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# Parent-Child Interaction Therapy as Treatment for Child Physical Abuse: Relation to Internalizing Symptoms

by

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Honors Thesis

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#### Abstract

This paper explores the effectiveness of Parent-Child Interaction Therapy (PCIT) in reducing child internalizing symptoms in physically abused children as compared to the standard community group treatment. The data for this study was taken from a randomized control trial by Chaffin et al. (2004), which found that PCIT significantly reduced re-reports of physical abuse. The participants were 110 parent-child dyads referred by child welfare due to a recent report of child physical abuse. Both PCIT and the standard community group showed significant reductions in child internalizing symptoms over time, however there was no interaction effect between treatment group and time. Additionally, parent perceptions of their own negative parenting behavior improved significantly over time in both groups, without a significant interaction. The results suggest that PCIT does not target internalizing symptoms in the child any more than the standard community group, however it may disrupt the cycle of abuse.

# Parent-Child Interaction Therapy as Treatment for Child Physical Abuse: Relation to Internalizing Symptoms

Child abuse is public health concern that affects 1 in 7 children in the United States (CDC, n.d.). It was estimated by the National Incidence Study of Child Abuse (NIS-4) in 2005-2006 that 323,000 children experienced child physical abuse (Sedlak et al., 2010), with an incidence of 6.47 out of 1,000 children having experienced abuse (Sedlak & Basena, 2014). The CDC defines child physical abuse as "the intentional use of physical force against a child that results in, or has the potential to result in, physical injury." These physical acts can include hitting, kicking, punching, beating, throwing, pulling, shaking, strangling/choking, and other physical abuse (CDC, n.d.).

Treatment. Historically, child physical abuse has been treated with a variety of interventions. There have been child-focused interventions including Cognitive Behavioral Therapy (Kolko, 1996) and therapeutic day-care programs (Wolfe & Wekerle, 1993); parentfocused interventions including CBT (Kolko, 1996), behavioral parent training program interventions (Chaffin, Funderburk, Bard, Valle, & Gurwitch, 2011) and social networks (Wolfe & Wekerle, 1993); and more comprehensive interventions like family therapy (Kolko, 1996), family-centered home-based interventions, ecobehavioral interventions (Wolfe & Wekerle, 1993) and multi-systems therapy (Brunk, Henggeler, & Whelan, 1987). The most common interventions are parent training programs, despite their less than perfect success rates. These programs are typically didactic, theoretical and abstract discussions about parenting techniques; however, they have recently been replaced with more effective, evidence-based behavioral skills training. Recent research suggests Parent-Child Interaction Therapy (PCIT) is an effective behavioral intervention in treating parent-child dyads, which this study investigates further.

#### **PCIT and Child Physical Abuse**

**Evidence of PCIT.** PCIT is an evidence-based treatment for disruptive childhood behavioral disorders, including oppositional, preschool-aged children (Brinkmeyer & Eyberg, 2003), children with conduct problem behavior (Eyberg, Boggs, & Algina, 1995), and children with ADHD (Wagner & McNeil, 2008). It is a behavioral treatment used to teach parents positive parenting skills, improve the parent-child relationship, create behavior management strategies for parents that are consistent and effective, and decrease negative behaviors of the child. PCIT has been modified for child welfare cases, and has evidence of not only improving child behavior, but also parent behavior, which leads to decreased rates of recidivism (Reese, Hanson, & Sargent, 2014).

PCIT and Physical Abuse. Recent intervention efforts in the realm of child physical abuse have pointed to Parent-Child Interaction Therapy (PCIT). Many studies have looked at the effectiveness of using PCIT as an intervention to break the coercive cycle of abuse. One of the earliest studies of the use of PCIT in cases of child physical abuse was a case study that showed the effectiveness of PCIT in reducing child problem behavior and mother's stress, as well as an increase in positive parent-child interactions (Borrego, Urquiza, Rasmussen, & Zebell, 1999). Comparing maltreatment vs. non-maltreatment dyads, PCIT is effective in both groups in reducing abuse risk (Timmer, Urquiza, Zebell, & McGrath, 2005) as well as reducing child abuse potential (Thomas & Zimmer-Gembeck, 2011). When combined with self-motivation orientation, PCIT significantly increases positive behaviors and reduces negative behaviors in parents, with significantly lower rates of recidivism (Chaffin et al., 2011). As an intervention for child physical abuse, PCIT also is beneficial in foster parent-maltreated child dyads. These dyads have increased risk of abuse because of the severe externalizing behaviors of the maltreated

child, which can be significantly reduced with PCIT (Timmer et al., 2006a; Timmer, Urquiza, & Zebell, 2006b).

There are 4 randomized control studies, as well as a few case studies, on PCIT and child physical abuse, each reporting its effectiveness in reducing re-reports of abuse. The current research focuses on work done by Chaffin et al. (2004). This study compared the effects of PCIT, an enhanced version PCIT with individualized services (EPCIT), and the standard community parenting group on future abuse reports for 110 physically abusive parent and abused child dyads. The results showed that 19% of the PCIT treatment group had re-reports of abuse, compared with 49% in the community parenting group. PCIT had significantly better survival than the standard treatment. The study found evidence that the effectiveness of PCIT is mediated by the reduction in parent negative behavior found in the PCIT condition, as compared to the community group. The current study uses this dataset to analyze the effectiveness of PCIT in reducing internalizing symptoms in physically abused children, as compared to the standard community treatment.

#### **Child Physical Abuse and Internalizing Symptoms**

Although PCIT is primarily a treatment for externalizing symptoms in children, a primary outcome of child physical abuse is internalizing symptoms. Research shows that there is a strong relationship between child physical abuse and internalizing symptoms later in life, such as depression and anxiety. A meta-analysis of the literature from 2000 to 2012 collected data on physical and sexual abuse of children under 16 years old and their outcomes (Lindert et al., 2014). All studies of physical abuse included in the meta-analysis reported increased odds ratios of depression in adults who experienced childhood physical abuse. Another study looking at the

effects of corporal punishment in adolescence found that those who received corporal punishment had significantly increased rates of depression (Straus & Kantor, 1994).

Research suggests a variety of theories to explain the connection between different forms of child abuse and depression, both biological and social. Biological theories suggest that physical or sexual abuse in childhood has an effect on the neurobiology and epigenetics of the child (Lindert et al., 2014). Child abuse has been associated with changes in the HPA axis, neurotransmitter systems, and the hippocampus—changes that are risk factors for depression and internalizing symptoms.

Other theories implicate social factors in the connection between child physical abuse and later internalizing symptoms, including concepts such as attachment, social support and victimization. Muller, Gragtmans, & Baker (2008) studied attachment in adults who suffered physical abuse in childhood, and found that attachment mediated the relationship between abuse and perceived social support. They summarize the attachment theory as the formation of expectations about interactions between the self and others. In the coercion cycle that often characterizes childhood abuse, the relationship between the child and parent can fluctuate from affectionate and loving to hostile and abusive (Muller et al., 2008). The lack of secure attachment in childhood can affect the child's view of self, believing they are worthless and unable to function in relationships, leading to less perceived social support in adulthood and anxiety. The theories that suggest insecure attachment is a leading risk factor for depression in children who have been abused put intervention efforts and emphasis on the parent-child relationship.

Other theories provide a cognitive or psychological explanation for the relationship between child physical abuse and internalizing symptoms, suggesting it is the traumatic process of victimization in childhood that leads to depression later in life (Straus & Kantor, 1994). Being

victimized, especially by someone like a parent who the child depends on to survive, can lead to feelings of powerlessness and decreased self-esteem: both of which are risk factors for depression that persist in future relationships.

### **PCIT and Internalizing Symptoms**

There is some evidence that PCIT is effective in reducing internalizing symptoms, specifically in children with behavioral issues. A study of children with Oppositional Defiant Disorder reported results that showed significant decreases in internalizing symptoms (Chase & Eyberg, 2008). PCIT is also shown to be effective in decreasing depression severity scores, as well as other internalizing symptoms, in preschoolers (Lenze, Pautsch, & Luby 2010). The intervention was modified with an emphasis on emotional development, as researchers recognize the importance of parent-child relationship in fostering emotional well-being in their child. There appears to be only one study that suggests the effectiveness of PCIT in reducing internalizing symptoms in physically abused children. This study reports that PCIT is significantly more effective in reducing internalizing symptoms as compared to a waitlist control group (Thomas & Zimmer-Gembeck, 2012). The current study investigates whether PCIT is more effective than the standard child physical abuse treatment in reducing child internalizing symptoms. Additionally, due to the importance of cognitive and appraisal factors in the development of internalizing symptoms, we investigate whether PCIT addresses parent and child perceptions of parenting behavior.

#### **Current Study**

There is a large body of evidence connecting childhood physical abuse and development of internalizing symptoms in adolescence/adulthood, and this evidence is consistent with a biopsychosocial model. However, less is known about the internalizing symptoms experienced

by the children at the time of, or time close to abuse, particularly given that many of the psychological factors in the development of depression are still being developed at this time. There is promising evidence that PCIT decreases re-referrals for physical abuse, and improves the parent-child relationship and externalizing behavior in physically abused children, yet only one study has investigated whether PCIT has decreased internalizing symptoms in those who have been physically abused (as compared to a waitlist control group). The current study uses the dataset from Chaffin et al. (2004) to look at the internalizing symptoms of children who have been physically abused, and the effect of PCIT on those internalizing symptoms. The first aim of this study was to compare child internalizing symptoms pre and post-PCIT treatment with internalizing symptoms pre and post-standard community group treatment. The hypothesis was that internalizing symptoms would more significantly improve post-PCIT treatment. The second aim was to look further into the role of parent and child perceptions of parenting, and whether these perceptions changed pre and post-treatment. Based on prior research, we predicted there would be improvement in parent perceptions of their own behavior, but no change in child perception of parenting behavior.

#### Method

#### **Participants**

This study represents a secondary analysis of RCT data collected by Chaffin et al. (2004). De-identified data was accessed through a public dataset on the National Data Archive on Child Abuse and Neglect. The participants were parent-child dyads referred because they had entered the child welfare system with a new report of child physical abuse. In order to qualify as a participant, both the parent and abused child had to be able to participate in treatment, the parent had to have a minimum IQ of 70, the child had to be between 4 and 12 years of age, there could

not be a report of sexual abuse against the parent, and the parent was required to provide consent to participate. After 300 dyads obtained referrals, 112 dyads met criteria. Two were removed from data analysis because it was believed they did not provide valid data, resulting in a total of 110 parent-child dyads. Of the 110 parents, 65% were female with a mean age of 32. Fifty-two percent were non-Hispanic White, 40% African American, 4% Hispanic/Latino and a small percentage identified as Native American, Asian or Other. Sixty-two percent of the families were considered below the poverty line.

#### Measures

*Internalizing Symptoms*: internalizing symptoms were assessed with the Behavioral Assessment System for Children (BASC). The BASC (Reynolds & Kamphaus, 1992) is a measure of the thoughts, behaviors and emotions of a child. It is standardized for age and gender norms and includes both adaptive and problematic behaviors, reported by the child, the parent and if possible, the child's teacher. The assessment measures both internalizing and externalizing behavior. This study focuses on the internalizing measures, including anxiety, depression, and overall experience of internalizing symptoms.

*Parent and Child Perception of Parenting:* perceptions of parenting were measured through the Parent Perception Inventory (PPI). The PPI (Hazzard et al., 1983) consists of 18 items to assess child and parent perceptions of positive and negative parenting behavior (9 items for positive, 9 for negative). The measure uses a 5-point scale to assess the frequency of each parenting behavior, ranging from "never" (0) to "a lot" (5).

#### Procedure

The current research is a secondary analysis of the dataset from a randomized control trial by Chaffin et al. (2004). In the original study, the 110 parent-child dyads were randomly

assigned to one of three treatment groups: PCIT, EPCIT (enhanced PCIT with added individualized services), or the standard community group. The participants were referred to this study by child welfare, and thus some families were not seeking treatment voluntarily. There were several motivational orientation sessions that parents were required to pass before moving on to treatment. Those in the PCIT group received 12-14 sessions of standard PCIT treatment, with live-coaching for the majority of the sessions. The EPCIT groups received standard PCIT plus individualized enhanced services addressing substance abuse, parental depression or various other conflicts within the family. The standard community group provided didactic informational sessions about parenting skills and behavior management. The purpose of the original study was to investigate the effectiveness of PCIT as a child physical abuse intervention, and whether it reduces re-reports of abuse. After varying follow up times, the median being with in 850 days, PCIT was found to significantly reduce re-reports of abuse compared to EPCIT and standard community groups.

#### Results

#### Aim 1: comparing child internalizing symptoms pre and post-PCIT treatment

We ran five 2x2 repeated measures ANOVAs on BASC internalizing subscales, 3 for parent report (depression, anxiety, total internalizing) and 2 for child report (depression and anxiety; child reports of internalizing symptoms were not included in this dataset). The hypothesis that internalizing symptoms would more significantly improve post-PCIT treatment compared to standard community treatment was not supported, as there was no significant interaction between time and treatment group. However, there was a significant main effect of time for both parent report of child internalizing (F(1,1) = 11.243, p = .001,  $\eta^2_{partial} = .160$ ) and parent report of child depression (F(1,1) = 7.891; p = .007,  $\eta^2_{partial} = .118$ ). There was also a

marginal main effect of time for parent report of child anxiety (F(1,1) = 3.958, p = .051,  $\eta^2_{partial} = .063$ ). It is important to note that there were no significant differences in internalizing symptoms for any child report of their own internalizing symptoms. Mean scores of internalizing subscales can be found in Table 1.

#### Aim 2: comparing perceptions of parent behavior pre and post-treatment

We ran three more 2x2 repeated measures ANOVAS, this time on the PPI subscales. This included child report on the mother's positive and negative parenting and parent report of their own negative parenting. The hypothesis that parent perceptions of their own behavior would improve was supported. We found a significant main effect of time for the parent perceptions of negative parenting behavior subscale (F(1,1) = 18.954, p < .001,  $\eta^2_{partial} = .240$ ), however there were no significant group effects. Mean scores on PPI subscales can be found in Table 1.

#### Discussion

This study looked at the effectiveness of Parent-Child Interaction Therapy as compared to the standard community group in reducing internalizing symptoms of physically abused children. Our results show that receiving PCIT does not significantly reduce internalizing symptoms more than the standard community group, inconsistent with the hypothesis. Rather, the results showed that overall internalizing symptoms were reduced over time, whether the parent-child dyad received PCIT or the standard community group treatment. Specifically, there were significant reductions in child depression and child internalizing according to the parent report. There was also a marginal effect on child anxiety levels. Thus, it is possible that PCIT does not specifically target internalizing behaviors, but rather receiving any treatment or services can be effective in reducing internalizing symptoms in physically abused children. This matches with previous findings that PCIT does reduce internalizing behaviors in physically abused children.

Our findings support the idea that there are common factors used in therapies, which are generally effective despite the more specific factors that make therapies different (Wampold, 2015). It is possible that PCIT and the standard community group utilize common factors of therapy, despite differing in their specific factors. We suggest that the common factors are what led to the reduction in child internalizing symptoms in both treatment groups. One common factor has to do with the client's expectations for treatment. Although this is difficult to assess in psychotherapy, meta-analyses have found that there is a significant relationship between expectations and outcomes (Constantino, Arnkoff, Glass, Ametrano, & Smith, 2010), which will be discussed further.

Much of the literature supporting the significant connection between childhood trauma and later internalizing symptoms has assessed internalizing symptoms in adolescence or adulthood, as age of onset for most depressive disorders is late adolescence. Although changes in internalizing symptoms specific to PCIT were not identified, chronicity of abuse is linked to higher levels of internalizing symptoms (Lindert et al., 2014). Thus, disrupting the abuse within the family at an early age is of utmost importance, and PCIT has been shown to do so by significantly decreasing rates of re-reports of abuse (Chaffin et al., 2011). Future research should investigate trajectories of depressive symptoms through adolescence and into adulthood following successful treatment for child abuse to better understand these patterns.

The second aim of this study was to compare perceptions of parent behavior pre and posttreatment. The results showed that parent perceptions of their own negative parenting behavior significantly improved, whereas child perceptions did not significantly change. In combination with Aim 1, which also showed significant improvements within parent reports, Aim 2 emphasizes that these interventions target the parent behavior, not the child. As mentioned, one

of the common factors of psychotherapy is expectation, where client expectation is significantly related to outcomes (Constantino et al., 2010). It is possible that parents who go through either PCIT or the standard community group have the expectation not only that their parenting behavior will improve, but also that their child's outcomes will improve.

However, there are other explanations to consider when looking at significant changes in parent reports but not child reports. One reason could be the age of the children participating in the study. To be eligible for the study, the abused child had to be between the ages of 4 and 12. Their young age may indicate that they are not accurate reporters of their own internalizing symptoms. The important difference in PCIT is that it disrupts the cycle of abuse. It is possible that the child may not understand the changes that are occurring, and thus not report them, but are still experiencing better outcomes. The child reports of perceptions of parenting (PPI) were also nonsignificant, which could indicate that schemas for power, control, intimacy and selfesteem are still developing and are based on how children are treated in early relationships. Young children do not have a comparison outside of their own family; their family is their whole context. Thus, children will love their parents no matter what, and because their schemas are still developing, they do not report significant changes in their parents. While it was important to evaluate the child reports, our results are more consistent with our understanding of how internalizing symptoms develop from child physical abuse. These symptoms begin to develop in adolescence and into adulthood. This is why future research should trace children who received PCIT and other physical abuse interventions into adulthood to get a more accurate measure of their resulting internalizing symptoms.

As previously mentioned, one possible limitation for this study is the age of the children (4-12 years old). It is possible, for many reasons, that they are not accurate reporters of their own

symptoms. Additionally, PCIT is intended for children between 2 <sup>1</sup>/<sub>2</sub> and 7 years old, however the treatment was modified for older age groups. This could have influenced the effectiveness of PCIT. This data was collected from a population with severe child welfare reports. Many parents were low income and experiencing mental illness. These factors may have influenced the way parents responded to the therapists administering the PCIT or standard treatment; by receiving therapy, parents may have felt improvements in their own mental illness, thus influencing their reports on their child. Future studies could investigate these effects on less severe cases of child physical abuse. Finally, not all participants provided data on internalizing symptoms and the Parent Perception Inventory.

Future directions are important for working to improve outcomes for children and prevent abuse. There is evidence that PCIT adapted for young children who already have depression, which trains the parent to facilitate emotional development and regulation in their child, significantly reduces depression in children (Lenze et al., 2011). Futures studies may find that this adapted version of PCIT is more beneficial in reducing internalizing symptoms in young children who are physically abused. The current research shows how abuse interventions can reduce internalizing symptoms, and PCIT significantly disrupts the cycle of abuse. We know that internalizing symptoms like depression develop in adolescence and adulthood, which means early detection and treatment of childhood physical abuse is crucial in halting the development of these symptoms.

The current study is a secondary analysis of the previous research by Chaffin et al. (2004). The research suggests that PCIT is effective in reducing re-reports of physical abuse. Studies show PCIT is also effective in reducing internalizing symptoms in children with behavioral issues (Chase & Eyeburg, 2008) as well as children with early childhood depression

(Lenze et al., 2010). However, only one study reports PCIT being effective in reducing internalizing symptoms in children who have been physically abused, as compared to a waitlist control group (Thomas & Zimmer-Gembeck, 2012). Expanding on this research, the current study has found that while PCIT does reduce internalizing symptoms in children who are physically abused, it does not target internalizing any more than the standard community group. However, compounded with the evidence that PCIT reduces risk of abuse (Timmer et al., 2005), child abuse potential (Thomas & Zimmer-Gembeck, 2011) and re-reports of abuse (Chaffin et al., 2011), PCIT interrupts the chronic abuse cycle at an early age, possibly preventing worsening internalizing symptoms in adulthood.

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### *Table 1* Means of BASC Internalizing and PPI Subscales

		Treatment Group			
		PCIT		Community Group	
_	Subscales	Pre	Post	Pre	Post
Parent	BASC Anxiety	50.563	47.854	48.538	44.769
	BASC Depression*	55.167	49.438	54.923	49.692
	BASC Internalizing*	52.479	47.375	50.769	45.769
	PPI Parent Negative*	17.673	13.565	15.817	12.429
Child	BASC Anxiety	49.037	45.407	50.500	47.407
	BASC Depression	52.893	52.036	53.667	45.833
	PPI Child Positive (Mom)	24.443	25.905	27.083	27.979
	PPI Child Negative (Mom)	13.250	12.500	15.583	14.500

*Note.* \*= significant by time at p < .05

BASC Parent Internalizing CG: n = 13; PCIT: n = 48BASC Child Anxiety CG: n = 6; PCIT: n = 27BASC Child Depression CG: n = 6; PCIT: n = 28PPI Parent CG: n = 14; PCIT: n = 48PPI Child CG: n = 12; PCIT: n = 46