Multiphasic Personality Inventory (Hathaway & McKinley, 1940). In particular, there is a strong correlation between the Depression scale of the BSI and the MMPI Depression scale ($r = .72$). Factor analytic studies of the internal structure of the BSI provide evidence for good construct validity (Derogatis & Melisaratos, 1983). Over 100 studies provide strong evidence for criterion-related validity (i.e., the BSI is broadly related to psychological distress status) (e.g., see Derogatis, 1993 for a review).

Child perceptions of parental warmth. Child perceptions of parenting were assessed using the Child Puppet Interview (CPI; Sessa et al., 2001). The CPI consists of 17 items that describe various positive (hugging) and negative (spanking) parent behaviors. To administer the CPI, the examiner presents the child with two identical hand puppets that are the same gender as the child. The examiner uses the puppets to present opposite statements about the child’s mother (e.g., one puppet says, “My mommy reads to me” and the other puppet says, “My mommy does not read to me”). The child is asked to indicate which puppet is most like
him or her. Responses are coded as either 1 (not like me) or 3 (like me). A score of 2 is given if the child indicates both puppets are like him or her. Each item is categorized under the dimension (scale) of Warmth, Hostility, or Structure. The item scores are added together, and each scale receives a total raw score. For the current study, only the warmth scale (6 items) was used.

The three scales were derived from exploratory factor analyses on a sample of 260 preschool, first, and second grade children (Sessa et al., 2001). Authors reported acceptable internal consistency (warmth $\alpha = .68$). In addition, the scales were not highly correlated, suggesting that the three dimensions of parenting are conceptually different. To assess stability of children’s perceptions over time, the CPI was administered twice over a 4-week interval; stability appeared to be high (warmth $r = .81$) (Sessa et al., 2001). The CPI is a relatively new instrument and its validity warrants further study. The CPI was chosen for this study because it is the only measure of parent perceptions of caregiving behavior for very young children. In the current study, internal consistencies for the warmth scale were $\alpha = .60$ (Time 2) and $\alpha = .64$ (Time 3).
CHAPTER FIVE

Results

Preliminary Analyses and Descriptive Statistics

Details pertaining to the demographic make-up of the sample can be found in Table 1. To assess normality of data, means, standard deviations, and ranges were calculated for all variables. Values can be found in Table 2. In addition, in order to examine the distribution of independent and dependent variables, skewness and kurtosis values were computed. Each variable’s skewness and kurtosis score was converted to a z-score by computing the ratio of skewness and kurtosis to its standard error and comparing this score to the value of 1.96 (Field, 2005). The variables of depression, maternal warmth, academic adjustment, and negative regard were skewed and socioemotional adjustment, depression, and negative regard were all kurtotic. Skewed and kurtotic variables were not transformed because the values were not extreme (Field, 2005). Skew and kurtosis values for all variables can be found in Table 3. The sample included children in kindergarten and first grade; a chi-square test was also conducted in order to determine if recency of abuse differed by the child’s grade placement. As noted above, one criterion for entry into the study was a substantiated abuse experience within the year prior to study entry, so for children in kindergarten, the abuse occurred within last 12 months and for children in first grade, abuse occurred prior to the last 12 months. Results of the chi-square test were non-significant, $\chi^2 (1, N=80) = 0.19, p = .660$.

A series of analyses was conducted to identify possible covariates. One-way ANOVAs were conducted to determine if academic or socioemotional adjustment differed by child gender, socioeconomic status (SES), or ethnicity. Outcome variables did not differ
significantly by gender or ethnicity. However academic adjustment differed significantly by SES; therefore, SES was entered as a covariate in subsequent regression analyses when academic adjustment was the dependent variable. A Bonferroni post-hoc test revealed that those in the lowest SES group (i.e., a Hollingshead rating of V) had significantly lower academic adjustment standard scores than those in a higher SES group (i.e., a Hollingshead rating of II). In addition, correlational analyses were conducted to examine the strength of the relation between children’s intelligence (measured using the Kaufman Brief Intelligence Test (KBIT; Kaufman & Kaufman, 1990) and academic and socioemotional adjustment. Intelligence was significantly related to both academic and socioemotional adjustment, and was therefore entered as a covariate in subsequent regression analyses. Correlations among all variables can be found in Table 3.

Data Reduction: Parenting Behavior

Scores for each of the five parenting dimensions (i.e., positive regard, negative regard, sensitivity, intrusiveness, and flat affect) from each of the three PCI segments (i.e., free play, instructions, puzzles) were significantly correlated; therefore, a mean score was created for each dimension by averaging the dimension scores for the three segments. After averaging the scores, an exploratory factor analysis was performed on the five parenting dimensions to determine whether they loaded onto one or more factors. A Principal Component Analysis (PCA) was chosen for factor analysis because this method is most appropriate for the purposes of data reduction (Garson, 2010). Additionally, PCA is a commonly-used method of factor analysis and produces similar results as another popular method, Principle Axis Factoring (PAF) (Field, 2005; Garson, 2010; Thompson & Vidal-
Brown, 2001). To aid in interpretation, an oblique rotation, specifically a “direct oblimin,” was chosen because this method allows for the underlying factors to be correlated by not forcing an orthogonal solution (Field, 2005). As expected, a two-factor solution did emerge, accounting for a total of 83% of the variance. Positive Regard, Sensitivity, and Flatness of Affect loaded onto one factor (i.e., sensitivity/positive parenting factor); Negative Regard and Intrusiveness loaded onto a second factor (i.e., controllingness factor). Composite scores of the factor loadings were used to represent an insensitivity score and a controllingness score, and these scores were used as the independent variables in subsequent analyses. A display of the factor loading value of each parenting dimension using direct oblimin oblique rotation can be found in Table 4.

Tests of Hypotheses: Parenting Behavior as a Predictor of Socioemotional and Academic Adjustment.

First, the degree to which parenting behavior (i.e., insensitivity and controllingness) predicted socioemotional and academic adjustment (Hypotheses 1 and 2; Research Question 1) was examined using four separate linear regression analyses with the addition of appropriate covariates. After controlling for child intelligence, controllingness was not a significant predictor of socioemotional adjustment (i.e., CBCL total problem behavior score), $\beta (59) = .181, t = 1.47, p = .148$. The model as a whole accounted for 13.5% of the variance in socioemotional adjustment. After controlling for child intelligence, insensitivity was also a non-significant predictor of socioemotional adjustment, $\beta (59) = .018, t = .134, p = .894$. This model as a whole accounted for 10.2% of the variance in socioemotional adjustment.
Turning to academic adjustment as the dependent variable, after controlling for child intelligence and SES, controllingness was a significant predictor of academic adjustment (i.e., SSRS standard score) in the expected direction, $\beta (56) = - .253$, $t = - 2.11$, $p = .04$. The model as a whole accounted for 24.9% of the variance in academic adjustment. Finally, after controlling for child intelligence and SES, insensitivity was not a significant predictor of academic adjustment, $\beta (56) = .149$, $t = 1.13$, $p = .265$. The model as a whole accounted for 20.5% of the variance in academic adjustment.

**Test of Hypotheses: Moderation Analyses**

Moderation analyses were conducted using the procedures recommended by Baron and Kenny (1986). In addition, appropriate covariates were entered into all analyses.

**Maternal Depression as a Moderator.** In order to determine if maternal depression was a significant moderator of the relation between controllingness and socioemotional and academic adjustment (Hypotheses 3 and 4), two moderation analyses were conducted. After controlling for child intelligence, the interaction of maternal depression and controllingness in prediction of socioemotional adjustment was not significant, $\beta (59) = .057$, $t = .451$, $p = .654$, accounting for 13.9% of the variance in socioemotional adjustment. Likewise, after controlling for child intelligence and SES, the interaction of maternal depression and controllingness was not a significant predictor of academic adjustment, $\beta (56) = .072$, $t = .554$, $p = .582$, accounting for 25.5% of the variance in academic adjustment.

Next, moderation analyses were conducted to determine if maternal depression was a significant moderator of the relation between maternal insensitivity and child socioemotional and academic adjustment (Hypothesis 3, Research Question 2). After controlling for child
intelligence, the interaction of maternal depression and insensitivity on socioemotional adjustment was not significant, $\beta (59) = .156$, $t = 1.24$, $p = .221$, accounting for 13.1% of the variance in socioemotional adjustment. Similarly, after controlling for SES and child intelligence, the interaction of maternal depression and insensitivity on academic adjustment was not significant, $\beta (56) = -.184$, $t = -1.49$, $p = .142$, accounting for 24.8% of the variance in academic adjustment.

**Child Perception as a Moderator.** To determine if child perception of maternal warmth was a significant moderator of the relation between maternal controllingness and child socioemotional and academic adjustment (Hypotheses 5 and 6), two moderation analyses were conducted. After controlling for child intelligence, the interaction of perception of warmth and controllingness on socioemotional adjustment was not significant, $\beta (59) = .018$, $t = .136$, $p = .892$, accounting for 13.9% of the variance in socioemotional adjustment. Likewise, after controlling for SES and child intelligence, the interaction of perception of warmth and controllingness was not a significant predictor of academic adjustment, $\beta (56) = .066$, $t = .532$, $p = .597$, accounting for 26.9% of the variance in academic adjustment.

Finally, moderation analyses were conducted to determine if child perception of their mother’s warmth was a significant moderator of the relation maternal insensitivity and child socioemotional and academic adjustment (Hypothesis 5; Research Question 3). After controlling for child intelligence, the interaction of perceptions of warmth and insensitivity on socioemotional adjustment was not significant, $\beta (59) = -.084$, $t = - .589$, $p = .559$, accounting for 11.2% of the variance in socioemotional adjustment. Similarly, after
controlling for SES and child intelligence, the interaction of perceptions of warmth and insensitivity on academic adjustment was not significant, \( \beta (56) = .000, t = -.004, p = .997 \), accounting for 21.4% of the variance in academic adjustment.

**Post Hoc Analyses**

In order to explore several questions that arose subsequent to the tests of hypotheses, a series of post hoc analyses were conducted. First, to determine if individual parenting behavior scales might predict child adjustment, correlations were run between each parenting dimension separately (positive regard, sensitivity, negative regard, intrusiveness, and flat affect) and internalizing and externalizing problem behavior scores. All correlations were non-significant. Please see Table 5.

In original analyses, internalizing and externalizing behavior problems were combined to create a total problem behavior score. In order to determine if parenting behavior was related to each construct separately, follow-up regression analyses were conducted:

**Externalizing Problems as Dependent Variable.** First, in order to check for possible covariates, a one-way ANOVA was conducted to determine if externalizing problems differed by SES, child gender, or ethnicity. Externalizing behavior problems differed significantly by child gender; therefore, gender was entered as a covariate in the following regression analyses. Specifically, a \( t \)-test revealed that males \( (M = 55.37; SD = 11.82) \) had higher externalizing behavior problem scores than females \( (M = 53.74; SD = 7.25) \), \( t = 0.55, p = 0.04 \). Turning to the regression analyses using gender as a covariate, neither
controllingness (β (58) = .740, t = .498, p = .620, R² = .011) nor insensitivity (β (58) = -1.99, t = -1.48, p = .143, R² = .044) were significantly related to externalizing behavior problems.

*Internalizing Problems as Dependent Variable.* A one-way ANOVA was conducted to determine if internalizing problems differed by SES, child gender, or ethnicity. Internalizing problems differed significantly by child gender; therefore gender was entered as a covariate in the following regression analyses. A t-test revealed that males (M = 51.07; SD = 11.28) had higher internalizing behavior problem scores than females (M = 49.84; SD = 8.00), t = 0.43, p = .05. Turning to the regression analyses using gender as a covariate, neither controllingness (β (58) = 1.875, t = 1.326, p = .190, R² = .031) nor insensitivity (β (58) = .536, t = .406, p = .686, R² = .003) were significantly related to internalizing behavior problems.

In original analyses, only the warmth scale of the Child Puppet Interview was used as an indicator of children’s perceptions of their parents’ behavior. In order to explore if the other two scales, hostility and structure, might interact with parenting behavior in prediction of child outcomes, moderation analyses were conducted using appropriate covariates.

*Hostility as a Moderator.* After controlling for child intelligence (when the dependent variable was socioemotional adjustment) and SES and child intelligence (when the dependent variable was academic adjustment), child perception of maternal hostility was not a significant moderator of the relation between maternal controllingness and child socioemotional adjustment (β (58) = -.132, t = -.988, p = .327, R² = .168) or academic adjustment (β (55) = .009, t = .066, p = .947, R² = .256). Likewise, child perception of maternal hostility was not a significant moderator of the relation between maternal
insensitivity and child socioemotional adjustment ($\beta$ (58) = .079, $t$ = .601, $p$ = .550, $R^2$ = .128) or academic adjustment ($\beta$ (55) = -.033, $t$ = -.254, $p$ = .801, $R^2$ = .211).

Structure as a Moderator. After controlling for child intelligence (when the dependent variable was socioemotional adjustment) and SES and child intelligence (when the dependent variable was academic adjustment), child perception of maternal structure was not a significant moderator of the relation between maternal insensitivity and socioemotional ($\beta$ (58) = .153, $t$ = 1.206, $p$ = .233, $R^2$ = .141) or academic adjustment ($\beta$ (55) = -.083, $t$ = -.653, $p$ = .517, $R^2$ = .214). Likewise, structure was not a significant moderator of the relation between controllingness and academic adjustment ($\beta$ (55) = .191, $t$ = .15, $p$ = .134, $R^2$ = .115). However, the structure scale did serve as a significant moderator of the relation between controllingness and socioemotional adjustment ($\beta$ (58) = -.252, $t$ = -2.044, $p$ = .046, $R^2$ = .204). To determine the nature of the interaction, a simple slope analysis was conducted using Preacher’s web-based macro (Preacher, Curran, & Bauer, 2006) at three levels of the moderator (one standard deviation above the mean, at the mean, and one standard deviation below the mean). For children perceiving their parents as high in structure, there was no relation between controllingness and socioemotional adjustment (simple slope = -0.50, $t$ = 0.31, $p$ = 0.75). At the sample mean for structure, the relation between controllingness and socioemotional adjustment was also non-significant (simple slope = 1.95, $t$ = 1.47, $p$ = 0.15). At low levels of structure, however, there was a significant and positive relation between parents’ controllingness and children’s socioemotional adjustment as reported by teachers (simple slope = 4.41, $t$ = 2.26, $p$ = 0.03). Specifically, the children perceiving their parents as
low in structure experienced higher teacher-reported problem scores as a function of controllingness. Please see Figure 2 in Appendix B for a graph of the interaction.
Table 1

*Demographic Characteristics of Children (N=80) and Mothers (N=72)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Number (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Child Race</strong></td>
<td></td>
</tr>
<tr>
<td>African American</td>
<td>59 (74%)</td>
</tr>
<tr>
<td>European American</td>
<td>15 (19%)</td>
</tr>
<tr>
<td>Other/Biracial</td>
<td>6 (8%)</td>
</tr>
<tr>
<td><strong>Child Gender</strong></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>52 (65%)</td>
</tr>
<tr>
<td>Female</td>
<td>28 (35%)</td>
</tr>
<tr>
<td><strong>Parent Marital Status</strong></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>36 (48%)</td>
</tr>
<tr>
<td>Married</td>
<td>21 (28%)</td>
</tr>
<tr>
<td>Divorced</td>
<td>7 (9%)</td>
</tr>
<tr>
<td>Separated</td>
<td>9 (12%)</td>
</tr>
<tr>
<td>Widow</td>
<td>2 (3%)</td>
</tr>
<tr>
<td><strong>Educational Attainment</strong></td>
<td></td>
</tr>
<tr>
<td>Less than high school</td>
<td>5 (7%)</td>
</tr>
<tr>
<td>Some high school</td>
<td>10 (13%)</td>
</tr>
<tr>
<td>Some college or specialized training</td>
<td>31 (41%)</td>
</tr>
<tr>
<td>College/Graduate degree</td>
<td>8 (10%)</td>
</tr>
</tbody>
</table>
Table 1 Continued

<table>
<thead>
<tr>
<th>Variable</th>
<th>Number</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>*SES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>0</td>
<td>(0%)</td>
</tr>
<tr>
<td>II</td>
<td>10</td>
<td>(14%)</td>
</tr>
<tr>
<td>III</td>
<td>15</td>
<td>(21%)</td>
</tr>
<tr>
<td>IV</td>
<td>24</td>
<td>(34%)</td>
</tr>
<tr>
<td>V</td>
<td>21</td>
<td>(30%)</td>
</tr>
</tbody>
</table>

Mean (SD)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent Age</td>
<td>34.08 (9.09)</td>
</tr>
<tr>
<td>Child Age</td>
<td>5.88 (0.54)</td>
</tr>
<tr>
<td>Parent IQ</td>
<td>89.03 (13.22)</td>
</tr>
<tr>
<td>Child IQ</td>
<td>91.26 (14.39)</td>
</tr>
</tbody>
</table>

Note. *SES represented by the Hollingshead Index ranging from I-V; I=highest; V=lowest
Table 2

Number of Participants, Mean Raw Scores, and Standard Deviations of Measures for Full Sample

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>M</th>
<th>SD</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Insensitivity” Factor</td>
<td></td>
<td>0</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Positive Regard</td>
<td>74</td>
<td>3.43</td>
<td>1.14</td>
<td>1-6</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>76</td>
<td>3.69</td>
<td>1.03</td>
<td>1.67-6</td>
</tr>
<tr>
<td>Flatness of Affect</td>
<td>76</td>
<td>4.06</td>
<td>0.99</td>
<td>1.33-6</td>
</tr>
<tr>
<td>“Controllingness” Factor</td>
<td></td>
<td>0</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Negative Regard</td>
<td>76</td>
<td>2.17</td>
<td>0.79</td>
<td>1-5</td>
</tr>
<tr>
<td>Intrusiveness</td>
<td>76</td>
<td>3.41</td>
<td>0.98</td>
<td>1.33-6</td>
</tr>
<tr>
<td>Academic Adjustment</td>
<td>70</td>
<td>89.31</td>
<td>13.37</td>
<td>62-133</td>
</tr>
<tr>
<td>Socioemotional Adjustment</td>
<td>63</td>
<td>53.75</td>
<td>11.05</td>
<td>32-89</td>
</tr>
<tr>
<td>Maternal Depressive Symptoms</td>
<td>77</td>
<td>51.17</td>
<td>9.70</td>
<td>42-75</td>
</tr>
<tr>
<td>Child Perceptions of Maternal Warmth</td>
<td>76</td>
<td>14.96</td>
<td>2.53</td>
<td>8-18</td>
</tr>
</tbody>
</table>

Note: Academic Adjustment represented by standard scores; Socioemotional Adjustment and Maternal Depressive Symptoms represented by T-scores; Child Perceptions of Maternal Warmth represented by raw scores; Insensitivity and Controllingness represented by composite factor loading scores
Table 3

**Skew and Kurtosis of Measures for Full Sample**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Skew</th>
<th>S.E.</th>
<th>Kurtosis</th>
<th>S.E.</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Insensitivity” Factor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive Regard</td>
<td>-.505</td>
<td>.279</td>
<td>-.671</td>
<td>.552</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>.695</td>
<td>.276</td>
<td>-.395</td>
<td>.545</td>
</tr>
<tr>
<td>Flatness of Affect</td>
<td>-.093</td>
<td>.276</td>
<td>-.263</td>
<td>.545</td>
</tr>
<tr>
<td>“Controllingness” Factor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negative Regard</td>
<td>1.21</td>
<td>.276</td>
<td>1.83</td>
<td>.545</td>
</tr>
<tr>
<td>Intrusiveness</td>
<td>.202</td>
<td>.276</td>
<td>-.159</td>
<td>.545</td>
</tr>
<tr>
<td>Socioemotional Adjustment</td>
<td>.533</td>
<td>.302</td>
<td>1.32</td>
<td>.595</td>
</tr>
<tr>
<td>Academic Adjustment</td>
<td>.749</td>
<td>.287</td>
<td>.887</td>
<td>.566</td>
</tr>
<tr>
<td>Maternal Depression</td>
<td>.626</td>
<td>.274</td>
<td>-.745</td>
<td>.541</td>
</tr>
<tr>
<td>Child Perceptions of Maternal Warmth</td>
<td>-.714</td>
<td>.276</td>
<td>-.195</td>
<td>.545</td>
</tr>
</tbody>
</table>
Table 4

*Correlations Among All Variables*

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Positive Regard</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Sensitivity</td>
<td>0.80**</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Flatness of Affect</td>
<td>-0.69**</td>
<td>-0.52**</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Negative Regard</td>
<td>-0.35**</td>
<td>-0.46**</td>
<td>-0.05</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Intrusiveness</td>
<td>-0.13</td>
<td>-0.25*</td>
<td>-0.15</td>
<td>0.49*</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Socioemotional Adj.</td>
<td>-0.06</td>
<td>-0.01</td>
<td>0.01</td>
<td>0.13</td>
<td>0.16</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Academic Adj.</td>
<td>-0.31*</td>
<td>0.27*</td>
<td>-0.15</td>
<td>0.30</td>
<td>-0.25*</td>
<td>-0.44**</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Maternal Depress.</td>
<td>-0.12</td>
<td>0.04</td>
<td>0.06</td>
<td>-0.16</td>
<td>-0.12</td>
<td>0.08</td>
<td>0.00</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>9. Child Perceptions of Warmth</td>
<td>0.02</td>
<td>0.06</td>
<td>0.07</td>
<td>0.07</td>
<td>0.06</td>
<td>-0.10</td>
<td>-0.03</td>
<td>0.06</td>
<td>--</td>
</tr>
</tbody>
</table>

Note: *p<.05; **p<.01
Table 5

*Rotated Factor Loading Scores of PCI Dimensions*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Factor 1 (Insensitivity)</th>
<th>Factor 2 (Controllingness)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive Regard</td>
<td>0.93</td>
<td>-0.26</td>
</tr>
<tr>
<td>Negative Regard</td>
<td>-0.25</td>
<td>0.88</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>0.87</td>
<td>-0.43</td>
</tr>
<tr>
<td>Intrusiveness</td>
<td>-0.05</td>
<td>0.90</td>
</tr>
<tr>
<td>Flat Affect</td>
<td>-0.86</td>
<td>-0.19</td>
</tr>
</tbody>
</table>

Note: Rotated using Direct Oblimin
Table 6

*Post Hoc Correlations Among Each Parenting Dimension and Internalizing and Externalizing Problem Behaviors*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Internalizing Problem Score</th>
<th>Externalizing Problem Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive Regard</td>
<td>-0.02</td>
<td>-0.20</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>0.04</td>
<td>-0.12</td>
</tr>
<tr>
<td>Flatness of Affect</td>
<td>-0.15</td>
<td>0.17</td>
</tr>
<tr>
<td>Negative Regard</td>
<td>0.09</td>
<td>0.13</td>
</tr>
<tr>
<td>Intrusiveness</td>
<td>0.11</td>
<td>0.07</td>
</tr>
</tbody>
</table>

*p<.05, **p<.01
Although maltreatment tends to negatively impact a child’s socioemotional and academic well-being (e.g., Leiter & Johnson, 1994; Shonk & Cicchetti, 2001), there are individual differences in the adjustment of these children (e.g., Collishaw et al., 2007). In order to better understand socioemotional and academic outcomes for maltreated children, one should consider sources of individual differences. The purpose of the current study was to consider the observed behavior of the child’s parent as a potential predictor of the child’s socioemotional and academic adjustment. Although it is well documented that parenting behavior influences child outcomes in normative samples, this link has been explored less frequently in samples of maltreated children and their families (e.g., Chen et al., 2000; Gray & Steinberg, 1999). In addition to exploring the link between parenting behavior and child outcomes in maltreated children, a second purpose of this study was to explore factors that might moderate the relation. Specifically, past research suggested that two factors, maternal depression and children’s perceptions of their mother’s warmth/sensitivity, might moderate the relation between parenting and child outcomes (e.g., Takei et al., 2006; Toth et al., 2002).

Maternal Behavior and the Relation to Child Outcomes

As hypothesized, maternal controllingness was significantly related to abused children’s academic maladjustment, even after controlling for SES and child intelligence. Specifically, mothers who displayed more hostile, negative, dominating, and intrusive behaviors during interactions with their children had children who received higher ratings of academic maladjustment by teachers. In the current study, the controllingness factor
consisted of a combination of negative regard for the child and parental intrusiveness, which can be considered the opposite of parental support for the child’s autonomy. This finding is consistent with other studies demonstrating that parental autonomy support has unique effects on young children’s academic competence and achievement (e.g., Grolnick, Gurland, DeCourcey, & Jacob, 2002; Grolnick & Ryan, 1989; Joussemet, Koestner, Lekes, & Landry, 2005; Mattanah, 2001). The current study extended these findings to samples of physically abused children and expanded findings to younger children, as adolescent samples have mainly been used in past research.

In the last decade, there has been an emphasis on identifying the importance of exploring the impact of specific parenting behaviors that comprise authoritative parenting on young children’s adjustment (Mattanah, 2001). Although there has been research on parental sensitivity/warmth and the relation to child adjustment, the variable of “parental autonomy promotion” has received less of a focus in younger children and more of a focus in samples of older children (Barber, 1996; Mattanah, 2001). Pending further prospective research, these findings suggest that controllingness may negatively impact academic adjustment, even in very young children. Perhaps autonomy promotion is an important skill to teach parents of young children, as too much behavioral or psychological control and negativity toward the children may hinder academic performance even at an early age (McShane & Hastings, 2009).

All other relations between parenting behavior and child adjustment were non-significant. Specifically, maternal controllingness was not related to child socioemotional adjustment, and maternal insensitivity was not related to child socioemotional or academic
adjustment. One possible explanation for the non-significant findings relates to the measure of observed parenting behavior. Five parenting behaviors were factor analyzed to reduce the parenting variables into two meaningful constructs, controllingness and insensitivity. The decision to reduce the parenting variables using factor analysis was based on a long history of this practice in the field. Prior research indicates that data based on observations of parenting are often reduce to two broad parenting dimensions, representing positive and negative parenting practices, and those dimensions are predictive of a wide range of child outcomes. However, combining specific parenting practices into global constructs (e.g., controllingness was comprised of intrusiveness and negative regard) obscures potential correlations between specific parenting behaviors and child adjustment. Post hoc analyses were therefore conducted to examine relations between each of the five individual parenting behaviors and child adjustment. These analyses indicated that none of the individual parenting dimensions were related to the measures of child adjustment (see Table 5).

Further, although the Child Behavior Checklist is a commonly used and validated measure for reporting socioemotional adjustment, the version used in this study reflected only the teacher’s opinion of the child’s socioemotional adjustment. Other measures, such as the parent’s view of internalizing and externalizing problems, may have provided another perspective of socioemotional functioning. Further, internalizing and externalizing behavior problems were combined in order to create a total problem behavior score for socioemotional functioning; however, there is a large evidence-base showing that maltreated children, particularly children with a history of physical abuse, experience more externalizing behavior problems than internalizing problems (e.g., Shonk & Cicchetti, 2001). Therefore, measuring
socioemotional adjustment in terms of only externalizing behavior problems may have provided more robust effects. Although this is one potential explanation for non-significant findings, post hoc analyses did not support this explanation.

_Moderators of the Relation Between Mothers’ Parenting Behavior and Child Adjustment_

The relation between parenting and child adjustment did not vary based on mothers’ depression symptoms or children’s perceptions of their mothers’ warmth. Specifically, maternal depression did not interact with insensitivity or controllingness in prediction of socioemotional or academic adjustment; likewise, perceptions of maternal warmth did not interact with insensitivity or controllingness in prediction of socioemotional or academic adjustment.

The Child Puppet Interview (CPI) was chosen as the measure of children’s perceptions of their mothers’ caregiving because it is the only available measure that captures very young children’s perceptions of parenting (Sessa et al., 2001). However, only the warmth/responsiveness scale of the CPI was used in order to reduce the complexity of the model. The other scales of the CPI (i.e., structure and hostility) may have served as significant moderators. These questions were addressed via post hoc analyses. There was a significant interaction between perceptions of parent structure and controllingness in prediction of socioemotional adjustment. Specifically, for children perceiving their parents as low in structure, there was a significant and positive relation between controllingness and socioemotional adjustment. For children perceiving their parents as average or high in structure, controllingness was unrelated to socioemotional adjustment. According to Sessa and colleagues, the structure scale is derived from Baumrind’s (1971) work on parenting
styles, and low structure is related, conceptually, to permissive parenting. Structure on the CPI reflects the degree to which a parent attempts to provide organization, rules, and routines in the child’s daily life (e.g., giving the child a regular bed time, making them wash their hands before meals, making them sit at the table during meals). So, children perceiving their parents as displaying a less-structured, more permissive attitude at home experienced more difficulty with socioemotional adjustment in the school environment associated with mother’s controlling and intrusive behavior in the lab setting. Perhaps these children were more sensitive to their mother’s intrusive and controlling behavior in the lab setting because at home, they perceived their mothers as less demanding and structured. Their mother’s behavior may have been perceived as out of sync with what the child typically expects.

There is research to support the association between inconsistent parenting practices and maladjustment in children (e.g., Dadds, 1995; Jewell, Krohn, Carlton, & Scott, 2008; Johnson, 1999; Patterson, 1982). Rossman and Rae (2005) found that a parenting style characterized by low structure combined with spontaneous bursts of anger, high expectations, and control (i.e., “non-reasoning punitive, permissive” parenting) was related to a higher level of internalizing problems. Researchers explained that the inconsistency between offering limited structure unpredictably mixed with too much structure on occasion confuses children and makes them distressed. This finding is consistent, conceptually, with the current study. Similarly, Johnson (1999) found that mothers whose structure was consistent from dyad (parent-child interaction) to triad (whole-family interaction) had children rated as more socially competent.
Dwairy (2009) noted that parental inconsistencies may be conceptualized as occurring in three forms--father-mother inconsistency, temporal inconsistency (i.e., inconsistency in the reaction to the same situation from time to time), and situational inconsistency (i.e., inconsistency in parent reaction from one situation to another). In the current study, inconsistency could be viewed as situational because parent behavior was measured “at home” by child perceptions of their parent’s behavior in the home setting, as well as in the lab by an observer during parent-child interaction tasks. In a recent study, Dwairy found that situational inconsistency did not have an effect on adolescent’s psychological adjustment. Researchers explained that because situational inconsistency is more predictable for the adolescent, it is easier for the child to learn to adapt to the parent being more permissive in certain situations and not in others. Although the current study did not support that finding (i.e., that situational inconsistency in parenting did not affect child adjustment), the age of the children in the current study must be taken into consideration. Younger children are still learning what is permitted by their parents and may not be as prepared as adolescents to predict and react to parenting inconsistencies across situations.

Study Limitations and Future Directions

Several methodological limitations of the current study relate to measures of constructs. There was only one measure of parent behavior included in the current study, and researchers suggest that parenting behavior should be measured using multiple methods (Villar, Luengo, Gomez-Fraguela, Romero, 2009). Other studies have included parent reports of their own behavior, measuring such behaviors as control, inconsistency, and positive affect (e.g., Dwairy, 2009; McShane & Hastings, 2009). Therefore, one area of future
research might be to determine if the current findings remain significant using a self-report measure of parent behavior. In addition, there may have been a restriction in range with respect to maternal depression as a moderator. Most mothers were not clinically depressed, as only 12 mothers had scores in the clinically significant range (Derogatis, 1993).

Another limitation has to do with the fact that the study was correlational in nature. Correlational studies, unlike longitudinal investigations, are cross-sectional in nature and therefore only capture variable relations among constructs at one point in time. In the current study, parenting wasn’t associated with children’s concurrent behavior, but might possibly predict future behavior and provide support for a causal relationship (Menard, 2002).

In addition, the sample size may have been too small to detect significant effects. For a recommended power of .80, Cohen (1992) suggests a corresponding sample size of at least 85 in order to detect a medium effect size. Further, it has been suggested that the value of .70 represents adequate internal consistency and inter-rater reliability intra-class correlations (Field, 2005; Garson, 2010). As such, low internal consistencies on the Child Puppet Interview as well as several moderately low intra-class correlation coefficients on the Parent Child Interaction task, is another limitation and might be an explanation for non-significant findings.

A final limitation involves generalizability of findings with respect to parent gender. Only mothers were included in the current study. Future researchers should consider investigating the role of paternal parenting practices in prediction of children’s adjustment, especially in maltreated children. Unfortunately, recruitment of abusive fathers is quite challenging, so fathers are rarely included child maltreatment research (Lee, Bellamy, &
Guterman, 2009). Without an empirical understanding of the role of fathers, it is difficult to determine protective or risk factors contributed by fathers that may differ from maternal factors (Guterman & Lee, 2005), especially with respect to parent-child interactions. Being that fathers often are the perpetrators of violence in the home this is an important area of future direction (Lee et al, 2009).

A final area of future direction involves sampling more ethnically diverse families. In the current study, over 80% of the sample was not of Caucasian ethnicity, yet the majority of research investigating the link between parenting and child adjustment in maltreated children is based on nonminority samples (Whiteside-Mansell, Bradley, Owen, Randolph, & Cauce, 2003). Current hypotheses were formed based on research with nonminority samples, which may be an explanation for nonsignificant findings. An important area of future research is the ethnic differences in the behavior of maltreating parents and the degree to which these ethnic differences predict outcomes for children (Darling & Steinberg, 1993).

In summary, most studies examine the differences in functioning between maltreated and non-maltreated children. The current study was the first study to examine the link between observed parenting behaviors and child outcomes in a sample consisting only of maltreated children and the first study to examine potential moderators of this relation. Continuing this line of research is important to help researchers and clinicians determine what types of parenting behaviors impact the adjustment of children who have a history of maltreatment. Most of the hypotheses put forth in this study were based on studies of nonmaltreated children, and most were not supported. Based on findings in the current study, it seems we cannot make assumptions about links between parenting and child behavior.
based on research with nonmaltreated samples. Moreover, an understanding of moderating factors should continue in order to enhance our understanding of variables that might interact with parenting behaviors in prediction of children’s adjustment. Such factors could be targeted as part of maltreatment prevention programs or incorporated into interventions that use hybrid treatment models (i.e., a systems perspective) to improve the functioning of maltreating parents and their children (Cohen & Mannarino, 1993; Kolko & Swenson, 2002).
REFERENCES


Figure 1. A visual display of the variables of interest in the current study
APPENDIX B

Figure 2. Post hoc analysis of the interaction between structure and controllingness (centered) in prediction of socioemotional adjustment (TRF scores) at low, mean, and high levels of structure
APPENDIX C

Child Puppet Interview Administration Script

“Today we’re going to do a lot of fun things. First we’ll do some stuff together with the puppets.”

Tester: “(Child’s Name), I want to introduce you to a couple of friends of mine. This is Ziggy.”

Ziggy: (raise Ziggy and say…) “Hi (Child’s Name)!”

Tester: “And this is Iggy.”

Iggy: (raise Iggy and say…) “Hi (Child’s Name)!”

Ziggy: “Do you know what we want you to do today? We want to talk to you.”

Iggy: “Yeah! I want to tell you about myself!”

Ziggy: “And I want to tell you about myself!”

Iggy: “And then we want you to tell us about yourself.”

Ziggy: “To tell us about yourself, you can pick up the top card on this pile and put it in front of the puppet that is most like you.”

Iggy: “Does that sound like fun?” (allow child to respond)

Both: “Great!”

Ziggy: “We want you to know that we won’t tell your mom or anyone else in your family what you share with us today. But if you want to tell your mom or anyone in your family about the puppet show, that’s okay.”

Ziggy: “Let’s try a few practice questions.”

Administer warm-up questions.

If the child responds in a codeable manner, proceed with the interview questions. If not, continue asking warm-up questions until the child understands how to respond.

Administration Begins
Remove all the sample/practice cards from the deck so that card #1 is on top of the stack.

Iggy: “Now I’m going to tell you about my family….”

Ziggy: “And I’m going to tell you about my family. And you can tell us about your family, okay?”

L (hand): My mom and I take walks together
R: My mom and I do not take walks together.

R: My mom goes to work.
L: My mom does not go to work.

Administer Puppet Interview Items (see Appendix E)

After all items are finished, the puppets should conclude the interview by saying:

R: “You know what (child’s name)? That was the last question. We’re all done with the puppet show.”

L: “Thanks for talking with us.”

R: “We really enjoyed talking with you and getting to know more about you.”

L: “Yeah!” I really enjoyed it too.”

R: “You did such a great job.”

L: “We’re going to say good-bye now, OK?”

R: “Bye!”

L: “Bye (child’s name)”

The tester then takes off the hand puppets.
APPENDIX D

Child Puppet Interview Administration Items by Scale

*Warmth Scale*

1. My mom does not give me special presents; My mom gives me special presents.
2. My mom says I do a good job; My mom does not say I do a good job.
3. My mom hugs and kisses me; My mom does not hug and kiss me.
4. My mom lets me sit in her lap; My mom does not let me sit in her lap.
5. My mom laughs at my jokes; My mom does not laugh at my jokes.
6. My mom does not read to me; My mom reads to me.

*Structure Scale*

1. I go to bed whenever I want; I go to bed when my mom tells me to go to bed.
2. I do not have to wash my hands before I eat; I have to wash my hands before I eat
3. At dinnertime, my mom does not make me sit at the dinner table; At dinnertime, my mom makes me sit at the dinner table.
4. I do not have to clean up my toys; I have to clean up my toys.
5. I have to share my toys; I do not have to share my toys.

*Hostility Scale*

1. My mom spanks me when I am bad; My mom does not spank me when I am bad.
2. My mom does not make me cry; My mom makes me cry
3. My mom likes having me around; My mom does not like having me around
4. My mom hits me; My mom does not hit me
5. My mom gets mad at me a little; My mom gets mad at me a lot.
6. My mom yells at me a lot; My mom yells at me a little.

*Used in the current study*