

**SPARE THE ROD AND SPOIL THE CHILD:  
RELATIONS AMONG PARENTING STYLE, CORPORAL PUNISHMENT, AND CHILD  
AGGRESSION**

By

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To my parents, my best examples of authoritative parenting- You both have given me so much love and support on my road to graduate school, and I could not have done this without you

To Susan, Michelle, Sophia, and Gaby- You all believed in me from the beginning and provided the footpath. I'll never forget all the guidance you've provided, not only in the field, but in what it takes to be a strong, confident, successful woman

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This study examined patterns of child aggression and maternal punishment style in 59 families of 3- to 6-year-olds with Oppositional Defiant Disorder before and after their participation in Parent-Child Interaction Therapy (PCIT). PCIT is an evidenced based treatment designed for 2- to 7-year-olds with maladaptive behavior that focuses on creating a secure attachment and teaching effective discipline techniques. It was hypothesized that physical punishment, maladaptive parenting styles, and child aggression would decrease after PCIT. Maladaptive parenting included both lax and over-reactive parenting styles. Lax parents are permissive and do not hold clear boundaries for their children; whereas over-reactive parents use harsh discipline without adequate nurturance. The first hypothesis was that parents would rate their children as less aggressive on two measures of child behavior, the Child Behavior Checklist (CBCL) and the Eyberg Child Behavior Inventory (ECBI), at the post-treatment assessment. The second and third hypotheses were that parents would use less physical punishment and become less lax and less over-reactive after completing PCIT. Additionally, our final hypothesis was that both lax and over-reactive parents who used physical punishment would rate their children as more aggressive on parent report measures of child behavior.

To measure pre-post changes in physical punishment, maladaptive parenting, and child aggression, we used paired-samples *t* tests. Results indicated that mothers used less physical punishment after completing PCIT than before. Mothers also rated themselves less lax and less over-reactive after treatment. Mothers rated their children's behavior as less aggressive after completing PCIT. Specifically, they reported lower scores on the CBCL Aggression Scale, and less endorsement of the ECBI items "hits parents," "physically fights with siblings," and "physically fights with friends own age." To test possible interactions among variables, we used multiple regression analyses. Analyses of pretreatment scores showed that lax, but not over-reactive, mothers who used physical punishment rated their children as more aggressive on the CBCL and ECBI than parents with more adaptive parenting styles. These analyses provide further support for the efficacy of Parent-Child Interaction Therapy in helping parents develop an authoritative parenting style.

## CHAPTER 1

### INTRODUCTION

Physical punishment has been a highly controversial topic in the United States for several decades. Although a significant amount of research has addressed the issue of its potential for benefit or harm, conclusions remain contentious. One 1999 survey of US parents found that 94% reported spanking their child before the age of 3 or 4 (Larzelere, 2004; Straus & Stewart, 1999), making continued research on physical punishment imperative.

The prevalence of childhood aggression in the United States is also high, representing a large majority of mental health referrals in the United States (Kazdin, Siegal, & Bass, 1990). Research has suggested that aggressive behavior, if not treated, tends to be stable over time, and these children are more likely to develop other psychological disorders, exhibit delinquent behavior, and have significant social difficulties in adolescence and adulthood (Serbin & Karp, 2003). Scott, Knapp, Henderson, & Maughn (2001) suggest that aggressive children are consistently viewed in a negative light by others, and therefore continue to act in aggressive ways to fit that profile, further contributing to this negative cycle. Additionally, child aggression and conduct problems have large societal and financial costs as well, as these children demand significant resources to address their behavior problems. Due to the many negative outcomes of child aggression, many researchers are currently examining programs that aim to decrease this negative child behavior.

Many researchers agree that parenting is one of the most direct influences on child behavior, and has a large impact on the development of aggressive behavior (Dodge, 2002). Parental physical punishment is one hotly debated potential causal mechanism of child aggression. Studies have shown that children who have been spanked at home use more reactive aggression in school (Strassberg, 1994; Dodge, 1994) and exhibit more antisocial behavior two

years after punishment (Straus, 1997). Other arguments against physical punishment are that many children fail to understand the reason for their parents' punishment and, in turn, learn to avoid the punishment instead of truly understanding what they did wrong. Some of these children may interpret their parent's punishment as hostile and make negative attributions toward their parent, and some may express these attributions through physical aggression toward their parent (Dodge, Pettit, McClasky, & Brown, 1986).

Not all research has found physical punishment detrimental to children. Larzelere and Kuhn (2005) found that non-abusive physical punishment led to positive child outcomes such as increased compliance and decreased delinquent behavior in adolescence. Baumrind (1996) found that spanking, when combined with other discipline strategies, predicted the best outcomes for children (Baumrind, 1996). Extensive evidence put forth on both sides of the physical punishment controversy suggests that more refined research designs and approaches to the question of whether or not physical punishment leads to negative or positive child outcomes may be needed. The important question may not be whether physical punishment leads to negative or positive child outcomes, but rather, under what circumstances physical punishment leads to these outcomes, in particular child aggression? Considering that most children in the United States are spanked, but relatively few children develop significant aggressive behavior, the relation sometimes found between physical punishment and aggressive child behavior is likely mediated by other factors. Baumrind (1996) suggested that parenting styles, such as permissive, authoritarian, or authoritative parenting, provide the context that determines outcomes of spanking as a disciplinary tool. Reid, Webster-Stratton, & Baydar, 2004 suggested that parents may provide inconsistent parenting in response to the stresses associated with child misbehavior, which in turn, can lead to additional child aggression.

Due to the high prevalence of externalizing behavior problems, including aggression, in the United States, many therapy programs have been designed and researched to treat these problems efficaciously. Some of the most common types of treatment for externalizing behavior problems in children are parent-training or parent-child interaction programs. Some researchers have shown that these treatments work by teaching parents positive parenting skills, and reducing negative parenting behaviors (Bagner & Eyberg, 2007; Webster-Stratton, Reid, & Hammond, 2004). Pettit and Bates (1989) suggested that mothers who lack warmth or support in interactions with their children tend to rate their children as more aggressive. Other theories suggest that mothers of aggressive children tend to disregard children's feelings and make negative comments about their children in play (Landy & Menna, 2001). Additionally, this play allowed the parent to interact with his or her child in a positive environment, without harsh discipline, suggesting that the child may be more likely to comply with parent directives in the future (Gardner, Ward, Burton, & Wilson, 2003). All of these therapies share one thing in common: they seek to disrupt the negative interactions, and introduce positive parenting approaches which are associated with more positive child outcomes (Bagner, et. al., 2007).

The purpose of this study was to examine whether physical punishment, when combined with a lax or over-reactive parenting style, is related to child aggression. The long-range goal of this research is to modify current treatment protocols to address familial patterns of aggression directly, and intervene in the coercive cycle of aggression between parents and their children by helping parents learn to use effective discipline strategies. The treatment protocol that was used in this study is Parent-Child Interaction Therapy (PCIT).

Parent-Child Interaction Therapy is an empirically supported treatment for young children with disruptive behavior disorders, which focuses on enhancing the parent-child bond

and modifying maladaptive parent-child interactions. PCIT was selected for this project because it is based on Baumrind's theory of parenting styles: authoritative, authoritarian, and permissive. Baumrind proposed these styles after determining that parents of preschool age children who were less nurturing, less involved, and used more control and punitive discipline (i.e. authoritative) had children who were unhappy, withdrawn, and mistrustful (Baumrind, 1996; 1991). The strong and consistent relations between certain parenting styles and problematic child outcomes have been shown in many studies (e.g., Azar & Wolfe, 1989; Franz, McClelland, & Weinberger, 1991; Olson, Bates, & Bayles, 1990; Power & Chapeski, 1986). These studies suggest that to promote optimal child outcomes in treatment, there must be a focus on promoting an optimal parenting style and parent-child interactions.

PCIT teaches the parent skills to enhance the parent-child relationship while increasing the child's pro-social behaviors and decreasing the child's inappropriate behaviors. PCIT is composed of two phases: Child-Directed Interaction (CDI) and Parent-Directed Interaction (PDI). In the CDI, parents learn skills to follow the child's lead in play using differential social attention, while providing positive attention to pro-social child behaviors (Boggs & Eyberg, in press) and ignoring negative behavior. The rationale for implementing CDI first is to strengthen the parent-child relationship in preparation for the PDI procedure

In the second phase of treatment, Parent-Directed Interaction, parents learn to shape their child's behavior by giving clear commands and following through with consistent contingency plans for compliance or non-compliance. Many times, when parents attempt to control interactions with their child, they inadvertently create coercive patterns which can negatively affect the relationship. In this cycle, the child's noncompliance or negative response to a parent's command is met with negative attention from the parent (Patterson, 1982). The coercive cycle

continues as the child's maladaptive behavior increases, and eventually the parent withdraws their original command thereby negatively reinforcing the child's negative behavior. Not only is the child reinforced in this cycle, but the parent's withdrawal behavior is reinforced by a temporary stop in the child's misbehavior. The Parent-Directed Interaction interrupts the coercive cycle by teaching the parent to give clear commands followed by consistent consequences, either praise and positive attention for compliance or timeout from positive attention following non-compliance. Over time, the child learns to immediately comply with parent directives and receives immediate positive attention from the parent. Eventually this new interaction pattern increases pro-social behavior from the child and positive and effective parenting strategies, which further reinforces both the parent and child (Hood & Eyberg, 2003).

Substantial research has been done on the positive outcomes associated with Parent-Child Interaction Therapy. While PCIT has been used both with physically abusive parents, parents with maladaptive parenting styles, and aggressive children, at the time of this study, there were no studies that specifically addressed the potential benefit of PCIT to decrease aggression in children and change damaging parenting patterns in children.

This study examined the effects of Parent-Child Interaction Therapy on parental use of physical punishment, maladaptive parenting styles, and child aggression. It was hypothesized that physical punishment, maladaptive parenting styles, and child aggression would decrease after PCIT. Additionally, it was hypothesized that mothers with either a lax or an over-reactive parenting style and who used physical punishment, would rate their children as more aggressive on child behavior measures than parents with more adaptive parenting styles.

There are several specific aims for this project. The first aim of the study is to determine whether there are pre to post changes in parent-rated child aggression. The dependent variables

that will be used to measure child aggression are the aggression subscale of the Child Behavior Checklist and specific aggression items on the Eyberg Child Behavior Inventory. The second specific aim for this study is to determine whether parents use less physical punishment after completing Parent-Child Interaction Therapy. The dependent variable used for this analysis will be the daily amount of physical punishment on the Daily Discipline Inventory. The third objective of this study was to determine if/ or what types of maladaptive parenting styles parents were using before starting treatment, and whether those parenting styles changed after completing Parent-Child Interaction Therapy. This question will be analyzed using data from the Parenting Scale, a measure of lax and over-reactive parenting. The final aim of the project is to determine whether parents with maladaptive parenting styles who use physical punishment tend to have children that are more aggressive. This analysis will include the independent variables of physical punishment on the Daily Discipline Inventory and parenting styles on the Parenting Scale, and the dependent variables of child aggression as rated on the CBCL and the ECBI.

## CHAPTER 2

### METHODS

#### **Participants**

Participants were 59 families with 3- to 6-year-old children who met DSM-IV criteria for Oppositional Defiant Disorder, that were enrolled in a larger study examining the efficacy of a maintenance treatment after completion of Parent-Child Interaction Therapy. Families were required to have at least one parent participate with the child during PCIT. Children (39 boys and 20 girls) were referred to the study by pediatricians, child psychiatrists, pediatric neurologists, teachers, day care providers, and self-referrals. The mean age of the children was 4.33 years ( $SD = 1.09$ ). The ethnic composition of the children in the sample was: 44 (75%) Caucasian, 4 (7 %) African American, 2 (3 %) Hispanic, 1 (2%) Asian American, and 8 (14%) Biracial. Children were excluded from the study if they had serious developmental or sensory impairments (e.g., blindness, autism), or obtained a standard score below 70 on a measure of receptive vocabulary (Peabody Picture Vocabulary Test – Third Edition; PPVT-III; Dunn & Dunn, 1997). Families were also excluded from the study if the mother received a standard score of less than 75 on a cognitive screening measure (Wonderlic Personnel Test; WPT; Dodrill, 1981). Children were not excluded from participation if they were taking medication to control their behavior; however, their dosage had to be stable for one month prior to the pretreatment assessment and they were asked not to change their dosage during treatment. Children with a co-morbid diagnosis of Major Depressive Disorder (MDD), Separation Anxiety Disorder (SAD), Conduct Disorder (CD) or Attention Deficit Hyperactivity Disorder (ADHD) were not excluded. Additionally, the parents were not screened for psychopathology. Only mothers' scores were analyzed in this study. The mean age for mothers was 33.96 years ( $SD = 9.67$ ). The ethnic composition of the mothers was as follows: 51% Caucasian, 2% Hispanic, and 2% African American. Mean family

SES, derived from the Hollingshead (1975) 4-factor Index of Social Position, was 37.65 ( $SD = 13.97$ ), with a range from 16 to 66, indicating a wide range of socioeconomic status within the group.

**Table 2-1. Demographic Characteristics of Participants**

<i>Variable N = 59</i>	<i>M/%</i>	<i>SD</i>
SES	37.65	13.97
Child age (years)	4.33	1.09
Child sex (% male)	66	-
Child race/ethnicity		
Caucasian	75	-
African American	4	-
Hispanic	2	-
Asian American	1	-
Biracial	8	-
Mother age (years)	33.96	9.67

## Measures

**National Institute of Mental Health Diagnostic Interview Schedule for Children-IV-Parent (NIMH DISC- IV; Shaffer, Fisher, Lucas, Dulcan, & Schwab-Stone, 2000).** Mother's were interviewed using the NIMH-DISC-IV to provide one index in determining a diagnosis of Oppositional Defiant Disorder, an inclusion criterion. The DISC-IV is a structured interview that asks parents about the history, frequency, and severity of the child's problem behaviors. One-week test-retest scores have been reported at .79 for ADHD, .54 for ODD, and .43 for CD (Shaffer et al., 2000).

**Child Behavior Checklist (CBCL; Achenbach, 1991; 1992).** To help ensure a more accurate diagnosis of ODD, mothers also completed the Child Behavior Checklist for 4-18 Year Olds (CBCL/4-18; Achenbach, 1991) or the Child Behavior Checklist for 2 to 3 Year Olds

(CBCL/2-3; Achenbach, 1992). Children were included in the study only if they obtained a DISC diagnosis of ODD plus a standard score on the CBCL Aggression subscale above 61.

**Peabody Picture Vocabulary Test (PPVT-III; Dunn & Dunn, 1997).** The Peabody Picture Vocabulary Test III is a standardized measure of receptive vocabulary that was used as the cognitive screening measure for children's inclusion in the study. Split-half reliability coefficients for children have been reported at .86 to .97, with a median of .94. Test-retest reliabilities have ranged from .91 to .94 (Dunn & Dunn, 1997). The PPVT has been highly correlated with the verbal scale of Wechsler Intelligence Scale for Children at .91 (Altepeter, 1980; Carvajal, Hayes, Miller, Wiebe, & Deloise, 1993).

**Wonderlic Personnel Test (WPT: Dodrill, 1981).** The Wonderlic Personnel Test was used to screen for cognitive problems in the mothers. The Wonderlic has been shown to correlate with the Full Scale IQ of the Wechsler Adult Intelligence Scale at .93 (WAIS: Wechsler, 1981).

**Eyberg Child Behavior Inventory (ECBI, Eyberg & Pincus, 1999).** The ECBI is a 36-item parent-report measure of disruptive behavior that assesses the severity of child disruptive behavior (Intensity Scale) and the extent to which the child's behavior is problematic for the parent (Problem Scale). We examined three items (numbers 18, 26, and 27) from the Intensity Scale to assess the degree to which the child is physically aggressive with parents, same-age peers, and siblings. Item-to-total reliability has been demonstrated for these items (total  $r = .55$ ,  $SD = 0.12$ ). The Intensity Scale of the ECBI yields an internal consistency coefficient with preschoolers of .95 and .93 (Colvin, Eyberg, & Adams, 1999); inter-rater (mother-father) reliability coefficients of .69 and .61 (Eisenstadt, McElreath, Eyberg, & McNeil, 1994); and test-retest reliability coefficients of .80 and .85 across 12 weeks and .75 and .75 across 10 months, respectively (Funderburk, Eyberg, Rich, & Behar, 2003).

**Parent Daily Report (PDR, Chamberlain & Reid, 1987).** The PDR is a 24-hour recall measure, administered by telephone, which assesses the number of times a child exhibits specific behaviors in the home that are identified as problematic for the parent. This measure has shown inter-rater, inter-parent, and test-retest reliability, and concurrent validity with direct observation measures (Chamberlain et al., 1987; Patterson, 1982). Therapists called the families on 5 consecutive days to collect pretreatment PDR data, and scores were averaged to determine the mean daily frequency of identified problem behaviors. This same procedure was repeated post-treatment. This measure will not be used as a dependent variable, but rather as an opportunity to see how many times the child exhibited targeted maladaptive behaviors.

**Daily Discipline Report (DDI; Webster-Stratton & Spitzer, 1991).** The DDI is used in conjunction with the PDR and provides daily instrumentation of discipline procedure used each time the when their child engaged in one of the identified problematic behaviors. For each identified behavior problem endorsed on the PDR the therapist asks, “How did you handle this problem?” Each response is recorded verbatim and later coded into a specific category (e.g., physical punishment, verbal punishment, privilege removal). Only the physical discipline scores were used for this project. Scores over the 5-day period were averaged to determine a mean daily physical punishment score. This procedure was used at pre and post-treatment as a measure of physical punishment used by parents.

**Parenting Scale (PS: Arnold, O’Leary, Wolff, & Acker, 1993).** The Parenting Scale is a self-report measure that assesses parent discipline style in response to children’s behavior problems. Parents endorse how much each item relates to their own behavior. Two scales from this instrument were used -- Laxness and Over-reactivity -- to operationally define a mother’s parenting style. Laxness is defined as lack of responsiveness to child misbehavior, and over-

reactivity is defined as the propensity to react excessively to child misbehavior. This instrument has show test-retest reliabilities from .79 to .84, and correlates highly with behavioral observation measures of parent-child interactions. The PS was collected at pre and post treatment to assess change in parenting style.

### **Procedures**

#### **Assessments**

During pre and post treatment assessments, parents completed a demographic questionnaire, parent-report and self-report questionnaires, a child diagnostic interview, and a clinical interview. Additionally, a graduate level assessor called the family every day for five days to complete the Daily Discipline Inventory. During this phone call, the assessor asked if the child exhibited any of the identified problematic behaviors, and if so, what discipline strategy did the parent use in response to the behavior. After treatment was completed, parents again completed the outcome measures and Daily Discipline Inventory (for five days) in order to assess any significant changes from the pre-treatment assessment.

#### **Therapy**

Families attended weekly therapy sessions of PCIT at the Child Study Lab with a lead and a co-therapist. Therapists were advanced graduate students with extensive training in PCIT. Therapists participated in weekly supervision sessions with two licensed psychologists during the course of the study. All therapists followed the Individual PCIT Manual to guide each session. All sessions were tape recorded, and 50% of all sessions from each family randomly selected and coded for accuracy using treatment manual checklists. Fifty percent of the checked tapes were again randomly selected and reviewed independently by a second coder to provide an inter-observer reliability estimate. Treatment integrity was 97%, with an inter-observer reliability of 97% (range = 79 - 100%).

PCIT is not time-limited, and families continued treatment until they met certain termination criteria: (a) Parents mastered the CDI and PDI skills; (b) Parents reported resolution of their presenting problems; (c) Parents rated their child's behavior within normal limits on the ECBI; and (d) Parents reported feeling confident in managing their child's behavior on their own. The attrition rate for the overall study was 37%, with the mean number of sessions equaling 13.67 ( $SD = 7.19$ ) for treatment completers.

## CHAPTER 3 RESULTS

### **Relations among Physical Punishment, Parenting Style, and Child Aggression**

A multiple regression was used to examine relations among physical punishment, parenting style, and child aggression scores at pre-treatment. We used the scores derived from the DDI to create the physical punishment variable; scores from the PS as our parenting style variables; and the scores from the Aggression scale of the CBCL and the aggression items from the ECBI for our child aggression variable. Results indicated that parents who scored higher on laxness and reported greater use of physical punishment also reported higher levels of child aggression,  $\beta = .361$ ,  $t(56) = 2.163$ ,  $p < .05$ . However, there was no evidence to support an interaction between over-reactive parenting and physical punishment.

### **Maternal Behavior**

To examine the effects of PCIT on maternal behavior, we used paired-samples *t* tests to analyze pre- to post- treatment changes in physical punishment use and parenting style. The daily average number of physical punishment per parent on the DDI at post-treatment ( $M = 0.27$ ;  $SD = 0.61$ ) was significantly lower than at pretreatment scores ( $M = 1.69$ ;  $SD = 2.17$ ),  $t(58) = 5.02$ ,  $p < .001$ , showing that mothers used less physical punishment after completing PCIT.

To address our second hypothesis, we again used paired-samples *t* tests to examine changes in mothers' lax and over-reactive parenting styles. Mothers' post-treatment scores on Lax parenting ( $M = 1.96$ ;  $SD = 1.12$ ) were significantly lower than their pretreatment Lax parenting scores ( $M = 3.11$ ;  $SD = 0.82$ ),  $t(58) = 8.128$ ,  $p < .001$ . Additionally, Over-reactive treatment scores at post-treatment ( $M = 2.21$ ;  $SD = 0.66$ ) were significantly lower than Over-reactive parenting scores at pre- treatment ( $M = 3.34$ ;  $SD = 0.76$ ),  $t(58) = 11.61$ ,  $p < .001$  (See Figure 3-1).

### **Child Behavior**

Changes in children's behavior after completing PCIT were analyzed using a paired-samples *t* test. Pre- to post-treatment changes in child aggression were conducted to explore our third hypothesis. Mothers' ratings on the CBCL at post-treatment were significantly lower ( $M = 57.47; SD = 8.90$ ) than their ratings at the pre-treatment ( $M = 75.47; SD = 8.63$ ),  $t(58) = 13.857$ ,  $p < .001$  (See Figure 3-2). On specific ECBI items asking about physical aggression, mothers also rated the frequency of occurrence lower after treatment on the following items (where 1 = never and 7 = always): "hits parents," ( $M_{pre} = 4.08, SD = 1.93; M_{post} = 1.61, SD = 0.79$ );  $t(58) = 10.321, p < .001$ ), "physically fights with siblings," ( $M_{pre} = 3.02, SD = 1.79; M_{post} = 1.47, SD = 0.63$ );  $t(58) = 4.804, p < .001$ ), and "physically fights with friends own age," ( $M_{pre} = 3.47, SD = 2.22; M_{post} = 1.49, SD = 0.19$ );  $t(58) = 6.836, p < .001$ ).

Table 3-1. Pre to Post Treatment Changes in Maternal and Child Behavior

<i>Variable</i>	Pre		Post		<i>t(58)</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
<b>Maternal Behavior</b>					
DDI scores	1.69	2.17	0.27	0.61	5.02
Laxness	3.11	0.82	1.96	1.12	8.13
Over-reactivity	3.34	0.76	2.21	0.66	11.61
<b>Child Behavior</b>					
CBCL	75.47	8.63	57.47	8.9	13.86
ECBI-Parents	4.08	1.93	1.61	0.79	10.32
ECBI-Siblings	3.02	1.79	1.47	0.63	4.80
ECBI-Friends	3.47	2.22	1.49	0.19	6.84

\*All changes were significant at  $p < .01$

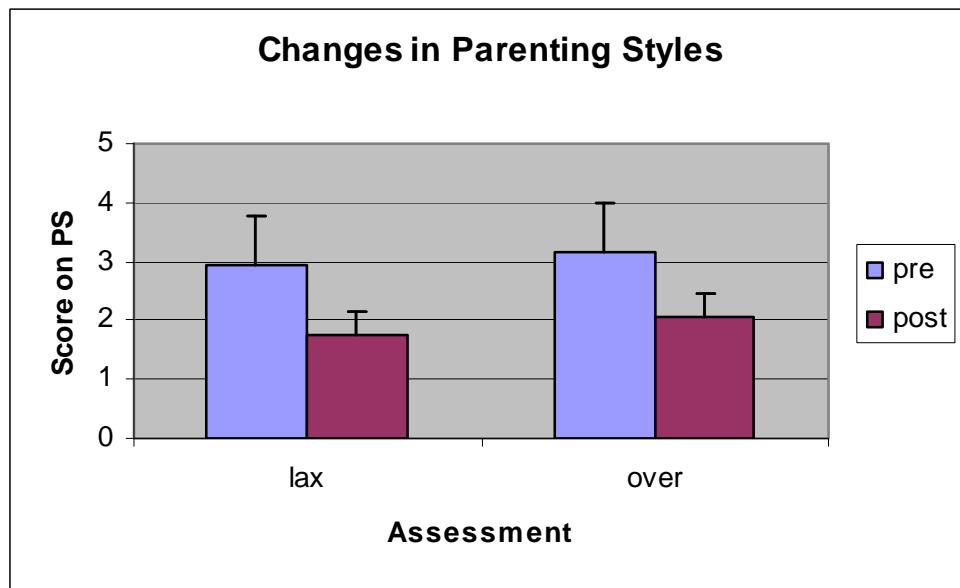


Figure 3-1. Changes in Parenting Style

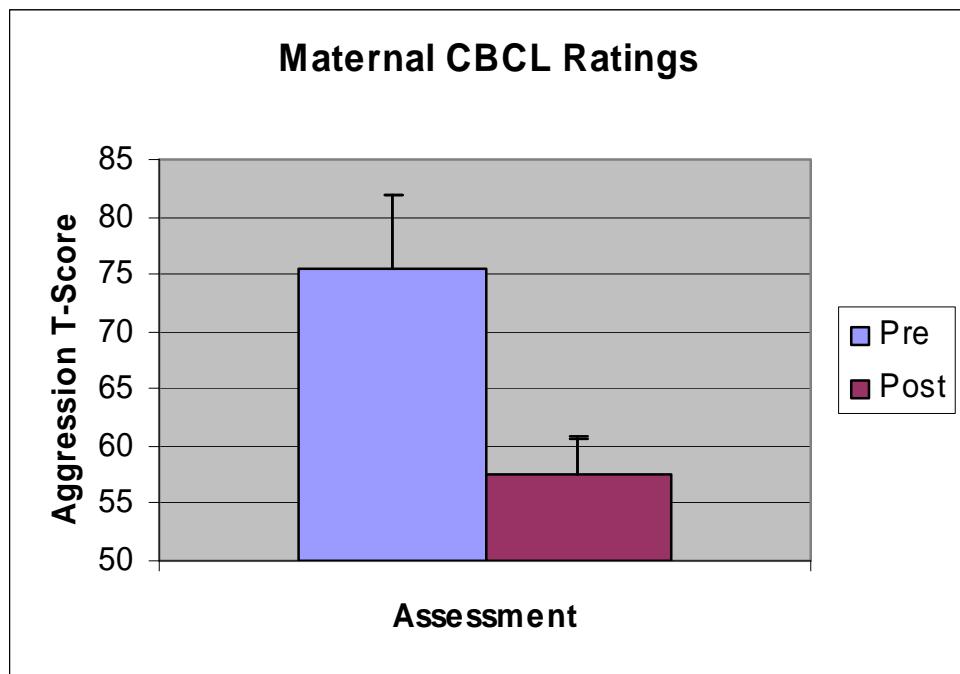


Figure 3-2. Changes in Child Aggression

## CHAPTER 4 DISCUSSION

This study examined patterns of child aggression and parent punishment styles in families participating in PCIT for the treatment of Oppositional Defiant Disorder in preschool-age children. Mothers were found to use less physical punishment, and their parenting style became both less lax and less over-reactive after treatment. These results suggest that mothers entering treatment with permissive or authoritarian parenting styles can benefit from the authoritative parenting techniques learned in PCIT. Additionally, mothers rated their children as less aggressive on two separate measures after completing PCIT.

Results suggest that parents with a lax parenting style who also use physical punishment at the pre-treatment assessment tend to rate their children as aggressive on parent-report measures. Lax parents appear to display features most closely related to Baumrind's (1966) permissive parenting style. Accordingly, these parents have difficult setting limits with their children, which may contribute to the children being exposed to aggressive models (i.e., on television, another authority figure). This exposure, combined with the negative interaction patterns, could eventually lead to the coercive cycle described by Patterson (1982). When lax parents overlook or avoid setting limits for many mildly disruptive child behaviors, the behaviors escalate to a point where they can no longer be overlooked, and the parent is left with no other option but to spank their child. In this situation, the child learns that he or she does not have to immediately comply with parental directives, and the parent learns that spanking will decrease the maladaptive behavior. Because this spanking is used sporadically, the physical punishment becomes especially salient for the child, and the child learns that physical aggression can be used to solve interpersonal problems. This finding is consistent with Baumrind's theory that it is not necessarily physical punishment that leads to negative outcome for children, but rather that when

combined with maladaptive parenting styles, it can have detrimental effects for children. Future research should also examine the changes in positive parenting behaviors (i.e. praise) and whether parents are using these positive strategies in place of physical discipline.

While contention remains about the effects of physical punishment on child outcomes, the fact is that the majority of parents in the United States are spanking their children. Because some studies suggest that spanking can lead to negative outcomes (Strassberg, 1994; Dodge, 1994; Straus, 1997), it is imperative that treatments are designed that provide alternate discipline strategies for parents. PCIT does not directly target physical punishment in its protocol, but these results support literature that states that if you increase the amount of positive parent-child interactions, and decrease the negative interactions (i.e. harsh punishment), it can have positive effects for both the parent and child (Bagner, et al., 2007).

The high rate of childhood aggression in the United States underscores the need for treatments that can effectively target aggressive behaviors in pre-school children in order to prevent future maladaptive behavior. Many studies have shown that PCIT is effective in reducing disruptive behavior in young children (Zisser & Eyberg, in press). While there have been many studies that have shown that parent-training programs are effective in decreasing child aggression, to this date, there have been no studies that have directly addressed the relationship between PCIT participation and decreases in child aggression. The focus of this study on aggression adds to the literature specific information on the effectiveness of PCIT for reducing aggressive behavior in young children, which suggests that children may become less aggressive after their participation. Mothers not only rated their children lower on the aggression scale of the CBCL after treatment, but also endorsed lower frequencies of specific physically aggressive acts including hitting parents, siblings, and peers. Results from this study suggest that Parent-

Child Interaction Therapy is an effective therapy for intervening in the coercive cycle and thereby decreasing inconsistent discipline and child aggression.

### **Limitations**

Some limitations in this study should be considered in interpreting the results. This study was a secondary data analysis from a single group of treated families, and because of this, we were unable to compare these finding to a randomized control group without treatment. It is possible that other factors associated with PCIT, or just the time differential, could be associated with the changes in physical punishment use, parenting style, and child aggression.

The analyses included data only from mothers. As we considered mothers the primary disciplinarian, we did not use father data on parenting or use of physical punishment in the analyses. However, it is possible that the use of physical punishment or a maladaptive parenting style by the father, or other parental figures in the home could affect the child's behavior. This consideration could be especially important for the lax mothers because the child could be learning aggressive tactics from others in the home. Future studies should analyze data on the father's use of physical punishment and parenting style.

This study used only parent-report methods to assess parenting variables and child behavior. Any parent-report measure may be influenced by response sets, respondent biases, and motivation, especially because the parent was reporting to their therapist about their child's behavior. Multiple methods of measuring a construct can provide greater confidence in the results. Measuring spanking, in particular, can be a sensitive issue in some cultural groups, although most parents in our sample described spanking as one of their typical discipline techniques during the pretreatment assessment. The DDI provided an the most accurate measure of spanking because it was measure every day in response to specific behaviors, and alternative methods of assessing spanking frequency are not likely to improve on the validity of parent

report. Future studies may seek to measure aggressive acts during the assessment or at school to obtain an objective measure of the child's behavior.

### **Future Directions**

This study also highlighted the value of assessing parenting style during treatment screening for PCIT. The identification of lax or over-reactive parents may help guide treatment intervention by narrowing the types of parent behaviors that need to be targeted. Lax parents have difficulty setting appropriate limits and consistent contingency schedules. Therefore lax parents may need more emphasized coaching to deliver and follow through with the PCIT skills. Over-reactive parents tend to use harsh discipline skills while providing little nurturance to their children. Therapists working with these parents may need to provide psycho-education regarding normative child behavior and appropriate expectations. Additionally, there may be other factors (i.e. environment, other family members) that contribute to the development of ineffective parenting styles. Future research should examine the mechanisms from which maladaptive parenting styles are developed, and what may be done in treatment to minimize their effects.

**APPENDIX A**  
**CHILD DIRECTED INTERACTION SKILLS**

PRIDE RULES	REASON	EXAMPLES
PRAISE your child's appropriate behavior	<ul style="list-style-type: none"> <li>• Causes your child's good behavior to increase</li> <li>• Lets your child know what you like</li> <li>• Increases your child's self-esteem</li> <li>• Makes you and your child feel good</li> </ul>	<ul style="list-style-type: none"> <li>• Good job of putting the toys away!</li> <li>• I like the way you're playing so gently with the toys.</li> <li>• Great idea to make a fence for the horses.</li> <li>• Thank you for sharing with me.</li> </ul>
REFLECT appropriate talk	<ul style="list-style-type: none"> <li>• Lets your child lead the conversation</li> <li>• Shows your child that you are listening</li> <li>• Demonstrates that you accept and understand your child</li> <li>• Improves your child's speech</li> <li>• Increases verbal communication between the both of you</li> </ul>	<p>Child: I drew a tree.      Parent: Yes, you made a tree.</p> <p>Child: The doggy has a black nose.      Parent: The dog's nose is black.</p> <p>Child: I like to play with the blocks.      Parent: These blocks are fun.</p>
IMITATE appropriate play	<ul style="list-style-type: none"> <li>• Lets your child lead</li> <li>• Shows your child that you approve of the activity</li> <li>• Shows that you're involved</li> <li>• Teaches your child how to play with others and</li> </ul>	<p>Child: I put a nose on the potato head.      Parent: I'm putting a nose on Mr. Potato Head too.</p> <p>Child (drawing circles on a piece of paper)      Parent: I'm going to draw circles on my paper just like you.</p>

	<ul style="list-style-type: none"> <li>take turns</li> <li>Increases the child's imitation of the things that you do</li> </ul>	
DESCRIBE appropriate behavior	<ul style="list-style-type: none"> <li>Lets your child lead</li> <li>Shows your child that you are interested</li> <li>Teaches your child concepts</li> <li>Models speech for your child</li> <li>Holds your child's attention on the task</li> <li>Organizes your child's thoughts about the activity</li> </ul>	<ul style="list-style-type: none"> <li>You're making a tower.</li> <li>You drew a square.</li> <li>You are putting together Mr. Potato Head.</li> <li>You put the girl inside the fire truck.</li> </ul>
Be ENTHUSIASTIC	<ul style="list-style-type: none"> <li>Lets your child know that you are enjoying the time you are spending together</li> <li>Increases the warmth of the play</li> </ul>	<p>Child (carefully placing a blue lego on a tower). Parent (gently touching the child's back): You are REALLY being gentle with the toys.</p>

MORE RULES	REASON	EXAMPLES
Avoid COMMANDS	<ul style="list-style-type: none"> <li>Takes the lead away from your child</li> <li>Can cause unpleasantness</li> </ul>	<ul style="list-style-type: none"> <li>Indirect Commands:</li> <li>Let's play with the farm next.</li> <li>Could you tell me what animal this is?</li> <li>Direct Commands:</li> <li>Give me the pigs.</li> </ul>

		<ul style="list-style-type: none"> <li>• Please sit down next to me.</li> <li>• Look at this.</li> </ul>
Avoid QUESTIONS	<ul style="list-style-type: none"> <li>• Leads the conversation</li> <li>• Many questions are commands and require an answer</li> <li>• May seem like you aren't listening to your child or that you disagree</li> </ul>	<ul style="list-style-type: none"> <li>• We're building a tall tower, aren't we?</li> <li>• What sound does the cow make?</li> <li>• What are you building?</li> <li>• Do you want to play with the train?</li> <li>• You're putting the girl in the red car?</li> </ul>
Avoid CRITICAL STATEMENTS	<ul style="list-style-type: none"> <li>• Often increases the criticized behavior</li> <li>• May lower your child's self-esteem</li> <li>• Creates an unpleasant interaction</li> </ul>	<ul style="list-style-type: none"> <li>• That wasn't nice.</li> <li>• I don't like it when you make that face.</li> <li>• Do not play like that.</li> <li>• No, sweetie, you shouldn't do that.</li> <li>• That animal doesn't go there.</li> </ul>

BEHAVIOR MANAGEMENT	REASON	EXAMPLES
IGNORE negative behavior (unless it is dangerous or destructive) a. avoid looking at the child, smiling, frowning, etc. b. be silent c. ignore every time expect the ignored behavior to increase at first continue ignoring until your child is doing something appropriate d. praise your child immediately for appropriate behavior	<ul style="list-style-type: none"> <li>Helps your child to notice the difference between your responses to good and bad behavior</li> <li>Although the ignored behavior may increase at first, consistent ignoring decreases many behaviors</li> </ul>	Child: (sasses parent and picks up toy) Parent: (ignores sass; praises picking up)
STOP THE PLAYTIME for aggressive and destructive behavior	<ul style="list-style-type: none"> <li>Teaches your child that good behavior is required during special playtime</li> <li>Shows your child that you are beginning to set limits</li> </ul>	Child: (hits parent) Parent: (CDI STOPS. This can't be ignored.) Special playtime is stopping because you hit me.  Child: Oh, oh, oh mom. I'm sorry. Please, I'll be good. Parent: Special playtime is over now. Maybe next time you will be able to play nicely during special playtime.

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**APPENDIX B**  
**PARENT DIRECTED INTERACTION SKILLS**

RULE	REASON	EXAMPLES
Commands should be direct rather than indirect	<ul style="list-style-type: none"> <li>Leaves no question that the child is being told to do something.</li> <li>Does not imply a choice, or suggest the parent might do the task for the child.</li> <li>Is not confusing for young children.</li> </ul>	<p>Please hand me the block.      Put the train in the box.      Draw a circle.  <i>Instead of:</i>      Will you hand me the block?      Let's put the train in the box.      Would you like to draw a circle?</p>
Commands should be positively stated	<ul style="list-style-type: none"> <li>Tells child what "to do" rather than what "not to do."</li> <li>Avoids criticism of the child's behavior</li> <li>Provides a clear statement of what the child can or should do.</li> </ul>	<p>Come sit beside me.  <i>Instead of:</i>      Don't run around the room!</p> <p>Put your hands in your pocket.  <i>Instead of:</i>      Stop touching the crystal.</p>
Commands should be given one at a time	<ul style="list-style-type: none"> <li>Helps child to remember the whole command</li> <li>Helps parent to determine if child completed entire command</li> </ul>	<p>Put your shoes in the closet.  <i>Instead of:</i>      Put your shoes in the closet, take a bath, and brush your teeth.</p> <p>Put your shirt in the hamper.  <i>Instead of:</i>      Clean your room.</p>
Commands should be specific rather than vague	<ul style="list-style-type: none"> <li>Permits children to know exactly what they're supposed to do.</li> </ul>	<p>Get down off the chair.  <i>Instead of:</i>      Be careful.</p> <p>Talk in a quiet voice.  <i>Instead of:</i>      Behave!</p>

RULE	REASON	EXAMPLES
Commands should be age-appropriate	<ul style="list-style-type: none"> <li>Makes it possible for children to understand the command and be able to do what they are told to do.</li> </ul>	Put the blue Lego in the box. <i>Instead of:</i> Change the location of the azure plastic block from the floor to its container.  Draw a square. <i>Instead of:</i> Draw a hexagon.
Commands should be given politely and respectfully	<ul style="list-style-type: none"> <li>Increases likelihood child will listen better.</li> <li>Avoids teaching child to obey polite and respectful commands.</li> <li>Avoids child learning to obey only if yelled at.</li> <li>Prepares child for school.</li> </ul>	Child: (Banging block on table) Parent: (in a normal tone of voice) Please hand me the block. <i>Instead of:</i> Parent: (said loudly) Hand me that block this instant!
Commands should be explained before they are given or after they are obeyed	<ul style="list-style-type: none"> <li>Avoids encouraging child to ask “why” after a command as a delay tactic.</li> <li>Avoids giving child attention for not obeying.</li> </ul>	Parent: Go wash your hands. Child: Why? Parent: (ignores, or uses timeout warning if child disobeys). Child: Obeys Parent: Now your hands look so clean! It is so good to be all clean when you go to school!
Commands should be used only when necessary	<ul style="list-style-type: none"> <li>Decreases the child’s frustration (and the amount of time spent in the time-out chair)</li> </ul>	[Child is running around] Please sit in this chair. (Good time to use command) <i>Instead of:</i> Please hand me my glass from the counter. (Not a good time to use a direct command)

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## BIOGRAPHICAL SKETCH

Ryan Emily Fussell graduated with a Bachelor of Science degree in human development and a Bachelor of Arts degree in psychology in June 2006 from the University of California, Davis. After graduating from college Ms. Fussell worked as a community health representative doing in-home Parent-Child Interaction Therapy in Sacramento, CA. She then changed coasts and attended the University of Florida where she obtained a Master of Science degree in clinical and health psychology. She is currently pursuing doctoral degree in clinical and health psychology, with a specialization in clinical child psychology, at the University of Florida. Her research interests include parent-child interactions, child abuse outcomes and prevention, and attrition in filial therapies. She is also an assessor and therapist for Project SHAPE, a NIMH-funded grant, examining Parent-Child Interaction Therapy in group and individual formats for children with Attention-Deficit/Hyperactivity Disorder.