

ABSTRACT

KREIG, COLLEEN SHAWN. The Link between Parental Discipline and Social Behavior among Abused and Comparison Children: Moderating Influences of Nurturing Parenting Style and Child Gender. (Under the direction of Mary E. Haskett, Ph.D.).

Children's social behavior is an important indicator of children's present and future adjustment, and as such there has been an extensive amount of research conducted on factors associated with positive and negative child social behavior. Parenting style and discipline have been postulated as being related to children's social behavior. The aim of this study was to examine the relations among nurturing parenting style, children's physical discipline experiences, and children's prosocial and aggressive behavior. The sample included 137 African American and European American parent-child dyads, half with substantiated child abuse and half with non-abusive parent-child histories. A multi-method assessment of constructs was employed, including observations and self-reports of parenting and observations and teacher reports of child social adjustment. The relationship between physical discipline and child social behavior (both prosocial and aggressive) was hypothesized to be moderated by nurturing parenting style and child gender. In addition, ethnicity was investigated as a potential moderator of the relationship between physical discipline and child social behavior. A series of regression models was computed to test the hypotheses. There was partial support for the moderating role of both parenting style and ethnicity but there was no support for moderation by child gender. Implications of these findings along with suggestions for future research are discussed.

THE LINK BETWEEN PARENTAL DISCIPLINE AND SOCIAL BEHAVIOR
AMONG ABUSED AND COMPARISON CHILDREN: MODERATING
INFLUENCES OF NURTURING PARENTING STYLE AND CHILD GENDER

by

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DEDICATION

This dissertation is dedicated to the memory of my father, Walter Henry Kreig. My father died the year before I returned to graduate school to complete my Ph.D. He too had entered a Ph.D. program and left with a Masters, but unlike me, he never had the opportunity to return and finish his Ph.D. To him, I owe too much to list, but I do want to thank him for instilling in me a love of learning, and acknowledge his enduring support of every endeavor I ever undertook. For all that you were, and all that you have given to me--I thank you...and miss you...everyday.

PERSONAL BIOGRAPHY

Colleen “Shawn” Kreig was born January 16, 1964 to Walter Henry Kreig and Marilyn Ann Kirkpatrick Kreig in the wee hours of the night during a snowstorm. The youngest of five, she grew up in Oklahoma City and graduated from U.S. Grant High School in 1982. She went on to attend the University of Oklahoma at Norman and University of Texas at Austin, and she completed a Bachelor of Arts in Psychology in 1986. In 1986, she moved to Seattle, Washington and entered the Ph.D. program in Psychology at the University of Washington. Shawn took a leave of absence from graduate school in 1988, and spent two years finding herself. During that time, she worked as a cook in a vegetarian Indian restaurant, studied Buddhist and Hindu philosophy, and spent much of her free time hiking the Olympic and Cascade Mountains in the beautiful Pacific Northwest. She returned to graduate school to finish a Masters of Science in Psychology in 1990. For seven years, Shawn worked in the Otolaryngology Department at the University of Washington Medical School conducting research on the auditory and vestibular systems. During that time, Shawn married Tushar Fadale and gave birth to Jasmine Asha Fadale Kreig in 1992. After moving to Raleigh, North Carolina in 1996, Shawn gave birth to twins, Nikhil Jacob Kreig Fadale and Kethan Edward Kreig Fadale in 1997. She enrolled in the Ph.D. program in School Psychology in 1998. For many years, Shawn had wanted to return to school and with the support of her husband she was able to achieve her dream and complete a Ph.D. in a field she loved. Shawn completed an internship with Wake County Public School System in Raleigh, North Carolina in 2002-2003, and she is presently employed with that same school system as a School Psychologist.

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TABLE OF CONTENTS

LIST OF TABLES	vii
LIST OF FIGURES	viii
INTRODUCTION	1
PURPOSE OF PRESENT RESEARCH	4
LITERATURE REVIEW	6
PARENTING STYLE	6
Dimensions of Parenting Style.....	7
Parenting Styles and Child Peer Behavior and Child Peer Status	8
Differential Effects of Gender on Parenting and Child Peer Behavior.....	14
PHYSICAL DISCIPLINE	23
Physical Discipline and Child Aggression.....	24
CHILDREN'S PEER RELATIONS	29
Prosocial Behavior	30
Associations Between Prosocial and Aggressive Behavior.....	39
Gender Differences in Prosocial and Aggressive Behavior.....	41
Physically Abused Children's Social Behavior	44
CURRENT RESEARCH	49
HYPOTHESES AND RESEARCH QUESTION	50
METHOD	52
PARTICIPANTS.....	52
Participant Recruitment and Verification of Abuse Status	56
PROCEDURES	58
INSTRUMENTATION	59
Measure of Nurturing Parenting Style	59
Measures of Children's Discipline.....	62
Measures of Children's Behavior	64
RESULTS	69
DESCRIPTIVE STATISTICS.....	69
HYPOTHESIS TESTING	75
Correlations between Parent and Child Variables	75
Tests of Moderation	76
DISCUSSION	85
Parenting Style and Children's Prosocial and Aggressive Behavior	86
Physical Discipline and Children's Prosocial and Aggressive Behavior.....	89
Nurturing Parenting as a Moderator	95
Child Gender as a Moderator	99

Moderation by Ethnicity?	100
LIMITATIONS OF THE STUDY AND FUTURE DIRECTIONS.....	102
CONCLUSIONS AND IMPLICATIONS OF THIS STUDY	106
REFERENCES	109
APPENDIX A.....	131
APPENDIX B.....	134
APPENDIX C	145
APPENDIX D.....	149
APPENDIX E	152
APPENDIX F.....	156
APPENDIX G.....	157

LIST OF TABLES

Table 1: Demographics of Parent Participants.....	54
Table 2: Mean Raw Scores and Standard Deviations of Measures for Full Sample	70
Table 3: Mean Raw Scores and Standard Deviations of Measures for Abuse and Comparison Sample	71
Table 4: Inter-correlations and Confidence Intervals among Measures of Physical Discipline, Parenting Style and Children’s Social Adjustment	74

LIST OF FIGURES

Figure 1: The relation between relational aggression and intended punishment at three levels of nurturing.	79
Figure 2: The relation between overt aggression and intended punishment at three levels of nurturing.	80
Figure 3: The relation between relational aggression and intended punishment for Boys and Girls.	83
Figure 4: The relation between relational aggression and intended punishment for European Americans and African Americans.	84

CHAPTER ONE

Introduction

In our interdependent society, one of the most important developmental tasks for children to accomplish is learning to get along with other children and adults. Researchers have identified positive peer relations as a marker of present and future adjustment (Hartup, 1983; Ladd & Kochenderfer, 1996; Parker & Asher, 1987). Specifically, prosocial behavior has been shown to be correlated with children's social adjustment, and difficulties with peer relations such as aggression, peer rejection, and social withdrawal are stable indicators of children's poor social adjustment (Asher & Coie, 1990; Coie, Dodge, & Kupersmidt, 1990; Hymel, Rubin, Rowden, & LeMare, 1990). In addition, research has shown that some children who engage in aggressive behavior with peers are at an increased risk for adjustment difficulties such as mental illness, criminality, and antisocial behavior in adolescence and adulthood (Huesmann, Eron, Lefkowitz, & Walder, 1984; Loeber, 1991; Parker & Asher). Child social adjustment is also correlated with academic achievement and acceptance by peers and adults (Masten & Coatsworth, 1995). Researchers have supported the importance of child social adjustment to future adjustment, yet the mechanisms through which children become socially adjusted are still debated.

Historically, parents have been viewed as the primary influence on children's early socialization (see Maccoby, 1992; Sears, 1975). Although in recent years, other variables (such as environmental factors or child temperament) have been suggested and studied as influences on children's socialization (e.g. Bronfenbrenner & Ceci, 1994; Goldsmith, 1993), most researchers in the field of child development still acknowledge an essential role for the

parent as a primary socialization agent of children (see Maccoby, 1992 for a review; see Harris, 1995, for an exception). Parents are thought to play a very influential role in the development of children's social competence, which is often operationally defined by positive peer relations (Mize & Pettit, 1997; Pettit, Dodge, & Brown, 1988; Volling, MacKinnon-Lewis, Rabiner, & Baradaran, 1993). Parents are known to have direct as well as indirect influences on their children's peer relations (Ladd & LeSieur, 1995; Parke & Ladd, 1992). Direct parental influences include explicit teaching about peer relationships, supervising contacts with playmates, providing advice about peer relations, and arranging opportunities for child-peer contact (Ladd & Le Sieur, 1995; Parke, Cassidy, Burks, Carson, & Boyum, 1992). Indirect parental influences develop from the child's observation of his/her parent interacting with others and from the interactions that occur between parent and child. Parent-child interactions are hypothesized to form the basis for children's development of behavioral and affective patterns of relating to their peers (Ladd & Le Sieur, 1995; Parke, et al., 1992).

Early research on parenting styles attempted to identify styles that would be most beneficial for successfully socializing children (for a review, see Darling & Steinberg, 1993). The term parenting style is typically used to describe the affective relation and power structure present in the parent-child relationship (Baumrind, 1973; Maccoby & Martin, 1983). Perhaps one of the most influential theorists in the area of parenting styles is Diana Baumrind. Her influential research (Baumrind & Black, 1967) relating parental styles to child social competence has been the impetus for decades of research on parenting styles and children's social behavior, and serves as an important foundation for the current research.

While parenting *style* is an important component of the parent-child relation and defines the context of the parent-child relation, parenting *behaviors* are measurable and quantifiable events that allow additional important insights into the influence of parenting on children's adjustment. One aspect of parenting behavior that has garnered significant attention is physical discipline or corporal punishment. Corporal punishment of children has been and continues to be a "hot-button" topic that elicits equally passionate condemnation and support. Some child psychology researchers condemn any child physical discipline as an inappropriate and ineffective parenting practice (Hyman, 1997; Straus, Sugarman, & Giles-Sims, 1997), whereas other researchers have found that controlled child physical discipline as a parenting practice is not necessarily associated with negative outcomes (Baumrind, 2001; Larzelere, 2000).

Despite the polarization of beliefs about the value of physical punishment as a method of child disciplinary control, there is more unified agreement among most individuals that physical abuse of children is inappropriate and detrimental to the child's physical and emotional welfare. Much is known about the effects of child abuse on children's social, emotional, and academic functioning and overwhelmingly the findings reveal that abused children have many deficits within these domains and are at risk for adjustment difficulties into adulthood (Erickson & Egeland, 1987; Widom, 1989; Wodarski, Kurtz, Gaudin, & Howling, 1990). Less is known about the effects of nonabusive physical discipline which is a potentially much more common experience for children (Straus & Stewart, 1999). As a more prevalent experience for children, it is important to identify any harmful consequences that may be associated with the experience of physical discipline.

Purpose of Present Research

The current research was designed to examine the relations among nurturing parenting style, children's physical discipline experiences, and children's prosocial and aggressive behavior within samples of children with documented child abuse and comparison children. Much of the early research on parenting style and children's prosocial and aggressive behavior identified an association between parenting style and children's aggressive behavior, with children experiencing negative parenting styles displaying more aggression (Baumrind & Black, 1967). Research on parenting style and children's prosocial behavior is less substantial and has provided inconsistent results. With respect to parental discipline practices, a connection between physical discipline and child aggression with peers has been demonstrated in previous research (Bierman & Smoot, 1991; Strassberg, Dodge, Pettit, & Bates, 1994; Weiss, Dodge, Bates, & Pettit, 1992). Specifically, children who have received harsh physical discipline tend to engage in high rates of aggressive behavior with peers. Research on the relation between physical discipline and children's prosocial behavior is essentially non-existent, with most of the research on discipline concentrated on the distinction between inductive or reasoning methods and power assertive discipline techniques that include physical discipline along with many non-physical techniques such as time-out, yelling, and grounding. In a literature review conducted by Deater-Deckard and Dodge (1997), it was concluded that the link between discipline and child social behavior was complex and that there were likely to be moderators of the link. The authors specifically noted that a parent's general parenting style might serve as a moderator of the relation between physical discipline and children's aggressive behaviors. The present research served

as both a replication of previous research on the relation of children's aggressive behavior and parenting style and physical discipline, and an expansion of previous research by including the effects of parenting style and physical discipline on children's prosocial behavior. Potential moderating variables on the relation between physical discipline and children's peer behavior were explored. In addition, the current research included children who had experienced the full range of physical discipline, from “normative” spanking to abusive parenting. Inclusion of this range allowed a more complete examination of the relation of parental discipline practices to children’s social behavior than has been possible in past research. In order to provide a grounding and justification for this study, literature on parenting style, child prosocial and aggressive behaviors, and physical discipline will be reviewed.

CHAPTER TWO

Literature Review

Parenting Style

As the primary socializing agents of young children, parents are assumed to have an influential role in shaping child behavior. Parents are known to have direct influences on children's behavior in that parents serve as models of social behavior, and parents also use direct teaching methods for child socialization, such as teaching social skills. These parental socialization techniques are not used in isolation, but rather are embedded within a parental style of interaction with their child. This parental style has been characterized as being consistent across time and context and has been shown to be related to child outcomes (Darling & Steinberg, 1993; Dishion, 1990; Metsapeltio, Pulkkinen, & Poikkeus, 2001; Pettit, Bates, & Dodge, 1997). Parental style is thought to reflect "a constellation of attitudes toward the child that are communicated to the child and that, taken together, create an emotional climate in which the parents' behaviors are expressed" (Darling & Steinberg, 1993, p. 493). Parenting style has been described as the "milieu" (Darling & Steinberg, 1993) in which parenting behaviors or parenting practices occur. Parenting behaviors include parental practices intended to socialize the child, such as using physical punishment or supervising a child's play-date. Parenting behaviors are oriented towards a particular socialization goal, and parenting style describes the emotional context in which the parenting practices are delivered (Darling & Steinberg, 1993). Thus all parental *behaviors* occur within a context of general parenting *style*, and both parental behaviors and parenting style have been shown to be important predictors of child adjustment. In the next section, dimensions of parenting style

will be presented along with research that supports the relation between parenting style and child peer relations.

Dimensions of Parenting Style

Research by Baumrind (Baumrind, 1967, 1971; Baumrind & Black, 1967) has influenced the field of parenting style immeasurably. Many of the studies in the area of parenting style have utilized Baumrind's conceptualization of parenting style. Her research on parenting style utilizes categories or dimensions to describe inherent qualities of parenting that are not readily apparent, such as communication style, emotional tone, and power structure. Rather than describing each individual component of parenting, parenting style is a composite that includes all these individual factors. Research by Baumrind (1971) focused on parental control and affective style of the parent as the defining components of parenting style.

Baumrind proposed three types of parenting styles that differed on the basis of parental control strategies and emotional warmth; those styles included authoritative, authoritarian, and permissive. Authoritative parents are sometimes termed democratic parents, and are characterized as holding high but developmentally appropriate standards for children. Control of children by authoritative parents is from a basis of warmth. Authoritarian parents are similar to authoritative parents in their high standards for children's behavior, but the two parental styles differ in methods of controlling their children. In contrast to authoritative parents, authoritarian parents control their children through fear and through demands to submit to the parent's authority. Control of children by authoritarian parents is strict and often physical and children are expected to comply with parental demands without

questioning the parent's authority. Whereas authoritative and authoritarian parents are similar in their high standards for children's behavior, permissive parents are in stark contrast in that they have low expectations for children's behavior and rarely apply consequences for inappropriate child behavior. Permissive parents respond to their children in a warm and indulgent manner. Despite the warmth of the permissive parenting style, children of permissive parents often receive little parental supervision or guidance.

Adding to the research of Baumrind, Maccoby and Martin (1983) described a fourth pattern of parenting style, indifferent-uninvolved, to characterize parents low in control and low in warmth. Indifferent-uninvolved parents are similar to permissive parents in that they have very low expectations for children's behavior, but they differ from permissive parents in degree of warmth expressed. Permissive parents are seen as being relatively warm in their parenting approach whereas indifferent-uninvolved parents fail to provide much in terms of affective relations with their children.

The relevance of parenting styles to the present research is the fact that each parenting style is associated with unique outcomes for children, which highlights the central importance of parenting in children's socialization. It has previously been established that there is a significant relation between parenting style and children's social adjustment (Baumrind, 1967, 1971; Chao, 2001; Patterson, 1982), and specific findings from those investigations will be reviewed below.

Parenting Styles and Child Peer Behavior and Child Peer Status

Many researchers assert that there is a relation between the parenting that children receive and children's behavior with peers (Hartup, 1979; Parke, Cassidy, Burks, Carson, &

Boyum, 1992). Baumrind's (1967, 1971) early studies of parenting style and children's social competence highlighted the positive relationship between authoritative parenting and children's social competence. Additional associations were subsequently identified between authoritative parenting style and children's and adolescents' intellectual competence, achievement orientation, and social responsibility (Baumrind, 1991; Lamborn, Mounts, Steinberg, & Dornbusch, 1991; Weiss & Schwarz, 1996). Despite the almost overwhelming support for positive relations between authoritative parenting and children's social adjustment, some researchers question whether the association is valid for all children. Most of the research on parenting styles has been conducted with samples of middle-class and White participants, and some researchers have suggested that ethnic and social class differences may result in meaningful cultural or contextual differences in the relation between parenting style and children's adjustment (Baldwin, Baldwin, & Cole, 1990; Chao, 1994; Darling & Steinberg, 1993; Deater-Deckard & Dodge, 1997). The present study was designed to contribute to this discussion of the role of moderators in the association between parenting and child outcomes by use of a more diverse sample than previous research has utilized as the sample included both African-American and European American parents from a wide range of socioeconomic status (SES) levels.

As research on parenting styles has evolved from its early origins that were primarily focused on identifying the effects of parenting styles (i.e. authoritative, authoritarian, permissive, indifferent-uninvolved) on child outcomes (Baumrind, 1973; Peery, Jensen, & Adams, 1985), research on parenting styles has become more focused on the components of parenting style (affective relations and control) that are associated with child outcomes. In

the next section, research on parental affective style, which has been the focus of many studies of parenting style as a unique predictor of child adjustment, will be reviewed (Dix, 1991; Maccoby, 1992). Although the present research was based on a sample of school-aged children, research based on preschool samples will be reviewed herein because the number of studies of school-aged children that include actual observations of parenting as opposed to self-report of parenting styles is highly limited (see Cohn, Patterson, & Christopoulos, 1991, for a review).

In an early study of parental warmth, Gottman and Fainsilber-Katz (1989) observed 5-year-old children with their parents and with the children's best friends. Results indicated that children who demonstrated poor peer play quality and high levels of negative interactions during play with their best friends had parents who displayed more cold and angry behavior during parent-child interaction than did children who engaged in higher quality peer play and fewer negative interactions during play with their best friend. In another early study that focused on parenting style (i.e., warmth and support) and preschool children's popularity, Roopnarine and Adams (1987) observed parents with their children in a laboratory "teaching task." Popular children, as measured by sociometric ratings, had parents with more positive and supportive interactional styles compared to the interactional styles of parents of unpopular children. Specifically, parents of popular children gave more praise and offered more explanations to their children than did parents of unpopular children.

In another study that specifically focused on the affective quality of parenting style, Putallaz (1987) focused on the relation between the affective style of mothers and their first-grade children's peer status. Each mother-child dyad was videotaped for 15 minutes in a

structured game playing interaction, then each child was paired with an unacquainted same age peer for a 15 minute free-play session that was also videotaped. Behavior of mothers and children was coded for agreeableness and disagreeableness. Children's peer status within the school setting was identified through sociometric ratings. Results of this study showed that mother's agreeableness during the mother-child interaction was positively associated with children's sociometric rating. That is, children with high peer status had mothers who interacted with them in a more positive and agreeable manner as compared to children with lower peer status. An association was also found between the qualities of the mother-child interaction and qualities of the child-peer interaction, in that mothers who engaged in more agreeable behavior with their children had children who were more concerned with feelings during the child-peer interaction. Despite the artificial nature of the child-peer interaction, results suggested that there was an association between parent's emotional relationship with their child and the child's peer behavior and social status.

Using a more naturalistic assessment of peer behavior, Kahen, Katz, and Gottman (1994) analyzed the relations between parent-child interactions and preschool children's peer behavior. Triads of mothers, fathers, and their children were videotaped in a 10-minute laboratory play session. A 30-minute audiotape of an in-home play session between each child and his/her best friend was made as a measure of child-peer behavior. It was found that negative parenting (i.e. criticism of child, use of derisive humor, lack of affection and enthusiasm) predicted children's lack of engagement with their best friend during the audiotaped play session. In another study that assessed both mothers' and fathers' interaction style with their children and their children's peer relations, Pettit, Harrist, Bates, and Dodge

(1991) supported the findings of warm and responsive family interactions being associated with children's competent peer relationships. Using a small subset of families and children from the larger longitudinal multi-site study of children's development of aggressive behavior (i.e., the Child Development Project, a multi-site, longitudinal study of early-elementary-age children and their parents), a parent report of the child's behavior was completed to identify the 10 children with the highest aggression scores, 10 children with the lowest aggression scores. Teachers rated children's peer relationships and family interaction style was coded from four hours of family interactions in the home setting. Results showed that children rated as the most socially competent in peer relations had higher rates of responsive and engaged interactions with their parents and lower rates of negative coercive interactions. In contrast, children who were rated as more aggressive by teachers had families with higher rates of coercive and intrusive behavior.

Booth, Rose-Krasnor, McKinnon, and Rubin (1994) conducted a longitudinal study that provided support for the relation between parenting style and children's peer behavior. Booth and colleagues assessed the relations among children's social adjustment at age 8, their attachment security at age 4, and an assessment of their parent's parenting style when the children were four years old. At the 4-year-old assessment, children were videotaped interacting in several play situations with their mother, another child, and the other child's mother. Mothers' behavior was coded for warmth and negativity, and children's behavior was coded for several categories of play including solitary and parallel play. At the 8-year-old assessment, children were observed playing with three unfamiliar peers. After the play session, each child was interviewed separately to obtain sociometric ratings of the other

children. Mothers completed a behavior checklist for both the 4-year-old and 8-year-old assessment as a measure of externalizing and internalizing behavior. Results indicated that maternal warmth at age 4 was associated with children's behavior at age 8. Specifically, maternal warmth was negatively associated with child externalizing behavior, and maternal negativity was positively associated with child externalizing behavior. Interestingly, there was no relation between attachment status at age 4 and subsequent externalizing behavior. The authors suggested that the results supported a direct influence of parenting style on children's externalizing behavior rather than an indirect influence via children's internal working models, as assessed by attachment status.

In one of the few published studies that failed to document a relation between parental affective style and child social adjustment, Patterson, Cohn and Kao (1989) observed mother-child dyads in a laboratory play session and subsequently assessed children's peer status through sociometrics. Even though there was not a relation between maternal affective style and peer status, maternal warmth appeared to act as a protective factor for peer-rejected children. That is, peer-rejected children who experienced high maternal warmth were rated by their teachers as having fewer behavior problems compared to peer-rejected children who experienced low levels of maternal warmth. Thus, maternal warmth moderated the relation between peer rejection and behavior problems in the school setting. That finding supports the importance of parenting style in children's social adjustment.

In most studies of parenting style and children's peer interactions, there has been support for a positive association between the affective quality of parenting and children's

peer behavior. Parents who are warm, sensitive, and positive in interactions with their children tend to have children who engage in higher quality peer play (Gottman & Fainsilber-Katz, 1989), are viewed as more popular by peers (Putallaz, 1987; Roopnarine & Adams, 1987), are more engaged in play with best friends (Kahen, et al., 1994), are rated as higher in social competence in peer settings (Pettit, et al., 1991), and engage in less externalizing behavior compared to children of parents who are not warm and positive in interactions with their children (Booth, et al., 1994). From the studies reviewed, it appears that there is significant support for the association of warm parenting and child peer behavior. One factor that has been posited as influencing children's social behavior and parenting is gender. In the next section, research will be reviewed on the relations between parent and child gender on parenting and children's peer behavior.

Differential Effects of Gender on Parenting and Child Peer Behavior

Historically, the focus of parent-child research has been on mother-child dyads rather than father-child dyads, and despite trends in the last few decades for fathers to have a more central and significant role in parenting (Phares, 1996), many researchers continue to focus only on mothers (Ladd & Le Sieur, 1995). In this section, research will be reviewed that highlights the differential effects of mothers' and fathers' parenting on children's peer social behavior. Child gender is often included as an additional variable of interest in studies of gender-based parenting influences on children's social behavior. Therefore, the influence of parent and child gender on parenting and children's peer behavior will be reviewed together. Many of the studies that include parent and child gender as variables of interest have utilized observations of parents and children interacting to identify gender differences in the

interactional styles of parents and the effect of those differences on boys' and girls' peer behavior. Identification and study of these parenting differences is important to allow the field to progress from broad generalizations about the influence of parenting on children's adjustment, to a more meaningful understanding of the nature of the relations among gender, parenting, and child social adjustment. If indeed there are gender differences in parenting that affect boys and girls in dissimilar ways, parenting interventions (e.g., parent training) should be sensitive to those variations so that treatment effectiveness can be maximized.

In an early study of differential parenting of mothers and fathers and relations of those parenting patterns on children's social behavior, MacDonald and Parke (1984) compared children's play behavior with their mothers, fathers, and peers. Preschool aged children were videotaped in a 20-minute dyadic play session with their mothers and then with their fathers. Children were also videotaped with same-sex peers for a 12-minute dyadic session. The children's social adjustment was determined by teacher rankings of popularity and teacher reports of peer play behavior. There were similar findings for prediction of boys' and girls' peer popularity; both maternal and paternal playfulness and engagement during parent-child play were associated with boys' and girls' popularity as rated by teachers. Additionally, paternal directiveness was negatively associated with boys' and girls' popularity. However, maternal directiveness showed a differential relation to popularity for boys and girls; there was a positive association between maternal directiveness and girls' popularity, but there was no association between maternal directiveness and boys' popularity.

In a more recent study designed to investigate the relevance of parent and child gender in understanding the link between parenting and children's peer relations, Pettit,

Brown, Mize, and Lindsey (1998) observed preschool children in a play session with their mother and with their father, and in a play session with an unknown peer with either their mother or father present. Children were also observed with their mother or their father in a coaching session in which the parent was asked to help their child solve a hypothetical social problem (such as a peer refusing to share). Parents' behavior was coded for their level of involvement in play with their child, involvement in child-peer play, and quality of coaching. Teachers rated children's peer behavior and sociometrics were completed to assess peer acceptance. Results indicated that play between both mothers and fathers and their sons predicted the boys' competence with peers as rated by teachers and peers. In contrast, play between mothers and fathers and their daughters did not predict girls' competence with peers. An interesting gender effect was also found for parental involvement in play. Father's involvement in child's peer play was associated with *greater* child competence with peers, but mother's involvement in child's peer play was associated with *lower* peer competence.

Whereas the research discussed above focused on relatively brief laboratory-based play sessions between parents and children, other researchers studying the relations among gender, parenting, and children's social behavior have utilized naturalistic observations of parents and children interacting in the home setting. One representative study based on naturalistic observations will be reviewed as an example of that methodology. McFadyen-Ketchum, Bates, Dodge, and Pettit (1996) collected longitudinal data on mother-child interactions and child aggressive/disruptive behavior from kindergarten to third grade. The purpose of that study was to identify predictors of initial and future levels of aggressive and disruptive behaviors. Interactions between mothers and children were observed in the home

setting for four hours, and were scored for coerciveness and affection. Teachers and peers rated children's aggressive behavior. Findings indicated that initial levels of boys' and girls' aggression and disruptiveness in kindergarten were associated with maternal coerciveness and affection. Although there were no gender differences in initial levels of aggressive behavior, significant gender differences were identified in trajectories in aggressive behavior across the four-year time span. That is, boys who had experienced high levels of coercion and non-affection tended to *increase* levels of aggression over the years, but girls who had experienced high levels of coercion tended to *decrease* their levels of aggression.

Collectively, results from these single studies indicate that parenting during play is closely related to children's peer competence; furthermore, there appear to be different effects of parental behaviors (e.g., directiveness) depending on parent and child gender. Two meta-analyses designed to study the relation between parenting variables (e.g. approval, affection, and coercion) and externalizing behavior reported contradictory findings for the influence of parent gender. A discussion of the two meta-analyses will follow.

A meta-analysis of studies designed to examine the relation between parenting and child externalizing behavior conducted by Rothbaum and Weisz (1994) revealed significant differences in the effect of parenting on child behavior, with maternal behavior having a more substantial effect than paternal behavior on children's externalizing behavior. Those results are in sharp contrast to an earlier meta-analysis conducted by Loeber and Stouthamer-Loeber (1986). In that paper, the authors concluded that fathers had a more powerful influence on child externalizing behavior than did mothers. Rothbaum and Weisz (1994) suggested that sampling differences might have been responsible for the inconsistent

conclusions. Loeber and Stouthamer-Loeber's meta-analysis was primarily based on studies of children who were identified as clinic-referrals or delinquents, whereas Rothbaum and Weisz' analysis specifically excluded studies of those two populations. There are likely many significant differences between children identified as clinic-referrals or delinquents and children identified as more “normative” that might serve to explain the contrasting findings of the two meta-analyses. For example, the influence of the father on children’s externalizing behavior was found to be more significant in studies that included children who engaged in high levels of externalizing behavior; perhaps the role of the father is different in families with very aggressive children, such that the fathers of the high-externalizing children played a more active role in parenting than did fathers of children who did not engage in high levels of externalizing behaviors. In other words, perhaps fathers become more active in the parenting role, and therefore effects of their parenting become more apparent, when their child is engaged in serious misconduct.

The Rothbaum and Weisz’ meta-analysis also included an examination of the effect of parenting on boys’ and girls’ externalizing behavior, in order to identify the influence of child gender. An analysis of all studies in the meta-analysis that included both boys and girls revealed trends suggesting greater parenting effects for boys than for girls, but those trends were not statistically significant. Subsequent analyses of externalizing behavior among only the preadolescent boys and girls resulted in significant differences for boys and girls’ externalizing behavior. The association between externalizing behavior and parenting behavior was stronger for boys than it was for girls. Thus, it appears that parenting styles

may be associated with the display of externalizing behavior in boys more so than in girls, especially for younger children.

From the research reviewed, there is evidence to support the contention that the associations between parenting and children's behavior may be different depending on the gender of the parent and of the child. For example, Pettit, et al., (1998) and Kahen, et al. (1994) both found that the associations between parenting and children's peer behavior were different based on the gender of the parent displaying the behavior. Child gender has also been shown to be an important variable in the relation between parenting and children's peer relations. Several researchers (MacDonald & Parke, 1984; Pettit, et al., 1998; McFadyen-Ketchum, et al., 1996) found that parenting influenced children's peer behavior differently depending on the gender of the child. There is still much that is unknown about the influence of gender on the relation between parenting and child social behavior. In a review of research on parenting and children's peer relationships, Ladd and Le Sieur (1995) suggested that the relationship between parent and child gender and peer behavior had not been well-studied, and that exploration of gender as a moderating variable should be pursued in future research. Such was one purpose of this study.

Parenting Style and Behavior of Physically Abusive Parents

The majority of research that has been conducted on parenting styles has involved community samples of parents; parenting style typologies are not considered to be relevant for physically abusive parents (Baumrind, 1971; Maccoby & Martin, 1983). Rather, abuse of children is considered to be such an extreme and inappropriate form of parenting that abusive parents would not be included in any of the four categories of parenting style as put forth by

Baumrind or Maccoby and Martin. Instead, research on abusive parenting tends to be separate from the literature on parenting styles.

One early study by Burgess and Conger (1978) focused on the parenting behavior of physically abusive parents. In that study, groups of mothers with a history of physical abuse, neglect, or no history of physical abuse/neglect were observed interacting with their young children in the home setting. Results revealed that abusive mothers had lower rates of verbal interactions with their children, and higher rates of negative verbal interactions with their children as compared to mothers without a history of abuse. Bousha and Twentyman (1984) also made observations in the homes of abusive mothers and control mothers who had no history of physical abuse. That study replicated the findings of Burgess and Conger (1978), and further showed that total rates of interaction between abusive mothers and their children were lower when compared to control mothers and their children. In addition, abusive mothers directed more aggressive and negative behavior toward their children than did control mothers. A different methodology that has been employed in studies of parenting style is a parent-child interaction in the laboratory setting. Interactions in the laboratory provide a controlled and standardized interaction in which parents are typically asked to interact with their child during a time-limited structured interaction (e.g. clean-up, solve a puzzle, etc.). The current study included such an interaction; therefore research using this structured interaction will be reviewed in the next section to provide support for the methodology of the present study.

Studies of abusive mothers and their children interacting under controlled conditions in a laboratory setting are generally consistent with results of home-based observations in

finding significant differences in parenting behavior of abusive and comparison parents. For example, Schindler and Arkowitz (1986) observed abusive and comparison mothers with their young children in three different task situations designed to elicit increasing levels of frustration in the child and stress in the parent. The three task situations were videotaped and coded for maternal commands, approval, threats, total maternal behavior, and child compliance. Similar to results of the home observation studies presented earlier, abusive mothers interacted less with their children than did control mothers. Furthermore, abusive mothers used significantly less contingent praise for children's appropriate behavior. Levels of negative behavior and disapproval were similar and at a low level for both abusive and control mothers.

Other research that utilized a laboratory observation of interactions between abusive mothers and their children (Mash, Johnston, & Kovitz, 1983) did not find any significant differences in overall rate of interaction between abusive mothers and control mothers, but abusive mothers did engage in higher rates of controlling and directive behavior towards their children. Research on interactional styles of abusive fathers is very limited (Haskett, Marziano, & Dover, 1996). An exception is a study of families with a history of abuse conducted by Kavanagh, Youngblade, Reid, and Fagot (1988) that included both mothers and fathers in a joint laboratory play session with their children. Mothers, fathers and their children (22 abusive and 23 control families) were videotaped in a 10-minute free-play situation and a clean-up situation. There were no data presented on response styles of mothers versus fathers, but overall results replicated earlier studies that included only mothers. Specifically, abusive parents engaged in significantly less positive parenting (i.e.

cooperative play, positive comments, and verbal interaction) as compared to control parents. In addition, abusive parents responded to fewer child bids for attention or interaction than did control parents. As in earlier research based in a laboratory setting, there were very low levels of negative parenting behavior and there were no differences between abusive and control parents in the levels of negative parenting.

Much of the research that has been conducted on the general parenting style of maltreating parents was done more than a decade ago, and early research in the field of child abuse was limited in two ways. The sample sizes in early research were usually quite small, and control or comparison families were typically quite different from the maltreating families in terms of SES, ethnicity, parent education, parental mental health status, and family size. From more recent research (e.g. Dodge, Pettit, & Bates, 1994), it is now known that variables such as SES, ethnicity, and parental mental health are associated with variations in parental behavior. There are many methodological limitations inherent in research on abusive families, such as difficulty in recruitment of families, ethical concerns related to protecting children, and difficulties in controlling for extraneous variables that may be influencing outcomes in research, and in a recent review, Milner (1998) reported that present-day research on abusive families is more focused on the methodological problems associated with research on child abuse than it is in identifying characteristics of abusive parents. Abusive parenting per se was not the focus of the current study, although abusive parents were included in the sample. In the next section, a review of physical discipline as a specific parenting behavior associated with child social adjustment will be discussed.

Physical Discipline

Discipline is a common and, many would argue, essential component of child rearing. In many American families, discipline of children involves a physical component. In fact, Straus and Stewart (1999) reported that more than 90% of Americans acknowledged spanking their preschool age child in the previous year. Spanking and other forms of corporal punishment have been classified as “power assertive” forms of discipline, along with non-physical discipline techniques such as time-out and grounding (Brody & Shaffer, 1982; Hart, Ladd, & Burlison, 1990). The current research explored the relation between normative physical discipline and children's peer behavior. A group of physically abusive parents was included in the sample to assess the relation between "non-normative" physical discipline and children's peer behavior. The difference between normative physical discipline and non-normative physical discipline (i.e. child abuse) is often quite difficult to discern, and in the next section that distinction will be explored.

Research has revealed that abusive parents, compared to non-abusive parents, are more likely to use corporal punishment as a disciplinary strategy (Chilamkurti & Milner, 1993). Despite this association between physical discipline and child abuse, there is clearly a significant difference between the two. Physical discipline (i.e. corporal punishment) has been defined as a behavior that parents engage in with the express purpose of controlling their child's behavior through the application of physical force. The goal is not to injure the child but to control the child (Straus & Donnelly, 1993). Child abuse has been defined in many different ways, and there is no single definition accepted by every state, but the U.S. Department of Health and Human Services (DHHS) defines child physical abuse as "the

infliction of physical injury as a result of punching, beating, kicking, biting, burning, shaking or otherwise harming a child. The parent or caretaker may not have intended to hurt the child; rather, the injury may have resulted from over-discipline or physical punishment” (2002). This definition is focused on the physical injury to the child and specifically excludes consideration of the parent’s intention to injure the child. There is considerable debate in the field of child abuse and neglect about how to define child abuse (see Cicchetti & Lynch, 1995, for a review), thus any attempt to contrast child abuse with physical punishment or corporal punishment will also be extremely difficult. Utilizing the definition of the DHHS, the primary difference between abuse and discipline consists of the presence of physical injury. In the next section, the associations between physical punishment and aggression in children will be reviewed.

Physical Discipline and Child Aggression

The majority of parents who engage in physical punishment do so with the intention of socializing their child or teaching their child appropriate behavior (Holden, Miller, & Harris, 1999). Parents who use corporal punishment are likely to hold positive views about the effectiveness of corporal punishment for changing children’s behavior and bringing about positive child adjustment (Crouch & Behl, 2001). There is a large body of research on the use of physical discipline as a child-rearing technique and on the relationship between physical discipline and aggression in children. A recent meta-analysis by Gershoff (2002) identified primarily negative associations between the use of physical discipline and child behaviors, whereas another meta-analysis completed by Larzelere (2000) identified both positive and negative associations between physical discipline and child behavior. Recommendations by

both researchers support future research on the associations between discipline and child behavior, as the association appears to be very complex. Most of the studies that have been conducted on the relationship between corporal punishment and child adjustment have focused primarily on aggression as an indicator of child adjustment. In the following section several studies of the relation between physical discipline and child aggressive behavior will be reviewed.

Much of the research on the link between parental use of physical discipline and child aggressive behavior has been conducted by researchers using data from the Child Development Project. For example, Weiss, Dodge, Bates, and Pettit (1992) utilized those data to study the relation between early harsh discipline (defined as significant corporal punishment) and child aggression. Parents were interviewed regarding their discipline practices and their child's misbehavior from approximately 1-to-4-years-of age. The interviewer then rated the parent's use of and severity of physical discipline on a 1-5 scale. Children's peer behavior was determined by teacher ratings, peer ratings, and observations of the child's playground behavior during twelve 5-minute episodes during kindergarten. Results suggested that the experience of early harsh physical discipline was associated with children's later aggressive peer behavior. The relation between early harsh discipline and aggressive child behavior was significant even after controlling for the effects of SES, child temperament, and marital violence, all of which are associated with child aggressive behavior. The results of this study were compelling, but interpretation of the findings is limited by the use of only one retrospective self-report of harsh discipline.

Another study (Strassberg, Dodge, Pettit & Bates, 1994) based on data from the Child Development Project was focused specifically on spanking as opposed to harsh discipline. The Conflict Tactics Scale (Straus, 1979) was modified to provide two indices of frequency of punishment for the previous 12 months: Spanking (e.g. "spanked your child, but not with anything") and Violence (e.g. "hit your child," "beat up your child"). Observations of playground behavior provided information on children's aggressive behavior. Results revealed positive associations between parental use of physical punishment (Spanking and Violence) and children's subsequent aggressive behavior with peers, with children in the Spanked group engaging in more aggressive behaviors as compared to children who were in the no spanking (Non-use) group. Further, children who were in the Violent group engaged in more aggressive behaviors with peers than did children in the Spanked group or the Non-use group. There was no association, however, between frequency of spanking (in the Spanking group) and children's aggression; rather it was the existence of a history of being spanked, even at very low levels, that was related to children's aggression.

In a recent study that has garnered quite a bit of interest from the general public and from professionals and researchers in the parenting field, Baumrind and Owens (2000) examined the relation between "normative physical punishment" and child adjustment and found no significant relation between the experience of being spanked and children's adjustment, *after excluding children of the most frequent/severe spankers*. Using a longitudinal design, the authors conducted parent interviews and made observations of parents and children at three time points (preschool, 8-9-years old, and 14-15-years old). The researchers made ratings of parents' discipline strategies, frequency of spanking, Q-sort

ratings of children's social competence, and externalizing behavior by utilizing information collected during the interviews and observations. There was no relation between frequency/severity of spanking at Time 1 and children's externalizing behavior at Time 2 or 3, after controlling for children's initial level of externalizing behavior. However, results revealed a significant relation between spanking and children's general social competence such that children who had been spanked with greater frequency and severity were rated lower on Q-sort measures of social competence. These results became insignificant, however, after removing a small group of parents who engaged in very excessive or severe spanking, which the authors justified by claiming that those parents had engaged in "non-normative" physical discipline. This research has not been peer-reviewed or published to date, thus the results of this study should be interpreted with caution pending peer review and replication. There is abundant evidence for a significant relation between child aggression and "harsh physical discipline" (Weiss, et al. 1992), or "spanking and violence" (Strassberg et al., 1994), but the degree to which "normative spanking" and externalizing behaviors are linked is less certain (Baumrind & Owens, 2001). Clearly, further investigations of the link between the experience of physical discipline and children's social adjustment must take into account severity of the physical discipline. To that end, the current research included a sample of parents who acknowledged use of corporal punishment and a sample of parents with documented histories of abuse. In addition to accounting for severity of physical discipline, further investigations should examine other factors that might influence the link between discipline and children's social behavior.

Ethnicity is one potential moderator of the link between physical discipline and child social competence that has been explored in previous research. For example, Deater-Deckard, Dodge, Bates and Pettit (1996) examined longitudinal data (again, from the Child Development Project) on maternal use of physical discipline and children's externalizing behavior in African-American (AA) and European American (EA) children. A Physical Discipline composite score was created by using ratings of physical discipline derived from a maternal interview, a score from five hypothetical child misbehavior vignettes in which parents reported whether or not they would use physical punishment, and parents' reports of discipline strategies on a modified version of the Conflict Tactics Scale. An Externalizing Composite score was created from teacher and maternal ratings of children's externalizing behavior and peer ratings of aggression. Results revealed a significant positive relation between physical discipline and child externalizing behavior for EA children, but not for AA children. African American children receiving significant physical discipline had lower scores of aggressive and externalizing behavior compared to EA children receiving significant physical discipline. Deater-Deckard and colleagues (1996) suggested that one potential explanation of their differential findings based on ethnicity was cultural differences in the meaning of and value placed on corporal punishment as a child socialization technique. That study highlights the importance of considering the *context* in which physical discipline occurs in order to refine our understanding of the association between discipline and child outcomes. In a subsequent article in which the link between physical discipline and externalizing behavior was closely examined, Deater-Deckard and Dodge (1997) reviewed studies based on the Child Development Project database as well as studies by other

researchers, and they concluded that there was a crucial need for continued research to identify factors that moderate the relation between physical discipline and child externalizing behavior. In a more recent study by McLoyd and Smith (2002), there was no support for ethnicity as a moderator of the relationship between physical discipline and child aggressive behavior.

The research of Deater-Deckard and colleagues (1996, 1997) supports moderating variables such as ethnicity in the relation between physical discipline and child aggression while more recent research (McLoyd & Smith, 2002) did not support ethnicity as a moderator of the relationship between physical discipline and child aggression. Research on the link between physical discipline and children's aggressive behavior, and possible moderators of that link might serve to discourage broad generalizations that were standard issue in much of the early research in this area. Identifying moderating variables will allow a full understanding of the complex nature of the relation between parenting and outcomes for children. As the field progresses to a more complete understanding of the relation between parenting and child social adjustment, there will be a firmer basis for interventions that are empirically grounded for parents and children.

Children's Peer Relations

In recent years, children's peer relations have been highlighted as an important arena in which children learn many invaluable lessons. Many social lessons are best learned from one's peers because of the nature of peer relationships. That is, peer relationships are characterized by a sense of equality that children are not likely to have experienced in relations with parents and/or siblings. Relations with parents and siblings are inherently

hierarchical, whereas peer relationships do not have an inequality based on family roles or birth order. In addition, peer relations are typically based on preference and not on an immutable relationship. The ability to get along with one's peers is frequently identified as one of the primary developmental tasks of middle childhood (Erikson, 1968; Masten & Braswell, 1991), and children who have difficulty with peer relations have been shown to be at greater risk for maladjustment in adolescence and adulthood compared to children who have adequate peer relations (Parker & Asher, 1987). Two forms of social behavior that are related to children's adjustment and are also thought to be associated with parenting are prosocial and aggressive behavior.

Prosocial Behavior

Prosocial behaviors are behaviors that are voluntarily engaged in by one person with the intention of benefiting another person (Mussen & Eisenberg, 2001), and prosocial behaviors are associated with social competence (Masten & Coatsworth, 1998). Prosocial behavior is thought to begin to develop during the second year of life, and is exhibited by behaviors such as helping, sharing, or offering help (Eisenberg & Fabes, 1998; Sroufe, 1996). Early research on prosocial behavior documented the general consistency of prosocial behavior over time (Radke-Yarrow & Zahn-Waxler, 1984) and across situations (Rushton, 1980). Of particular relevance to the present study are findings that the display of prosocial behaviors by children is associated with several parenting variables. In the next section, the link between prosocial behavior and parental affective style and parental discipline will be discussed.

Prosocial behavior and parenting variables. Parents are the first socializing agents of children, and many researchers would argue the most important socializing agents of children, thus the relation between various aspects of parenting behavior and children's prosocial behavior has been an area of extensive research. In the next section, research on the relations among attachment in young children, nurturant parental behavior, and prosocial child behavior will be reviewed. Following that section, a review of the association between parental discipline practices and children's prosocial behavior will be discussed. In previous sections of this proposal, research on the independent relations between parental warmth and support and children's peer behavior, and the relations between physical discipline and children's peer behavior were reviewed, therefore the next sections will be limited to only research that is focused specifically on prosocial behavior in children.

Research indicates that children's attachment status and parental nurturing behavior are two important predictors of children's prosocial behavior. Attachment and parental nurturing are related in that attachment theory purports that children who have experienced warmth and positive engagement in early relationships with caregivers develop trust in other people (Bowlby, 1982; Bretherton, 1985). Infants and toddlers who develop such trust are typically described as having a "secure attachment" (as contrasted with "insecure attachment"). Attachment models posit that infants and toddlers with secure attachment histories will develop "internal working models" in which the child will have positive expectations about interactions with other people based on their early relationship of warmth and responsiveness with their primary caregiver. Internal working models have been posited as the mechanism through which children interpret social relations and develop expectations

about relationships with people (Bowlby, 1982; Bretherton, 1985; Cohn, et al., 1991).

Studies of the early relationship between infants and their mothers have supported the relation between infant attachment status and subsequent prosocial behavior in children. In a review of the extensive literature on attachment and children's peer behavior, Bretherton, Golby, and Cho (1997) detailed significant empirical support for the positive relation between secure attachment in early childhood and frequent engagement in prosocial behavior.

Two reports on attachment status and children's prosocial behavior with peers will be presented to illustrate research that supports the relation between secure attachment and prosocial behavior in children. In a longitudinal study of a group of preschoolers with known infant attachment status, LaFreniere and Sroufe (1985) used teacher rating and behavioral observations to assess prosocial behavior in young children. Results indicated that children with secure attachments were more responsive and caring toward peers who showed emotional distress than were children who were identified as having insecure attachments as infants. Using a school-age sample, Cohn (1990) also identified a link between attachment status and children's behavior with peers. Teacher ratings of children's behavior and sociometric ratings served as measures of prosocial behavior. The relationship between attachment status and prosocial behavior was significant for boys; that is, boys with insecure attachment engaged in less prosocial behavior than did boys with secure attachment. The relationship between attachment and prosocial behavior did not reach significance for girls. A review by Renken, Egeland, Marvinney, Mangelsdorf, and Sroufe (1989) supports the notion that the relation between attachment status and prosocial behavior is often stronger for

boys than it is for girls, thus providing more support for child gender as a moderator of the relation between parenting and child peer behavior. Secure attachment status in young children has been shown to be related to warm and nurturing parental behaviors (Bowlby, 1982), and research on the relations between nurturing parenting and children's prosocial behavior will be discussed next.

In an early study by Zahn-Waxler, Radke-Yarrow, & King (1979), mothers of toddlers were observed caring for their young children in the home setting and observational data were collected on the children's prosocial behavior with other children. Results indicated that mothers who were high in empathy and warmth had children who were more likely to (a) offer support to other children who were experiencing emotional distress and (b) engage in helping behaviors. Mothers low in empathy and warmth had children who showed less prosocial behavior toward their peers.

In a study of older children, Attili (1989) studied fathers' and mothers' behavior with their preschool age children. Results from this study supported the relation between the display of prosocial behavior in children and children's experience of warm and engaged parenting. Mize and Pettit (1997) videotaped 43 mother-child dyads in three different interactions in a study analyzing maternal coaching, parenting style, and children's peer behaviors. A significant association was found between maternal responsive parenting (defined as warmth and synchrony) and children's positive interactions with peers, as rated by teachers. Finally, Carson and Parke (1996) examined the relations between the affective style of both mothers and fathers and their children's peer relations. Results revealed a significant association between father's high rate of negative affective exchanges with their

children and children's low levels of positive behaviors with peers, but no comparable association was found for mother's affective behavior. That study provided additional support for the notion of differential influences of mothers and fathers' parenting.

Discipline practices have also been shown to be associated with children's prosocial behavior. As noted previously, discipline strategies are sometimes broadly divided into one of two categories, inductive and power-assertive. Inductive strategies are generally conceived of as strategies in which the parent uses explanations and/or reasoning to correct the child's behavior. Power-assertive strategies are characterized as discipline techniques in which the parent wields his/her power over the child either by physical control, or through the use of deprivation of privileges/objects. Inductive discipline strategies are more prevalent in authoritative parenting, and power assertive strategies are more common in authoritarian parenting (Baumrind, 1978). Martin Hoffman and his associates were the first to study the associations between forms of punishment (power-assertive and inductive) and prosocial behavior of children. In one of their earliest studies, Hoffman and Saltzstein (1967) studied the relation between discipline strategies and prosocial behavior in middle school children. Prosocial behavior was assessed by peer nominations of helpful and empathic classmates, and disciplinary strategies were assessed by parental responses to hypothetical situations in which the child in the scenario had behaved inappropriately. There was a significant association between parent's choice of inductive discipline over power-assertive strategies and girls' prosocial behavior with their peers. The relation between discipline strategies and prosocial behavior was not significant for boys.

In a study of toddlers, Hart, DeWolf, Wozniak, and Burts (1992) measured mothers' and fathers' discipline responses to hypothetical child misbehaviors and their children's prosocial behavior. An association was found between use of inductive discipline strategies and children's prosocial behavior, such that parents who chose inductive discipline strategies tended to have children who were more prosocial than parents who chose power assertive discipline strategies. Locke and Prinz (2000) analyzed the relationship between parental use of negative discipline and children's prosocial behavior in a group of preschoolers. Analyses revealed an inverse relationship between children's prosocial behavior and parental use of negative discipline such that parents who reported using more negative discipline had children who displayed less helping and sharing behaviors in a parent-child interaction and who were also were rated as less prosocial by their parents. In a more recent study, Russell, Hart, Robinson, and Olsen (2003) examined the connection between parenting, temperament, and children's prosocial and aggressive behavior in American and Australian children. Parent and teacher questionnaires provided information on parenting and child temperament. Father's use of strict discipline predicted children's prosocial and aggressive behavior and prosocial and aggressive behavior for both groups of children was predicted by temperament.

In summary, extant research offers strong support for the relation between parenting and children's prosocial behavior. Specifically, children who have experienced secure attachment with parents, affectively warm parenting, and inductive discipline show more prosocial behavior than do children who have experienced insecure attachment patterns, cold and rejecting parenting, and power assertive discipline. The potential moderating influence of

parent and child gender on the relation between physical discipline and prosocial behavior has been indicated in some studies, but further studies are needed to more fully explore gender as a moderating variable.

Aggressive Behavior

Aggressive behavior has been defined as behavior that is intentionally engaged in for the purpose of bringing harm to another individual (Parke & Slaby, 1983). Aggressive behavior is known to be present in young children and has been shown to be fairly stable from childhood to adolescence, and into adulthood (Olweus, 1979; Parke & Slaby). In a large study of children and parents that spanned 22 years, Huesmann, Eron, Lefkowitz, and Walder (1984) found that aggressive behavior was a stable trait from childhood into adulthood. Furthermore, aggressive behavior was stable across family generations, with parents' and grandparents' aggressive behavior being associated with children's aggressive behavior as adults. In that study, aggressive behavior in children was associated with adult antisocial behaviors such as criminal behavior and spousal abuse. Loeber and Farrington (1998) identified two distinct trajectories of aggressive behavior in boys. In a subgroup of boys that engaged in less serious forms of violence in early childhood, there was a decrease in the aggressive behavior from childhood to adolescence; another subgroup of boys who had engaged in more serious forms of violence in childhood showed an increase in aggressive behavior into adolescence. In a six-site cross-national study of children's aggression by Broidy, et al. (2003), there was a strong link between recurrent physical aggression in elementary school-age boys and subsequent violent and delinquent behavior in adolescence. There was no similar relationship identified for girls in the sample.

To summarize, although there is a substantial body of literature that indicates childhood aggression is quite stable over time, more recent research indicates that there are individual differences in trajectories of aggression. Recent findings do not negate the need to study aggressive behavior in children, rather those findings support the search for moderating variables in the development and maintenance of aggressive behavior. In the next section, research conducted on the relation between aggressive behavior and parenting behavior will be highlighted, with a focus on factors that might moderate the linkage.

Aggressive behavior and parenting styles. Research on aggressive behavior among children has focused on several parenting variables, such as discipline and "coercive training" that are assumed to be associated with children's aggressive behavior. In an earlier section, research on physical discipline and children's aggressive behavior was reviewed, therefore, that research will not be reviewed again. Instead two theoretical models that explain the mechanism underlying the relation between the experience of physical discipline and children's aggressive behavior will be briefly discussed.

Early investigations into the etiology of aggression in children by Bandura and colleagues (Bandura, Ross, & Ross, 1961; Bandura & Walters, 1963) identified imitative modeling as one way that children learned to engage in aggressive behaviors. According to social learning theory, when parents engage in power assertive discipline that involves physical correction of their child, the parent is actually modeling the use of aggressive behavior to solve a social conflict. Children may then be learning that an acceptable way to resolve peer problems is through aggressive behavior. A germinal investigation by Bandura and colleagues (Bandura, et al., 1961) showed that children who had viewed a model engage

in physically and verbally aggressive behavior toward a doll demonstrated increased levels of aggression towards the doll in a later session. In fact, the style of aggressive behavior that the children engaged in was very similar in nature to the style of the aggressive behavior that had previously been modeled. Subsequently Bandura and colleagues completed multiple experiments (see Bandura, 1977, for a review) providing support for modeling as a manner in which new behaviors could be learned, and also detailing parameters under which learning through modeling was most powerful. Results of this research on imitative modeling suggest that modeling is enhanced when the model is viewed as an expert, as powerful, and as nurturing. Those parameters are undoubtedly present in most parent-child relations, thus lending support for imitative modeling as a mechanism to account for the relation between parental use of physical discipline and children's aggressive behavior with peers.

Within the domain of social learning theory, Gerald Patterson and his colleagues at the Oregon Social Learning Center have developed coercion theory as an alternative explanation of the relation between parenting behaviors/style and children's aggressive behavior with peers (see Patterson, 1982; Patterson, Reid, & Dishion, 1992). Many years of research have been spent developing and refining coercion theory as an explanatory model for the development of aggressive behavior in some children. According to coercion theory, aggressive behavior in children develops in response to inconsistent and often harsh discipline in which parents attempt to gain compliance from their children through negative or coercive means of control (Patterson, 1982; Patterson, et al., 1992). Parents' ineffectual attempts at control result in a negative cycle of behavior between parent and child that often escalates into physical assault. Coercion training involves many cycles of interactions in

which the parent initially attempts to control the child's behavior in a somewhat heavy-handed fashion, the child responds with a counterattack such as arguing, whining, or refusal, and the parent responds to the child's counterattack by softening his/her attack, with the final step resulting in the child's compliance with the parent's initial directive. Thus, both parent and child are negatively reinforced by the other's behavior such that in future interactions, each will engage in the coercive interaction again. Over time, the coercive exchange becomes more intense, often resulting in the parent using physical means as the initial attempt in gaining compliance from the child. Thereby, children learn that physical and verbal aggression are effective tools for controlling the behavior of others. Children exposed to coercive parenting replicate that relation with their peers. Extensive research provides empirical support for the associations of coercive parenting and child aggression (for reviews see Chamberlain and Patterson, 1995; Patterson, 1982; Patterson, et al., 1992).

In summary, there is a strong theoretical and empirical basis for the link between parenting experienced by children and their behavior with peers. The link is evident in children's prosocial behavior with peers and in their aggressive behavior with peers. Links between the display of prosocial and aggressive behavior will be explored in the next section to provide support for both behaviors as important and distinct markers for children's peer competence.

Associations Between Prosocial and Aggressive Behavior

Prosocial and aggressive behaviors are not assumed to be at opposite ends of the social behavior continuum, instead, children could engage in high rates of both behaviors. However, most researchers studying prosocial and aggressive behavior in children have

identified a low to moderate negative relation between prosocial and aggressive behaviors (Eron & Huesmann, 1984; Miller & Eisenberg, 1988), such that children rated as more aggressive tend to engage in fewer prosocial behaviors. In a meta-analysis, Miller and Eisenberg (1988) assessed the relation between empathy and aggression in children. Empathy is not necessary for prosocial responding, but researchers have identified empathy as a correlate of prosocial responding (Chapman, Zahn-Waxler, Cooperman, Ianotti, 1987). Results from the meta-analysis indicated a very low, negative association between self-reports of empathy and several measures of aggressive behavior, including self-reports. A recent study by Pepler, Craig, and Roberts (1998) contradicted previous research that identified a negative relation between prosocial and aggressive behavior. Pepler and colleagues (1998) observed interactions of aggressive and non-aggressive school age children on the school playground. Results revealed that aggressive children demonstrated higher rates of engagement in verbal and physical aggression *and* in prosocial behavior. Although the relatively small sample of aggressive children ($n = 17$) makes generalization of findings somewhat questionable, the use of playground observations rather than self-report or peer nomination to assess children's behavior renders the results of this study very compelling. Much of the research on prosocial and aggressive behavior in children has employed self-report, peer nomination, or teacher or parent rating scales of behavior rather than observations of natural behavior.

In a review of 10 years of data collected on child and pre-adolescent prosocial and aggressive behavior that used self-report, peer nominations, and teacher ratings, Caprara, Barbaranelli, & Pastorelli, (2001) found no consistent relation between prosocial and

aggressive behavior. Rather, negative associations between prosocial and aggressive behavior tended to be present for older boys rather than for younger boys, and for boys as compared to girls. Although the correlation between prosocial and aggressive behavior remains unclear, there is sufficient empirical support for including prosocial and aggressive behaviors in the current research as separate measures of children's peer behavior. Gender based differences in prosocial and aggressive behavior will be reviewed in the next section because the current research investigated child gender as a moderating variable in the relation between parenting and child peer behavior.

Gender Differences in Prosocial and Aggressive Behavior

Early studies of prosocial behavior included an exploration of gender differences (see Zahn-Waxler & Smith, 1992 for a review), and researchers expected to find significant gender differences in the display of prosocial behaviors. However, there have been no consistent findings from the research conducted on gender differences in prosocial behavior. Some studies support gender differences, such as a literature review by Hoffman (1977) in which he concluded that females engaged in more empathic behavior than males. Another study that offered support for gender differences was conducted by Shigetomi, Hartmann, and Gelfand (1981), who completed an extensive investigation of children's moral development. Results showed that girls engaged in more prosocial behavior than boys, and that girls were viewed by peers as being more helpful and caring than boys. In a subsequent review of the literature, Radke-Yarrow, Zahn-Waxler, and Chapman (1983) found no consistent gender differences in behaviors such as sharing, helping, and cooperating. A more recent review by Caprara, Barbaranelli, and Pastorelli (2001) reported research that had been

carried out over a 10-year period on prosocial and aggressive behaviors in children. Those studies included self-reports, peer nominations, and teacher reports of prosocial and aggressive behavior on a very large sample of 7-13-year-old children. At all ages, there were consistent gender differences in self-report of prosocial and aggressive behavior. Girls rated themselves higher than did boys in prosocial behavior and lower than did boys in aggressive behavior. Findings for boys were the opposite; boys rated themselves higher in aggressive behavior than did girls, and lower in prosocial behavior. Results from peer nominations and teacher ratings were less consistent for prosocial behavior. Teachers and peers rated boys as more aggressive than girls at all ages, but peer and teacher ratings of prosocial behavior varied by age and rater, with no uniform pattern.

In summary, research on gender differences in prosocial behavior has resulted in mixed findings. Some researchers have identified significant gender differences in the display of prosocial behavior (Hoffman, 1977; Shigetomi, et al., 1981), whereas others (Radke-Yarrow, et al., 1983) have reported no gender differences in prosocial behaviors. More recent research (Caprara, et al., 2001) has resulted in support for gender differences in prosocial behavior when self-report was used to assess prosocial behavior, and no consistent gender differences when peers and teachers were used as reporters of prosocial behavior. The basis for inconsistencies across studies has not been addressed by researchers, but differences in sample characteristics, variations in operational definitions of prosocial behavior, and differences in measurement could account for the discrepancies across studies. Gender differences in aggression have been more conclusively established than gender differences in prosocial behavior.

Historically, males have been found to be more aggressive than females (Hyde, 1984; Parke & Slaby, 1983). However, most of the research on aggression has focused on physical and verbal aggression such as hitting, or threatening to hit (i.e. overt aggression). Recent studies on an alternative form of aggression, referred to as relational aggression, indicate that the link between aggression and gender is not so straightforward (Crick & Grotpeter, 1995; Crick, 1996). Relational aggression is defined as behavior that is intended not to physically hurt another, but rather to damage another's peer relations by exclusion (e.g. "you can't come to my party") or manipulation (e.g. spreading rumors that serve to incite others to reject child). Some researchers (Cairns, Cairns, Neckerman, Ferguson, & Garipey, 1989; Crick, 1996) have suggested that girls may be more adept at and comfortable in engaging in relational aggression as opposed to overt aggression; therefore, gender differences in aggression may be dependent on the type of aggression assessed. Research by Crick and Grotpeter (1995) and Crick (1996) conducted on overt and relational aggression in school-age children revealed that (1) girls engaged in more relational aggression than overt aggression, (2) girls engaged in more relational aggression than did boys, and (3) relational aggression was associated with children's social adjustment. Other researchers (Delveaux & Daniels, 2000; Henington, Hughes, Cavell, & Thompson, 1998) have failed to document any gender differences in relational aggression in school age children.

To illustrate, Henington, Hughes, Cavell, and Thompson (1998) used peer ratings of relational and overt aggression in school age children and found that boys were rated as higher in *both* overt and relational aggression as compared to girls. Relational aggression is still a relatively "new" construct, and there is still much to be learned about this form of

aggression. As most of the previous research on aggression was focused only on physical forms of aggression per se, and did not include an assessment of relational aggression, there is still much to be learned about possible gender differences in aggression. Although the primary focus of the current research was on gender differences in aggression, the moderating influence of gender on the relation between physical discipline and children's aggressive behavior was explored. Therefore, the present study assessed both overt and relational aggression for a thorough analysis of aggression in children.

Physically Abused Children's Social Behavior

Physically abused children have been shown to suffer many negative effects associated with the experience of being abused (Egeland, Sroufe, & Erickson, 1983; Wodarski, Kurtz, Gaudin, & Howling, 1990). Children's social development, the focus of the current study, is one area that has been identified as being negatively influenced by abusive parenting. Considering the research presented earlier in this paper addressing the relations between parenting style and children's social behavior, it is no theoretical leap to surmise that abused children are likely to have social deficits associated with the experience of being abused. In fact, studies of toddlers' and preschoolers' social behavior have revealed that abused children engage in play that is at a lower social and cognitive level (e.g. Alessandri, 1991), that abused children initiate fewer interactions with unfamiliar children (e.g. Howes & Espinosa, 1985), and that young abused children have fewer positive and more negative interactions with peers and fewer peer reciprocated interactions when compared to their non-abused peers (e.g. Haskett & Kistner, 1991).

Abused children also tend to display more aggressive behavior and more avoidant behaviors with peers (Herrenkohl & Russo, 2001; Mueller, & Sullivan, 1989). In a classic study of social behavior of abused toddlers and preschoolers, George and Main (1979) studied the social behavior of young, abused children in daycare. Direct observation of children's behavior with their peers and their caretakers revealed that abused children were more physically and verbally aggressive with peers and with caretakers when compared to control children who had been carefully matched on demographic variables. Abused youngsters were shown to actively avoid and/or withdraw from interactions with peers and caregivers.

Subsequent studies have shown that deficits in social behavior of abused children are also present in school-age populations. Using a grade-school sample of abused and control children in a structured laboratory peer interaction, Jacobson and Straker (1982) observed triads of abused and control children interacting and found that there were no differences in levels of aggressive behavior displayed by abused or control children, but abused children were not as socially active as the control children. Salzinger, Feldman, Hammer and Rosario (1993) studied the relationship between physical abuse and peer rejection in school age children. Children's sociometric status was assessed through peer ratings, and children's behavior was assessed by teacher and parent ratings. Results suggested that children who had experienced physical abuse were at significant risk for peer rejection. Peer rejection of abused children was shown to be associated with their social behavior. Abused children were less cooperative, more aggressive, and rated as more "mean" and more likely "to start fights." In a more recent study of children's social behavior, Bolger and Patterson (2001) also

studied physically abused school age children. Over a three-year span, ratings of aggressive behavior and social status were collected from teachers and peers of maltreated children. Results from each year revealed a pattern of peer rejection for maltreated children. As in the Salzinger, et al. (1993) study, there was a significant relationship between the level of aggressive behavior of maltreated children and their rejection by peers.

Abused children have also been shown to engage in less prosocial behavior than their peers (Hoffman-Plotkin & Twentyman, 1984). Hoffman-Plotkin and Twentyman studied young physically abused and neglected children utilizing teacher ratings and direct observation of children's behavior. Results showed low levels of prosocial behavior among physically abused and neglected children when compared to control children who were matched on important demographic variables such as gender, ethnicity, socioeconomic status, and duration of day care experience. Other researchers have studied abused children's behavioral responses to distress in peers. Klimes-Dougan and Kistner (1990) observed physically abused and non-abused young children in a daycare setting. Results from this study showed that there was not a significant difference between abused and control children's *appropriate* responses to a peer in distress (i.e. both groups of children showed interest in a peer in distress). However, there were significant differences in rates of *inappropriate* responses (e.g., aggression) to a peer in distress, with physically abused children displaying more inappropriate responses to distress in peers than control children.

On a more positive note, research on abused children's social functioning has revealed that there is a small subset of abused children who do not exhibit significant dysfunctional social behavior (e.g., Cicchetti & Rogasch, 1997). Recent studies on resiliency

and risk have suggested that abused children whose behavior is not characterized by high rates of aggression and limited prosocial behavior are likely to have more protective factors and fewer risk factors compared to abused children who display more disturbed social behavior. Protective factors are thought to buffer children from experiencing the negative sequelae typically found in abused children, while risk factors are thought to increase the likelihood that an abused child will have dysfunctional adjustment. Of particular relevance to the present study are results of a longitudinal study of high-risk families in which secure attachment and early sensitive parenting were identified as two factors that were associated with better social adjustment for abused children (Egeland, Sroufe, & Erickson, 1983). Risk factors associated with increased dysfunction in abused children were identified as lower SES and having a hostile/rejecting mother (Herrenkohl, Herrenkohl, & Egolf, 1994). Thus there is additional support for the role of parenting style as a moderator of outcomes for children, including children who have experienced abuse.

In conclusion, the preponderance of research evidence indicates that physically abused children tend to have substantial difficulties in social behavior. Abused children's social behavior is characterized by aggression and lack of prosocial involvement with peers. Despite the fairly consistent findings of group differences in social behavior when comparing abused children to non-abused children, there are some abused children who do not appear to have significant deficits in social relations with their peers. The current research included abused children and was designed to explore the hypothesis that nurturing parenting style would moderate the relation between physical discipline (with physical abuse being an extreme manifestation of physical discipline) and children's prosocial and aggressive

behavior. In effect, most of the research that has been conducted on abused children has identified the abuse itself as the likely causative variable for poor social adjustment, and the current research explored another variable (i.e. nurturing parenting) that may play an important role in the quality of children's relationships with peers.

CHAPTER THREE

Current Research

The current research was based on the premise that nurturing parenting style, physical discipline, and children's social behavior are related to one another in the following manner. Both nurturing parenting style and physical discipline were hypothesized to be independently related to children's social adjustment (i.e., overt and relational aggression and prosocial behavior), *and* parenting style was hypothesized to be a moderating variable in the relation between physical discipline and children's social behavior. Child gender was also hypothesized to have a moderating effect on the relation between physical discipline and children's social behavior. Research was reviewed to provide support for the connection between parenting style and children's social adjustment. In addition, studies were reviewed that identified an association between physical discipline and children's social behavior. Recent work (Deater-Deckard, Dodge, Bates, & Pettit, 1996; Gunnoe & Mariner, 1997) supports the possibility of moderating influences on the relation between physical discipline and child social behavior. In the current study, the relations among parenting style, physical discipline, and child social behavior were studied in a sample that included parents with documented child abusive parenting and comparison non-abusive parents in an attempt to include the full-spectrum of parenting. Inclusion of children with such a wide range of experiences of physical discipline allowed for a more complete exploration of the relations between physical discipline and outcomes for children as the sample included children at both ends of the physical discipline continuum (i.e. no physical discipline to severe physical discipline). A multi-method assessment of constructs was employed, including observations

and self-reports of parenting and observations and teacher reports of child social adjustment. The following hypotheses and research questions were tested.

Hypotheses and Research Question

1. A significant relation between parenting style and prosocial and aggressive behavior was expected. Specifically it was predicted that there would be a significant positive relation between warm, nurturing parenting and children's prosocial behavior and a significant negative relation between warm, nurturing parenting and children's aggression.
2. A significant relation between physical discipline and children's prosocial and aggressive behavior was expected. Specifically it was predicted that there would be a significant positive relation between physical discipline and children's aggressive behavior and a significant negative relation between physical discipline and children's prosocial behavior.
3. It was expected that parenting style would moderate the relation between physical discipline and children's prosocial and aggressive behavior. That is, children who experienced high levels of physical discipline in the context of nurturing parenting would engage in more prosocial behavior and less aggressive behavior than would children who experienced high levels of physical discipline in the context of less nurturing parenting.
4. It was expected that child gender would moderate the relation between physical discipline and children's prosocial and aggressive behavior. Boys who experienced

high levels of physical discipline would engage in less prosocial behavior and more aggressive behavior than would girls who experienced similar levels of physical discipline.

The following research question was posed.

1. Would ethnicity moderate the relationship between physical discipline and child social adjustment?

CHAPTER FOUR

Method

Participants

A total of 137 parents and their children (ages 48 to 131 months; $M = 87$ months) were included in this research. Parent-child dyads were selected from a larger database ($N = 209$) that included participants in a study of abusive parenting, social cognition, and child adjustment that received institutional review board approval. The sample for this research included 73 parent/child dyads with a documented report of physical child maltreatment in the year prior to data collection and 64 comparison parent/child dyads recruited from the community. Comparison parents and their children were matched to parents with documented histories of child abuse and their children on age, race, and gender of parent and child; parents' educational attainment and marital status; and family size and socioeconomic status (Hollingshead, 1975). There were no significant differences between comparison and abusive parents on any of the matched demographic variables except family size ($p > .007$), which was smaller for the comparison families. The parents were primarily mothers (87%) and African American (68%), with equal numbers of married and single parents (37%) and a smaller percentage of divorced/separated (25%) families. Parental age ranged from 21 to 53 with a mean age of 33. The child sample included 68 boys and 69 girls. Finally, the full range of SES and educational attainment (from less than high school to graduate degrees) was represented among participants, with 53% of the sample having attended college or obtained a college or graduate degree. There were approximately equal numbers of parents who were categorized into the lowest two levels of socioeconomic status (42%) and the highest two

levels of socioeconomic status (38%) as defined by Hollingshead. A summary of demographic variables for parents is presented in Table 1.

Parents in the abuse sample had substantiated cases of either (a) physical abuse, defined by North Carolina law as involving serious injuries such as broken bones or severe burns resulting from the “cruel or grossly inappropriate” behaviors of the caretaker or (b) neglect involving improper discipline, defined in North Carolina as involving less serious injuries such as bruises or lacerations. There was no distinction made between “physical abuse” and “neglect involving improper discipline” because the underlying concern was physical harm to a child that was inflicted by the parent, regardless of whether the harm resulted in a bruise or a burn. In fact, cases of neglect involving improper discipline as defined by NC law would be classified as physical abuse in most other states. According to the child protective services’ computer registry, comparison parents did not have any reports of child abuse or neglect during the four years in which data were collected.

Table 1: Demographics of Parent Participants

Parent Characteristics (N = 137)	Number	Percentage
Gender		
Male	18	13%
Female	119	87%
Ethnicity		
African American	93	68%
Caucasian	42	31%
Hispanic	2	1%
Marital Status		
Single	51	37%
Married	51	37%
Divorced / Separated	34	25%
Widowed	1	0.7%
Abuse Status		
Abuse	73	53%
Comparison	64	47%

(table continues)

Parent Characteristics (N = 137)	Number	Percentage
Level of Education		
Junior High School (9 th)	6	4%
Partial High School (10 th or 11 th)	16	12%
High School Grad	42	31%
Partial College	43	31%
College Degree	18	13%
Grad / Professional Degree	12	9%
Level of SES (Hollingshead) (n=123)		
I	11	9%
II	36	29%
III	25	20%
IV	19	15%
V	32	26%

A number of participant selection procedures resulted in a reduction of the full sample from 209 dyads involved in the larger study to the 137 dyads included in this study. First, some families were excluded because the abusive parent in the family was not available for data collection and instead data were collected with the non-offending parent. Only abusive parent-abused child dyads were included in this research. Second, due to logistical complications (e.g., late arrival of the family to the data collection session) and refusal or inability of some participants to complete certain measures, there was incomplete data for some families. Finally, some of the families that participated in the larger study had more than one eligible child and there were several two-parent families. For purposes of this study, each parent and child was only included in the data analyses once to ensure independence of data. However, if there was more than one eligible child in a family and two parents, there could be two different parent-child dyads from the same family included in the sample. In two-parent families with only one eligible child, father-child dyads were given preference over mother-child dyads to increase the number of fathers in the sample.

Participant Recruitment and Verification of Abuse Status

Recruitment of abusive parents was facilitated by a close working relationship with the local child protective services agency. Meetings between project staff and social workers were held to inform workers of the study. Abusive parents were recruited by two methods. First, social workers were informed about the study and requested to provide recruitment packets to eligible parents. Recruitment packets included a written description of the study and project staff members' contact phone numbers. Second, project staff periodically reviewed the child protective services register to identify any eligible parents who had not

received a recruitment packet from their social worker. Those parents were then mailed a recruitment packet. Comparison parents were recruited through the use of flyers posted in childcare centers and businesses located in neighborhoods where the abusive parent participants lived. Many comparison parents also entered the study after being informed of the project by friends and neighbors who had participated in the study. All direct contact with the project staff was initiated by parents who voluntarily called the project office.

To ensure accurate identification of abuse status, all parents were screened prior to placement in the abuse or comparison groups. The social workers of parents referred through social services were contacted to confirm that the abusive parents had substantiated cases of physical abuse as defined previously and that there was no indication of sexual abuse in the family. The screening of comparison parents involved three phases. The first two phases were completed during the psychosocial interview. First, parents were asked whether they had ever been involved with child protective services. Second, a modified version of the Conflict Tactics Scale (CTS) was administered, followed by a series of follow-up questions related to severity of corporal punishment. Parents who reported prior use of corporal punishment that had resulted in marks, bruises, or cuts were excluded from the comparison sample. The third screening phase involved a review of the child protective services register for the names of the comparison children or their siblings. If any of these steps suggested that a parent might have had a history of abusing any of their children, they were excluded from participation in the study as a comparison parent.

Procedures

During the initial contact with study staff, parents completed a psychosocial interview (Appendix A) conducted over the telephone by a doctoral level psychologist. The purpose of the interview was to gather demographic information on the family and to complete a modified version of the Conflict Tactics Scale (Kaufman, Jones, Steiglitz, Vitulano, & Mannarino, 1994). After the interview, parents who were deemed eligible for the study were invited to participate.

There were two phases of data collection. First, families completed a clinic-based family assessment then six months later school-based data were collected. Clinic-based data were collected in a university clinic during evening and Saturday appointments by a team of undergraduate and graduate student researchers. A taxi service was provided for families without transportation and childcare was provided for siblings who were not age-eligible for the study. Upon arrival at the university, families were greeted by and introduced to the research team. After introductions, parents completed an informed consent form that included specific information about the clinic-based and school-based assessment procedures. The form also advised parents of their right to discontinue the assessment at any time. Parents were also advised that they would be paid \$75 for completion of the 3-4 hour family assessment. In addition to the monetary incentive, parents were invited to return to the clinic after the assessment to receive feedback about their family's assessment from the primary investigator. At the conclusion of the family assessment, parents were provided with a booklet of community resources for families. Six months after the clinic-based data

collection, a school visit was made to administer the Social Behavior Scale to the child's teacher, and the child was observed on the playground during free play.

Training of undergraduate research assistants, who remained uninformed as to the specific purpose and hypotheses of the larger study, was extensive and included approximately 14 hours of training in ethical and standardized administration of measures. Clinic-based data collection for the larger study included numerous self-report, observational, and interview measures that were administered by teams of undergraduate research assistants under the supervision of a graduate student. The current research included only two measures that were administered during the clinic-based family assessment: Parent-Child Interaction (PCI) and Cognitive Vignettes (CV). The other measures used in the research were school-based: Social Behavior Scales (SBS) and the playground observation of the child's social behavior.

Instrumentation

Measure of Nurturing Parenting Style

Parent-child interaction. Each parent-child dyad participated in a 30-minute interaction session based on procedures originally developed by Mash and Johnston (1982). The parent-child interaction session consisted of three 10-minute segments. The first 10-minute segment was a "free-play" session in which parents were asked to play with their children using a standard set of age-appropriate toys (e.g. markers, Legos®, magnetic letters). The second 10-minute segment was an "instruction" session in which parents were asked to give their child three instructions. The instructions were for the child to (1) clean up the toys, (2) draw a picture of a person, and (3) sit quietly while the parent read a magazine.

The final segment was a “teaching/frustration” task in which the child was required to complete two puzzles that were slightly above the child’s level within a 10-minute time period. An audible timer (kitchen timer) was placed on the table in view of the parent and child, and the parent was asked to help the child, but not to touch the puzzle pieces. Only the first two segments were used for the present study because of the demand characteristics of the third segment, which has been shown to produce limited variability in one of the parenting behaviors (Sensitivity) that is of interest in this study (Haskett, 2001a).

The sessions were videotaped to allow for later coding of parent and child behavior. Videotaping was done via an unobtrusive camera installed in a clock in the room, and parents and children had given prior consent for taping. Using a modified version of the Qualitative Ratings of Parent-Child Interactions developed by Cox (Appendix B; 1997) six categories of parenting behavior were rated by graduate research assistants trained to 80% reliability with the primary coder. The current research used four dimensions of parenting to reflect a Nurturing Parenting Style as identified by factor analysis in a previous study (Haskett, 2001a). The categories used in this study along with a brief description of each dimension follow. The Positive Regard category represents the parent’s positive feelings for the child that are expressed through both verbal and physical behaviors, such as smiles, hugs, and praise of the child. The Sensitivity category reflects the parent’s support or responsiveness to the child’s emotional and physical needs, as demonstrated by such behaviors as adapting to the child’s mood and scaffolding of tasks to allow the child task mastery. The Detachment category represents the parent’s emotional and physical involvement with the child, and is reflected in behaviors such as not responding to the child’s cues or vocalizations. The Flat

Affect category represents the parent's animation and energy during the interaction, and is characterized by blank, impassive facial expressions and monotone vocal expressions.

For each 10-minute segment, the coder assigned a rating for each parenting category. The rating process involved two steps. Ratings for each category ranged from one to seven with a rating of "one" given for behavior that was not at all characteristic of the category, and a rating of "seven" given for behavior that was highly characteristic of the category. The first step in assigning ratings involved the coder viewing the 10-minute segment in its entirety and forming an initial impression of the quantity and quality of each of the categories to be rated. Coders took notes on significant behaviors that characterized the four categories. After viewing the segment once, the coder scored each of the four categories as either "characteristic" (a 5, 6, or 7 rating) or "uncharacteristic" (a 1, 2, or 3 rating). The second step involved the coder viewing the segment a second time and making finer distinctions of the rating. Coders were encouraged to stop and rewind the tape at any point for additional viewing of relevant behaviors and clarification of scoring. This qualitative scoring method allowed the coder to take into consideration both the number of behaviors in each category as well as the intensity of the behavior.

For purposes of the current research, a score for Nurturing Parenting Style (NUR-PAR) was computed by summing the ratings for Positive Regard, Sensitivity, Detachment (reverse scored), and Flat Affect (reverse scored) for the "free-play" and "instruction" segments. The Nurturing Parenting Style was thus comprised of eight raw scores (i.e., a rating score for each of the four parenting categories for both the first and the second segments of the parent-child interaction session), and each individual score ranged from 1-7.

The scores for the “free-play” and “instruction” segments were correlated (Positive Regard, .63; Sensitivity, .66, Detachment, .35, and Flat Affect, .63). Nurturing Parenting Style summary scores had a range of 8 to 56, with higher scores representing a warmer, more sensitive and involved parenting approach.

Psychometric properties of the coding system appeared to be strong based on analyses of Parent-Child Interaction data from the full sample on which the current study was based. Inter-rater reliability of ratings for the parenting categories ranges from .73 to .87 with a mean of .83 for the categories to be included in the current research (Robinson & Haskett, 2002). There is also support for validity of the coding system; scores for the parenting categories were significantly related in the expected directions to measures of parental emotional health and parent-to-child CTS scores in a previous study using the larger sample from which the current participants were drawn (Haskett, Smith Scott, & Sabourin, 2002). Furthermore, cluster analysis of abusive parents’ scores on the parenting dimensions has revealed clinically meaningful subgroups of abusive parents (Haskett, et al., 2002).

Measures of Children’s Discipline

Two measures of children’s discipline that were used included parents’ self-report of actual recent discipline practices and parents’ responses to hypothetical situations involving child misbehavior.

Conflict Tactics Scale (CTS). The CTS (Straus, 1979), a self-report measure of discipline, was used to quantify parental discipline strategies in the three months prior to the psychosocial interview. The original CTS is a 19-item instrument designed to assess the manner in which families solved conflicts. Kaufman, Jones, Steiglit, Vitulano, and

Mannarino (1994) developed the modified version of the CTS that was used in the current research. The modifications were made to allow the instrument to be more easily administered in the context of a phone interview; specifically, it was shortened by three items and the response scale was truncated from a 9-point scale to a 3-point scale. To administer the CTS, parents were asked to indicate the frequency with which they had used 20 different discipline strategies in the three months preceding the interview. Frequency was rated on a 3-point scale ranging from never = 1, to once = 2, to more than once = 3. Discipline strategies ranged in harshness from “reasoned with your child” to “thrown your child against wall.” For the purpose of the current study, only the 11 discipline strategies that focused on physical discipline were used. The possible range of raw scores was 11-33.

The original version of the CTS is widely used in the field of family violence and child maltreatment. There is a large literature that provides support for the validity of the instrument. For example, concurrent validity was determined by correlations between college students’ retrospective reports of family violence and parental retrospective reports of family violence, and ranged from a low of .19 for Reasoning scale items to .64 for Violence scales (Straus, 1979). Items included in this research represent the Violence Scale items. Research based on the modified version of the CTS that was utilized in the present study also supports validity of the measure. For example, abusive and comparison parents obtained significantly different scores on the CTS (Haskett, Smith Scott, & Sabourin-Ward, 2002)

Cognitive Vignettes-Punishment Scale (CV-P). The Cognitive Vignettes (Appendix C; Azar, 1989; Plotkin, 1983) is a measure of parents’ attributions of intentionality and intended punishment in response to children’s misbehavior. The CV includes 18 hypothetical

vignettes describing children's misbehavior. Vignettes are read to the parent and then parents rate the degree to which the child misbehaved specifically to annoy the parent and the degree to which they would punish the child in the vignette. The Attribution scale, which was not used in this study, is determined by the parent's rating of the child's intention to annoy the parent by his/her behavior. The Punishment scale, which was used in the current study, is determined by the parent's rating of the degree to which the parent would punish the child's behavior. A score of "1" represents no punishment at all, and a score of "9" represents severe punishment such as "spanking." Total raw scores range from 18 - 162.

In a study of the psychometric properties of the CV, the internal consistency ($\alpha = .83$) was high for the Punishment scale (Haskett, Smith-Scott, Willoughby, Ahern, & Nears, in press). Plotkin (1983) found that abusive parents indicated that the child in the vignette should receive significantly harsher punishment than the punishment recommended by non-abusive parents. A study designed specifically to assess the validity of the CV was conducted using the full sample from which the current participants were drawn. Results of that study revealed a small negative correlation between the CV-Punishment scale and an observational measure of positive parenting ($r = -.17, p < .05$), and a small positive correlation between the CV-Punishment scale and the Conflict Tactics Scale ($r = .20, p < .05$) (Haskett, et al., in press).

Measures of Children's Behavior

The two measures of children's social behavior that were used in this research were teacher's ratings of children's social behavior on the Social Behavior Scale and naturalistic observations of children's play with peers.

Social Behavior Scale (SBS). The SBS (Appendix D) is a 39-item teacher rating scale developed from three psychometrically sound instruments that measure teacher perceptions of the social behavior of young children. The SBS was completed by teachers in the school setting approximately six months after data had initially been collected in the clinic-based assessment. The SBS takes approximately 10 minutes to complete. To complete the SBS, teachers use a 5-point Likert scale (1=Never true, 2=Rarely true, 3=Sometimes true, 4=Often true, 5=Almost always true) to rate the degree to which each item describes the child. There are seven subscales of children's behavior. The subscales include Prosocial Behavior (e.g. displays kind and caring behavior), Relational Aggression (e.g. tries to harm others by telling lies or exclusion), Overt Aggression (e.g. hurts or threatens to hurt other children), Asocial Behavior (e.g. engages in solitary play and avoids peers), Excluded (e.g. other children avoid playing with this child), Depressed (e.g. appears sad), and Victimized (e.g. other children bully this child). To examine the hypotheses of the current research, the mean scores from three subscales (Prosocial Behavior, Relational Aggression, and Overt Aggression) were used.

Prosocial Behavior (5 questions), Relational Aggression (7 questions), Overt Aggression (7 questions), and Depressed (3 questions) subscales were taken principally from the Children's Social Behavior Scale (Crick, 1996) and the Preschool Social Behavior Scale (Crick, Casas, & Mosher, 1997). The Asocial Behavior (6 questions), Excluded (7 questions), and Victimized (3 questions) subscales, which were not included in this research, were taken without modification from the Child Behavior Scale (Ladd & Profilet, 1996).

Recent factor analyses (Haskett, 2001b) of the SBS supported the seven-factor structure and revealed strong internal consistency scores. Alphas for the scales used in the current research include .86 for Prosocial scale (SBS-PRO), .91 for Overt Aggression scale (SBS-OVT), and .92 for Relational Aggression (SBS-RA). There are no other psychometric analyses of the reliability and validity of the SBS, but there is ample data to support the component scales. For example, factor analyses of the Children's Social Behavior Scale conducted by Crick (1996) supported three distinct factors, Prosocial Behavior, Overt Aggression, and Relational Aggression accounting for 81% of the variation in children's scores. Internal consistency coefficients for the three factors ranged from .93 to .94, short-term stability ranged from .80 to .93, and long-term (6 months) stability ranged from .56 to .78. There was also a significant relation between teacher and peer reports of social adjustment and peer rejection and the Children's Social Behavior Scale. A principal components factor analysis (Crick, et al., 1997) of the Preschool Social Behavior Scale suggested four factors (i.e. prosocial, overt aggression, relational aggression, and depressed affect) accounting for 81% of the variation in children's scores. Internal consistency coefficients for the four factors ranged from .87 to .96.

Playground Observations. Observations of children's peer behavior were conducted for 30 continuous minutes during one regularly scheduled school playground session by uninformed undergraduate observers trained to 80% reliability. A modified procedure of Haskett and Kistner (1991) was used in which behavior was recorded in 15-second intervals (Appendix E). An audiotape cued the observer to observe and record behavior for each interval, and only the first instance of each target behavior was recorded. During the live

observation, coders observed the children's behavior for ten seconds and then the following five seconds was used to record the occurrence of target behaviors. Four target behaviors were recorded: Engagement, Negative Behavior, Rough Play, and Aggression. Engagement was recorded when the target child used verbal or physical behavior directed towards a peer that had the purpose of engaging a peer in an interaction. Behavior scored as Engagement could be positive behavior (e.g. inviting another child to play or complimenting another child) or neutral behavior (e.g. making a comment to another child). Verbal or physical behaviors with a negative connotation, such as teasing, taunting and commanding would not be coded as Engagement, but would be coded as Negative Behavior. Other behaviors coded as Negative Behavior included threats to harm, or threatening physical gestures. Negative physical behavior (e.g. pulling on another child's clothes or holding a peer tightly) that was not of an intensity to harm was scored as Rough Play. Other examples of Rough Play included roughhousing or elbowing. Behavior that included physical contact with a peer or object that had the potential to harm was scored as Aggression. Behaviors that were scored as Aggression included hitting, slapping, and destroying property. Inter-rater reliability for the four behaviors ranged from .78 to .94. In terms of validity of the coding system, scores based on this coding have been shown to be associated with teacher reports of externalizing problems and peer ratings of likability among preschool-aged children (Haskett & Kistner, 1991).

Due to the somewhat variable number of intervals each child was observed (i.e., some sessions lasted less than a full 30 minutes), data for each behavior category was converted into the percentage of intervals in which each behavior occurred. A percentage of

negative social behaviors to all social behaviors was computed by dividing the sum of Negative Behavior, Rough Play and Aggression, by the sum of Negative Behavior, Rough Play, Aggression and Engagement and multiplying by 100 to determine the percentage of negative behavior to engagement in overall social behavior.

CHAPTER FIVE

Results

Descriptive Statistics

Mean scores and standard deviations of the variables assessing parenting style, physical discipline and children's social adjustment were computed for the full sample and those data are presented in Table 2. Scores were also computed separately for the abuse and comparison sample and those data are presented in Table 3. Raw scores on the CTS (a self-report measure of the use of physical discipline within the last three months), with a range of 11 to 21 ($M= 14.23$, $SD = 2.46$) revealed that most parents did not acknowledge significant levels of physical discipline with this retrospective measure. In contrast, raw scores from the CV-P (a measure of parent's intended use of punishment in a hypothetical scenario), with a range of 19 to 82 ($M= 47.85$, $SD = 12.65$) indicated a broader parental acknowledgement of intended amount of discipline. Nurturing Parenting mean scores ranged from a low of 10 (2 points above the lowest possible score) to a high of 54 (2 points below the highest possible score) with an average score of 34.63 ($SD = 9.40$), suggesting wide variability in the parenting styles of participants.

Based on the Social Behavior Scale, children's behavior was more prosocial (SBS-PRO, $M = 3.57$, $SD = .77$) than aggressive (SBS-OVT, $M = 1.73$, $SD = .80$; SBS-RA, $M = 1.75$, $SD = .75$) as reported by teacher raters. Observations on the playground also revealed that the amount of negative behavior engaged in by children during the observation was low ($M= 11.39\%$ of intervals, $SD = 9.84$) compared to the amount of positive/neutral behavior engaged in by children ($M= 66.63\%$ of intervals, $SD = 19.03$).

Table 2: Mean Raw Scores and Standard Deviations of Measures for Full Sample

Variable (N = 137)	M	SD	Range
Parenting Style ^a			
Nurturing Parenting	34.63	9.40	10.0 – 54.0
Parenting Behavior (Physical Discipline)			
Conflict Tactics Scale (CTS)	14.23	2.46	11.0 – 21.0
Cognitive Vignettes – Punishment Scale CV-P	47.85	12.65	19.0 – 82.0
Children’s Social Adjustment SBS ^b			
Prosocial	3.57	.77	1.2 – 5.0
Relational Aggression	1.75	.75	1.0 – 4.0
Overt Aggression	1.73	.79	1.0 – 4.85
Playground Observations ^b			
Negative Behavior	11.39	9.84	0.0 – 46.3

^an = 136^bn = 133

Table 3: Mean Raw Scores and Standard Deviations of Measures for Abuse and Comparison Sample

Variable	Abuse (n = 73)		Comparison (n = 64)	
	M	SD	M	SD
Parenting Style ^a				
Nurturing Parenting	33.47	9.26	35.94	9.46
Parenting Behavior (Physical Discipline)				
Conflict Tactics Scale (CTS)	14.59	2.49	13.82	2.36
Cognitive Vignettes – Punishment Scale CV-P	48.82	12.38	46.75	12.96
Children’s Social Adjustment SBS ^b				
Prosocial	3.47	0.79	3.70	0.73
Relational Aggression	1.75	0.71	1.75	0.81
Overt Aggression	1.81	0.83	1.63	0.76
Playground Observations ^b				
Negative Behavior	10.15	8.59	12.78	10.98

Inspection of the parent and child variables revealed relatively normal distributions for CV-P, CTS, Nurturing Parenting, SBS-PRO, SBS-RA, and Negative Behavior with skewness and kurtosis coefficients between -.55 and .99 for those variables. The distribution for SBS-OVT was positively skewed, with skewness and kurtosis coefficients of 1.14 and 1.02 respectively. Skewness and kurtosis coefficients between -1.0 and 1.0 are considered acceptable (Huck, 2001). Distributions were also evaluated for outliers that were at least 3 standard deviations above the sample mean. Two outlier data points were identified in the SBS-RA distribution and one outlier data point was found in both the SBS-OVT and Negative Behavior distributions. A decision was made to include the outliers in data analyses but to conduct all statistical analyses that included the SBS-RA, SBS-OVT, and Negative Behavior variables twice (once with the outlier points included and once with the outlier points excluded) to evaluate the influence of the outliers on the statistical significance of the analyses. Statistical analyses without outlier data points will be discussed only when there is a substantive difference between results with outliers included and results with outliers excluded.

Intercorrelations among the three parent variables and the four child adjustment variables were calculated and are summarized in Table 4. Intercorrelations without the outliers are presented in Appendix F. The two measures of physical discipline were not significantly correlated $r(137) = .16, p < .06$ suggesting that the CTS and CV-P measured different facets of parent's use of physical discipline or intended use of physical discipline. Neither of the two measures of physical discipline CTS, $r(136) = -.15, p < .08$ or CV-P, r

(136) = $-.08$, $p < .35$ were significantly correlated with the parenting style measure (NUR-PAR).

There were several significant relations among the measures of children's social adjustment. The most significant associations were found among the three subscales of the SBS. Significant correlations were found between SBS-PRO and SBS-RA, $r(133) = -.31$, $p < .0003$, SBS-PRO and SBS-OVT, $r(133) = -.54$, $p < .00001$, and SBS-OVT and SBS-RA, $r(133) = .61$, $p < .00001$. Thus, children who were rated as more prosocial were rated as less aggressive (overt and relational). In addition, children who were rated as high in overt aggression tended to receive high ratings in relational aggression too.

Additional significant relationships were found between the three SBS subscales and the measure of observed negative behavior on the playground (Negative Behavior). Correlations between Negative Behavior and SBS-PRO, SBS-RA, and SBS-OVT were $-.20$, $.17$, and $.36$ respectively. These findings suggest that teacher's ratings of children's overt and relational aggression on the SBS were commensurate with levels of negative behavior observed during the playground observation. Additionally, the negative association between teacher rated prosocial behavior on the SBS and negative behavior on the playground was as expected and suggested that children who were considered by their teachers to be highly prosocial were observed displaying lower levels of negative behavior on the playground than were children who were considered to be less prosocial by their teachers.

Table 4: Inter-correlations and Confidence Intervals among Measures of Physical Discipline, Parenting Style and Children's Social Adjustment

Variables	1	2	3	4	5	6	7
Physical Discipline							
1. CTS	-	(-.01 - .32)	(-.31 - .02)	(-.31 - .02)	(-.07 - .27)	(.06 - .39)	(-.21 - .13)
2. CV-P	.16	-	(-.25 - .09)	(-.01 - .32)	(-.36 - -.03)	(-.31 - .03)	(-.24 - .10)
Parenting Style							
3. Nur-Par	-.15	-.08	-	(.16 - .47)	(-.31 - .03)	(-.33 - .00)	(-.16 - .18)
Children's Adjustment							
4. SBS-PRO	-.15	.16	.32 ^{***}	-	(-.46 - -.14)	(-.65 - -.40)	(-.36 - -.03)
5. SBS-RA	.10	-.20 [*]	-.14	-.31 ^{***}	-	(.49 - .71)	(.00 - .33)
6. SBS-OVT	.23 ^{**}	-.14	-.17 [*]	-.54 ^{***}	.61 ^{***}	-	(.20 - .50)
7. Neg. Beh.	-.04	-.07	.01	-.20 [*]	.17 [*]	.36 ^{***}	-

The lower diagonal provides inter-correlations with outliers included in the analysis and the upper diagonal provides confidence intervals for the inter-correlations.

*: < 0.1, **: < 0.01, *** < 0.001

Hypothesis Testing

To test hypotheses related to strength of associations among discipline, nurturance, and child social behavior, Pearson Product-Moment Correlation coefficients were calculated for each pair of variables, for a total of twelve correlations.

Correlations between Parent and Child Variables

Relations between parenting style and children's social behavior. The first hypothesis was that parenting style (NUR-PAR) would be positively associated with children's prosocial behavior (SBS-PRO) and negatively associated with all three measures of children's aggressive behavior (SBS-RA, SBS-OVT, and Negative Behavior). This hypothesis was partially supported, as there was a significant positive correlation between NUR-PAR and SBS-PRO, $r(132) = .32, p < .0002$ and a significant negative association between NUR-PAR and SBS-OVT, $r(132) = -.17, p < .05$. However, the correlations between NUR-PAR and SBS-RA ($r = -.14$) and between NUR-PAR and Negative Behavior ($r = .01$) were nonsignificant.

Relations between physical discipline and children's social behavior. The second hypothesis stated that physical discipline (CTS and CV-P) would be positively associated with children's aggressive behavior (SBS-RA, SBS-OVT, and Negative Behavior) and negatively associated with children's prosocial behavior (SBS-PRO). There was limited support for this hypothesis. There was no association between either measure of physical discipline and prosocial behavior in children. However there was a significant positive correlation between scores on one measure of physical discipline (CTS) and one measure of children's aggressive behavior SBS-OVT, $r(133) = .23, p < .007$. There was also an

unexpected significant negative correlation between the other measure of physical discipline (CV-P) and the measure of children's relationally aggressive behavior (SBS-RA), $r(133) = -.20, p < .01$.

Tests of Moderation

Both hypotheses 3 and 4 stated that there would be significant moderators of the link between the physical discipline that children experienced and the social behavior they displayed. Following procedures outlined by Baron and Kenny (1986) for testing moderation, a series of hierarchical regression equations were conducted for each hypothesis, with a separate set of analyses conducted for each outcome variable. Testing for moderation involves first testing for the significance of the interaction between the predictor variable (in this case, discipline) and the moderator (in this case, nurturing parenting and child gender), such that the effect of the predictor on the outcome variable (in this case, prosocial and aggressive child behavior) is modified. The second step is to probe the significant interaction terms to identify the direction of the "effect" of the moderator. When there was a significant effect of the interaction term (significant main effects are not relevant to moderation), follow-up analyses were conducted using the procedures recommended by Aiken and West (1991) to probe the interaction and complete the tests of moderation. Prior to computing regression equations each predictor and outcome variable was standardized to control for multicollinearity. Multicollinearity could be a significant concern because the interaction term is created by multiplying the two predictor variables, which would result in the interaction term being highly correlated with the predictor variables. As there is no standard

for the degree to which multicollinearity has to exist in order to necessitate standardizing variables, all variables were standardized.

Hypothesis 3 was tested by first regressing the child social behavior variable on discipline (either CTS or CV-P), Nurturing Parenting scores, and then the interaction of CTS or CV-P and Nurturing Parenting. Hypothesis 4 was tested in the same manner, with child gender serving as the moderator variable. To probe the interaction term, the relation between discipline and social behavior was plotted as a function of the sample mean and the high and low values for the moderator variables to form three simple regression lines. For the moderator variable, "high" scores were one standard deviation above the mean score and "low" scores were one standard deviation below the mean score. Once the data were plotted, t-tests were conducted to determine whether or not the simple regression lines differed significantly from each other.

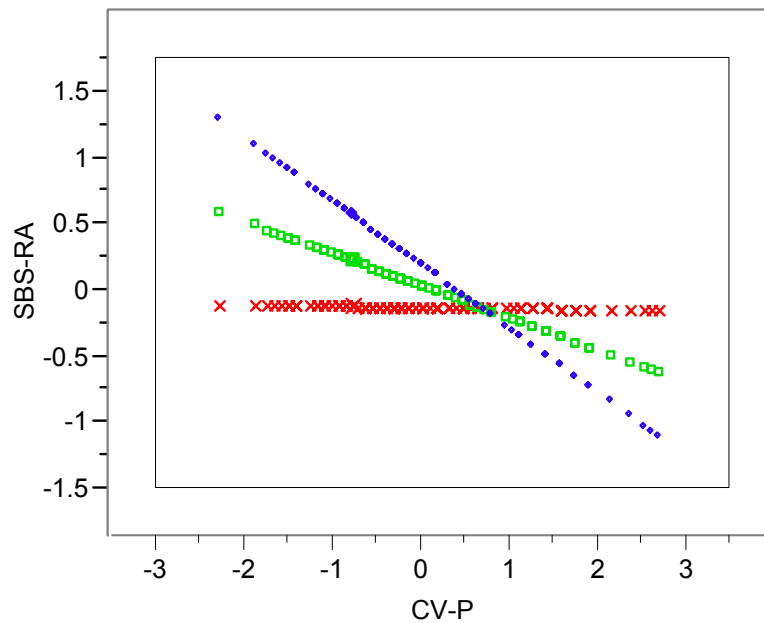
Moderation by parenting style. The third hypothesis was that the relation between physical discipline and children's prosocial and aggressive behavior would be moderated by parenting style, such that children who had experienced both high levels of physical discipline and high levels of nurturing parenting would engage in more prosocial behavior and less aggressive behavior than would children who had experienced high levels of physical discipline in the context of less nurturing parenting. Thus the slope of the regression line at high levels of nurturing parenting would be both *positive* and *smaller than* the slope of the regression line for low levels of nurturing parenting for aggressive behavior, whereas the relationship would be opposite for prosocial behavior. To test this hypothesis, a series of regression models was computed by first regressing the child social behavior variables on the

discipline variable (CTS or CV-P), then on Nurturing Parenting scores, and then on the interaction of CTS and Nurturing Parenting, or the interaction of CV-P and Nurturing Parenting.

Children's relational aggression was predicted by the interaction of Nurturing Parenting and CV-P, ($\beta = .24, p < .006$), and children's overt aggression was predicted by the interaction of Nurturing Parenting and CV-P, ($\beta = .20, p < .02$). No significant interaction effects were identified using the other measure of physical discipline (CTS) as the predictor.

Probing of the two significant interactions was carried out. Inspection of the regression lines (see Figures 1 and 2) revealed that the slope of the regression line at high levels of nurturing parenting was *less than* the slope of the regression line at low levels of nurturing parenting for aggressive behavior, but slopes were *negative* rather than positive as had been predicted. At high levels of Nurturing Parenting there were low levels of Relational Aggression and Overt Aggression for all levels of CV-P (intended physical punishment), but when Nurturing Parenting was low or average there were higher levels of Relational and Overt Aggression associated with lower levels of CV-P and lower levels of Relational and Overt Aggression associated with higher levels of CV-P. Thus the moderation effect found for low and mean levels of Nurturing Parenting is opposite to the predicted effect. For high levels of Nurturing Parenting there was no significant difference between the levels of Relational Aggression or Overt Aggression displayed at high or low levels of intended physical punishment.

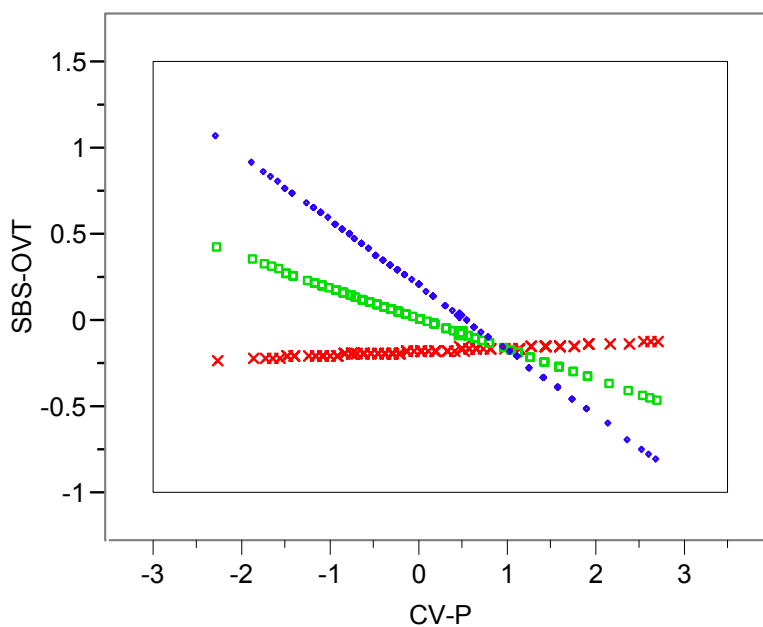
Figure 1: The relation between relational aggression and intended punishment at three levels of nurturing.



- Y
- ✕ SBS-RA predicted by CV-P @ high NURPAR
 - SBS-RA predicted by CV-P @ mean NURPAR
 - ◆ SBS-RA predicted by CV-P @ low NURPAR

SBS-RA predicted by CV-P	Slope	t value	p value
Probing zero slopes			
At +1 SD of NURPAR	-0.0080	-0.07	< 0.9433
At mean NURPAR	-0.2442	-2.87	< 0.0049
At -1 SD of NURPAR	-0.4804	-3.82	< 0.0002
Test of Slope Difference		2.82	< 0.0055

Figure 2: The relation between overt aggression and intended punishment at three levels of nurturing.



Y x SBS-OVT predicted by CV-P @ high NURPAR
■ SBS-OVT predicted by CV-P @ mean NURPAR
◆ SBS-OVT predicted by CV-P @ low NURPAR

SBS-OVT predicted by CV-P	Slope	t value	p value
Probing zero slopes			
At +1 SD of NURPAR	0.0206	0.18	< 0.8579
At mean NURPAR	-0.1782	-2.05	< 0.042
At -1 SD of NURPAR	-0.3770	-2.95	< 0.0038
Test of Slope Difference		2.33	< 0.0212

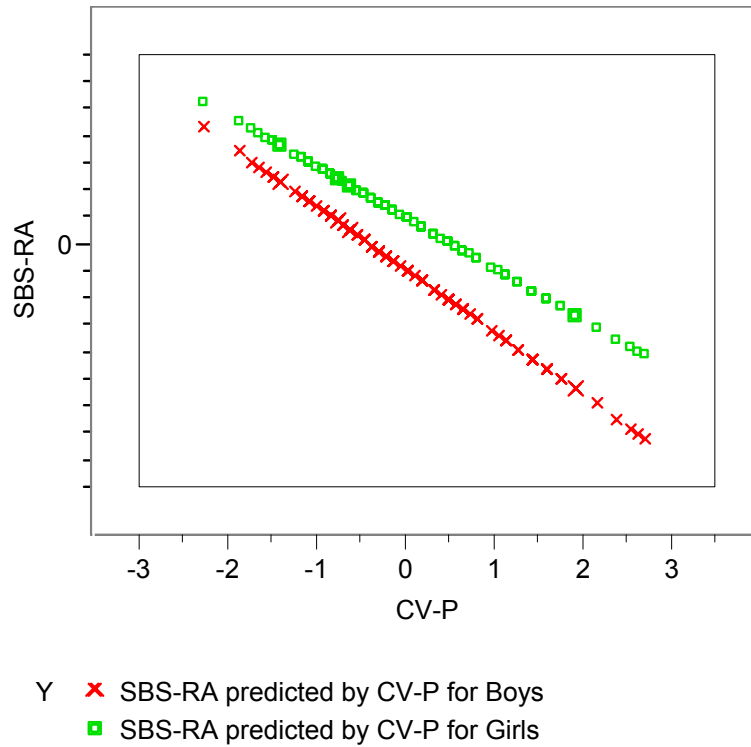
Moderation by child gender. The fourth hypothesis was that the relation between physical discipline and children's prosocial and aggressive behavior would be moderated by child gender, such that boys who had experienced high levels of physical discipline would engage in less prosocial behavior and more aggressive behavior than would girls who had experienced a similar level of physical discipline. Thus it was predicted that the slope of the regression line for boys would be both *positive* and *greater than* the slope of the regression line for girls for aggressive behavior, and the relationship would be opposite for prosocial behavior. To test this hypothesis, a series of regression models was computed by first regressing each of the child social behavior variables on the discipline variables (CTS or CV-P), then on Child Gender, and then on the interaction of CTS and Child Gender, or the interaction of CV-P and Child Gender. No significant interaction effects were identified (see Figure 3). Thus there was no support for the role of gender as a moderator on the relationship between physical discipline and child social behavior.

Moderation by Ethnicity. Data were analyzed to assess whether ethnicity moderated the relationship between physical discipline and children's social behavior. A series of regression models was computed by first regressing each child social behavior variable in turn on the discipline variable (CTS or CV-P), then on child race, and then on the interaction of discipline (CTS or CV-P) and race. Probing interactions that include both categorical and continuous variables involves computing separate regression equations for each level of categorical variable. Thus, the relation between physical discipline and child social behavior was plotted separately for African Americans (n=93) and European Americans (n= 42). Three Hispanic dyads were excluded from this analysis due to the small number of Hispanic

dyads. Children's relational aggression was predicted by the interaction of Child Race and CV-P for African Americans, $\beta = .22, p < .03$; for European Americans, $\beta = -.34, p < .03$. No other significant interaction effects were identified.

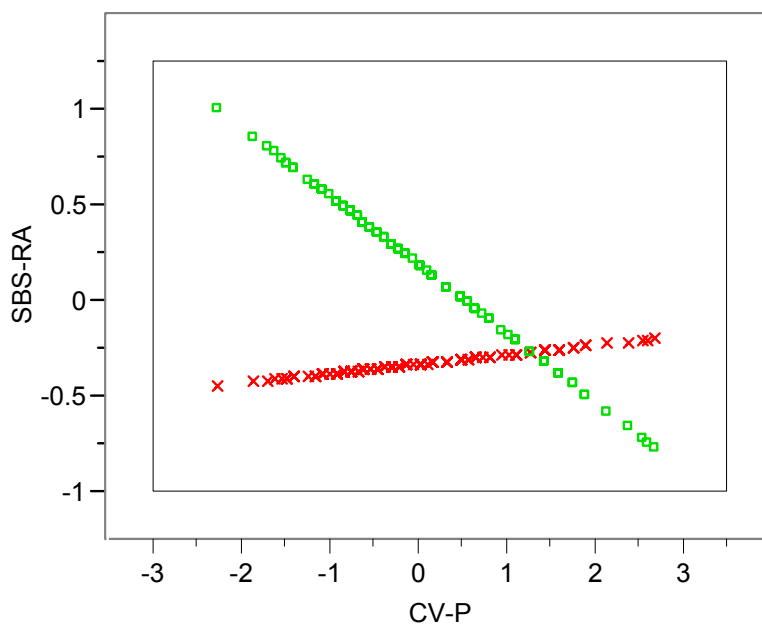
Inspection of the plot (Figure 4) displaying the regression equations for African Americans and European Americans revealed differential effects of physical discipline on children's relational aggression based on child race. African American children with low levels of physical discipline (CV-P) had *higher* rates of Relational Aggression than did African American children with high levels of CV-P. In contrast, European American children displayed similar levels of Relational Aggression at both high and low levels of physical discipline (CV-P).

Figure 3: The relation between relational aggression and intended punishment for Boys and Girls.



SBS-RA predicted by CV-P	Slope	t value	p value
Probing zero slopes			
For Boys	-0.2317	-1.85	0.0661
For Girls	-0.1888	-1.53	0.1273
Test of Slope Difference		0.24	0.8072

Figure 4: The relation between relational aggression and intended punishment for European Americans and African Americans.



Y x SBS-RA predicted by CV-P for European Americans
■ SBS-RA predicted by CV-P for African Americans

SBS-RA predicted by CV-P	Slope	t value	p value
Probing zero slopes			
European Americans	0.0496	0.32	< 0.7514
African Americans	-0.3583	-3.58	< 0.0005
Test of Slope Difference		2.2	< 0.0297

CHAPTER SIX

Discussion

For many decades physical discipline has been a focus of child behavior researchers (for example, Bandura, 1977; Hoffman & Salzstein, 1967). Despite extensive research on the use of physical discipline in child rearing, there still is not a consensus among researchers as to the effectiveness of corporal punishment as a parenting technique. Some researchers have identified physical discipline as a behavior that is associated with detrimental outcomes for children (Straus, Sugarman, & Giles, 1997; Weiss, Dodge, Bates, & Pettit, 1992) while other investigators have identified neutral or positive effects associated with the use of physical discipline (Baumrind & Owens, 2001; Larzelere, Schneider, Larson, Pike, 1996).

Recently there have been two comprehensive meta-analyses published on physical discipline and outcomes for children (Gershoff, 2002; Larzelere, 2000) and results from both reviews suggested that there are not fixed associations between corporal punishment and child outcomes; rather, the relationship varies depending on many factors such as the specific outcome being measured (e.g. children's aggression versus children's immediate compliance), child characteristics (e.g. gender, age, temperament), and parental characteristics (e.g. socio-cultural background, parenting style, gender). The overriding purpose of the current study was to explore the associations between physical discipline and children's social behavior, and to examine the moderating role of parenting style, child gender, and ethnicity on the relationship. Both negative (i.e. aggressive) and positive (i.e. prosocial) child social behaviors were studied.

Past research has yielded inconsistent support for the role of those variables, with some researchers identifying support for the moderating influence of parenting style, child gender, and ethnicity (Deater-Deckard, Dodge, Bates, & Pettit, 1996; Gunnoe & Mariner, 1997; Rohner, Bourque, & Elordi, 1996; Smith & Brooks-Gunn, 1997) and other researchers reporting limited support for those moderators (McLoyd & Smith, 2002; Simons, Johnson, & Conger, 1994; Straus & Mouradian, 1998). The current study was designed to investigate these potential moderators by studying a sample of parents that included mothers and fathers who had used a wide range of physical discipline (normative physical discipline to non-normative physical discipline) and who were from a variety of socioeconomic backgrounds. In addition, an observational measure of parenting style was used rather than the parent questionnaire/survey format used in other similar studies. Use of an observational means of measuring parenting style may provide for a more complete understanding of the relationships between parenting and children's behavior. The following chapter includes a discussion of the results of this study, limitations and directions for future research, and implications of this study.

Parenting Style and Children's Prosocial and Aggressive Behavior

It was expected that children who had experienced warm, responsive parenting would be more prosocial and less aggressive with peers compared to children who had experienced less nurturing parenting. There was partial support for this prediction. That is, parents who displayed more nurturing behaviors with their child had children who were rated as kind and helpful by their teachers. In contrast nurturing parenting did not appear to bear any relation to aggressive child behavior. Of the three measures of children's aggressive behavior, only

teacher's report of children's overt aggression was found to have a link with nurturing parenting. Thus there appeared to be little support for the association of nurturing parenting and aggressive child social behavior.

Results from the current study are consistent with previous research that has identified an association between a warm and supportive affective parenting style and children's prosocial behavior in toddlers (Zahn-Waxler, Radke-Yarrow, & King, 1979) and preschool-age children (Mize & Pettit, 1997). The current study identified similar results for school-age children, suggesting that the relationship between warm and supportive parenting and children's positive social behavior extends to older children. In addition, results from this study suggest that even in a sample that includes documented physical abuse, the relationship between nurturing parenting and children's prosocial behavior exists. In this research, both abusive and non-abusive dyads were included in an attempt to include the full-spectrum of parenting. It is informative to know that the associations between parenting style and child social behavior are present along the full continuum of parenting (normative to abusive), as several researchers (Baumrind & Owens, 2000; Deater-Deckard & Dodge, 1997) have previously suggested that abusive parenting was such an extreme form of parenting that it should not be included in studies of parenting. Those same researchers had suggested that the dysfunctional dynamics involved in abusive parenting appeared to bear scant resemblance to the dynamics of more normative parenting. That suggestion prompted Baumrind and Owens (2000) to remove dyads in which the parents had engaged in "non-normative physical discipline" from their study. Current findings do not support that assertion, in that the associations between parenting and children's positive behaviors were present in this sample

which included parents who had engaged in normative parenting as well as parents who had engaged in abusive parenting. In the current study, the relationship between nurturing parenting and children's prosocial behavior was investigated using correlational analyses, thus it is not possible to determine causality of the relationship. Future research should be conducted to investigate causal explanations of the relationship.

As noted above, in the current study there was a moderate association between nurturing parenting and aggression for one of the three indicators of aggression in children. Children whose parents were rated as more nurturant in a parent-child interaction were rated as less physically aggressive when compared to children of parents who were rated as less nurturing. Previous research on the association between nurturing parenting and children's aggressive behavior has resulted in inconsistent findings, with some researchers (Booth, Rose-Krasnor, McKinnon, & Rubin, 1994) reporting a strong link between a lack of parental warmth and children's aggressive behavior for a sample of non-clinic referred children, and other researchers (Frick, Christian, & Wootton, 1999) reporting no connections between positive parenting and children's aggressiveness in a clinic-referred group, and yet another group of researchers (Pettit, Bates, & Dodge, 1997) reporting that maternal warmth predicted lower aggression scores for African American children, but not for European American children.

The modest correlation for nurturing parenting and overt aggression, and the lack of support for an association between nurturing and relational aggression or negative playground behavior suggests caution should be used in interpreting the extent to which nurturing parenting is associated with aggressive behavior in children. Results from this

study do not conclusively support a relationship between nurturing parenting and child aggression. It is possible that the connection between parenting and aggression in children is more complex than the simple association assessed in this study and that other parameters such as ethnicity may be influencing that relationship.

Physical Discipline and Children's Prosocial and Aggressive Behavior

It was expected that parental use of physical discipline would be associated with children's social behavior such that parents who acknowledged using more physical discipline would have children who were less prosocial and more aggressive compared to children of parents who acknowledged using less physical discipline. In the current study, physical discipline was assessed with two measures. The first was a modified version of the CTS (Kaufman, Jones, Steiglitz, Vitulano, & Mannarino, 1994), a parental self-report of discipline based on the parents' recall of their discipline practices used in the previous three months. The second was the Punishment scale from the Cognitive Vignettes, which is comprised of 18 scenarios of children's misbehavior for which parents report their intended use of punishment. Prior to completing analyses, it was assumed that there would be a positive correlation between the two physical discipline measures, as previous researchers (Haskett, Smith Scott, Willoughby, Ahern, & Nears, in press) had identified a small positive correlation when using the larger database from which the current sample was drawn. However, analyses for the current study revealed a non-significant relationship between the two measures. Therefore analyses were conducted separately for the two measures of physical discipline.

While there was no relationship between either measure of physical discipline and the display of prosocial behavior by children, the relationship between discipline and aggressive behavior was significant for both measures of physical discipline. However, the associations between the two measures were dissimilar. Specifically, parents who reported higher levels of discipline used in the previous three months had children who were rated as more physically aggressive than did parents who reported lower levels of discipline. With respect to the link between intended punishment and aggression, parents who reported greater levels of intended punishment had children who were rated as *less* relationally aggressive when compared to children whose parents reported lower levels of intended physical punishment. That is, children who engaged in more relationally aggressive behaviors tended to have parents who reported *lower* levels of intended punishment for children's misbehavior. Intended punishment was unrelated to children's overt physical aggression or to children's aggressive behavior on the playground.

Physical discipline and prosocial behavior. The lack of a connection between physical discipline and prosocial behavior is in contrast to previous research. In a study of parenting behaviors and prosocial behaviors in toddlers, Locke and Prinz (2000) found that parents' use of negative discipline predicted children's prosocial behavior. Russell, Hart, Robinson, and Olsen (2003) reported similar relationships between parental discipline use and children's prosocial behavior for older children. In addition, Krevans and Gibbs (1996) reported a similar association between parental use of power-assertive discipline and middle-school-age children's lack of prosocial behaviors. Other research (Hart, DeWolf, Wozniak, & Burts, 1992; Hoffman & Salzstein, 1967; Krevans & Gibbs, 1996) has shown that parents

who primarily used inductive discipline methods had children who displayed higher levels of prosocial behavior when compared to the children of parents who had primarily used power-assertive discipline with their children. No other published research on the relationship between physical discipline and prosocial behavior was identified in a literature review, although research by Pettit, Bates, and Dodge (1997) explored the relationships between harsh parenting and middle-schooler's social skillfulness (i.e. children's ability to be aware of other's feelings and the effect of their own behavior on others). Results reported in that study also highlighted a connection between parental use of physical discipline and lack of children's positive social behavior.

Given past research, results of the current study that failed to identify a relationship between physical discipline and prosocial behavior were unexpected. There are several possible explanations for the current findings. First, most of the previous studies that have identified an inverse relationship between discipline and prosocial behavior have been based on either an observational measure of prosocial behavior (i.e. observed helping and sharing behaviors) and/or multiple rating scales of prosocial behavior. It is possible that the 5-item measure of prosocial behavior used in the current study (teacher ratings of children's prosocial behavior) was not sufficient to fully capture children's prosocial behavior. Second, many of the previous studies that have identified an inverse relationship between discipline and prosocial behavior have been focused primarily on two broad categories of discipline, specifically inductive and power assertive practices. In the current study, discipline was not categorized in this manner. Rather, one measure of physical discipline (CTS) assessed only past use of physical discipline and the other measure of physical discipline (CV-P) assessed

intended use of discipline. Thus it is possible that the focus in the current study on physical discipline, to the exclusion of other categories of discipline, may have resulted in failure to detect meaningful relationships between children's prosocial behavior and parental discipline tactics.

Contradictory results for two measures of physical discipline and aggressive behavior. The associations between physical discipline and children's aggressive behavior were also explored. The analysis of the association of the two measures of physical discipline and aggressive behavior resulted in significant, albeit contradictory findings. As expected based on past research (Stormshak, Bierman, McMahon, & Lengua, 2000; Strassberg, Dodge, Pettit, & Bates, 1994; Weiss, Dodge, Bates, & Pettit, 1992), parents' use of physical discipline (as measured by the CTS) was linked to their children's overt aggression. In contrast to expectations, parents' who reported higher levels of intended punishment for child misbehaviors had children who were rated as engaging in low levels of relational aggression.

In considering the relationship between reported levels of physical discipline and the other two indicators of children's aggressive behavior, it is unclear why there were not elevated levels of relationally aggressive behavior and negative behavior on the playground displayed by children whose parents had acknowledged using more physical discipline. One possible explanation may be due to the limited acknowledgement of use of physical discipline on the CTS. The modified version of the CTS is constructed of 20 questions about parental use of discipline techniques with their children in the previous three months. For purposes of this research, only the 11 questions that dealt with use of physical discipline were used. The potential range of scores for this measure was 11 to 33, but the range of scores

from this group of participants was only 11 to 21 with an average score of 14. Parents may have been hesitant to acknowledge using some of the more severe forms of physical behavior (e.g. “throw your child against a wall”) and thus the CTS may not have differentiated between parents who used severe physical discipline and those who used less severe physical discipline. It is possible that the restriction in the range of scores could have resulted in the non-significant relations with relational aggression and negative behavior on the playground.

There are several possible explanations for the unexpected relationship between intended discipline and children’s relational aggression in the current study. First, it is possible that there are other moderators of the relationship than those assessed in this study. Research conducted by Colder, Lochman, and Wells (1997) and Bates, Pettit, Dodge, and Ridge (1998) provides support for children’s temperament as a potential moderator of the relationship between physical discipline and children’s behavior. Colder et al. reported the highest levels of aggression in children who had the combination of high temperamental fearfulness and a history of physical punishment. Additionally, Bates et al. conducted similar research with children who were high in temperamentally based resistance to control. In that study, more appropriate behavior (including less aggressive behavior) in children with high temperamentally based resistance to control was associated with parental use of corporal punishment. Consequently it appears that temperament may play an important role in the connection between physical discipline and children’s aggressive behavior. As child temperament was not assessed in the current study, it is not possible to predict the influence of temperament on the current findings. Although it seems highly unlikely that the majority of the children in the current study would be high in temperamental resistance to control,

temperament remains one possible explanation for the unexpected negative association between physical discipline and children's relational aggression.

A second explanation is related to the structure of the CV-P. The CV-P contains 18 hypothetical vignettes describing children's misbehavior. Parents were asked to rate the degree to which they would punish the child in the vignette according to anchors provided to parents. A score of "1" represented no punishment at all, and a score of "9" represented severe punishment such as "spanking" while a score of "5" represented a mild consequence such as a "reprimand." Thus the most "severe" punishment that the parent could acknowledge on the CV-P was spanking. The highest score possible on the CV-P was 162 and a review of the scores for the CV-P revealed that the highest scores were in the 80's range while the mean score was 47. From these scores, it is apparent that no parents chose the most "severe" punishment of spanking for most child misbehaviors and that the majority of parent's scores reflected a moderate acknowledgement of spanking as a discipline technique. Thus scores from the CV-P did not necessarily provide an assessment of physical discipline; rather, the scores assessed parental use of different consequences for misbehavior including no consequence. It is possible that scores on the CV-P were not measuring parental tendency to use physical discipline per se rather the scores on the CV-P were a measure of parent's tendency to set limits on children's behavior. Parents with lower scores on the CV-P may actually be parents who had a tendency not to set limits on their children's behavior (i.e. permissive parents) whereas parents with higher scores on the CV-P may actually be parents who tended to monitor and correct their children's behavior (i.e. authoritative or authoritarian parents). In the current study, no concurrent traditional measure of "parenting style" was

utilized, therefore it was not possible to test this supposition. Previous researchers (Azar, 1989; Haskett, Bradshaw, Smith-Scott, & Little, 1999; Plotkin, 1983) have used both scales (Attribution and Punishment) of the Cognitive Vignettes to relate parental attributions of children's misbehavior and intended punishment for those same misbehaviors. They have not used the Punishment scale as a stand alone measure of physical discipline, and in the current study the CV-P was not strongly correlated with the other measure of physical discipline (CTS). Because it is not clear that the Cognitive Vignettes-Punishment scale can be used as a "pure" measure of physical discipline, future research should utilize other validated measures of physical discipline.

Nurturing Parenting as a Moderator

It was hypothesized that parenting style would attenuate the deleterious effects of high levels of physical discipline on children's prosocial and aggressive behavior. That is, nurturing parenting was hypothesized to provide a protective influence to (a) decrease the likelihood that children who had experienced high levels of physical discipline would engage in aggressive behavior and (b) increase the likelihood that those children would engage in prosocial behavior when compared to children who had experienced similar physical discipline without the buffering influence of nurturing parenting. There was no support for a moderating influence of nurturing parenting on prosocial behavior, and although there was support for nurturing parenting acting as a moderator of child aggressive behaviors, the effect was opposite to that predicted.

Moderation of prosocial behavior. To date, there has been no published research on the moderating influence of nurturing parenting on children's prosocial behavior. Nurturing

was proposed as a moderator based on previous research that had identified positive links between nurturing parenting and prosocial behavior (Mize & Pettit, 1997; Zahn-Waxler, Radke-Yarrow, & King, 1979), research that had identified negative associations between physical discipline and prosocial behavior (Krevans & Gibbs, 1996; Locke & Prinz, 2000), and research that supported the role of nurturing parenting as a moderator of child externalizing behaviors (Deater-Deckard, Dodge, Bates, & Pettit, 1996; Gunnoe & Mariner, 1997). Based on those bodies of research it was hypothesized that nurturing parenting would also influence the relationship between physical discipline and prosocial behavior.

The lack of a moderating role for nurturing parenting on the link between physical discipline and children's prosocial behavior may suggest that the linkages among these variables are more specific than originally proposed. For example, Pettit, Bates, and Dodge (1997) conducted a study in which they analyzed multiple indicators of supportive parenting (i.e. maternal involvement in their children's social contact with peers, calm discussion of conflict with child, and maternal warmth to child) from several assessment sources and they found that each indicator was independent of the other indicators and the indicators were related in different ways to child outcomes. Those results suggest a level of specificity to the associations of individual parenting and child behaviors. Therefore it is possible that the use of a composite nurturing parenting indicator in the current study diluted the associations of child prosocial behavior and nurturing parenting. To follow up on that possibility post-hoc analyses were conducted to determine if any single component (i.e. warmth, sensitivity, behavioral animation and engagement) of the Nurturing Parenting composite moderated the association of physical discipline and children's prosocial behavior. That analysis was

conducted despite the strong correlations, $r(137) = .52 - .75$ of the four individual factors that made up the Nurturing Parenting composite. There was no support for any of the four individual factors as protective factors for the influence of physical discipline on children's prosocial behavior. Future research using multiple, independent measures of parenting style may provide for greater understanding of the relationships among parenting, physical discipline, and children's prosocial behavior.

Moderation of child aggressive behavior. Parenting style has been hypothesized to have a moderating or buffering role on the associations of physical discipline and children's social behavior (Baumrind, 1991; Darling & Steinberg, 1993). Investigation of parenting style as a moderator of children's social behavior has included multiple facets of parenting style including parental acceptance (Rohner, Bourque, & Elordi, 1996), supportive parenting (Pettit, Bates, & Dodge, 1997) and parental warmth (Deater-Deckard & Dodge, 1997; Straus & Mouradian, 1998). In the current research, the construct of nurturing parenting style encompassed warmth, sensitivity, behavioral animation and engagement. Nurturing parenting was found to influence the association of one measure of physical discipline (CV-P) and both children's relational aggression and children's overt aggression. There was no indication of a moderating influence for the other measure of physical discipline (CTS) and any measure of child aggressive behavior.

Parents who engaged in low or average levels of nurturing parenting and had low levels of intended physical discipline had children who displayed the *highest* level of aggressive behavior with their peers. Parents with similar levels of nurturing parenting *and* the highest levels of physical discipline had children who displayed the *lowest* levels of

aggressive behavior with peers. This relationship is in contrast to the one identified for children who had experienced high levels of nurturing parenting as they displayed low levels of aggressive behavior at both low *and* high levels of physical discipline. Thus it appears that the presence of warm or nurturing parenting served to change the relationship between physical discipline and children's aggressive behavior. Despite apparent support for nurturing parenting as a moderator, the hypothesis was not supported because the direction of the relationship was opposite to that proposed. Rather than physical discipline being associated with high levels of child aggressive behavior as predicted, physical discipline appeared to be associated with *decreased* levels of aggressive behavior in children who had experienced low and/or moderate levels of nurturing parenting.

Why do low to moderate levels of nurturing parenting predict an inverse relationship for physical discipline and children's aggressive behavior? One potential explanation is related to the relatively large number of African American parents in the sample (93 AA, 42 EA, 2 Hispanic). Two previous researchers (Deater-Deckard, Dodge, Bates, & Pettit, 1996; Gunnoe & Mariner, 1997) had identified differential associations between physical discipline and children's aggressive behavior based on ethnicity. Those researchers had reported a positive association between physical discipline and aggressive behavior for EA children and a negative or non-significant relationship between physical discipline and aggressive behavior for AA children. Post-hoc analyses were conducted in this study to determine if the nurturing moderation effect was different based on ethnicity. When analyses were conducted separately for African American children and European American children, moderation effects were identified only for the AA sample and there was no moderating relationship

apparent in the EA sample. As the current sample was predominantly African American (68%), it is possible that the results for the full sample were unduly affected by the larger number of African American children. Future research utilizing larger samples of European American children may help validate these post-hoc analyses.

Child Gender as a Moderator

Child gender was also predicted to influence the association of physical discipline and children's prosocial and aggressive behavior. It was predicted that boys who had experienced high levels of physical discipline would engage in less prosocial behavior and more aggressive behavior than would girls who had experienced similarly high levels of physical discipline. Earlier research by Gunnoe and Mariner (1997) identified a positive relationship for physical discipline and aggressive behavior for boys, and no association between physical discipline and aggressive behavior for girls. Other researchers (Deater-Deckard & Dodge, 1997; Gershoff, 2002) had proposed gender as a potential moderator of the association between physical discipline and children's social behavior because boys and girls may respond differently to parental use of discipline. In the current study, analyses did not support child gender as a moderator of the association between physical discipline and children's social behavior.

Deater-Deckard and Dodge also suggested that the gender match between parent and child could influence the relationship such that when there is a gender match the effect of the discipline would be intensified. Their reasoning for this hypothesis was related to the idea that children viewed same-gender parents as role models and thus would be more likely to model the same-gender parent's behavior. In Gershoff's (2002) meta-analysis (subsequent to

the Deater-Deckard article) of corporal punishment and child social behavior, there was no support for the modeling hypothesis for same-gender dyads.

In the current study, post-hoc analyses were conducted to explore parent-child gender match as a moderator of the relationship between physical discipline and child social behavior. It was not possible to conduct analyses of maternal versus paternal parenting due to the small sample of fathers ($n = 18$). However analyses of mother-daughter and mother-son dyads were conducted to examine the moderating role of same-gender dyads on the association of physical discipline and children's social behavior. There does not appear to be strong support for the parent-child gender match hypothesis in the current study; of the eight tests of moderation conducted, there was only one significant interaction. The relationship between physical discipline and children's negative behavior on the playground was moderated by parent-child gender match. That is for mother-son dyads, high levels of negative behavior on the playground were associated with low levels of intended physical discipline, however, for mother-daughter dyads low levels of negative behavior on the playground were associated with low levels of intended physical discipline and high levels of negative behavior were associated with high levels of physical discipline (see Appendix G).

Moderation by Ethnicity?

A research question was posed as to whether ethnicity would influence the association of physical discipline and children's social behavior. Previous research has resulted in conflicting findings regarding this question, but results from the current study do provide limited support for ethnicity as a moderator of the association between parental intended physical discipline and relational aggression in children. It is important to put the

significance of this singular finding in perspective; of eight potential interactions only one interaction was significant. There were no significant moderating effects on overt aggression or prosocial behavior. Further, ethnicity did not moderate the impact of parental use of physical discipline on any measured child social outcome.

For European American children there was a positive relationship between physical discipline and relational aggression while there was an inverse relationship between the two for African American children. European American children who had parents that acknowledged low levels of intended punishment had low levels of relational aggression. At high levels of intended punishment, EA children had slightly higher levels of relational aggression. In contrast, African American children who had parents that acknowledged low levels of intended punishment had high levels of relational aggression. At high levels of intended punishment, AA children had low levels of relational aggression.

One explanation that has been offered by several researchers (Deater-Deckard & Dodge, 1997; Whaley, 2000) for differences based on ethnicity is that physical discipline may have differential meanings across cultures. These researchers suggested that cultural acceptance of spanking and prevalence of spanking in a culture may result in children from different cultural groups viewing spanking as an appropriate or inappropriate form of discipline. The child's cognitions about the appropriateness of the use of physical discipline may change the relationship between physical discipline and children's aggressive behavior with peers. As for the "different meaning" of spanking in different cultures, Whaley (2000) suggested that in the African American community spanking had historically been seen as one way that parents helped their children survive in an oppressive society. According to

Whaley, this view of spanking and other beliefs that are child-oriented hold spanking to be a technique that helps to train children to become functioning members of the society, whereas a parent-oriented approach to spanking is one in which spanking is used to teach children “obedience to parental authority” (p. 6). Thus it is possible that African American children view physical discipline as “for their own good.” This “positive” view of physical discipline may result in differential effects on child social behavior compared to children who hold less favorable views of physical discipline.

It is also possible that there were other factors that influenced the connection between physical discipline and children’s relational aggression and that those factors resulted in the inverse findings for African American children compared to European American children. For example, the use of corporal punishment may be concurrent with a parent being highly involved with their child and it is the involvement and not the corporal punishment per se that is associated with the lower level of physical aggression. Only the corporal punishment was measured in this and other studies that have identified a negative link between physical discipline and child aggression in African American children.

Limitations of the Study and Future Directions

Interpretation of the results of this study would not be complete without a discussion of the limitations of this study. The findings of this work were based primarily on correlational statistics, thus it is important for the reader to bear in mind that *associations* between parental behavior and children’s social behavior were examined and that this work did not examine directional effects from parent behavior to child behavior. Perhaps one of the most important avenues for future study is determining how parenting behavior and

children's peer interactions are related. As this study was not designed to explore causal mechanisms of children's social behaviors, it is not possible to discuss mechanisms from the results of this study. Future studies designed to specifically assess the causal dynamics of this relationship should be conducted. Intervention studies, in which treatment was aimed at parental nurturing behavior, parental use of discipline, or children's social behavior may supply information about the causal nature of this association.

One limitation of this study is related to the ethnic composition of the sample. Previous researchers (Deater-Deckard, et al., 1996; Gunnoe & Mariner, 1997) have reported conflicting relationships between physical discipline and children's social behavior based on ethnicity. As the sample in the current study was primarily (68%) African American and post-hoc analyses revealed that when tests for moderation were conducted separately for African Americans and European Americans the only interaction effects were identified for African Americans, it is possible that the group results are most representative of the AA sample. Future research should include sufficient sample sizes for both EA and AA samples to more fully elucidate the relationship among physical discipline, parenting, and children's social behavior for both ethnic groups. In addition ethnicity as assessed in the current study only provides a broad marker of racial identification, and it does not give any information about the underlying factors that are responsible for the differences based on ethnicity. It is highly unlikely that the differential findings based on ethnicity are related to group differences (i.e. African American compared to European American) rather it is more likely that underlying factors such as religiosity, cultural acceptance of physical discipline, or cultural parenting norms are responsible for the differential findings based on ethnicity

(Deater-Deckard & Dodge, 1997; Whaley, 2000). Therefore future research that explores these underlying factors may supply insight into the nature of ethnic differences.

Another limitation of this study is the small number of fathers included in the sample. Until recently fathers were typically omitted from parent-child research, and despite recent trends to include more fathers in parent-child research there is still parent gender inequity notable in this research domain (Ladd & Le Sieur, 1995). Unfortunately despite active attempts to recruit fathers into this study, most of the parents involved in this study were mothers (86%). There is evidence to support the idea that the relationship between parenting and children's behavior may be different depending on the gender of the parent included in the research (Kahen, Katz, & Gottman, 1994; Pettit, Brown, Mize, & Lindsey, 1998), thus the paucity of fathers included in this research disallows greater understanding of the influence of parent gender on child behavior. Future research on this topic should focus specifically on the possibility of parent gender and/or the combination of parent/child gender influencing the relationship between parenting and child social behavior.

The measures of physical discipline were potential limitations of this study. Prior to completing the analyses for this study, it was assumed that the two measures of physical discipline would be correlated as they had been in the larger sample from which this sample was drawn (Haskett, Smith Scott, Willoughby, Ahern, & Nears, in press), yet in the current study the correlation between CTS and CV-P was insignificant. This lack of correlation was problematic for several reasons. First, due to the non-significant relationship between the two measures of physical discipline all analyses had to be completed with each measure of physical discipline separately. This increased the number of statistical analyses that had to be

conducted thus increasing the chance of a Type I error. Second, there were contradictory results with the two measures of physical discipline. Therefore rather than elucidating the relationship between physical discipline and children's behavior this study actually produced more questions than answers as to the nature of the relationship between physical discipline and children's behavior and moderators of that relationship. Third, the contradictory results from the two measures of physical discipline prompted questions to be asked about the validity of one measure of physical discipline (CV-P). Assessing parental use of physical discipline is a difficult undertaking due to the potential social stigma attached to using physical discipline and the risk for underreporting use of physical discipline by parents concerned with appearing socially appropriate. Future studies exploring the relationship between physical discipline and children's social behavior may find more meaningful results by assessing physical discipline in a longitudinal study design rather than through retrospective methods, and by gathering information on use of physical discipline by multiple informants (i.e. mother, father, and child).

Another limitation of this research is related to the assessment of prosocial behavior. It would have been very helpful to have a concurrent behavioral measure of children's prosocial behavior, especially since the SBS included only 5 items on the Prosocial scale. Much of the previous research on the relationship between prosocial behavior and parenting has been conducted with behavioral measures of helpful, friendly, and kind behavior. Thus the relative lack of significant relationships in the current study may be a result of the poor measurement of prosocial behavior. Further studies assessing prosocial behavior and

parenting may provide a more complete understanding of the relationship by using observational measures of prosocial behavior in children.

One final limitation is related to the possibility of moderators not examined in this study influencing the relationship between parenting behaviors and children's social behavior. For example, child temperament has recently been suggested as a moderator of the relation and researchers (Bates, Pettit, Dodge, & Ridge, 1998; Colder, Lochman, & Wells, 1997) have reported differential child responsiveness to parental use of physical control based on the temperament of the child. That is, children with temperaments that are characterized as more resistant to control tend to respond more appropriately when their parents use corporal punishment as compared to children that are characterized as more temperamentally fearful. In the current study there was no assessment of temperament, thus it is not possible to speculate whether the differential findings based on ethnicity are related to temperament differences rather than ethnic differences. Thus future studies may want to include an assessment of temperament to determine if temperament moderates the link between physical discipline and children's social behavior.

Conclusions and Implications of this Study

Within the research community and the lay public alike there are polar opposite opinions as to the effectiveness of corporal punishment as a parenting technique and to whether the relationship between physical discipline and children's social behavior is detrimental. Thus this research was undertaken to provide additional insight into the nature of the relationship between two aspects of parenting (the affective nature of parenting and the use of physical discipline) and two aspects of children's social behavior (prosocial and

aggressive). Unfortunately results from this study do not support a simple or clear-cut explanation of the relationship between parenting behavior and children's behavior, rather the results provide some insight and ample avenues for future exploration of these relationships.

There are two general conclusions that can be drawn from this study. First, the affective aspect of parenting appears to be important in understanding the relationship between parenting and children's social behavior. Warm parenting was related to children's positive behaviors and warm parenting also served to weaken the relationship between physical discipline and children's aggressive behavior. Thus high levels of nurturing parenting appeared to function somewhat as a protective factor in this study.

Second, there is some support for ethnicity changing the connection between parenting behaviors and children's social behaviors. There was evidence of differential predictions of children's aggressive behavior based upon parental intention to discipline and ethnicity. African American children appeared to engage in more aggressive behavior with peers when their parent's intended discipline was low, and less aggressive behavior when parental intended discipline was high. In contrast, European American children appeared to react to both low and high levels of intended parental discipline with similar levels of aggression.

Results of this research may help to deepen the understanding of the complex associations between parenting and outcomes for children. Although this study does not provide definitive information on the relationship between physical discipline and children's social behavior, results do provide for a broader understanding of how and under what

circumstances physical discipline predicts negative consequences for children. There is substantial support for the importance of positive peer behaviors as a marker of present and future adjustment, and the ability to interact with one's peers in a positive and non-aggressive manner is an essential skill that children need to develop. Results of this study have two implications for intervening with children who are experiencing difficulties with peer interactions.

This research highlights the importance of considering the affective nature of the parent-child relationship for children who are experiencing difficulties with peer social interactions. In addition, findings point to the importance of considering cultural background in development of interventions. Currently most interventions used for improving children's social behavior provide for a basic "one-size fits all" approach to treatment. Results of this study suggest that there may be important cultural differences that should be considered in developing treatment plans for children and families. For example, many parenting treatment groups teach parents that corporal punishment or physical discipline is an unacceptable form of discipline. Due to cultural and societal norms, many parents may find this message counter-intuitive or difficult to accept, and thus these parents might be less likely to accept the other information provided in the treatment group. If parents feel that treatment providers do not understand their culture and the importance given to corporal punishment by that culture, it is possible that parents will not "buy-in" to any of the parenting strategies provided by the treatment provider or that parents will simply drop out of treatment. Ultimately the goal of future research in this area should be to provide for a better understanding of the etiology of children's social difficulties and treatment for those difficulties.

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Appendix A

PSYCHOSOCIAL INTERVIEW

Parent Information

Birthdate: _____ - _____ - _____ Age: _____ Gender: _____
 Relationship to child: _____ Race: _____ Level of Education: _____
 Phone #: _____ Address: _____
 Occupation: _____ Marital Status: _____
 Income: List sources (AFDC, food stamps, salary, child support) and total mo. or yr. _____

Recent therapy? ___ Treatment for substance abuse? ___ If yes, describe _____

Current medication? ___ If yes, list _____
 K-BIT Score: _____

Child Information

Name: _____
 Gender: _____ Date of Birth: _____ Age: _____ years _____ months
 Grade _____ School _____ Teacher _____
 Current medication? _____ If yes, list the medication(s) and reasons: _____

Recent therapy or counseling? _____

K-Bit Score: _____

List other family members living in the home (Use reverse if necessary):

Relationship to child	Age	Gender
-----------------------	-----	--------

How long have you been working with _____?

Obtain information about the circumstances of PS involvement.

Special Activities

What kinds of things do you do with your child?
 Do you like to go places with your child? Where do you go?
 Do you read books, put puzzles together or cook together?
 Do you play outside together? What do you do outside?

Communication

How much does your child talk to you about what s/he has been doing or what s/he's interested in?
 Do you set aside special time to talk to your child? When?
 What kinds of things does you child talk to you about?
 Does s/he tell you about what s/he has been doing in school?
 Does s/he tell you about his/her friends and if s/he has any problems with his/her friends?
 Does s/he tell you about things s/he is interested in - singers, clothes, records or sports?

Discipline Issues

In the next section, different disciplinary approaches will be surveyed. Prior to asking about the use of specific approaches, engage the parent in a general discussion to get information about the types of situations that elicit disciplinary action. These questions will provide examples to discuss the use of different disciplinary techniques.

Note: Reassure parent that you ask these questions to everyone as part of the interview. Do not be judgmental; normalize parents' responses with remarks like, "A lot of parents lose their temper with their children."

A. Open-ended questions:

- What kinds of things do you have to discipline your child for?
- What kinds of things does your child do that get on your nerves?
- How do you usually discipline your child?
- What do you usually do when your child:
 - Hits another child?
 - Hurts someone's feelings?
 - Doesn't take turns or play nicely with another child?
 - Makes a mess with his/her toys?
 - Doesn't listen to you or obey you?

B. Conflicts Tactics Scale - Modified

How often in the last three months have you

Rating Scale: 0 = No information; 1 = Never; 2 = Once, isolated incident; 3 = More than once

Reasoned with your child	0	1	2	3
Shouted at your child	0	1	2	3
Given your child a time out in a chair	0	1	2	3
Sent your child to their room	0	1	2	3
Grounded your child	0	1	2	3
Taken away privileges	0	1	2	3
Ignored your child	0	1	2	3
Ridiculed or made fun of your child	0	1	2	3
Threatened to hit your child	0	1	2	3
Threatened to leave child or send child away	0	1	2	3

C. Have you ever.....? If yes, how often? When?

If yes to any of the following, assess severity

	0	1	2	3	When?
Slapped child on hands, legs, or buttocks	0	1	2	3	_____
Slapped child on face or neck	0	1	2	3	_____
Hit or punched your child	0	1	2	3	_____
Hit your child with a strap, belt, or rope	0	1	2	3	_____
Hit your child with stick, paddle, or other hard object	0	1	2	3	_____
Shaken your child or pushed your child	0	1	2	3	_____
Pulled your child's hair	0	1	2	3	_____
Thrown your child against wall	0	1	2	3	_____
Bitten your child	0	1	2	3	_____
Burned your child	0	1	2	3	_____
Other (specify)	0	1	2	3	_____

Sexual Abuse History

Has your child ever suggested that someone touched them inappropriately? Fondled them?

Touched them in their private parts?

Have you ever had any concerns that this may have happened to your child?

What has made you concerned about this?

Experiences of Trauma

If parent answers yes to any of the following ask for a description, including:

1. When this occur?
2. Who was involved?
3. What was the children's reaction? What was your reaction?
4. Did the child receive counseling following this event?

Ever experienced any serious accident or illness, requiring emergency room treatment or extended hospitalization?

Ever experienced a physical assault by an adult or a serious assault by a peer?

Ever witnessed a serious accident in which someone was hurt?

Ever witnessed the assault or death of another person?

Ever been involved in a natural disaster?

Ever witnessed a physical fight between adults in his/her family?

Methods of Conflict Resolution

"How do you and your {husband/wife/boy or girlfriend} usually solve your disagreements?" Probe about specific areas of conflict raised in previous questions (e.g., housework, childrearing). Let parent answer spontaneously.

"Couples use many different ways to settle their disagreements. I'm going to read a list of ways couples sometimes solve differences, ways that you haven't mentioned yet. Let me know if you and your spouse have used any of these ways in the past 2 years."

Rating Scale: 0 = No information; 1 = Never; 2 = Once, isolated incident; 3 = More than once

Discussed an issue calmly	0	1	2	3
Argued heatedly, but short of yelling	0	1	2	3
Yelled	0	1	2	3
Insulted or swore at one another	0	1	2	3
Stormed out of room or house	0	1	2	3
Threatened to hit or throw something at other	0	1	2	3
Threw, smashed, hit or kicked something	0	1	2	3

If yes to any of the following, dismiss

Threw something at the other one	0	1	2	3
Pushed, grabbed, or shoved the other one	0	1	2	3
Slapped, hit, or kicked the other	0	1	2	3
Beat up the other one	0	1	2	3
Used weapon (specify)	0	1	2	3

Appendix B

Scales for Coding Parent-Child Interaction

Introduction

These scales will be qualitative ratings of three 10-minute parent–child interactions. They are an adaptation of scales developed by Cox (1997) for observing parent-child behaviors for young children but are adaptable for use with older children. The scales are to be used to code behaviors from five categories of interaction, Sensitivity, Intrusiveness, Detachment/Engagement, Positive Regard for the Child, Negative Regard for the Child and Flat Affect. The scales are scored on a seven point Likert type system.

The process of observation should unfold as follows. The observer should watch the designated ten-minute segment of the tape completely taking minimal notes relating to the chosen categories. These notes should include initial impressions of the interactions under scrutiny and significant behaviors observed that support these impressions. Subsequent to watching the tape, the observer should decide if the interaction was “characteristic” or “not characteristic” of the interaction and a preliminary score should be assigned (See scoring criteria on p.2)

The tape should be watched a second time with careful note taking of the parent and parent-child behaviors relating to the categories. After the second viewing, a final specific score should be assigned for each category under consideration. The tape may be stopped at any time and rewound to review key segments or behaviors.

These guidelines need to be maintained throughout the project. A standard and repeatable procedure is one of the best ways to ensure reliability. As you become more familiar with the scale, the rating of behaviors will become more fluent. With practice, it will be possible to rate several categories at the same time. The ratings should be made on both the quality and quantity of behaviors. That is, the characteristics of the behavior should be noted in proportion to the frequency of their occurrence. For example, if a parent displays a general characteristic of warmth and support for the child punctuated by one incident of irritation, that incident, however discordant, should not be the sole basis for rating the parent’s behavior as not characteristic of warmth and support.

Scoring

The Likert type scoring of the scales consists of ratings from one to seven. In assigning a number to the observed behaviors a two-step process should be employed. First, the observer should ask him or

herself, “Is this behavior characteristic of the category being applied?” If the answer is affirmative, an initial rating of 5, 6, or 7 should be assigned depending on the strength and frequency of the assigned behavior. If the observer determines that the behaviors observed are “not characteristic” of the category, a rating of 1, 2, or 3 is assigned. The middle number, “four”, will be used as a midpoint determinant of the behavior to answer the question “Is the category characteristic or not characteristic of the observed behavior”.

The second step in the scoring process is to assign a specific 1-7 score in each category under consideration. This final scoring should take place after viewing the tape a second time and be reviewed during the third viewing. Conceptual markers to use in both the initial and final assignation of numbers are the following: “one” indicates that the applied scale is not at all characteristic or indicative of the observed interaction, “three” suggests the interaction is slightly or minimally indicative of the interaction, “five” indicates the behaviors observed are significantly or predominantly characteristic of the interaction and “seven” suggests that the interactions are exceptionally indicative of the behavior category under consideration.

Scale Categories

Positive Regard for the Child:

Rationale: The category represents the parent’s positive feelings towards the child as expressed during interactions with him or her. Positive feelings may be shown by (a) speaking to the child in a warm soft tone of voice, (b) hugging or other expressions of physical affection, (c) an expressive face, smiling, relaxed, oriented toward the child, (d) positive verbal behaviors shown by praising, joking, laughing, (e) listening to the child, making eye contact when talking, watching attentively and appearing playful.

Ratings on this category are based on both the quantity and quality of positive behaviors.

Quantity is simply the frequency with which representative behaviors are demonstrated

Quality refers to the intensity of the behavior and may be thought of as levels of expressiveness, enthusiasm, playfulness and or warmth

1= Not at all characteristic: Parent shows none of the behaviors noted above either physical or verbal. For example, the parent initiates no physical contact with the child and demonstrates no verbal affection. The parent may appear negative with the child or neutral, flat or expressionless. This rating may also be applied if the positive expression seems inappropriate to the situation (laughing at

child non-compliance or giving clearly unwanted physical contact). Quality and quantity of behaviors are both non-existent.

2

3=Minimally characteristic: Parents display some positive verbal and/or physical behavior toward the child but it is minimal, weak in quality and/or infrequent in quantity. The parent may praise the child one or two times and smile infrequently with the child. The predominant (more than half) impression of the interaction is neutral/disengaged, intrusive or negative.

4

5=Moderately characteristic: Parents display predominantly positive behaviors toward the child with more frequent behaviors of higher quality. The sense of the interaction is clearly more positive than the 3 rating but positive regard waxes and wanes. Physical contact appears to be nurturing to the child. Praise is appropriately timed.

6

7=Very characteristic: Parents are exceptionally high in physical and verbal expressions of positive regard extending throughout the session. There are frequent expressions of praise, almost constant smiling and joking. Parents seem lighthearted and clearly delighted by the child.

Negative Regard for the child

Rationale: The category represents both the frequency and intensity of negative affect and behavior toward the child. Behaviors indicative of this category include (a) expressions of disapproval (Not appropriate limit setting (e.g. don't throw the blocks.) (b) harsh negative tone of voice when speaking with the child (negative does not mean monotone), (c) tense body and or tense facial muscles evidence of frustration with the child and/or a strained or pained expression, (d) threatening the child and or punishment without explanation, (e) physical roughness, and (f) belittling the child, put downs, use of unflattering names and sarcasm. Intrusive behaviors are scored by another category and should not be considered for this category unless there is a punitive quality to them.

Ratings on this category are based on both the quantity and quality of negative behaviors.

Quantity is simply the frequency with which representative behaviors are demonstrated

Quality refers to the intensity of the behavior and may be thought of as levels of tension, harshness or disapproval within the session.

1=Not at all characteristic: This rating should be assigned to parents who do not display any negative verbal or physical behaviors. No evidence of anger, frustration, disgust or dislike should be evident in

parent's voice or facial expression. The parent may appear positive or expressionless and flat but not negative.

2

3=Minimally characteristic: This rating should be given to parents who are minimally negative with low frequency and intensity of negative expressions or behaviors. There may be instances of frustration with what the child is doing but positive and neutral expressions may also be observed.

4

5=Moderately characteristic: This rating should be assigned to parents who predominately (more than half) display negative verbal and or physical behaviors but may display some neutral and even positive behaviors as well. Persistent low-intensity negative behaviors or some evidence of high-intensity negative regard are observed.

6

7=Highly characteristic: Feelings of negative regard are expressed strongly, or consistent levels of negative behaviors are observed. The overriding affect pervading the parent-child interaction is negative.

Sensitivity/Supportive Presence

Rationale: This category primarily refers to parental behaviors observed in relation to evolved free play, clean-up and puzzle solving activities. Either the parent or the child may have chosen the activity. The process after the initiation of the activity is the important point. The focus is on how the parent helps the child have positive play and learning experiences especially when the child is dealing with a difficult task (puzzle) or a chosen activity during the free play session. The sensitive and supportive parent shows a balance between allowing the child to play or work autonomously while maintaining a level of involvement and support that ensures the child will succeed in and enjoy the experience. If, for example, a child is having difficulty with a task, the parent may be verbally reassuring and encouraging, may give a suggestion or hint and perhaps lean physically closer to the child. A sensitive interaction is well timed to the child's responses (no long pause between child behavior and parent response) and appears to be in "sync" or appropriate with what the child seems to need. The parent helps keep the child interested if need be and also allows for autonomy when desired by the child. A sensitive parent helps the child regulate frustration, boredom, and anger with encouragement and the parent can adapt his or her interactions to the child's mood and effort.

Conversely, a parent scoring low in the category fails to provide supportive cues to the child, may appear passive, aloof and uninvolved or conversely intrusive, taking over the interaction. He or she may give the impression of greater concern for personal behavior and perceived adequacy as a parent rather than of the child's feelings or actions. The parent may appear to be performing for the camera, for example.

Ratings on this category are based on both the quantity and quality of sensitive/supportive behaviors.

Quantity is simply the frequency with which behaviors are demonstrated

Quality refers to the intensity of the behavior and may be thought of as levels of verbal support, encouragement connection with the child within the session.

1=Not at all characteristic: There are no signs of parental sensitivity or support for the child. The parent is either totally intrusive (ignoring the child's need to do things for him or her self and/or directing the child's behavior) or detached, aloof or unavailable. The parent does not respond appropriately to the child's verbal and physical cues (looks for help) and interactions are primarily ill timed or inappropriate. The parent completely fails to be supportive of the child.

2

3=Minimally characteristic: The parent gives some support but it is sporadic and poorly timed to the child's needs. The child may look frustrated and/or ask for help and the parent fails to respond in a brief time. ("Give it another try" is an appropriate initial response). The dominant mode is one of parental insensitivity i.e. intrusiveness although some positive behaviors like encouragement or praise may also be noted.

4

5=Moderately characteristic: The parent provides good but occasionally inconsistent support, reassurance and confidence in the child's ability during activities and tasks. The parents are, however, predominantly (more than half the time or in half the interactions) supportive and sensitive but some supportive responses may be ill timed

6

7=Highly characteristic: This parent skillfully and sensitively provides support throughout the sessions. The parent sets up the situation demonstrating confidence in the child's ability to complete the activity. If the child is having difficulty, the parent finds a way to encourage whatever effort the child makes. Although inadequate efforts may be rejected, this is done with sensitivity and confidence

in the child. This rating should be assigned to parents who are exceptionally sensitive. Interactions with the child are characteristically well timed and appropriate

Detachment/Disengagement

Rationale: This category represents the level of parental interest and emotional involvement with the child, as they play together or work to complete the assigned tasks. The detached parent seems unaware of the child's need for interaction and does not respond to the child's looks, cues or vocalizations. The parent may sit quietly aloof not paying attention to the child and there seems to be little relationship between the child's behavior and the parent's response to it. The child may initiate conversation, for example, and the parent does not respond or responds inappropriately. The parents' behavioral timing seems out of synchrony with the child's affect and behavior.

Simply allowing the child to complete the puzzle or play by him or herself is not necessarily a sign of detachment. This may be appropriate if the child is doing well and is happy and the parent checks in with the child visually. The detached parent seems passive, emotionally uninvolved, bored and unenthusiastic about what the child is doing. Behaviors suggestive of detachment may include (a) facing away from the child without attempting to visually check in, (b) infrequent eye contact or conversation, (c) not responding to the child's vocalization and or smiles, and (d) ignoring what the child is doing. Being intrusive and even negative is not being detached.

Ratings on this category are based on both the quantity and quality of negative behaviors.

Quantity is simply the frequency with which behaviors are demonstrated

Quality refers to the intensity of the behavior and may be thought of as levels of indifference and a lack of involvement within the session.

1=Not at all characteristic: This rating should be given to parents who display no detachment or underinvolvement. When interacting with the child, the parent is clearly emotionally involved (talking with and being oriented to the child). These parents may be sensitive to the child's needs or intrusive as rated by other categories.

2

3=Minimally characteristic: This rating should be assigned who display minimal detachment. They may briefly look away from what the child is doing or not respond to everything the child says. While the parent is sometimes uninvolved, he/she is clearly more involved than not.

4

5=Moderately characteristic: This rating should be given to parents who appear predominantly (more than half the time) detached. They are observed to be verbally and/or physically aloof from the child, facing away more often than being oriented to the child and frequently not responding to the child's conversation. The parent is relatively more uninvolved than involved.

6

7=Highly characteristic: This rating should be assigned to parents who are so detached that it seems worrisome. The child sits without parent attention almost the entire time even when the parent is in close proximity. The parent may move away from the child or withdraw emotionally.

Intrusiveness

Rationale: A parent scoring high in this category lacks respect for the child as an individual and fails to recognize or understand the child's need for autonomy and independence. The parent interferes with the child's needs, desires, interests or actual behaviors and dominates or leads the interaction. Setting appropriate behavioral limits for the child with directives is not necessarily intrusive. Intrusiveness may be reflected by a parent's failure to follow the child's lead in interactions. Choosing the activity during play sessions is intrusive. Intrusiveness can also occur in a physical manner (a) grabbing the child's hands and placing them somewhere else or (b) inappropriate affection such as hugging or kissing that interferes with the child's efforts. The parent may be verbally intrusive by (c) imposing directions or not allowing the child to make suggestions or pursue independent efforts.

It is also important to observe the context of parental intrusions referring to child behaviors that precede them (looks of helplessness for example) and child responses to the behaviors (signals to back off and/or frustration). What may seem intrusive to the coder may not be to the child. These context clues are highly subjective, however, and if clear evidence of parental intrusion is present it should be scored as such.

Ratings on this category are based on both the quantity and quality of intrusive behaviors. **Quantity** is simply the frequency with which behaviors are demonstrated. **Quality** refers to the intensity of the behavior and may be thought of as levels of intrusiveness and parental control within the session.

1=No intrusiveness: No signs of intrusiveness are present. The parent may be involved with the child yet continue to give sensitive encouragement while allowing the child to choose activities and decide

how to complete them. The parent may alternatively, appear totally uninvolved with the child and appear detached or withdrawn. In either case, the parent does not impose directives or suggestions on the child unless the child needs or asks for that direction. If directives or suggestions are given, it is a manner showing patience and respect for the child. A parent may also offer the child help and let the child decide to accept or reject it. If requested, the parent will allow the child to work alone.

2

3=Moderately low intrusiveness: There is some evidence for intrusiveness but it is not pervasive. The parent may initially choose the play activity but then allow the child to take the lead in play. The instances that do occur are of low intensity and may not interfere materially with the child's need for autonomy. Directives may be poorly timed, for example.

4

5=High intrusiveness: There are clear incidents of intrusiveness throughout the sessions and it is clear that the parent's agenda has precedence over the child's needs and interests. There may be either some "high intensity" interactions (physically directing the child) or persistent "low" level intrusive interactions such as frequent but not constant suggestions as to how activities should proceed. For example, the parent may physically direct behavior more than once or may appear uninvolved for long periods but whenever there is an interaction appear consistently intrusive.

6

7=Very high intrusiveness: The parent is highly intrusive. The parent's runs the show and almost constantly intervenes inappropriately without cues from the child with a stream of directives and suggestions. Highly intrusive parents seem to react to their own schedule rather than basing their actions upon the needs of the child. The parent is domineering and may demonstrate power assertive techniques (threats) to get the child to comply either with verbal commands or physical directives.

Flatness of Affect

Rationale: This category represents the parent's level of animation in face and voice. Flatness is exhibited by blank impassive facial expressions and monotone vocal expressions. It is marked by a lack of animation or apparent energy. Parents who display intrusive and negative verbal behaviors or expressions with their children are not flat. Also, if the parent is not expressing much verbal animation but is watching the child with interest, (e. g. eyes bright, smile on the lips, oriented toward

the child), it is a sign that the parent's affect may not be flat. The parent may simply be reserved. This category assesses the parent's overall demeanor not just animation with the child. Behaviors are rated not what is being said.

Ratings on this category are based on both the quantity and quality of flat behaviors

Quantity is simply the frequency with which behaviors are demonstrated

Quality refers to the intensity of the behavior and may be thought of as levels of flatness or blankness.

1=Not at all characteristic: This rating should be assigned to parents who exhibit no flatness. There is consistent animation in the parent's demeanor, behaviors and voice.

2

3=Minimally characteristic: This rating should be given to parents who exhibit some flatness. The parent is usually animated but there is some time when facial expression is blank and impassive and the voice is monotone.

4

5=Moderately characteristic: This rating should be assigned to parents who are predominantly flat (more than half the time). Infrequent periods of animation may alternate with more clear and prolonged periods of flatness

6

7=Highly characteristic: There is a consistent absence of animation in expression and/or voice.

Scoring Sheet for Parent-Child Interactions

Name _____
 Parent ID# _____

Date _____
 Child ID# _____

Segment 1 2 3

1. Positive Regard

Notes

1
2
3
4
5
6
7

2. Negative Regard

Notes

1
2
3
4
5
6
7

3. Sensitivity/Support

Notes

1
2
3
4
5
6
7

4. Disengagement/Engagement

Notes

1
2
3
4
5
6
7

5. Intrusiveness

Notes

1
2
3
4
5
6

7

6. Flat Affect

Notes

1
2
3
4
5
6
7

- _____ 5. This morning you asked your preschool child to tie his/her shoelaces for the first time her/himself. Later you check to see if s/he did what you asked and you see that s/he had not.
- _____ 6. Your 3 year-old was at home and told you that s/he was going to the restroom. As s/he went into the restroom, s/he said, "Look at me, how good I am." You join her/him in the restroom as s/he is laughing and looking right toward you while s/he is urinating all over the floor and her/his clothing.
- _____ 7. You give your infant a bottle and come back a few minutes later and see him/her drop the bottle, which breaks on the rug.
- _____ 8. Your 7 year-old has the flu and is sick in the bed with a fever and stomach ache. When you take him/her his/her supper, s/he refuses to eat.
- _____ 9. Shortly after you punished your 5 year-old, you tell her/him to play quietly with her/his toys. Very soon after this instruction s/he stands up, looks at you in the eye, throws a toy at an expensive lamp, breaks its, and then laughs.
- _____ 10. Your preschool child is in the next room and you do not know what is going on in there. You ask him/her for a favor but there is no reply.
- _____ 11. As your 3 year-old child is walking him from the store with you s/he remarks that s/he has to go to the bathroom – s/he no longer can wait. Unfortunately, a bathroom is still a long walk away. Upon arrival home, the child embarrassedly shows you the dirty, soiled underwear pants.
- _____ 12. After you bathed, clothed, fed, and played with your 2 year-old child, you gently placed him/her in a quiet room. For no seemingly good reason you hear the child crying.
- _____ 13. Your 4 year-old child comes in for lunch after playing outside. You notice that s/he doesn't eat anything.
- _____ 14. Your infant is not good at holding on to objects yet. You give him/her a bottle and it slips out of his/her hands and breaks on the rug.
- _____ 15. You ask your preschool child to get your cigarettes, a favor that s/he can sometimes do. After the request your child stands there, like s/he didn't hear you.
- _____ 16. You leave your 6 year-old child and his/her friend in the next room to play for a while. After a few seconds you decide to check and see how things are

going with the kids. At that moment you see your child throw an object and break an expensive lamp.

- _____ 17. Your 2 year-old is with you while you go shopping. Both of you are tired when you return home. You put him/her in the next room to rest and then you start your own chores. Soon after that you hear your child crying and when you got to the next room you see him/her alone crying.
- _____ 18. Your infant has been very difficult all day. You give her/him a bottle to make him/her feel better. S/he throws it on the rug and it breaks.

How much did your child do that to annoy you?

- 1 My child had no intension of annoying me
- 2
- 3 My child might have known that this would annoy me.
- 4
- 5 My child probably knew that this would annoy me
- 6
- 7 My child had some intention of annoying me when s/he did this.
- 8
- 9 My child did this specifically to annoy me.

How much would you punish your child?

- 1 I would not do anything at all.
- 2
- 3 I would use a disapproving facial expression.
- 4
- 5 I would use mildly negative consequences (e.g. reprimand).
- 6
- 7 I would use moderately negative consequences (e.g. take privileges).
- 8
- 9 I would severely punish for this (e.g. spanking).

Appendix D

Social Behavior Scale

Child's Name/ID: _____ Teacher's Name: _____
 Date form completed: _____ How long have you known this student? _____

Using the 5-point scale below, please indicate the degree to which each statement describes this child. Then place the completed scale in the envelope provided and mail back to Dr. Mary Haskett. Thank you.

1 = Never true 2=Rarely true 3=Sometimes true 4=Often true 5=Almost always true

- | | | | | | |
|--|---|---|---|---|---|
| 1. This child is good at sharing and taking turns. | 1 | 2 | 3 | 4 | 5 |
| 2. This child tells a peer that s/he won't play with that peer or be that peer's friend unless s/he does what this child asks. | 1 | 2 | 3 | 4 | 5 |
| 3. This child is a solitary child. | 1 | 2 | 3 | 4 | 5 |
| 4. This child hurts other children by pinching them. | 1 | 2 | 3 | 4 | 5 |
| 5. This child tries to get others to dislike certain peers by telling lies about the peers to others. | 1 | 2 | 3 | 4 | 5 |
| 6. This child likes to play alone. | 1 | 2 | 3 | 4 | 5 |
| 7. This child is ignored by peers. | 1 | 2 | 3 | 4 | 5 |
| 8. This child verbally threatens to hit or beat up other children. | 1 | 2 | 3 | 4 | 5 |
| 9. This child ruins other peer's things when s/he is upset. | 1 | 2 | 3 | 4 | 5 |
| 10. Peers say mean things to this child at school. | 1 | 2 | 3 | 4 | 5 |
| 11. This child pushes or shoves other children. | 1 | 2 | 3 | 4 | 5 |
| 12. This child prefers to play alone. | 1 | 2 | 3 | 4 | 5 |
| 13. This child verbally threatens to physically harm a peer in order to get what they want. | 1 | 2 | 3 | 4 | 5 |
| 14. This child tells others not to play with or be a peer's friend. | 1 | 2 | 3 | 4 | 5 |
| 15. This child is helpful to peers. | 1 | 2 | 3 | 4 | 5 |
| 16. This child is not chosen as a playmate. | 1 | 2 | 3 | 4 | 5 |
| 17. When mad at a peer, this child keeps that peer from being in the play group. | 1 | 2 | 3 | 4 | 5 |

18. Peers avoid this child.	1	2	3	4	5
19. This child tries to cheer up peers when they are sad or upset about something.	1	2	3	4	5
20. This child tries to dominate or bully peers.	1	2	3	4	5
21. This child doesn't have much fun.	1	2	3	4	5
22. This child is ridiculed or picked on by peers.	1	2	3	4	5
23. This child doesn't smile much.	1	2	3	4	5
24. Peers refuse to let this child play.	1	2	3	4	5
25. This child keeps peers at a distance.	1	2	3	4	5
26. This child kicks or hits others.	1	2	3	4	5
27. This child avoids peers.	1	2	3	4	5
28. This child is kind to peers.	1	2	3	4	5
29. This child tries to get others to dislike a peer.	1	2	3	4	5
30. This child is not liked much.	1	2	3	4	5
31. This child is excluded from peers' activities.	1	2	3	4	5
32. Peers say bad things about this child to other kids at school.	1	2	3	4	5
33. This child withdraws from peer activities.	1	2	3	4	5
34. This child tells a peer that they won't be invited to their birthday party unless s/he does what the child wants.	1	2	3	4	5
35. This child gets hit or bullied at school.	1	2	3	4	5
36. This child looks sad.	1	2	3	4	5
37. This child verbally threatens to keep a peer out of the play group if the peer doesn't do what the child asks.	1	2	3	4	5
38. This child says or does nice things for other kids.	1	2	3	4	5
39. Please rate this child's <u>overall academic performance</u> this year.	A	B	C	D	F

		SUM	MEAN
Prosocial	1: __, 15: __, 19: __, 28: __, 38: __	____/5	____
Relational Aggr.	2: __, 5: __, 14: __, 17: __, 29: __, 34: __, 37: __	____/7	____
Overt Aggr.	4: __, 8: __, 9: __, 11: __, 13: __, 20: __, 26: __	____/7	____
Asocial	3: __, 6: __, 12: __, 25: __, 27: __, 33: __	____/6	____
Excluded by peer	7: __, 16: __, 18: __, 22: __, 24: __, 30: __, 31: __	____/7	____
Depressed	21: __, 23: __, 36: __	____/3	____
Victimimized	10: __, 32: __, 35: __	____/3	____

Appendix E

Playground Observations of Social Interactions

This observational approach involves interval coding. There may be two coders: a primary coder and a secondary coder. The primary coder is responsible for gathering all materials (cassette recorder, interval tape, coding sheets, the SBS, information on the child, and directions to the school) and returning all materials to the lab within 24 hours. The secondary coder is responsible for recording the information at the school site and giving the completed form to the primary coder to return to the lab.

This observation system is called a focal child system. One child, called the “target”, is observed continuously for 30 minutes.

INTERVAL CODING SYSTEM

Within each 15-second interval the Coder will record whether the behavior occurred at any time (not each time) during the interval. Thus, in each 15-second interval there will be a maximum of one notation per behavior. The attached data form shows 4 columns, one for each of the four behaviors to be recorded: Engagement, Negative, Rough Play, and Aggression. The Coder will observe the target and his or her interactions with peers for 10 seconds and will then have 5 seconds in which to record the behaviors that occurred in the interval. Occurrence will be indicated by a check () in the box corresponding to the behavior(s) observed.

In any given interval, it is possible that the target will engage in all four behaviors, only a few, or none of the behaviors. If the child does not engage in any of the behaviors, draw a line through the interval number for which the child was not engaged (see Example 1) in order to keep your place on the data collection sheet. If a child is out of sight for an interval simply mark through the entire interval line (see Example 2). There are spaces provided by each interval to allow the Coder to write any notes that are needed.

To the left of the columns are number for each set of four rows. The first digit indicates the minute of data collection session. An audiotaped recording of the interval numbers will cue the observer to change into intervals. The Coder will observe the child’s behavior immediately after the tape says “One point one: Observer” and will record behavior for that interval as soon as the tape says “One point one: Record”. Then the Coder will observe the child for the next 10 seconds when the tape says “One point two: Observer” and will record behavior for that interval when the tape says “One point two: Record” etc... Each data sheet contains enough intervals for 30 minutes worth of data recording.

When the tape says “Record” the Coder should look down to the data sheet, record the behaviors that occurred, and continue to look down until the tape says “Observe”. If no behaviors occurred in the interval, the Coder should lightly cross out the number of the interval on the order to keep the place on the data sheet.

To allow the children to “warm up”, recording will begin after approximately two minutes of playtime have passed. Recording should continue for 30 consecutive minutes. If the child leaves the observation area, stop the audiotape and begin again when the child returns. Make a note in the margin if the child leaves, and give the reason (e.g. “child out of play area for 5 minutes due to time out by the teacher”).

If the observation session must end prior to the full 30 minutes of data collection (for example, if the children are only on the playground for 20 minutes), draw a line through all the remaining intervals and note that the session ended.

Behavior to be coded includes the following four social behaviors:

1. Engagement (ENG)

Verbal or physical behavior directed to another peer or group of peers (not teachers) that has the purpose of engaging the peer in interaction or continuing the interaction begun by a peer.

This may be neutral or positive behavior. Defining features of engagement include general proximity and active behavior such as touching, eye contact, talking etc. Actively participating in a game is also included. It is NOT onlooker behavior such as “hanging out” beside a group of children (for example, on the monkey bars), watching but not joining in the activity. Examples include:

- offer to help or request for help, sharing, providing information or recognition
- a general comment or complaint
- invitation to play or response to invitation
- playing chase or racing with another child or group of children
- swinging or playing on monkey bars, with conversation or eye contact
- digging a hole in the dirt with others (but only if they are working on the same hole, not if target is digging a hole besides others but not joining in via eye contact or conversation)
- being involved in a game of duck-duck-goose
- laughing with another child
- jumping rope or cheerleading or dancing with others
- smiling at others or making eye contact with others
- can involved physical touching, such as a hug or other type of gentle touch (holding hands)

2. Negative (NEG)

Negative verbal or gestural behavior directed to another child, or saying negative things about another child. This category does not include physical contact (see RP and AGGR below). Examples include:

- teasing (“your underwear is showing”. “ha ha you dropped it”)
- name calling
- reprimands (“you shouldn’t do that”)
- commands (“come here now”)
- tattling (even if legitimate complaint)
- threatening (“I’m gonna hit you”)
- profanity (@*!)
- saying mean things (“his pants are so ugly”)
- instances of relational aggression (“you can’t play with us”)
- sticking tongue out, displaying a threatening gesture
- taunting or challenging gestures, growling
- attempts to hit or pretending to hit, but missing the child
- throwing objects in the air towards another child, but not hitting the child with the object

3. Rough Play (RP)

Physical contact with a peer that is rough and negative but not of sufficient strength to be AGGR. These behaviors often occur during “roughhousing” but might occur in isolation, for example, brushing up against another child roughly while running past the other child. This behavior may occur in the context of engagement, but might be coded along if only the RP occurs in the interval. Examples of RP include:

- holding onto a child’s clothes
- rough tumbling down a hill together
- holding a peer tightly
- tapping firmly on another child to get attention
- elbowing or shouldering
- physical contact while playing touch football or other game
- bumping into one another

4. Aggression (AGGR)

Physical contact with a peer or object that constitutes an attack with clear potential to harm OR taking something belonging to another child. This does not have to be intention (we can’t guess at a child’s intentions). Record even if the behavior seems “accidental”. A single behavior chain may include RP and then become AGGR. Examples include:

- hit, slap, scratch, pull hair, bite, kick, pinch, butt with head, head lock, twist arm/leg, push, pull throw object at another person (looking at and /or orienting toward the child), pulling to the ground.
- destroying property

- taking (or attempting to take) a toy that someone else is clearly playing with.
Taking a toy is recorded when the object is in the hands of another child or if it is a piece of a game being actively played with (e.g. a ball)
- taking articles of clothing such as shoes
- any type of hitting even when part of a game
- if target is holding another person, it would be aggression when the target tries to restrain the person while she or he is trying to get away.

Appendix F

Outlier correlations

Inter-correlations and confidence intervals among Measures of Physical Discipline, Parenting Style and Children's Social Adjustment without outliers (N = 133)

Variables	1	2	3	4	5	6	7
Physical Discipline							
1. CTS	-	.17	-.15	-.17	.08	.26**	-.01
2. CV-P	(.00 - .33)	-	-.09	.15	-.22*	-.12	-.07
Parenting Style							
3. Nur-Par	(-.31 - .02)	(-.26 - .08)	-	.32***	-.13	-.19*	.02
Children's Adjustment							
4. SBS-PRO	(-.33 - .00)	(-.02 - .31)	(.16 - .47)	-	-.38***	-.54***	-.18*
5. SBS-RA	(-.09 - .25)	(-.38 - -.05)	(-.30 - .04)	(-.52 - -.22)	-	.68***	.16
6. SBS-OVT	(.09 - .41)	(-.29 - .05)	(-.35 - -.02)	(-.65 - -.40)	(.57 - .76)	-	.32***
7. Neg. Beh.	(-.18 - .16)	(-.24 - .10)	(-.15 - .19)	(-.34 - -.01)	(-.01 - .32)	(.16 - .47)	-

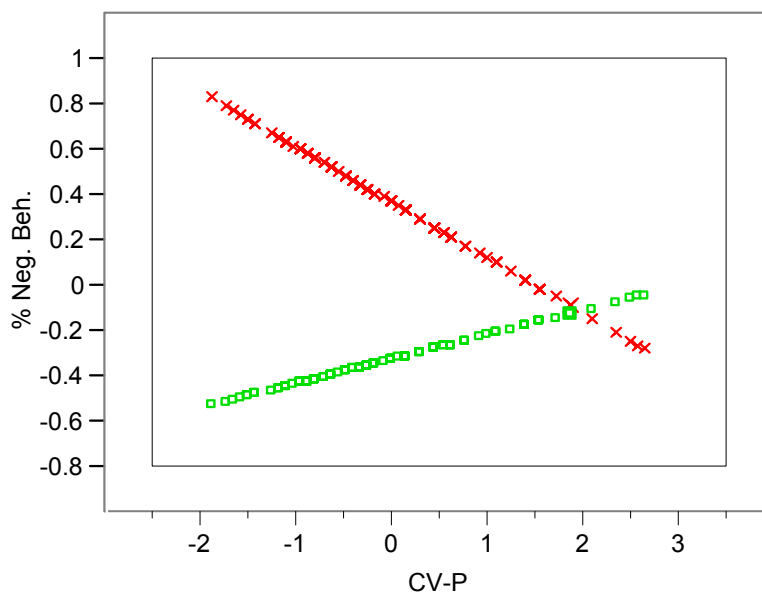
The upper diagonal provides inter-correlations without outliers in the analysis and the lower diagonal provides confidence intervals for the inter-correlations.

*: < 0.1, **: < 0.01, *** < 0.001

Appendix G

Post-Hoc Analysis

Relation between negative behavior and intended punishment for mother-son and mother-daughter dyads.



Y x % Neg. Beh. predicted by CV-P for Mother-Son dyad
■ % Neg. Beh. predicted by CV-P for Mother-Daughter dyad

% Negative Behavior predicted by CV-P	Slope	t value	p value
Probing zero slopes			
For Mother-Son dyad	-0.2446	-1.95	< 0.0536
For Mother-Daughter dyad	0.1076	0.91	< 0.3655
Test of Slope Difference		2.04	< 0.0435