EXAMINING THE PARENT PERCEPTION INVENTORY WITHIN

THE CONTEXT OF BEHAVIOR PARENT TRAINING

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EXAMINING THE PARENT PERCEPTION INVENTORY WITHIN THE CONTEXT OF BEHAVIOR PARENT TRAINING

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THESIS ABSTRACT

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THE CONTEXT OF BEHAVIOR PARENT TRAINING

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The Parent Perception Inventory (PPI) is a child report measure used to assess child perceptions of parenting positive and negative behaviors. A parent version of the PPI was also used to assess how parents perceive their own parenting behaviors. PPI positive and negative behavior scores were compared for physically abusive families (consisting of the abusive parent and their child) who completed behavioral parenting training treatment groups and those families who dropped out of treatment.

Parents who went through treatment perceived themselves as having fewer negative behaviors on the PPI after treatment than those who did not go through treatment. No significant differences were found regarding the children's reports of their parents' positive or negative behaviors. Comparisons were also made between parent and child reports and children from different age groups.

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INTRODUCTION

Much of what children say or talk about is overlooked by others. However, child reports can be an important source of information regarding a variety of topics, such as reporting their own behavior or their parents' behaviors. Several research studies have compared child reports with other informant reports (i.e., parents, teachers, etc.) regarding a child's behavior (e.g., Achenbach, McConaughy, & Howell, 1987; Edelbrock, Costello, Dulcan, Conover, & Kala, 1986; Greenbaum, Dedrick, Prange, & Friedman, 1994; Phares, Compas, & Howell, 1989; Pierce & Klein, 1981; Rowe & Kendal, 1997). Among all these studies, it was found that there were low concordance rates and few similarities between child reports and other informant reports (e.g., parents, teachers, etc.) regarding the child's behavior, indicating that children and others seem to perceive a child's behavior differently. These findings have important clinical implications, since treatment targeting a child's problem behavior is often based on other informants' perceptions of the problem, such as those reported by the child's parents or teachers. According to these results, it may be important to assess the child's perception of their own problem behaviors and focus treatment along these lines.

In contrast to reports regarding a child's behavior, reports regarding parenting behaviors have also been examined over the years. Research on child reports of parental behaviors seemed to flourish during the 1950s and 1960s (e.g., Ausubel, Balthazar, Rosenthall, Blackman, Schpoont, & Welkowitz, 1954; Goldin, 1969; Kagan, 1956;

Schaefer, 1965; Siegelman, 1965). A review of the literature on child reports of parental behaviors during this time (Goldin, 1969) commented on the work of Schaefer (1965) and Siegelman (1965). Although using slightly different terminology, both Schaefer and Siegelman described three factors that seemed to define the domain of children's reports of parental behaviors. Schaefer (1965) identified the three factors as Acceptance vs. Rejection (A-R), Psychological Autonomy (PA) vs. Psychological Control (PC), and Firm Control (FC) vs. Lax Control (LC), while Siegelman (1965) identified the three factors as Loving (L), Demanding (D), and Punishment (P). An overall analysis of the results from several studies addressing child reports of parental behaviors suggests that children's reports of parental behaviors seem to be different from parent self-reports of their own parenting behaviors and appear to be related to the child's gender, social class, and behavior (Goldin, 1969).

Using the same measures as Schaefer (1965) and Siegelman (1965), Brook, Whiteman, Gordon, Brenden, and Jinishian (1980) examined the relationship between adolescents' and their mothers' perceptions of maternal child-rearing practices. Two dimensions of parental behavior were assessed: an Affective component that corresponded to Accepting vs. Rejecting parental behaviors and a Controlling component that corresponded to Rewarding vs. Restricting parental behaviors. Overall, adolescents' perceptions were similar to their mothers' perceptions of parenting behaviors. However, adolescents' and mothers' perceptions were more similar to each other in regards to the negative parental behaviors (i.e., Rejecting and Restricting behaviors) than in regards to the positive parental behaviors (i.e., Accepting and Rewarding behaviors).

Bogels and Melick (2004) also used Schaefer's (1965) Child Report of Parental Behavior Inventory to assess the parental behavior dimension of psychological control. In addition, the Mother-Father-Peer Inventory (Epstein, 1983) was used to assess the parental dimensions of Autonomy vs. Overprotection and Acceptance vs. Rejection. These researchers were interested in the relationship among child-report, parent-report, and partner-report of parental rearing behaviors, as well as how children's and parent's anxiety relates to their perceptions of parenting behaviors. It was found that the mothers tended to give a more favorable impression of their own parenting behavior compared to both the child and partner reports. In addition, the partners' reports of the parent's behavior were more similar to the children's reports of the parent's behavior. This implies that parents tend to be less critical about their own parenting behaviors, and thus, not including other informants (e.g., partners, children, etc.) may lead to a biased, overly positive self-report of parenting behaviors.

Parent Perception Inventory

The popularity of Schaefer's (1965) Child Report Inventory and Bronfenbrenner's Parental Behavior Questionnaire (Siegelman, 1965) can be seen by the variety of studies over the years that have used these measures in examining child perceptions of parental behaviors (e.g., Bogels & Melick, 2004; Brook, Whiteman, Gordon, Brenden, & Jinishian, 1980; Schaefer, 1965; Siegelman, 1965). However, it has been argued that these methods seem to be more suitable for theoretical studies than for behavioral outcome studies (Hazzard, Christensen, & Margolin, 1983). The fact that they are lengthy and do not include specific referents to behavioral treatment (i.e. time out)

question their relevance for use in behavioral treatment outcome studies (Hazzard et al., 1983).

In order to address these limitations, Hazzard et al. (1983) developed the Parent Perception Inventory (PPI), which is a brief, easily administered measure that assesses children's perceptions of positive and negative parental behaviors. This measure includes 18 items, 9 of which describe positive parental behavior (positive reinforcement, comfort, talk time, involvement in decision-making, time together, positive evaluation, allowing independence, assistance, and nonverbal affection) and 9 of which describe negative parental behavior (privilege removal, criticism, command, physical punishment, yelling, threatening, time-out, nagging, and ignoring). Children are read descriptions and given examples of each behavior class and then asked to respond using a 5-point scale ranging from 0 (never) to 4 (a lot). Four subscale scores can be derived from the PPI: Mother Positive, Mother Negative, Father Positive, and Father Negative.

Children between the ages of 5 and 13 years from distressed families (clinic-referred families that were either experiencing marital problems or child behavior problems) and non-distressed families (families that volunteered from the community) were used to examine to the reliability and validity of the PPI. Internal consistency for each item and its subsequent PPI subscale was found to range from .40 to .83 for the positive items and from .34 to .72 for the negative items. In addition, Cronbach's alpha (Cronbach, 1951) was calculated for each of the PPI subscales and ranged from .78 to .88. Internal consistency was also assessed for different aged groups and ranged from .81 to .87 for children aged 5-9 and from .74 to .89 for children aged 10-13.

Age and gender effects were also examined. Age differences were not found to be significant, but results did vary according to the gender of the child and the parent. Boys seemed to report more positive behaviors for their parents, particularly for fathers, than did girls. Overall, children seemed to view both their parents equally, although mothers were reported as performing more negative behaviors than fathers.

Both convergent and discriminant validity were assessed for the PPI. For convergent validity, the PPI was compared to a measure of the child's self-concept (either the Piers-Harris or McDaniel-Piers Self-Concept Scale; McDaniel & Piers, 1973; Piers & Harris, 1964) and a parental measure of child conduct disorder (the Child Behavior Checklist Externalizing Scale; Achenbach, 1978; Achenbach & Edelbrock, 1979). Six out of the eight convergent validity correlations were found to be significant, providing initial support for the validity of the PPI. For discriminant validity, the PPI was compared to two measures of achievement, the Wide Range Achievement Test (WRAT; Jastak & Jastak, 1978) and the Becker Intellectual Inadequacy Scale. Only two out of the eight discriminant validity correlations were found to be significant, providing additional support for the validity of the PPI.

When the children from distressed families were compared to the children from non-distressed families, it was found that the children from distressed families rated both their parents as lower in positive behaviors and higher in negative behaviors than did the children from non-distressed families. In addition, the children from non-distressed families tended to rate their parents as behaving more similarly than did the children from distressed families.

In their review of measures that assess parental discipline and nurturance, Locke and Prinz (2002) reported additional evidence for the psychometric properties of the PPI, including internal consistency of its subscales (.74-.89) as well as concurrent, criterion, discriminant, and predictive validity.

One ongoing study (L. A. Valle, personal communication, January 2006) is currently assessing the reliability and validity of the pre-treatment PPI scores found in the Chaffin, Silovsky, Funderburk, Valle, Brestan, Balachova, Jackson, Lensgraf, and Bonner (2004) study. Internal consistency of the PPI at pre-treatment is being evaluated, specifically for a newly created parent version of the PPI that was used in conjunction with the original child version. In addition, validity of the PPI is being assessed in this ongoing study by comparing the pre-treatment PPI scores to the scores obtained on the Conflict Tactics Scale (CTS; Straus, 1998), as well to specific categories of the Dyadic Parent-Child Interaction Coding System (DPICS-II; Eyberg, Bessmer, Newcomb, Edwards, & Robinson, 1994), which is a system for coding parent and child verbal, vocal, and physical behaviors during a structured three-part task that includes child-directed activity, parent-directed activity, and clean-up from the activity. The results from this ongoing study will be able to provide more evidence for or possibly against the reliability and validity of the Parent Perception Inventory.

A Child's Perception of Physical Abuse

In addition to examining children's reports of parental positive and negative behaviors, research has also addressed children's perceptions of parental abusive behaviors. As one example, Roscoe (1987) examined young adolescents' perceptions of

parental abuse behaviors (specifically child physical abuse and neglect) using a modified version of a questionnaire developed by Giovanni and Becerra (1979). Adolescents aged 12-13 years rated vignettes that described child maltreatment according to how serious they thought the maltreatment was to the child's welfare. Overall, the adolescents were very critical of parental behaviors, more so for physical and emotional abuse than for child neglect. Compared to college-aged students, younger adolescents appeared to perceive parental behaviors as more harmful to the child's welfare.

Given its emphasis on parental discipline and nurturance behaviors (Locke & Prinz, 2002), the Parent Perception Inventory has been used in studies with physically abusive families (e.g., Chaffin et al., 2004; Glaser, Horne, & Myers, 1995; McCloskey, Figueredo, & Koss, 1995). For example, McCloskey et al. (1995) examined the perceptions of battered women and their children, ranging from 6-12 years of age, on family violence. Children were given the PPI to assess their perceptions of parental warmth and support. It was found that children's perceptions of parental warmth and nurturance was negatively correlated with the presence of family violence, i.e. less parental warmth and nurturance was perceived in families that displayed more violence, while more parental warmth and nurturance was perceived in families that displayed less violence. In addition, children perceived less parental support in families with elevated levels of family violence.

In a cross-validation study of the PPI, Glaser et al. (1995) administered the PPI to children aged 6-ll from physically abusive families, clinic-referred families for child behavior problems, and non-distressed families recruited from local schools. All of the

families were single-parent families, in which the mother was the head of the household. Thus, only mothers and maternal parenting behaviors were assessed in this study. The purpose of this study was to establish the validity of the PPI in relation to a parent-report measure of child behavior and also to compare the results found to the original Hazzard et al. (1983) study. Children completed the PPI and their mothers completed the Parent Daily Report (PDR; Patterson, Reid, Jones, & Conger, 1975), which measures positive and negative behaviors of children. As a measure of convergent validity, high correlations were found between children's reports of positive maternal behaviors (i.e., Mother Positive subscale score) on the PPI and mothers' reports of positive child behaviors on the PDR, as well as between children's reports of negative maternal behaviors (i.e., Mother Negative subscale score) on the PPI and mothers' reports of negative child behaviors on the PDR. As a measure of divergent validity, low correlations were found between children's reports of maternal positive behaviors (i.e., Mother Positive subscale score) on the PPI and mothers' reports of negative child behaviors on the PDR, as well as between children's reports of maternal negative behavior (i.e., Mother Negative subscale score) on the PPI and mothers' reports of positive child behavior on the PDR. When these results were compared with the results found in the original Hazzard et al. (1983) study, it appeared that children from non-distressed families in this study viewed their mother's behavior more negatively than the children from non-distressed families in the original Hazzard et al. (1983) study. This study concluded that there appeared to be bi-directional influences of the perception of behavior among family members, such that positive child perceptions of parental

behaviors seem to be related to parent reports of positive child behavior, while child perceptions of poor parenting behaviors seem to be related to parent reports of child misbehavior.

Chaffin et al. (2004) evaluated the effectiveness of Parent-Child Interaction Therapy with physically abusive families in reducing future abuse reports. Parent-Child Interaction Therapy (PCIT; Eyberg, 1988; Eyberg & Robinson, 1982; Hembree-Kigin & McNeil, 1995) is an empirically supported treatment (Brestan & Eyberg, 1998; Chambless & Ollendick, 2000) in which parents are trained to use specific skills while interacting with their children. Physically abusive families, as referred by the child welfare system, were assigned to one of three interventions: PCIT, PCIT plus individualized treatment services, or a standard community-based parenting group. The treatment groups lasted approximately six months. During the initial and final sessions, a variety of measures were given to the parents and their children to complete, one of which was the Parent Perception Inventory. For this study, a parent report version of the PPI was created and used in conjunction with the original child report version of the PPI. The parent report version of the PPI asked parents to report their perceptions of their own parenting behaviors. The questions comprising the parent report version were the same as those on the child report version (differing only in regards to the person being evaluated) but did include two additional questions. Since the primary focus of the Chaffin et al. (2004) study was to evaluate the effectiveness of PCIT, the PPI data collected during the project were not systematically evaluated. Specifically, given that the PPI was being used in a treatment outcome study, analyses that take into account the

pre- and post-treatment PPI scores could inform future use of this measure. Therefore, subsequent analyses using these PPI results seem to be warranted.

Goals of the Study

Since the psychometric properties of both the parent and child versions of the Parent Perception Inventory (PPI) during pre-treatment are currently being assessed in the L. A. Valle study (personal communication, January 2006) mentioned above, the present study attempts to take the next step by evaluating the sensitivity of the PPI within the context of behavioral treatment. The treatment groups (i.e., PCIT, PCIT coupled with individualized therapy, and a standard community-based parenting program) used in the Chaffin et al. (2004) study with the physically abusive families were hypothesized to reduce future abuse reports through behavior change. Therefore, since the PPI is designed to assess perceptions of parenting behaviors and was completed by the parents and their children in this study at pre- and post-treatment, it is now possible to evaluate potential pre-post changes in the PPI scores. Clinically significant pre-post PPI change scores would support the clinical utility of these behaviorally based parent and child report measures.

Hypotheses

Given the research on the PPI, physically abusive families, and treatment effects, the following hypotheses were proposed:

1. Up to this point, research has not addressed test-retest reliability of the PPI. In the Chaffin et al. (2004), families who did not go through treatment but had pre- and post-treatment PPI scores make it possible to examine the test-retest reliability of

the PPI. Thus, it was hypothesized that the PPI would demonstrate adequate test-retest reliability.

2. There would be statistically significant and clinically significant differences between the pre- and post-treatment PPI scores for parents in the treatment group regarding their own parenting behaviors, with higher PPI scores for positive behaviors and lower PPI scores for negative behaviors shown at post-treatment.
3. There would be significant differences from pre- to post-treatment for PPI positive and negative scores between parents in the treatment group and parents in the comparison group, with parents in the treatment group having higher PPI positive behavior scores and lower PPI negative behavior scores than those in the comparison group at post-treatment.
4. There would be statistically significant and clinically significant differences between the pre- and post-treatment PPI scores for the children of families in the treatment group regarding their parents' behaviors, with higher PPI scores for positive behaviors and lower PPI scores for negative behaviors shown at post-treatment.
5. There would be significant differences from pre- to post-treatment for PPI positive and negative scores between children in the treatment group and children in the comparison group, with children in the treatment group having higher PPI positive behavior scores and lower PPI negative behavior scores than those in the comparison group at post-treatment.

In addition to these hypotheses, exploratory analyses were also conducted:

1. Previous research comparing children's perceptions to parent's perceptions of parenting or child behaviors have found that there appears to be a negative correlation, or close to no correlation, between the two (Achenbach et al., 1987; Bogels & Melick, 2004; Edelbrock et al., 1986; Goldin, 1969; Greenbaum et al., 1994; Phares et al., 1989; Pierce & Klein, 1981; Rowe & Kendal, 1997). However, these studies did not include treatment samples, making it unclear whether there would be a difference in children and parent perceptions after going through a treatment program. Since the present study included a 6-month treatment component, it was possible to examine whether there were significant differences between the children's perceptions of their parents' behaviors and their parents' perceptions of their own parenting behaviors at post-treatment using their positive and negative PPI scores.
2. The children in the Chaffin et al. (2004) study ranged in age from 4 to 14 years. Thus, the present study examined differences in positive and negative PPI scores according to the age of the children.
3. To test the hypotheses in the present study, only the families in the PCIT and EPCIT treatment groups were used. Additional analyses were conducted to examine any differences that may arise when the families from the standard community treatment group were included in the overall treatment group.

METHOD

Participants

The participants used for this study are parent-child dyads (consisting of an abusive parent and an abused child) living in Oklahoma who had been referred to the child welfare system for instances of physical abuse. Out of the 110 families that participated in the original study (Chaffin et al., 2004), 40 parents were used in this study to test hypotheses #2 and #3, and 39 children (aged 4-12 years) were used to test hypotheses #4 and #5. In addition, 7 families that have pre- and post-treatment PPI scores but either had no treatment at all (n = 5; 71%) or completed less than 10 treatment sessions (n = 2; 29%) were used in this study as a comparison group. For hypothesis #1, eight comparison families (those who did not have any treatment at all) were used to examine the test-retest reliability of the PPI for the parents, while nine comparison families were used to examine the test-retest reliability of the PPI for the children.

With regard to parent demographics, most parents were female (60%), Caucasian (48%) or African-American (36%), and were the child's biological mothers (53%). With regard to child demographics, most of the children were male (64%), and although the children ranged in age from 4 to 12 years, the majority of them were between the ages of 6 and 8 years.

Measures

The Parent Perception Inventory (PPI; Hazzard, Christensen, & Margolin, 1983) is the only measure that was used in this study. The original PPI that was developed by Hazzard et al. (1983) consists of a child report version in which the child perceptions of parental positive and negative behaviors are assessed. This measure includes 18 parental behavior items, 9 of which describe positive parental behavior (positive reinforcement, comfort, talk time, involvement in decision-making, time together, positive evaluation, allowing independence, assistance, and nonverbal affection) and 9 of which describe negative parental behavior (privilege removal, criticism, command, physical punishment, yelling, threatening, time-out, nagging, and ignoring). Children are read descriptions and given examples of each behavior class and then asked to respond using a 5-point scale ranging from 0 (never) to 4 (a lot). Four subscale scores can be derived from the PPI: Mother Positive, Mother Negative, Father Positive, and Father Negative.

For the Chaffin et al. (2004) study, a parent report version of the PPI was created and used in conjunction with the original child report version of the PPI. The parent report version of the PPI asks parents to report their perceptions of their own parenting behaviors. The questions comprising the parent report version are the same as those on the child report version (differing only in regards to the person being evaluated) but do include two additional questions (one additional positive behavior question and one additional negative behavior question). The same 5-point response scale is used (i.e. 0-4) for the parent report version of the PPI and the same four subscale scores (i.e. Mother Positive, Mother Negative, Father Positive, and Father Negative) can be derived. Both

the child report and the parent report versions of the PPI used in this study are shown in the appendices.

Procedure

During the initial sessions (i.e. pre-treatment), the parents and their children went through a structured interview, completed several measures (one of which was the Parent Perception Inventory, completed by both the parent and the child) and participated in a structured parent-child play interaction.

Once these steps were completed, the families were randomly assigned to one of three treatment groups:

1) Parent-Child Interaction Therapy (PCIT; Eyberg, 1988; Eyberg & Robinson, 1982; Hembree-Kigin & McNeil, 1995), which is an empirically supported treatment (Brestan & Eyberg, 1998; Chambless & Ollendick, 2000) that involves training parents to use behavior management and specific communication skills while interacting with their children.
2) Enhanced Parent-Child Interaction Therapy (EPCIT), which involved using PCIT, as well as individualized enhanced services that focused on potential familial problems.
3) Standard Community-Based Parenting Group, a parenting training program that was offered by a non-profit agency in the local community.

In order to collapse the families from the different treatment groups into an overall treatment group for the purposes of this study, it was important that the different groups display similar features and are consistent with each other. The standard community

parenting treatment group differed from the PCIT and EPCIT treatment groups in that only the parents were involved in the standard community treatment program, while both the children and the parents were involved in the PCIT and EPCIT treatment groups. Therefore, only the PCIT and EPCIT treatment families were used to test the hypotheses in the present study.

The families participated in the treatment groups for approximately 6 months. Following treatment (i.e. post-treatment), the families completed several of the same measures (including the PPI by both the parent and the child) and went through the same observational coding procedure as during pre-treatment.

RESULTS

Test-Retest Reliability

In order to obtain a preliminary measure of the test-retest reliability for the PPI, Pearson correlations were conducted between the pre- and post-treatment PPI scores (separated by 6 months) for both positive and negative behavior scores of the parents (n = 8) and the children (n = 9) in the comparison group who did not complete any treatment. The results of these correlations are shown in Table 1.

Table 1
Test-Retest Reliability of the Parent and Child PPI Scales

PPI Behavior Scale	*r*
Parent Positive	0.86**
Parent Negative	0.94**
Child Positive	0.71*
Child Negative	-0.33

Note. PPI = Parent Perception Inventory
*p < .05. **p < .01.

For the parents, the correlations between the pre- and post-treatment positive behavior PPI scores (r = .86) and the pre- and post-treatment negative behavior PPI

scores (r = .94) were significant at the 0.01 alpha level, thereby demonstrating adequate test-retest reliability. For the children, the correlation between the pre- and post-treatment positive behavior PPI scores (r = .71) was significant at the 0.05 alpha level and therefore also demonstrated adequate test-retest reliability. However, the correlation between child pre- and post-treatment negative behavior PPI scores (r = -.33) was not significant.

Differences between Pre- and Post-Treatment PPI Scores for Treatment Group Parents

Paired sample *t*-tests were conducted to evaluate statistically significant differences between the pre- and post-treatment PPI positive and negative behavior scores for the parents in the treatment group (n = 40). The results of these *t*-tests are shown in Table 2.

Table 2

Pre- and Post-Treatment PPI Means Scores for Treatment Group Parents

	Time		
PPI Behavior Scale	Pre	Post	
Positive	29.01 (5.51)	30.58 (5.17)	p = .053
Negative	17.46 (5.26)	12.74 (5.32)	p < .001**

Note. Values enclosed in parentheses represent standard deviations. PPI = Parent Perception Inventory.

For the PPI positive behavior scale, the pre-treatment (M = 29.01, SD = 5.51) and post-treatment (M = 30.58, SD = 5.17) PPI mean scores were not statistically significant, $t(39) = -1.997$, $p = .053$. However, the pre-treatment (M = 17.46, SD = 5.26) and post-treatment (M = 12.74, SD = 5.32) PPI mean scores for the negative behavior scale were statistically significant, $t(39) = 4.775$, $p < .001$, with lower negative behavior scores shown at post-treatment.

In order to evaluate clinical significance between the pre- and post-treatment PPI scores for the parents in the treatment group, effect sizes were obtained and a mean reliable change index score was calculated for both the positive and negative behavior scale scores (see Table 3). Effect sizes greater than .80 are considered meaningful. A moderate effect size was found between the pre- and post-treatment PPI positive behavior scale scores ($\eta^2 = .57$). For the PPI negative behavior scale scores, a small effect size was found between pre- and post-treatment ($\eta^2 = .30$). Reliable change index scores for each parent were calculated using the formula obtained from Jacobson, Follette, & Revenstorf (1984): $RC = (x_2 - x_1)/S_E$, where x_1 is the subject's pretest score, x_2 is the subject's posttest score, and S_E is the standard error of measurement. S_E was calculated using the formula $S_E = s_1 \sqrt{(1 - r_{xx})}$, where s_1 is the standard deviation at pre-treatment and r_{xx} is the test-retest reliability. The individual parent reliable change index scores were averaged to produce a mean reliable change index score for both the PPI positive and negative behavior scales. A reliable change index score greater than 1.96 or less than -1.96 is considered meaningful (Jacobson, Roberts, Berns, & McGlinchey, 1999). The mean reliable change index score for the PPI negative behavior scale (RC = -3.71) was

clinically significant, with parents perceiving their parenting behavior as less negative at post-treatment. The mean reliable change index score for the PPI positive behavior scale (*RC* = .74) was not considered clinically meaningful.

Table 3

Effect Sizes and Reliable Change Index Means for Treatment Group Parents

		Reliable Change Index		
PPI Behavior Scale	Effect Size	Mean	Minimum	Maximum
Positive	0.57	0.74	-4.29	6.67
Negative	0.3	-3.71	-14.17	10.74

Note. PPI = Parent Perception Inventory

Differences between Pre- and Post-Treatment PPI Scores for Treatment Group Children

Paired sample *t*-tests were conducted to evaluate statistically significant differences between the pre- and post-treatment PPI positive and negative behavior scores for the children in the treatment group ($n = 39$). The results of these *t*-tests are shown in Table 4.

Table 4

Pre- and Post-Treatment PPI Mean Scores for Treatment Group Children

	Time		
PPI Behavior Scale	Pre	Post	
Positive	24.41 (8.08)	25.44 (7.39)	p = .57
Negative	12.90 (7.98)	12.08 (7.53)	p = .55

Note. Values enclosed in parentheses represent standard deviations. PPI = Parent Perception Inventory.

No statistically significant differences were found between the pre-treatment (M = 24.41, SD = 8.08) and post-treatment (M = 25.44, SD = 7.39) PPI positive behavior mean scores, $t(38) = -.576$, p = .568, as well as between the pre-treatment (M = 12.90, SD = 7.98) and post-treatment (M = 12.08, SD = 7.53) PPI negative behavior mean scores, $t(38) = .602$, p = .551.

In order to evaluate clinical significance between the pre- and post-treatment PPI scores for the children in the treatment group, effect sizes were obtained and a mean reliable change index score was calculated for both the positive and negative behavior scale scores (see Table 5). A moderate effect size was found between the pre- and post-treatment PPI negative behavior scale scores (η^2 = .40). For the PPI positive behavior scale scores, a small effect size was found between pre- and post-treatment (η^2 = -.05). Reliable change index scores for each child were calculated using the same formula as in the parent analyses (Jacobson, Follette, & Revenstorf, 1984), and individual child reliable change index scores were averaged to produce a mean reliable change index score for

both the PPI positive and negative behavior scales. The mean reliable change index score for both the PPI positive and negative behavior scales (*RC* = .24 and *RC* = -.09, respectively) were not considered clinically meaningful.

Table 5

Effect Sizes and Reliable Change Index Means for Treatment Group Children

		Reliable Change Index		
PPI Behavior Scale	Effect Size	Mean	Minimum	Maximum
Positive	-0.05	0.24	-5.38	7.31
Negative	0.40	-0.09	-2.28	2.61

Note. PPI = Parent Perception Inventory

Differences in PPI Scores between Parents in the Treatment Group and Parents in the Comparison Group

In order to evaluate statistically significant differences between parents in the treatment group ($n = 40$) and parents in the comparison group ($n = 7$), 2x2 ANOVAs were conducted across group (treatment vs. comparison) and time (pre- vs. post-treatment) for both the PPI positive and negative behavior scale scores. Statistically significant differences were found between the groups for both the PPI positive behavior scores, $F(1, 45) = 7.997$, $p = .007$, and negative behavior scores, $F(1, 45) = 4.934$, $p = .03$, with parents in the treatment group perceiving more positive behaviors and less negative behaviors than parents in the comparison group at post-treatment (see Table 6 and Figures 1 and 2). However, it is important to note that the treatment and comparison

groups were significantly different at pre-treatment with regard to the PPI positive behavior scores, $F(1, 46) = 6.125$, $p = .02$, with parents in the treatment group perceiving more positive behaviors than those in the comparison group.

Table 6

Pre- and Post-Treatment PPI Mean Scores for Treatment and Comparison Parents

	Pre-Treatment		Post-Treatment	
PPI Behavior Scale	Tx Group	Comp Group	Tx Group	Comp Group
Positive	29.01[a]	23.43[a]	30.58[b]	24.71[b]
Negative	17.46	20.14	12.74[c]	19.05[c]

Note. Means having the same superscript differ significantly from each other at $p < .05$. PPI = Parent Perception Inventory; Tx = Treatment; Comp = Comparison.

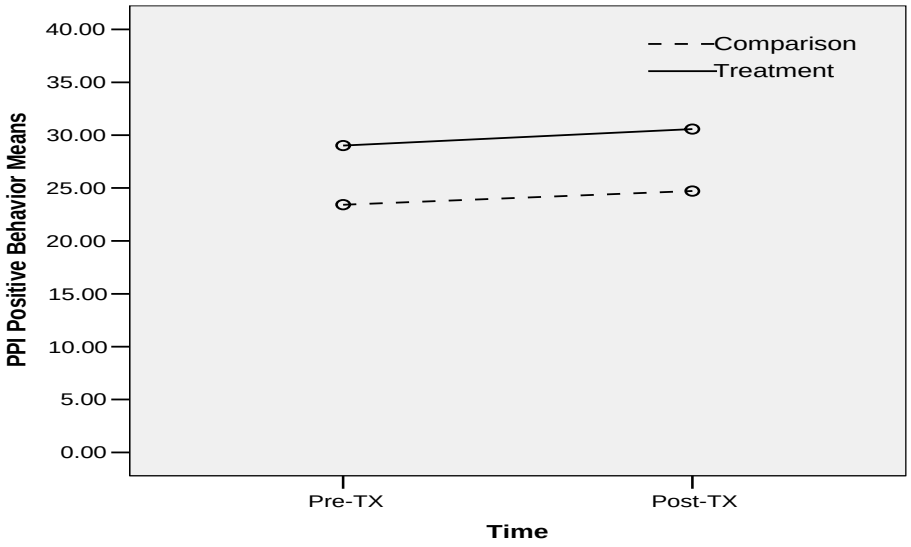

Figure 1. Parent Treatment vs. Comparison Groups for PPI Positive Behaviors at Pre- and Post-Treatment.

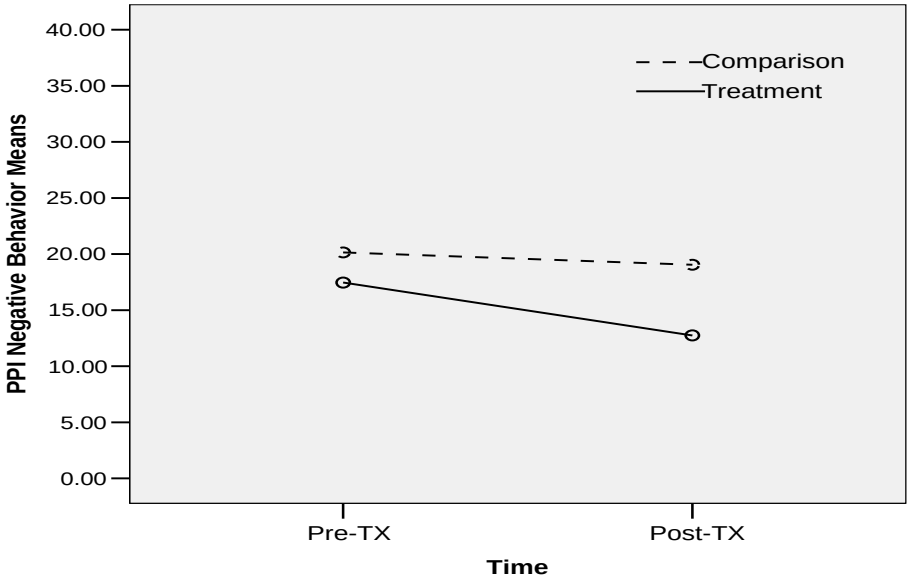

Figure 2. Parent Treatment vs. Comparison Groups for PPI Negative Behaviors at Pre- and Post-Treatment.

Effect sizes were also obtained to assess whether differences between the groups were clinically significant. Small effect sizes were found for both the positive and negative behavior scale scores ($\eta^2 = .15$ and $\eta^2 = .10$, respectively).

Differences in PPI Scores between Children in the Treatment Group and Children in the Comparison Group

In order to evaluate statistically significant differences between children in the treatment group ($n = 39$) and children in the comparison group ($n = 7$), 2x2 ANOVAs were conducted across group (treatment vs. comparison) and time (pre- vs. post-treatment) for both the PPI positive and negative behavior scale scores. No statistically

significant differences were found between the groups for the PPI positive behavior scores, $F(1, 44) = .224$, $p = .64$, or the PPI negative behavior scores, $F(1, 44) = .222$, $p = .64$ (see Table 7 and Figures 3 and 4).

Table 7

Pre- and Post-Treatment PPI Mean Scores for Treatment and Comparison Children

	Pre-Treatment		Post-Treatment	
PPI Behavior Scale	Tx Group	Comp Group	Tx Group	Comp Group
Positive	24.41	24.43	25.44	27.43
Negative	12.90	13.71	12.08	13.68

Note. PPI = Parent Perception Inventory.

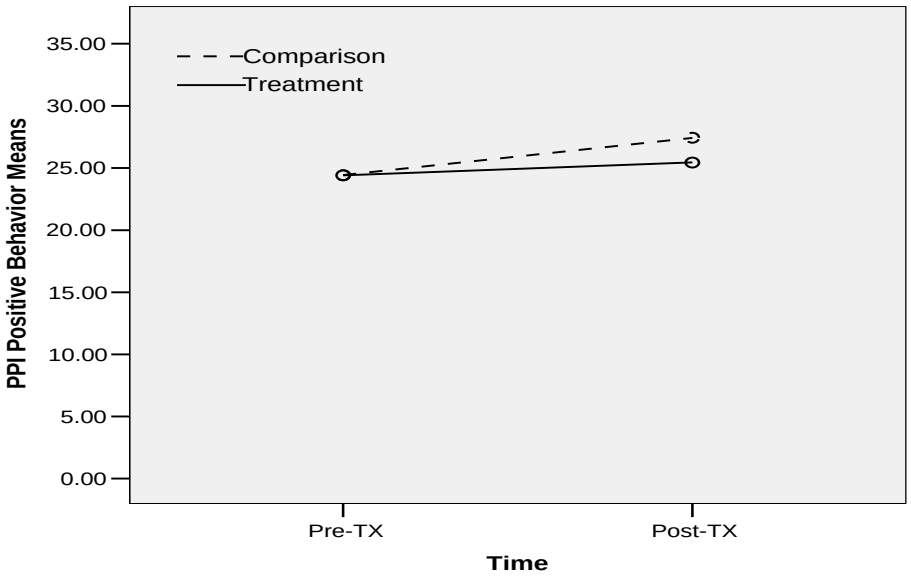

Figure 3. Child Treatment vs. Comparison Groups for PPI Positive Behaviors at Pre- and Post-Treatment.

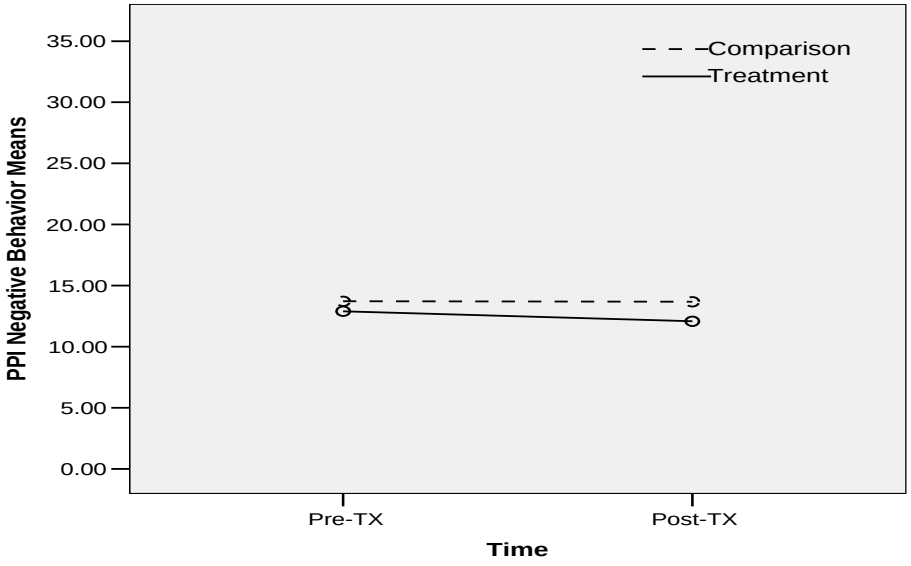

Figure 4. Child Treatment vs. Comparison Groups for PPI Negative Behaviors at Pre- and Post-Treatment.

Effect sizes were also obtained to assess whether differences between the groups were clinically significant. Small effect sizes were found for both the positive and negative behavior scale scores ($\eta^2 = .01$ and $\eta^2 = .01$, respectively).

Parent and Child Comparisons

Exploratory analyses were conducted using paired sample *t*-tests to examine whether there were differences between the children's perceptions of their parents' behaviors and their parents' perceptions of their own parenting behaviors at pre- and post-treatment for both PPI positive and negative behavior scores. Thirty-nine parents

and their children in the treatment group were used in these comparisons. The results of these analyses are shown in Table 8.

Table 8

Comparison of Parent and Child PPI Scores

	Pre-Treatment		Post-Treatment	
PPI Behavior Scale	Parents	Children	Parents	Children
Positive	28.89[a]	24.40[a]	30.56[bb]	25.44[bb]
Negative	17.70[cc]	12.90[cc]	12.94	12.08

Note. Means with a single superscript differ significantly from each other at $p < .05$, while means with a double superscript differ significantly from each other at $p < .01$. PPI = Parent Perception Inventory.

For the PPI positive behavior scale, the pre-treatment PPI mean scores for the parents ($M = 28.89$, $SD = 5.52$) and children ($M = 24.41$, $SD = 8.08$) were significantly different, $t(38) = 1.923$, $p = .006$. Similarly, the post-treatment PPI mean scores for the parents ($M = 30.56$, $SD = 5.24$) and children ($M = 25.44$, $SD = 7.39$) were also significantly different, $t(38) = 3.712$, $p = .001$.

For the PPI negative behavior scale, the pre-treatment PPI mean scores for the parents ($M = 17.70$, $SD = 5.09$) and children ($M = 12.90$, $SD = 7.98$) were significantly different, $t(38) = 3.525$, $p = .001$. However, the post-treatment PPI mean scores for the parents ($M = 12.94$, $SD = 5.23$) and children ($M = 12.08$, $SD = 7.53$) were not significantly different, $t(38) = .598$, $p = .55$.

Child Age Group Differences

Exploratory analyses were also conducted to examine whether there were any differences in positive and negative PPI scores according to the age of the children. Three age groups were compared for these analyses: children aged 4-7 years (n = 20), children aged 8-10 years (n = 22), and children aged 11-14 years (n = 14).

For the PPI positive behavior scale (see Table 9 and Figure 5), the pre-treatment PPI mean scores for the children aged 4-7 years (M = 25.89, SD = 5.98), the children aged 8-10 years (M = 24.55, SD = 8.68), and the children aged 11-14 years (M = 24.07, SD = 8.00) were not significantly different from each other, $F(2,55) = .275$, $p = .76$. Similarly, the post-treatment PPI mean scores for the children aged 4-7 years (M = 25.20, SD = 5.19), the children aged 8-10 years (M = 28.09, SD = 6.92), and the children aged 11-14 years (M = 23.64, SD = 7.98) were also not significantly different from each other, $F(2,55) = 2.107$, $p = .13$. Thus, children from different age groups had similar perceptions with regard to level of positive parenting behaviors.

Table 9

Child Age Group Comparisons for the PPI Positive Behavior Scale

	Child Age (in years)		
Time	4 to 7	8 to 10	11 to 14
Pre-Treatment	25.89	24.55	24.07
Post-Treatment	25.20	28.09	23.64

Note. PPI = Parent Perception Inventory

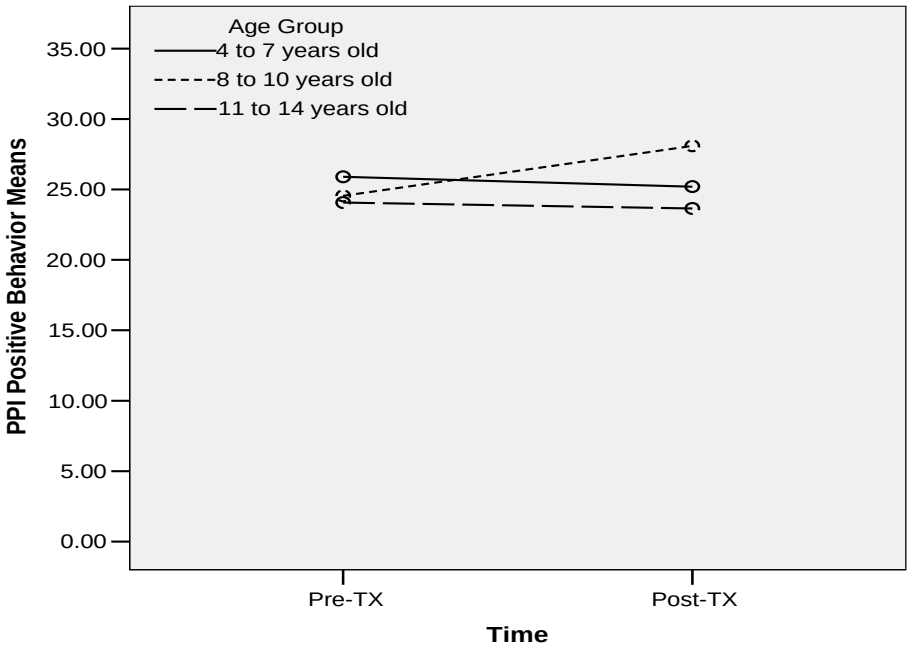

Figure 5. Child Age Group Comparisons for PPI Positive Behaviors at Pre- and Post-Treatment.

For the PPI negative behavior scale (see Table 10 and Figure 6), the pre-treatment PPI mean score for the children aged 4-7 years (M = 18.15, SD = 6.64) was significantly different from those of the children aged 8-10 years (M = 10.82, SD = 7.77) and the children aged 11-14 years (M = 10.43, SD = 8.15), $F(2,55) = 6.433$, $p = .003$, with the younger age group perceiving more negative behaviors than those in the older age group. However, the post-treatment PPI mean scores for the children aged 4-7 years (M = 15.70, SD = 8.47), the children aged 8-10 years (M = 11.06, SD = 8.06), and the children aged 11-14 years (M = 11.96, SD = 6.44) were not significantly different from each other, $F(2,55) = 1.974$, $p = .15$.

Table 10

Child Age Group Comparisons for PPI Negative Behaviors

	Child Age (in years)		
Time	4 to 7	8 to 10	11 to 14
Pre-Treatment	18.15*	10.82	10.43
Post-Treatment	15.70	11.06	11.96

Note. PPI = Parent Perception Inventory

* Mean differs significantly at $p < .05$ when compared to the means of the other two age groups.

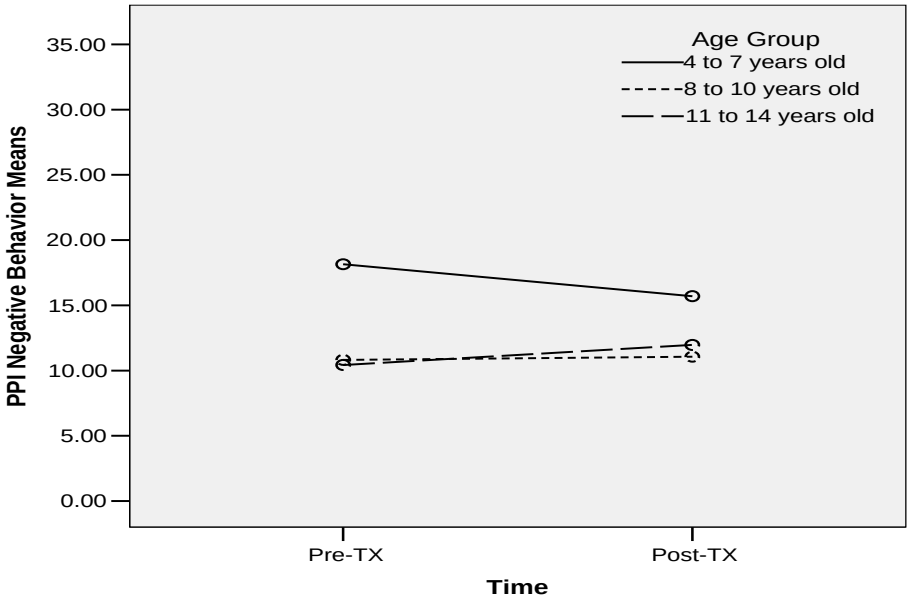

Figure 6. Child Age Group Comparisons for PPI Negative Behaviors at Pre- and Post-Treatment.

Results when including the Standard Community Group in the Overall Treatment Group

Exploratory analyses were also conducted to examine whether there were any differences when the families from the standard community treatment group were included in the overall treatment group. The same analyses used to test the above hypotheses were conducted, differing only in the sample size used. Only two differences were found when including the standard community group in the analyses and involved the parent PPI positive and negative behavior scores for treatment group parents vs. comparison group parents. Forty-nine parents in the treatment group and 11 parents in the comparison group were used in these analyses. Whereas the original results had a significant difference at pre-treatment with regard to the PPI positive behavior scores, the parent treatment and comparison groups when including the standard community treatment group were not significantly different at pre-treatment, $F(1,59) = 3.858$, $p = .054$. In addition, for the PPI negative behavior scores, results were no longer statistically significant between the parent treatment group and comparison group, $F(1, 58) = 2.717$, $p = .11$, when including the standard community treatment group (see Table 11 and Figures 7 and 8).

Table 11

Pre- and Post-Treatment PPI Mean Scores for Treatment and Comparison Parents when including the Standard Community Treatment Group

	Pre-Treatment		Post-Treatment	
PPI Behavior Scale	Tx Group	Comp Group	Tx Group	Comp Group
Positive	29.09 [29.01[a]]	25.27 [23.43[a]]	30.51[b] [30.58[c]]	24.91[b] [24.71[c]]
Negative	17.06 [17.46]	18.91 [20.14]	12.71 [12.74[d]]	16.30 [19.05[d]]

Note. Values enclosed in brackets represent results when not including the community sample treatment group. Means with the same superscript differ significantly from each other at $p < .05$. PPI = Parent Perception Inventory.

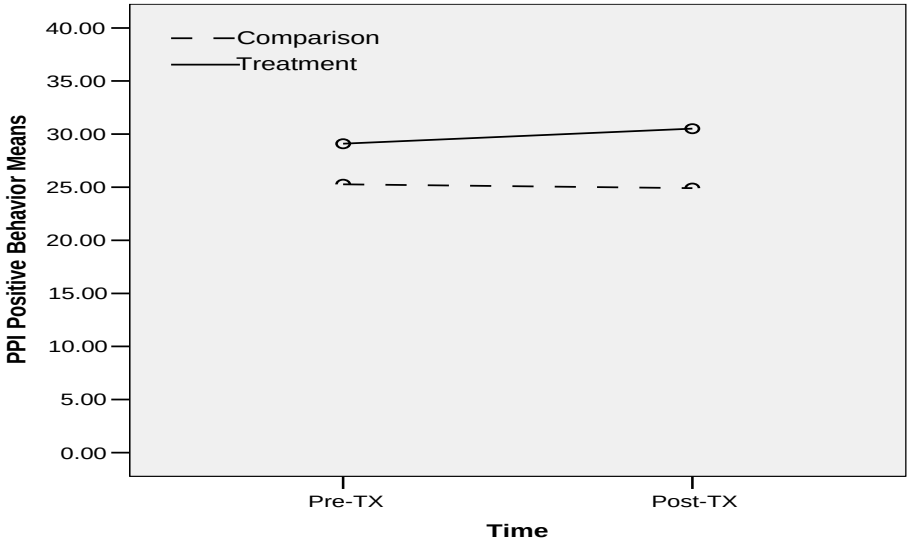

Figure 7. Parent Treatment vs. Comparison Groups for PPI Positive Behaviors at Pre- and Post-Treatment when including the Standard Community Treatment Group.

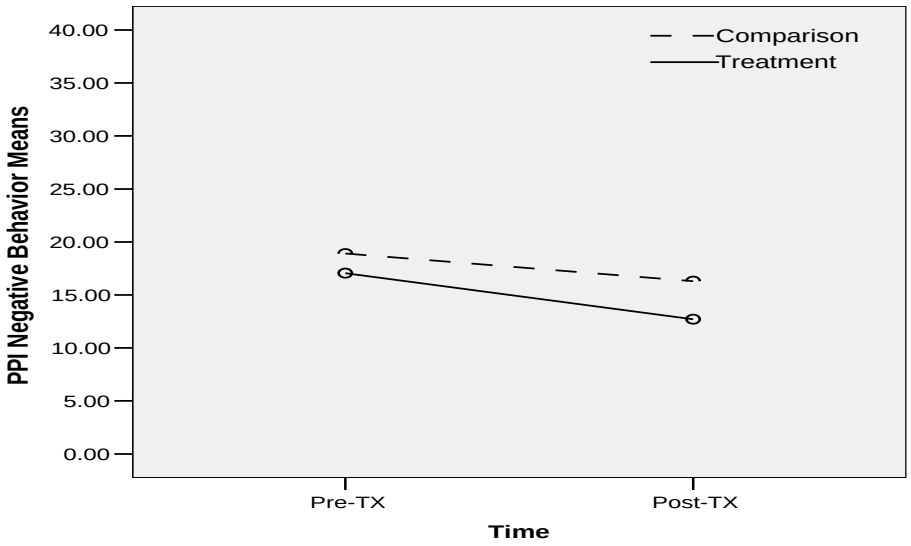

Figure 8. Parent Treatment vs. Comparison Groups for PPI Negative Behaviors at Pre- and Post-Treatment when including the Standard Community Treatment Group.

DISCUSSION

The purpose of this study was to evaluate the clinical utility of the Parent Perception Inventory (PPI) in the context of a behavioral treatment outcome study. In their study on evaluating the effects of different treatments in reducing future abuse reports among abusive families, Chaffin et al. (2004) had parents and their children complete the PPI at pre- and post-treatment. Therefore, in this study, it was possible to evaluate potential pre-post changes in the PPI scores, as well as provide a preliminary measure of the test-retest reliability for the PPI.

Initial evidence in support of the hypothesis for adequate test-retest reliability was found for both parent and child PPI positive behaviors, as well as for parent PPI negative behaviors, but not for child PPI negative behaviors. Overall, the test-retest reliability for the parent positive and negative behavior scales was stronger relative to the test-retest reliability of the child behavior scales. In particular, the test-retest reliability for the child negative behavior scale varied drastically from that of the other child scale, as well as both the parent scales. This exception can be partially explained when examining the individual scores for each child at pre- and post-treatment for the negative behavior scale. When compared to each other, these scores showed considerable variability, with some children showing an increase in their scores from pre- to post-treatment (ranging from 4 to 14 points), other children showing a decrease in their scores from pre- to post-treatment (ranging from 10 to 31 points), and one child staying the same from pre- to

post-treatment. Other factors that may contribute to less consistency (i.e., reliability over time) for a child report scale involve the potential influence of child developmental changes and the duration of the test-retest period (LaGreca, 1990).

When examining differences from pre- to post-treatment only for those parents who went through behavioral treatment, support for the hypothesis was mixed. Statistically and clinically significant differences were found regarding parent PPI negative behaviors in support of the hypothesis, with parents reporting fewer negative behaviors at post-treatment than at pre-treatment. However, parent positive behavior scores remained consistent from pre- to post-treatment and were not found to show an increase from pre- to post-treatment as hypothesized. The parents scored high on the positive behavior scale at pre-treatment (averaging a score of 29 out of a maximum 36), which may have limited their potential to report any improvement at post-treatment. Perhaps the significant change found regarding parent negative behaviors was due to the specific characteristics and goals of the behavioral treatment used with these parents. For example, the treatment used in this study, Parent-Child Interaction Therapy (PCIT; Eyberg, 1988; Eyberg & Robinson, 1982; Hembree-Kigin & McNeil, 1995), primarily focuses on decreasing parent negative behaviors and increasing positive behaviors during interactions with their children, including more effective discipline techniques. With regard to clinical significance, there was a discrepancy between the effect sizes and reliable change index scores for both parent self-reported positive and negative behaviors. A larger effect size was found for the parent positive behaviors than for the parent negative behaviors, while the mean reliable change index score was only found to be

clinically significant for the parent negative behaviors. Jacobson et al. (1984) explained that since the reliable change index is dependent on the sensitivity of the measure, it may be turn out to be large even if the effect size is small.

For those children who were in the treatment group, no statistically or clinically significant differences were found from pre- to post-treatment for positive or negative PPI behaviors. Their scores remained consistent for both scales from pre- to post-treatment. Thus, the hypothesis regarding an increase in positive behaviors and a decrease in negative behaviors from pre- to post-treatment for treatment group children was not supported. Although the specific treatment used in this study included both the parent and the child, it was the parents who were directly taught how to use and practice the specific behavior management skills, perhaps making any changes in parenting behaviors easier to recognize or more readily accessible for the parents than it was for the children.

Significant differences were found between the parent treatment and comparison groups at post-treatment for both PPI positive and negative behavior scores in support of the hypothesis, with parents in the treatment group perceiving more positive behaviors and less negative behaviors than parents in the comparison group at post-treatment. For the negative behaviors, the parents who went through treatment reported fewer negative behaviors after having completed the treatment, while those parents who did not go through treatment reported no perceived change (e.g., had consistent and similar perceptions of their negative behaviors from pre- to post-treatment). As already mentioned above, perhaps the specific goals and components of the treatment (PCIT)

used with the parents (i.e., the emphasis on reducing negative parenting behaviors) resulted in the parents perceiving themselves as engaging in less negative behaviors at post-treatment. Although the parents who completed treatment reported more positive behaviors than the parents who did not complete treatment, it is important to note that these groups differed from each other on self-reported positive behavior both at pre- and post-treatment. In general, parents in the treatment group reported more positive behaviors than did those parents in the comparison group both at pre- and post-treatment. Pre-treatment differences between these groups on self-reported positive behavior may be due to several reasons, one in particular being how these groups were comprised for this study. For instance, the parents comprising the comparison group were those parents who were originally assigned to one of the treatment groups and ended up dropping out of treatment. It has been argued that differences exist between people who complete treatment and people who fail to complete, or drop out of, treatment prematurely (Andra & Thomas, 1998; Pekarik, 1992). Despite the difference between groups, it is also important to be aware that there was no change in perceptions of self-reported positive behavior from pre- to post-treatment within each group (e.g., for each group, the mean score at pre-treatment was similar to and consistent with the mean score at post-treatment). Perhaps the PPI is more sensitive to picking up changes in negative behaviors than it is for positive behaviors. In addition, the specific aspects of PCIT may influence what people perceive regarding changes in their behavior.

In contrast to the parents, no differences were found between the children in treatment group and the children in the comparison group for both PPI positive and

negative behaviors. Child responses on the PPI for both groups were consistent and stable from pre- to post-treatment. Thus, the hypothesis that the treatment group children would report an increase in positive behaviors and a decrease in negative behaviors at post-treatment relative to the comparison group children was not supported. Again, perhaps the treatment was directed more toward the parents than it was toward the children, thus making any changes in parenting behavior easier to recognize for the parents than for the children. In addition, it is important to consider several factors that may have influenced the child reports and their accuracy, such as developmental factors, child pathology, environmental effects, characteristics of the self-report given, and social desirability biases (Kruttschnitt & Dornfeld, 1992; LaGreca, 1990; Tein, Roosa, & Michaels, 1994).

When comparing parent and child reports for the PPI positive behaviors, significant differences were found both at pre- and post-treatment, with the parents perceiving more positive behaviors overall than the children. These results are consistent with a wealth of research that has found that parent and child reports on parenting and child behavior differ from each other (Achenbach et al., 1987; Bogels & Melick, 2004; Edelbrock et al., 1986; Goldin, 1969; Greenbaum et al., 1994; Phares et al., 1989; Pierce & Klein, 1981; Rowe & Kendal, 1997; Shahinfar, Fox, & Leavitt, 2000). Although a significant difference was found between parent and child reports for the PPI negative behaviors at pre-treatment (with parents perceiving more negative behaviors than the children), the two groups were no longer significantly different at post-treatment. Thus, the perceptions for both the parents and their children regarding negative parenting

behaviors were more in line with each other after they had completed treatment. It is important to note, however, that parents reported fewer negative behaviors from pre- to post-treatment, while the perceptions of the children for negative parenting behaviors remained consistent from pre- to post-treatment. Parents' greater reporting of negative parenting behaviors at pre-treatment compared to the children may be due to children's under-reporting of violence or the extent to which they were victimized (Kruttschnitt, 1992; Shahinfar at al., 2000). In addition, the parents may not have been hesitant to report their use of hostile parenting behaviors if they felt that these parenting practices were appropriate or the only way to effectively discipline their children (Kolko, 1996; Tein et al., 1994). Furthermore, it has been argued that parents and children may perceive and interpret the same experiences, events, and questions differently, including their perceptions of parenting behaviors (Shahinfar et al., 2000; Tein et al., 1994).

When comparing children from different age groups, it was found that the children had similar perceptions of positive behaviors both at pre- and post-treatment. However, the younger children (4-7 year olds) differed from the older children at pre-treatment with regard to negative behaviors, reporting more negative behaviors than the older children. Although the younger children were no longer significantly different at post-treatment from the older children with regard to negative behaviors, they perceived more negative behavior than the older children. In addition, while the younger children changed their perceptions from pre- to post-treatment, reporting somewhat fewer negative behaviors at post-treatment than they had at pre-treatment, the two older child age groups remained consistent and stable in their reports from pre- to post-treatment.

Perhaps the difference from pre- to post-treatment reported only by the younger age group can also be explained within the context of the specific treatment used with them. PCIT was originally developed for young children aged 4-8 years and is considered empirically supported for this particular age group (Chambliss & Ollendick, 2000; Hembree-Kigin & McNeil, 1995). Therefore, the treatment may have had a greater effect on the younger children in changing their perceptions over time. In addition, characteristics of the PPI may have produced differential responses based on the age of the children. For example, it has been suggested that self-report measures used with children need to evaluated with respect to several considerations, one of which strongly emphasizes developmental factors (LaGreca, 1990; Shahinfar et al., 2000; Tein et al., 1994). It is also important to keep in mind that developmental considerations such as language, memory or cognitive ability, ability to distinguish between fantasy and reality, and suggestibility can all influence the accuracy of a child's response to questionnaire items (Lamb et al., 1994; Shahinfar et al., 2000).

The results when including the standard community treatment group in the analyses were similar to the results when not including this group, with the exception of the parent treatment vs. comparison group for parent PPI positive and negative behaviors. Significant differences between the parent treatment and comparison groups were no longer found at pre-treatment with regard to PPI positive behaviors when including the standard community treatment group. In addition, no differences were found at post-treatment between the parent treatment and comparison groups for self-reported PPI negative behaviors when the standard community treatment group was included. While it

may seem reasonable to attribute these findings to the different kind of treatment used with this group (e.g., standard parent group vs. PCIT with the other two treatment groups), the overall treatment group means in these analyses were similar to the overall treatment means in the original analyses without the community treatment group. Thus, the changes in self-reported positive and negative behaviors occurred not for the treatment group but for the comparison group. Using those parents who were originally assigned to the standard community group but dropped out of treatment in the comparison group for these analyses resulted in different mean PPI positive and negative behavior scores at pre- and post-treatment (e.g., scores that came closer to the scores of the treatment group and thus no longer produced significant differences between them). It is important to note that the comparison groups used in this study, whether including the standard community treatment group or not, did not consist of an ideal comparison or control group. The families comprising the comparison groups were those who had originally been randomly assigned to one of the treatment groups but dropped out of treatment. Thus, any differences found regarding the comparison group may be due to differing characteristics among the families within the group. A stronger research design would be one in which matched families never received treatment as a result of random assignment.

Limitations and Future Directions

While the results of this study are promising, it is important to keep in mind their preliminary nature. Several limitations of this study deserve to be mentioned, along with further research endeavors to consider regarding the PPI. One of the major limitations of

this study concerns the comparison group. As mentioned above, the families comprising the comparison groups were those who dropped out of treatment to which they were originally assigned, thus making these groups not representative of an ideal comparison or control group. In addition, using only those families who dropped out or did not complete treatment for the comparison groups resulted in a small sample size for these groups (n = 12). Thus, future research should evaluate the PPI using a true comparison or control group.

While discussing the issue of sample sizes, it is also important to mention that even the treatment groups used in this study were limited to those who had completed the treatment to which they were assigned and thus had complete data (i.e, those who had missing data were excluded from the analyses). Thus, more research on the use of the PPI in treatment outcome studies should not only examine those who complete treatment but also those who drop out and how the pattern of results might differ between these two groups. Moreover, considering both treatment completers and dropouts will potentially yield larger sample sizes, which will help in providing adequate power when conducting statistical analyses. The power used in the current study ranged from .075 to .883, with some analyses having more adequate power than others.

This study was also restricted by using only a physically abusive sample in the context of PCIT. Other participant populations may be important to consider, such as families of children who have behavior problems or other clinical concerns. Moreover, research using a standard community sample can assess potential normative PPI scores and thus allow for comparisons with other clinical populations. In addition to

considering other sample populations, using the PPI within the context of other treatments should be considered in future research. For example, a family systems treatment approach would be interesting to assess in conjunction with the PPI. Taking it one step further, examining individual items of the PPI and assessing their relation to components of specific treatments may help provide explanations for certain outcomes and address which treatments are most compatible for use with the PPI. For example, one possible extension for this specific study would be to examine which items of the PPI relate to particular components of PCIT and how this relation, or lack thereof, may have influenced the results found.

Although this study provides preliminary evidence regarding adequate psychometric properties (e.g., reliability) for the original PPI, further research on its psychometric properties is recommended, particularly with reference to its test-retest reliability. In addition, comparison of the PPI with other methods (e.g., behavioral observations) and measures relating to the type of treatment used (e.g., DPICS within the context of PCIT) would provide more evidence of its construct validity. An examination of the psychometric properties for the recently created PPI parent version used by Chaffin et al. (2004) in particular is warranted, as there has not been any research done thus far on its use.

In addition to providing further evidence for the psychometric properties of the PPI, the overall results of this study show the importance in acquiring reports from different sources, as significant differences regarding clinical issues may be uncovered and revealed (Kolko, 1996; La Greca, 1990; Shahinfar at al., 2000; Tein et al., 1994).

For example, self-reports from children have been shown to be particularly helpful in assessing the child's internalizing problems more accurately than other informants' reports (LaGreca, 1990). Furthermore, with regard to child physical abuse, little is known about children's interpretations of their abuse experiences and using child reports along with parent self-reports can help in providing more information about abusive parenting and the quality of parent-child relationships (Kolko, 1996). It is also important to keep in mind that possible biases may exist when reporting on one's own behaviors (Bogels & Melick, 2004; LaGreca, 1990; Tein et al., 1994), demonstrating a need to not only use other sources but also use other methods to acquire information regarding a person's behaviors such as behavioral observations or other kinds of self-report measures (Kolko, 1996; Kruttschnitt & Dornfeld, 1992; LaGreca, 1990; Tein et al., 1994).

In conclusion, the current study offers a promising step forward regarding the PPI and child reports on parenting behaviors. However, the literature on child reports of parenting behaviors has been severely lacking over the years, and there is a strong need for future research in this area.

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APPENDICES

Appendix A

PPI CHILD

Instructions: Read the child the following directions: WE WOULD LIKE TO KNOW HOW MUCH YOU THINK YOUR MOM/DAD DOES CERTAIN THINGS AT HOME. WE WILL NOT TALK TO YOUR PARENT(S) ABOUT WHAT YOU TELL US, SO PLEASE TELL US WHAT YOU REALLY THINK. For younger children, use the thermometers to give further explanation if necessary. Ask "HOW OFTEN DOES YOUR MOM/DAD…" For starred items, repeat the response choices.

		Never	A Little	Sometimes	Pretty Much	A Lot
1.	*Thank you for doing things, tell you when he/she likes what you did, give you something or let you do something special when you're good?	0	1	2	3	4
2.	*Take away things when you misbehave (like not letting you watch TV or ride your bike or stay up late or eat dessert)?	0	1	2	3	4
3.	Talk to you when you feel bad and help you to feel better, help you with your problems, comfort you?	0	1	2	3	4
4.	Tell you you're no good, tell you that you messed up or didn't do something right, criticize you?	0	1	2	3	4
5.	*Talk to you, listen to you, have a good conversation with you?	0	1	2	3	4
6.	Order you around, tell you what to do, give commands?	0	1	2	3	4
7.	Let you help decide what to do, let you help figure out how to solve problems?	0	1	2	3	4
8.	Spank you, slap you, hit you?	0	1	2	3	4
9.	Play with you, spend time with you, do things with you which you like?	0	1	2	3	4
10.	*Get mad at you, yell at you, holler at you, scream at you, shout at you?	0	1	2	3	4
11.	Say nice things to you, tell you that you're a good boy/girl, compliment you?	0	1	2	3	4
12.	Threaten you, tell you that you'll get in trouble if you do something wrong, warn you?	0	1	2	3	4
13.	Let you do what other kids your age do, let you do things on your own?	0	1	2	3	4
14.	Send you to a room or corner when you do something wrong?	0	1	2	3	4
15.	*Help you when you need it (with a hard job, with homework, when you can't do something by yourself?	0	1	2	3	4
16.	Nag you, tell you what to do over and over again, keep after you to do thing?	0	1	2	3	4
17.	Hug you, kiss you, tickle you, smile at you?	0	1	2	3	4
18.	Ignore you, not pay any attention to you, not talk to you or look at you?	0	1	2	3	4

Appendix B

PPI MOM/DAD

FOLLOWING IS A LIST OF WAYS IN WHICH PARENTS TYPICALLY INTERACT WITH THEIR CHILDREN AT HOME. EVERY PARENT FEELS THAT HE OR SHE DOES SOME THINGS BETTER THAN OTHER THINGS WITH HIS OR HER CHILDREN. WE WOULD LIKE YOU TO BE AS HONEST AND ACCURATE AS POSSIBLE IN ANSWERING THE FOLLOWING QUESTIONS ABOUT HOW OFTEN CERTAIN BEHAVIORS OCCYUR IN YOUR HOUSEHOLD WITH RESPECT TO YOUR SON/DAUGHTER.

	Never	A Little	Sometimes	Pretty Much	A Lot
1. How often do you say thank you to you son/ daughter for doing things, tell your son/daughter when you like what he/she did, give something to or let your son/daughter do something special when he/ she is good?	0	1	2	3	4
2. How often do you take things away from you son/ daughter when he/she misbehaves (for example, not letting him/her watch TV, stay up late or eat dessert)?	0	1	2	3	4
3. How often do you talk to your son/daughter when he/ she feels bad and help him/her to feel better, to solve problems and feel comforted?	0	1	2	3	4
4. How often do you tell your son/daughter that he/she is “no good,” that he/she messed up or didn’t do something right, criticize him/her?	0	1	2	3	4
5. How often do you talk to your son/daughter, just listen, or have a good conversation with him/her?	0	1	2	3	4
6. How often do you order your son/daughter around, tell him/her what to do or give commands?	0	1	2	3	4
7. How often do you let your son/daughter help decide what to do or let him/her help figure out how to solve problems?	0	1	2	3	4
8. How often do you spank, slap, hit your son/daughter?	0	1	2	3	4
9. How often do you play with your son/daughter, spend time together, do things together which your son/daughter like?	0	1	2	3	4
10. How often do you get mad at your son/daughter, yell, holler, scream, or shout at him/her?	0	1	2	3	4
11. How often do you say nice things, compliment your son/daughter or tell him/her that he/she is a good person?	0	1	2	3	4
12. How often do you threaten or warn your son/ daughter or tell him/her that he/she will get in trouble if he/she does something wrong?	0	1	2	3	4
13. How often do you let your son/daughter do what other kids his/her age do or let your son/daughter do things on his/her own?	0	1	2	3	4
14. How often do you send your son/daughter to his/her room (or the corner) when he/she does something wrong?	0	1	2	3	4
15. How often do you help your son/daughter with something when he/she needs it (with a hard job, with homework, with something he/she can’t do)?	0	1	2	3	4
16. How often do you nag, tell your son/daughter what to do over and over again, or keep after him/her to do things?	0	1	2	3	4
17. How often do you hug, kiss, tickle, or smile at your son/daughter?	0	1	2	3	4
18. How often do you ignore, not pay any attention to, or not talk to your son/daughter?	0	1	2	3	4
19. How often do you give reasons or explain why, when you tell your son/daughter that he/she is supposed to do something or not do something?	0	1	2	3	4
20. How often do you give unfair punishments that are worse than your son/daughter deserves, or which she/he doesn’t deserve at all?	0	1	2	3	4