

FROM TREATMENT THEORY TO CLINICAL PRACTICE:
HOW BEHAVIOR OBSERVATIONS GUIDE IN VIVO COACHING
IN PARENT-CHILD INTERACTION THERAPY

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ABSTRACT

FROM TREATMENT THEORY TO CLINICAL PRACTICE: HOW BEHAVIOR OBSERVATIONS GUIDE IN VIVO COACHING IN PARENT-CHILD INTERACTION THERAPY

by Miya Barnett

Although abundant research supports the efficacy of parent training programs in the treatment of childhood conduct disorders, a gap remains in the literature describing which components of treatment make these interventions effective. This study sought to increase understanding of two hypothesized mechanisms of change in parent-child interaction therapy (PCIT): the use of assessment-guided treatment and in vivo coaching of parenting behaviors. PCIT uses direct behavior observations of the parent at the beginning of each session to assess parenting skills and identify which skills the therapist will focus on during in vivo coaching.

This study used 61 archival videotaped sessions from a randomized control trial to investigate if PCIT therapists used the behavior observations to guide their coaching of parenting skills, and if this focus increased targeted parenting skills, as previously hypothesized in the PCIT literature. Results suggested that the initial behavior observations of two of the measured parenting skills (behavior descriptions and labeled praises) related to therapists' coaching techniques. Responsive coaching techniques (e.g., praise) is a possible mediator of change in parenting behaviors. Overall, this study furthers our understanding of how behavior observations are used in treatment, and how coaching influences the acquisition of parent skills in PCIT.

Keywords: PCIT, mediators of change, in vivo coaching, assessment-guided treatment

TABLE OF CONTENTS

LIST OF TABLES	viii
LIST OF FIGURES	ix
CHAPTER	
I. INTRODUCTION	1
<i>Current Study</i>	2
Parent-Child Interaction Therapy	3
<i>Assessment Guided Treatment</i>	5
<i>In Vivo Feedback</i>	6
Therapist Experience with Parent Training	7
Goals of This Study.....	8
<i>Hypothesis 1</i>	8
<i>Hypothesis 2</i>	9
<i>Hypothesis 3 (Exploratory)</i>	9
II. METHOD	10
Participants	10
<i>Parent-Child Dyads</i>	10
<i>Therapists</i>	11
Measures.....	11
<i>Eyberg Child Behavior Inventory (ECBI)</i>	11
<i>Behavioral Assessment for Children 2nd Ed. Parent Rating Scale</i> (<i>BASC-2-PRS</i>)	12
<i>The Dyadic Parent-Child Interaction Coding System-III (DPICS-III)</i>	12
<i>The Therapist-Parent Interaction Coding System (TPICS)</i>	14
Procedure.....	15
<i>Original Study</i>	15
<i>Intake</i>	15
<i>Treatment</i>	15
<i>Coding</i>	15
<i>Current Study</i>	16
<i>Coder Training</i>	16
<i>Modified DPICS-III Coding</i>	16
<i>TPICS Coding</i>	17
<i>Videotaped Session Samples</i>	17
III. RESULTS	19
Sample Characteristics	19
Interrater Reliability	20
<i>TPICS</i>	20
<i>Modified DPICS-III</i>	20
Therapist Behaviors	20

<i>Coaching Techniques</i>	20
<i>Parent Skills Targeted</i>	21
Relationships between Parenting Skills and Coaching	23
<i>Statistical Analysis</i>	23
<i>Outliers</i>	23
<i>Total Coaching</i>	23
<i>Directive Coaching</i>	24
<i>Responsive Coaching</i>	24
Mediation of Coaching on Parenting Skills	26
<i>Responsive Coaching and Labeled Praises</i>	27
Relationships of Coaching Techniques and Parent Behavior Change	28
Influence of Therapist’s Experience and Parent Behavior Change	29
 IV. DISCUSSION	 31
Strengths & Limitations	35
Implications	36
 REFERENCES	 70

LIST OF TABLES

TABLE	PAGE
1. <i>Descriptions of Coding Categories of Parent Behaviors</i>	13
2. <i>Sections of Treatment Coded in the Study</i>	18
3. <i>Major Demographic Variables and Conduct Problems in Participants</i>	19
4. <i>Descriptive Statistics of Coaching Techniques</i>	21
5. <i>Descriptive Statistics of Parent Skills Targeted</i>	22
6. <i>Correlations Between Parenting Skill and Therapist Coaching</i>	25
7. <i>Correlations Between Experience and Parent Behavior Change</i>	30

LIST OF FIGURES

FIGURE	PAGE
1. <i>Diagram of Paths of Hypothesized Mediation Model</i>	27
2. <i>Diagram of Mediation Model for Labeled Praises and Responsive Coaching</i>	28

CHAPTER 1

INTRODUCTION

The empirical evidence for the efficacy of psychosocial treatments for children with conduct problems (e.g., oppositional defiant disorder) has increased exponentially in the past fifty years. Empirical literature reviews conclude that behavioral parent training (BPT) is the best practice for young children with conduct problems (Brestan & Eyberg, 1998; Eyberg, Nelson, & Boggs, 2008). However, limited knowledge exists about the mechanisms that make these treatments effective (Nock, 2003). Simply teaching parenting skills has not proved adequate to promote behavior changes in parents (Eddy, Dishion, & Stoolmiller, 1998; Nix, Bierman, & McMahon, 2009), and directive teaching (e.g., teaching child management procedures) can lead to resistance from parents in treatment (Patterson & Forgatch, 1985). More complex mechanisms appear to be related to treatment change. Understanding these mechanisms of change may be the most important investment in research to improve clinical training and treatment implementation in the future (Kazdin & Nock, 2003; Weersing & Weisz, 2002).

Researchers have proposed many potential mechanisms for change in BPT programs, including: in vivo feedback to parents in session (Eyberg & Matarazzo, 1980); assessment-guided treatment (Bahl, Spaulding, & McNeil, 1999); social learning (Webster-Stratton, 1981); and social support (Webster-Stratton, 1997). Likewise, therapist variables, such as competence (Eames et al., 2008; Forgatch, Patterson, & DeGarmo, 2005) and experience (Leon, Martinovich, Lutz, & Lyons, 2005) have received attention as variables that influence treatment outcomes. However, as Kazdin (2007) noted, “Discussions and theory about why psychotherapy changes people are plentiful, but supportive evidence is quite rare” (p. 2).

Researchers acknowledge that the difficulty in designing studies that investigate mechanisms of change relates to the dearth of research in this area (e.g., Kazdin & Nock, 2003). These researchers recommend that the first step to understand mechanisms of change is to first identify mediators of change (Kazdin, 2007; Weersing & Weisz, 2002). Mediators are constructs that show statistical relationship between the intervention technique and outcome, but may not explain the precise process that causes the outcome (Kazdin, 2007).

In order to identify mediators of change, session-by-session assessments are necessary, because they are more able to identify when and how change occurs (Kazdin, 2007). Understanding the process of in-session behaviors is also important because research suggests that in-session client-therapist interactions directly influence treatment outcome (Llewelyn & Hardy, 2001; Snyder et al., 2006). For example, therapist communication style at the beginning of treatment strongly predicts treatment completion for PCIT, with improved results when therapists use more facilitative statements and fewer closed-ended questions (Harwood & Eyberg, 2004). Snyder and colleagues (2006) suggested that behavior observations are advantageous for measuring in-session change in treatment because they most accurately capture the social processes that influence how the parent is trained and the immediate behavior change engendered by the intervention.

Current Study

In spite of the importance of identifying mechanisms and mediators of change, little research has focused on it to date. This study addresses two questions related to two theorized mechanisms of change in parent-child interaction therapy (PCIT), assessment-guided treatment and in vivo feedback. Specifically, we looked to answer two questions (1) Do therapists use

behavior observations to guide their coaching? (2) Does coaching mediate parent skill acquisition?

Given the methodological challenges to understanding mechanisms of change we followed recommendations to use behavior observations to study the process of change (Snyder et al., 2006), looked at session by session changes (Kazdin, 2007), and tested mediation to better understand in vivo feedback as a mechanism of change (Kazdin, 2007; Nock & Kazdin, 2003; Weersing & Weisz, 2002). Furthermore, we conducted exploratory analyses to better understand the impact therapist experience has on in-session change. Even though this study specifically focuses on the proposed mechanisms of change in PCIT, the goal of researching mechanisms of change is to better understand the most effective strategies to improve BPTs and therapy in general (Westen, Novotny, & Thompson-Brenner, 2004). For this reason, the findings on assessment-guided treatment, in vivo feedback, and experience may have wider reaching implications for techniques clinicians use beyond those doing PCIT.

Parent-Child Interaction Therapy

PCIT is a behavioral family intervention with strong clinical evidence of its efficacy in treating young children with conduct disorders, along with a wide range of other emotional and familial problems (e.g., Herschell, Calzada, Eyberg, & McNeil, 2002; Hood & Eyberg, 2003; Nixon, Sweeney, Erickson, & Touyz, 2004). PCIT is based on a model similar to other efficacious BPT programs, where parents are first instructed in methods to improve their relationship with their child and then are taught effective discipline techniques. The content of programs based on this model typically include instruction in attending to and reinforcing positive child behaviors, and techniques to decrease negative behaviors including ignoring, providing clear directions, and using time-out.

Whereas the content of BPT programs is relatively similar, the methods of teaching parenting skills varies across treatment models and often include role-playing, modeling, and videotape review (e.g. Barkely, 1997; McMahon & Forehand, 2003; Webster-Stratton, 2005). Not only does the teaching method vary across programs, the type of feedback parents receive on their newly acquired parenting varies as well. The type of feedback that parents receive is considered to be an important way to efficiently change their behaviors in treatment. Feedback allows the therapist to correct behaviors that are problematic and reinforce the correct usage of parenting skills (Herschell, Capage, Bahl, & McNeil, 2008). Many programs depend on delayed feedback where parents are required to use the skills taught in session with their child during the week, and then report back to the therapist on the experience (e.g., Webster-Stratton, 2005). Delayed feedback has limitations because therapists are not able to observe the parent-child interaction directly and are not able to correct unreported or inaccurately reported problems.

PCIT addresses the limitations of delayed feedback through its use of weekly behavior observations of parent-child interactions and in vivo feedback, referred to as “coaching,” which immediately reinforces the correct use of skills. Typically, the therapist watches the parent-child interaction from behind a two-way mirror and provides coaching through bug-in-the-ear technology (Herschell et al., 2002). In the relationship-enhancing phase of treatment, Child Directed Interaction (CDI), parents are specifically coached to increase their child-focused “do skills” including *unlabeled* and *labeled praises*, *behavior descriptions*, and *reflections*. Along with the “do skills” parents are coached to decrease “don’t behaviors,” which take away from the child’s lead, and include *questions*, *commands*, and *criticisms*. For examples of these skills see Table 1. The focus of this study is on the assessment and coaching style used in CDI. The PCIT

treatment protocol, including the discipline phase of treatment, has been described in more depth elsewhere for readers who want more information (Niec, Gering, Abbenante, 2011).

Assessment Guided Treatment

PCIT emphasizes the use of weekly assessments to guide treatment (Bahl et al., 1999). A main component of the weekly assessment is a five-minute behavior observation of the parent's skill level. The use of behavior observations is considered to be advantageous for providing feedback because research indicates that direct observations of parent-child interactions are less prone to bias than self-reports (Gardner, 2000). The behavior observations allow a therapist to monitor the parent's weaker skills that need more emphasis in coaching (Bahl et al., 1999). Identifying weak skills is crucial because empirical evidence suggests that only targeted parenting skills change in response to coaching, if a therapist does not provide feedback for a skill, then it does not improve (Shanley & Niec, 2010). This is important evidence for the belief that therapists need to accurately identify the behaviors they want to target and then consistently address these behaviors in coaching.

In PCIT, the ongoing assessment is useful for both the parent and the therapist. The therapist is able to identify skills that need more attention in session, and the parent receives immediate feedback on changes in their skill level (Bahl et al., 1999). This type of feedback is supported by empirical findings that outcomes improve for clients when both the therapist and client receive feedback from ongoing assessments of treatment (Reese, Norsworthy, & Rolands, 2009). In general, research supports the use of ongoing assessment in treatment (Lambert, Hansen, & Finch, 2001). Although assessment-guided treatment is a cornerstone of PCIT, no current research has examined how PCIT therapists use the behavioral observations to guide their coaching.

In Vivo Feedback

One of the defining aspects of PCIT is the use of live coaching. Although parents' satisfaction with the coaching model is generally high (Schuhmann, Foote, Eyberg, Boggs, & Algina, 1998), there is limited research about what makes it an effective technique in PCIT (Shanley & Niec, 2010). It is theorized that the immediate feedback and social reinforcement provided in coaching facilitates skill development (Borrego & Urquiza, 1998; Eyberg & Matarazzo, 1980). The use of coaching is supported by a meta-analysis of parent training programs, which found that programs that include direct facilitated practice between a parent and their child have a greater effect size than programs without this component (Kaminski, Valle, Filene, & Boyle, 2008). An analogue study found that parents who received PCIT-type coaching showed improved parenting skills compared to parents that did not receive coaching, suggesting that in vivo feedback is an important mechanism of change in treatment (Shanley & Niec, 2010).

Borrego and Urquiza (1998) explained the coaching techniques that are used to change parent behaviors. They identified two types of coaching *directive* and *responsive* techniques. Directive techniques tell the parent what to do and are used as a teaching tool (e.g., "Tell Johnny, 'great job building that tower'"), whereas responsive techniques reinforce the parent's use of a skill (e.g., "You just used an excellent praise"). Overall, they recommended that responsive techniques should be used frequently as a way to shape behavior when parents approximate a correct skill or when they imitate the therapist's directive of a skill, because the social reinforcement (e.g., therapist's praise) leads to more behavior change in a parent.

The recommendations on social reinforcement strategies in coaching have limited empirical support. The only study on coaching style found that parents acquire skills at a higher rate when coaching includes both positive feedback and constructive advice (Herschell et al.,

2008). Though the literature of effective feedback styles is limited in the BPT literature, other areas of research have investigated the type of feedback that leads to behavior change. One study that looked at ways to train empathy in counselors randomized participants into different training programs, which included every combination of modeling, criticism, and praise. For example, some participants received praise and modeling, whereas others received only praise. Modeling was the only effective technique to change the participants' empathy behaviors (Gulanick & Schmeck, 1977). Therefore, even though there is anecdotal and theoretical support for responsive coaching as a way to change parent behaviors, the limited research in the field tends to support more directive or critical techniques.

With the strong emphasis of in vivo feedback in PCIT, it is important to increase understanding of the most effective forms of feedback in order to improve treatment delivery. Specifically, it is necessary to understand the type and consistency of social reinforcement that leads to the most behavior change (Borrego & Urquiza, 1998).

Therapist Experience with Parent Training

It is possible that therapists need a higher level of experience with and knowledge of social reinforcement, therapeutic strategies, and assessment to effectively use these strategies to promote behavior change in parents. However, understanding of how therapist experience influences client outcomes is mixed. The majority of research reviews indicate that a therapist's experience has no relation with their client's outcome (e.g. Stein & Lambert, 1984). However, other researchers posit that various methodological limitations influenced these findings (e.g., Huppert et al., 2001; Stein & Lambert, 1995). When the definition of experience (Huppert et al., 2001; McKnight & Sechrest, 2003), the specific measure of outcomes (Stein & Lambert, 1995), and the populations served (Leon et al., 2005) are taken into account experience does have a

relationship to client outcomes. Currently, the relationship between therapist experience and client outcomes with parent training models has not been investigated, and more exploration into this issue is warranted.

Goals of This Study

The current study explored the therapeutic processes of assessment-guided treatment and in vivo coaching by directly observing both parent and therapist behaviors during coaching in session. Although assessment-guided treatment is a defining characteristic of PCIT, no studies have examined the link between the proximal behavior assessment of parent skills and therapist behavior. Furthermore, very limited research exists that explores how a therapist's coaching techniques influence a parent's skill acquisition (Herschell et al., 2008; Shanley & Niec, 2010).

We investigated how therapists used the behavioral observation assessment to guide their coaching, and whether this assessment-guided coaching improved parenting behaviors in session and for the following session. Also, the relationship between therapist experience and parent behavior change was investigated. To achieve the goals of this study we developed a psychometric tool that measures assessment-guided treatment and coaching techniques, which could be useful for measuring therapist competency in the future.

Hypothesis 1

Parenting skills during the coded portion at the beginning of the session will be related to therapists' type and frequency of coaching as described specifically below:

1(a). The frequency of parenting skills (behavior descriptions, praises, reflections) during coding will be negatively correlated with directive coaching, such that lower levels of a skill leads to more directive coaching statements focusing on this specific skill.

1(b). The initial frequency of parenting skills (behavior descriptions, praises, reflections) will be positively correlated with responsive coaching, such that higher levels of a skill lead to more responsive coaching statements focusing on this specific skill.

1(c). There will be a negative relationship between behavior observation of parenting skills (behavior descriptions, praises, reflections) and total coaching (both directive and responsive) of this targeted skill.

Hypothesis 2

Coaching of a specific positive parenting skill (behavior descriptions, reflections, labeled praises) will mediate the relationship between parenting skills in the initial behavioral assessment and at the end of the session.

2(a). Targeted parenting skills at the beginning of session will be positively related to spontaneous parenting skills demonstrated in the last five minutes of in vivo coaching.

2(b). The frequency that the therapist coaches a targeted behavior will be positively related to spontaneous parenting skills demonstrated in the last five minutes of in vivo coaching.

2(c). The relationship between targeted parenting skills at the beginning of session and the end of session will be reduced in magnitude when frequency of coaching is included in the model, suggesting partial mediation.

Hypothesis 3 (Exploratory)

A therapist's experience with PCIT will be positively related to the increase of targeted parenting skills within session.

CHAPTER II

METHOD

Participants

Parent-Child Dyads

The data used in the present study were archival, provided by a pilot randomized control trial (RCT) evaluating the efficacy of group versus individual PCIT in the treatment of young children's conduct problems. Participants included families that presented to a university mental health clinic for treatment of their two to seven-year old children's disruptive behaviors. In order to qualify for participation the following requirements were met: (1) the child met DSM-IV criteria for Oppositional Defiant Disorder or Conduct Disorder (APA, 2000), and had conduct-disordered behaviors rated by a caregiver in the clinical range of severity (i.e., BASC-II Externalizing Composite cutoff score of $T > 70$ or ECBI Intensity cutoff score of $T > 60$); (2) at least one caregiver participated; (3) the family was not involved in Child Protective Services; and (4) children taking psychotropic medications had a period of stabilization before they entered the study.

We evaluated parent behaviors and therapist coaching in the second or third CDI coaching session for 61 parent-child dyads that received either individual or group PCIT. These 61 dyads consisted of 47 families including 33 families with only one caregiver and 14 families (28 caregivers total) with two caregivers. When more than one caregiver participated in treatment, both caregivers received individual coaching time, and coaching sessions were coded for both caregivers in the present study. Families from both treatment conditions were represented, including 26 parents who received individual PCIT and 35 parents who received

group PCIT. Families that completed the CDI didactic session and at least two of the first three CDI coaching sessions were eligible for inclusion in the study.

Therapists

The therapists in this study were 13 advanced doctoral students in clinical psychology. The therapists had all completed core clinical work (including courses in child and family assessment and intervention), and completed at least a year of PCIT training. All treatment was conducted with co-therapy teams, and all junior therapists (less than two years of experience with PCIT) were matched with advanced therapists. Therapist experience in PCIT ranged from one to five years.

Measures

Eyberg Child Behavior Inventory (ECBI)

The ECBI (Eyberg & Pincus, 1999) is a 36-item parent-rating-scale of disruptive behavior problems for children between the ages of 2 to 16. Parents rate the frequency of each disruptive behavior on a 7-point Likert scale ranging from *never* (1) to *always* (7), which are summed to yield the Intensity Scale. The parent also indicates if the behavior is a problem by circling *Yes* or *No* on each item, behaviors that are endorsed as problematic yield the Problem Scale. Boggs, Eyberg, and Reynolds (1990) established concurrent validity for the ECBI Intensity Scale by correlating it with the Child Behavior Checklist (CBCL) Externalizing scale, with correlations ranging from $r = .72$ for adolescents to $r = .86$ for preschoolers. The ECBI can appropriately distinguish between children in treatment for behavior problems opposed to learning delays (Burns & Patterson, 2001), and has appropriate test-retest reliability (Funderburk, Eyberg, Rich, & Behar, 2003).

Behavioral Assessment Scale for Children 2nd Edition-Parent Rating Scale (BASC-2-PRS)

The BASC-2-PRS is a commonly used assessment tool that examines a wide range of negative and positive child behaviors (Reynolds & Kamphaus, 2004). Parents rate the frequency of variety of child behaviors on a four-point Likert scale, which ranges from (1) *Never* to (4) *Almost Always*. The BASC-2-PRS consists of four composite scores: Behavioral Symptoms Index, Externalizing Problems, Internalizing Problems, and Adaptive Skills. The composite scores are made up of smaller primary scales (e.g., aggression, hyperactivity, anxiety, etc.). Two versions of the BASC-2-PRS were used in the main study: the preschool form (ages 2-5, 12 primary scales) and the child form (ages 6-11, 14 primary scales). The BASC-II technical manual reports internal consistency over .90 across scales and test-retest reliability between .85-.90 (Reynolds & Kamphaus, 2004). Convergent validity was established for the BASC-2-PRS by correlating it with the CBLC. Validity for the externalizing disorder scale used in this study is considered to be good, $r = .69$ (Doyle, Ostrander, Skare, Crosby, & August, 1997).

The Dyadic Parent-Child Interaction Coding System-III (DPICS-III)

The DPICS-III (Eyberg, Nelson, Duke, & Boggs, 2005) is a behavioral observation coding system that was designed to measure the quality of interaction in parent-child dyads in laboratory settings. The DPICS observations involve three standard parent-child interactions: Child-Led play, Parent-Led play, and Clean-Up. Twenty-four categories of parent and child behaviors receive frequency counts, including, verbalizations, vocalizations, and physical behaviors. The DPICS has been adapted for clinical use in PCIT. The clinical usage of DPICS involves a limited number of categories, which focus on the parenting skills targeted in treatment. The DPICS categories coded in this study include - *Unlabeled* and *Labeled Praises*,

Reflections, Behavior Descriptions, Negative Talk, Questions, and Indirect and Direct Commands (see Table 1).

The DPICS-III has been standardized with children ages 3 through 6. Inter-rater reliability on parent verbalizations ranged from correlations of 0.69 (*Behavioral Description*) to 0.99 (*Direct Command*) for the parent codes (Eyberg, 2005). DPICS accurately discriminates between families with and without a child with behavioral concerns (Robinson & Eyberg, 1981) and treatment sensitivity of the DPICS has been shown in PCIT and other treatment outcome studies (e.g., Eyberg & Matarazzo, 1980; Schuhmann et al., 1998; Webster-Stratton & Hammond, 1990).

Table 1. *Descriptions of Coding Categories of Parent Behaviors*

Behavioral Code	Description	Examples
<i>Behavior Descriptions</i>	A declarative sentence where a parent states what a child is doing or recently did.	“Your building a tower.”
<i>Unlabeled Praises</i>	A nonspecific verbal statement of approval of an attribute, behavior, or product of the child.	“Thank you” “Good work”
<i>Labeled Praises</i>	A specific verbal statement of approval of an attribute, behavior, or product of the child.	“Thank you for cleaning up.”
<i>Reflection</i>	A statement where a parent repeats or reflects back what the child said.	Child: “It’s fast.” Parent: “It’s fast.”
<i>Negative Talk</i>	A statement that criticizes a child’s activity, behavior, or verbalizations.	“That’s the wrong way.”
<i>Question</i>	A descriptive or reflective comment expressed in the form of a question.	“What does a cow say?”
<i>Direct Commands</i>	A declarative sentence that requests that a child perform a specific activity or behavior.	“Please hand me that red block.”
<i>Indirect Commands</i>	A sentence which requests a child do a behavior stated in a question form.	“Can you hand me that block?”

(Eyberg, Nelson, Duke, & Boggs, 2005)

The Therapist-Parent Interaction Coding System

The TPICS is a behavioral observational coding system developed for this study that measures the interactions between the therapist and the parent during in vivo coaching. Therapist coaching codes were based on categories from a previous project on therapist-parent interactions (Haseley, Star, Triemstra, & Niec, 2006). We developed a manual for the TPICS, which included a definition of each coding category, illustrative examples, specific guidelines to aid discrimination between categories, and decision rules to help the coder when there is uncertainty of which category to code (see Appendix A).

The TPICS codes include both the skill the therapist coaches (e.g., *Labeled Praise*, *Reflection*, *Behavior Description*), and the specific technique used to coach the skill (e.g., *Modeling*, *Prompting*, *Constructive Correction*). In the TPICS, PCIT coaching techniques are categorized as being directive or responsive. Directive coaching techniques lead parent's behavior and include: modeling the correct phrasing of a skill (e.g., "I like how you are staying at the table."), prompting the beginning of a skill, (e.g., "You are..." to elicit a behavior description), giving parents clear and direct commands (e.g., "Describe what he is doing"), suggesting a parent behavior with an indirect command (e.g., "Can you think of something to praise her for?"), and using specified exercises such as drills (e.g., "we are going to see how many behavior descriptions you can do in a minute"). Responsive coaching techniques typically follow a parent's behavior and include: providing labeled praise to what the parent is doing (e.g., "Nice reflection"), constructive corrections (e.g., "Label that praise"), reflective descriptions (e.g., "You used a behavior description"), and making process comments, which is when a therapist points out to a parent how their skills are affecting the child (e.g., "Your praise is really helping him stay calm and focused now.").

Procedure

Original Study

Intake. Participants were referred to the study when they sought treatment for their two to seven-year-old children's disruptive behaviors. These families met with a study clinician and received a thorough explanation of the project and provided written informed consent, as approved by the Central Michigan University IRB. At the intake they completed measures to determine study eligibility.

Treatment. Treatment sessions were conducted once a week for approximately one hour each for families in individual PCIT and two hours for parents in group PCIT to allow time for all of the parents in the group to receive coaching. The format of group and individual PCIT was similar, and conducted by the same therapists. The first sessions of group PCIT had an added emphasis of increasing group cohesion and rapport between parents. In both treatment groups parents were first taught the targeted skills in a didactic session, which included role-play and modeling techniques. The RCT used a standardized protocol that included four CDI sessions before the parents advanced to the PDI segment of therapy. Parents were also asked to practice the skills at home during daily "special time." After four sessions of CDI, parents received another didactic session on the targeted skills for the PDI phase, and then completed seven coaching sessions in this phase.

Coding. The five-minute segments from all the treatment sessions in the RCT were videotaped and coded by a primary coder blind to the study hypotheses. Prior to coding, the primary coder was trained intensively over a year in the DPICS-III coding system and had met criteria ($k > .80$ for all categories) with an expert-rated standard training tape. The primary coder had been coding DPICS for a total of four years at the time this project began.

To test the reliability of the primary codes, interrater coders at an outside institution (Auburn University) independently coded 25% (211) randomly selected segments. Interrater coders were blind to study hypotheses, participants' treatment condition, and phase of treatment. Pearson Product Moment correlations were calculated on the child-centered interaction skills ("Do Skills"), as well as those behaviors targeted to be reduced (i.e., "Don't Skills"). The correlations for Labeled Praise, Unlabeled Praises, Reflections, Behavior Descriptions, and Questions ranged between .82 and .92. The correlations on Indirect Commands and Direct Commands fell below .80 (.56 and .76, respectively), but these behavior categories are not a focus of the current study and therefore were not included in the current analysis.

Current Study

Coder Training. Coders included one graduate student (the principal investigator) and one undergraduate student who were trainees in the PCIT Clinic at CMU. The coders were trained in observational measures, with specific experience in conducting both live and video-taped parent-child observations using DPICS-III. The principal investigator and research assistant met criteria with an expert rated video for the DPICS-III before coding began ($k = .88$ and $.92$ respectively).

Modified DPICS-III Coding. Coders used DPICS-III to code the last five minutes of parent's behaviors during coaching before the therapist coached the parent to tell the child that "special time is almost over." Parents' spontaneous verbalizations (those without a directive coaching technique before them) were coded to measure the skills acquired during the session. Since the DPICS had not been standardized in a coaching paradigm additional reliability analysis was conducted for this study. The primary coder and secondary coder established reliability by separately coding a videotaped segment ($k = .94$).

TPICS Coding. The principal investigator (primary coder) established initial reliability for the TPICS with an expert rating done by a PCIT Master Trainer¹ on a videotaped segment that was not included in the study. Reliability for both the coaching technique used ($k = .90$) and parent behavior targeted in coaching ($k = .93$) were high for this videotaped segment. After reliability was established the principal investigator and Master Trainer reached a consensus on the codes where they differed and established the criteria for the expert rated tape.

Once reliability was established the primary coder trained the secondary coder in the TPICS. Training included: reading the PCIT manual (Eyberg, 1999); tutorial and discussion of the TPICS codes; and coding transcripts, quizzes, and videotaped sessions. The secondary coder exceeded the criterion of 80% with the expert rating tape for both the coaching technique ($k = .90$) and the parent behavior that was targeted ($k = .86$).

Videotaped session samples. As a requirement for the RCT, all treatment sessions were videotaped. Initially, 80 of these videotaped sessions were selected based on the following criteria: (1) it was the second CDI coaching session (2) the family completed the CDI didactic session and first coaching session (3) the coaching segment of the session was documented as being 15 minutes or longer. Of the initial 80 videotapes, 46 were not included due to a variety of reasons such as having technical problems (e.g., no sound) or being too short (e.g., the child took a bathroom break during the session). The criteria were extended to include videotapes of the third CDI coaching session and sessions that were under 15 minutes, but over 13.5 minutes. Using these criteria 61 videotapes were acceptable for the final study.

The videotaped sessions included the five-minutes of Child-Led Play observations and the in vivo coaching. In the current study, coders were blind to the five minutes of behavior

¹ Master Trainers are individuals with extensive experience with PCIT, who were vetted by the founder of PCIT and are responsible for broader dissemination of the PCIT protocol with fidelity.

observations to prevent bias on which parenting skills the therapist should be coaching. The initial 5-minutes of coaching after the DPICS behavior observations was coded with the TPICS. DPICS-III was used to code the final 5 minutes of spontaneous parent behaviors that occurred during coaching before the cleanup section of the session. Forty-eight of the 61 videotapes were long enough to include time to code spontaneous parent behaviors with the DPICS-III. Additional videotapes were included in the study if they were not long enough to code the end of session DPICS-III, but did have a behavior observation completed for the following session. For a further explanation of the specific segments of the session being coded see Table 2.

Table 2. *Sections of Treatment Coded in the Study*

Behaviors Coded	N	Time During Session	Coding System Used
<i>Targeted Parent Behaviors</i>	61	First 5 mins. of session	DPICS-III
<i>Therapist Coaching</i>	61	First 5 mins. of coaching	TPICS
<i>Spontaneous Parent Behaviors</i>	48	Last 5 mins. of coaching	Mod. DPICS-III
<i>Targeted Parenting Behaviors</i>	53	Following session - first 5 mins.	DPICS-III

Note. DPICS-III = The Dyadic Parent-Child Interaction Coding System-Third Edition. TPICS = The Therapist-Parent Interaction Coding System. Mod. DPICS-III = Modified DPICS-III.

CHAPTER III

RESULTS

Sample Characteristics

Children included in this study were two to seven years old ($M = 4.17$, $SD = 1.16$). Of the caregivers included in this study, 60.7% were biological mothers, 16.4% were biological fathers, 16.4% were other female caregivers (e.g., grandmothers, step-mothers), and 4% were other male caregivers (e.g., grandfathers). Children's mean scores on the ECBI and BASC-2 Externalizing Scale, two measures of disruptive behaviors, were at or exceeding the clinical cutoff.

Table 3. *Major Demographic Variables and Conduct Problems in Participants*

	Min.	Max.	<i>M</i>	<i>SD</i>
Child age	2.00	7.00	4.17	1.16
Primary caregiver age	21.00	69.00	32.32	8.58
Other caregiver age	23.00	65.00	37.31	11.59
BASC-2 – Externalizing Score	49.00	104.00	70.77	11.85
ECBI Intensity	35.34	87.33	60.97	10.22
ECBI Problem Score	40.78	87.53	62.00	11.68

Note. $N = 47$. BASC-2 – Externalizing Score = T-score for composite of externalizing problems on Parent Report at intake. ECBI scores = T-scores from measure at intake. *M* = Mean. *SD* = Standard Deviation.

Interrater Reliability

TPICS

Two independent coders (one primary, one secondary), who were trained in using the TPICS, completed coach coding. Of the 61 videotaped sessions, 15 ($\approx 25\%$) were randomly selected for reliability coding. Kappa tests were run for interrater reliability on both the specific type of parenting skill coached, and the specific PCIT coaching technique used (e.g., modeling, praising). Interrater reliability was high for both the coaching technique used ($k = .94$) and the parent behavior targeted ($k = .90$).

Modified DPICS-III

Coding of spontaneous parenting behaviors at the end of coaching was conducted by two independent coders who received specified instruction on using DPICS during live coaching. Of the 49-videotaped sessions that were long enough to code spontaneous parent behaviors, 15 ($\approx 31\%$) were randomly selected for reliability coding. Interrater reliability was high for spontaneous parent behaviors ($k = .91$).

Therapist Behaviors

Coaching Techniques

Descriptive statistics were calculated to explore how frequently therapists used different coaching techniques. The coaching techniques used least frequently were *Drills* ($M = .05$, $SD = .22$), *Corrective Criticisms* ($M = .46$, $SD = .81$), and *Process Comments* ($M = .23$, $SD = .53$). *Modeling* ($M = 11.72$, $SD = 6.33$) and *Labeled Praises* ($M = 9.23$, $SD = 4.67$) were used most frequently. Composites of all directive and responsive coaching techniques were also calculated.

On average, therapists used significantly more directive coaching statements to address positive parenting skills ($M = 14.11$, $SD = 6.35$) than responsive coaching statements ($M = 10.33$, $SD = 5.15$), $t(60) = 3.23$, $p < .01$. See Table 4 for further information on coaching techniques used during sessions.

Table 4. *Descriptive Statistics of Coaching Techniques*

	Minimum	Maximum	<i>M</i>	<i>SD</i>
Total Directive	2	33	14.11	6.35
Model	1	28	11.72	6.33
Prompt	0	4	1.07	1.25
Indirect/Direct Command	0	6	1.95	1.74
Drills	0	1	.05	.22
Total Responsive	2	23	10.33	5.15
Labeled Praises	2	22	9.23	4.67
Process Comments	0	2	.23	.53
Reflective Descriptions	0	4	.87	1.16
Corrective Criticism	0	4	.46	.81
Unlabeled Praises	0	23	4.26	4.88
Child Observation	0	10	1.87	1.94

Note. $N = 61$. M = Mean. SD = Standard Deviation

Parent Skills Targeted

Descriptive statistics were also obtained to assess the frequency that therapists targeted different parent behaviors. Therapists most frequently targeted one of the targeted “do” behaviors (i.e., parenting behaviors to increase; $M = 24.43$, $SD = 7.08$) in session. Therapists

also frequently coached “other” parent behaviors, which were not specifically related to the skills initially assessed ($M = 10.15$, $SD = 7.67$). “Other” parent behaviors included different skills that are addressed in PCIT such as ignoring negative child behaviors, being enthusiastic, and following the child’s lead, along with modeling verbalizations to parents that were not related to the targeted skills (e.g., “the tower fell over”). Of the targeted parenting “do” behaviors, therapists on average targeted labeled praises most frequently ($M = 8.15$, $SD = 4.25$) and behavior descriptions least often ($M = 5.93$, $SD = 3.91$). Therapists rarely targeted “don’t” behaviors (i.e., parenting behaviors to decrease) directly ($M = 1.07$, $SD = 1.25$), suggesting that they used selective attention and shaping to address these behaviors instead. See Table 5 for more information on the frequency of targeted parent behaviors in session.

Table 5. Descriptive Statistics of Parent Skills Targeted

	Minimum	Maximum	<i>M</i>	<i>SD</i>
Total “Do” Skills	12	44	24.43	7.08
<i>Labeled Praises</i>	1	23	8.15	4.25
<i>Behavior Descriptions</i>	0	22	5.93	3.91
<i>Reflections</i>	0	30	6.66	4.71
Total “Don’t” Behaviors	0	5	1.07	1.25
Total Other Behaviors	0	43	10.15	7.67

Note. $N = 61$. M = Mean. SD = Standard Deviation.

Relationships between Parenting Skills and Coaching

Statistical Analysis

Twenty-eight caregivers eligible for the study had the same child, which violated the assumption of independence. A random-effects regression model (RRM) was used based on Hedeker, Gibbons, and Flay's (1994) recommendations for clustered data. This model allows for inferences at the level of the individual parent while controlling for the degree of dependence at the family level (Hedeker et al., 1994).

Outliers

The data was analyzed for outliers using standardized residuals of the assessed parent skill and the number of times the skill was targeted in coaching. Based on recommendations on identifying and removing outliers, cases with standardized residuals greater than 2.5 were removed from the data set (Stevens, 1984). Two outliers were identified for labeled praises, three separate outliers were identified for reflections, and two separate outliers were identified for behavior descriptions. Analyses were run with and without outliers, and results were significantly influenced for labeled praises and behavior descriptions. Because the outliers did not appear to be related to error, and are instead representative of actual outliers from the population, both results with and without the outliers are reported when there was an influence on statistical significance (Stevens, 1984).

Total Coaching

The RRM was used to test the hypothesis that initial parent skills would be negatively correlated with the total amount of coaching of each individual skill. Total coaching was not significantly correlated for labeled praises, $\beta(61) = .01$, $t(59.22) = .13$, $p > .05$, or reflections,

$\beta(61) = -.06$, $t(57.22) = -.55$, $p > .05$, regardless of the inclusion or exclusion of outliers. The relationship between total coaching and behavior descriptions was approaching significance, with outliers, $\beta(61) = -.24$, $t(60.43) = -1.96$, $p = .06$, and without them, $\beta(59) = -.22$, $t(58.73) = -1.92$, $p = .06$. Minimal evidence supported the hypothesis that therapists would use more total coaching statements for a parent's weaker skills.

Directive Coaching

The RRM was used to test the hypothesis that parents with lower levels of skills would receive more directive coaching statements (e.g., modeling, prompting, commands, and drills). Without the outliers removed, directive coaching techniques were not significantly related to labeled praises, $\beta(61) = -.16$, $t(53.17) = -1.34$, $p > .05$, or reflections, $\beta(61) = -.12$, $t(46.36) = -.93$, $p > .05$, but were significant for behavior descriptions, $\beta(61) = -.39$, $t(59.97) = -3.35$, $p = .001$. When the outliers were removed from the analyses, directive coaching techniques were also significantly and negatively related with a parent's skill level for labeled praises, $\beta(59) = -.33$, $t(44.88) = -2.85$, $p < .01$. Significance levels were not impacted for behavior descriptions, $\beta(59) = -.38$, $t(57.82) = -3.53$, $p = .001$, or reflections, $\beta(58) = -.08$, $t(51.31) = -.63$, $p > .05$, when outliers were removed. This suggests that the majority of therapists used more directive coaching techniques with parents who were initially weaker with labeled praises or behavior descriptions.

Responsive Coaching

The RRM was used to test the hypothesis that therapists would provide more responsive coaching statements to parents who were stronger with a skill. There were no significant relationships between responsive coaching techniques and initial skill levels with labeled praises, $\beta(61) = .16$, $t(60.88) = 1.24$, $p > .05$, behavior descriptions, $\beta(61) = .14$, $t(61) = 1.08$, $p > .05$, or

reflections, $\beta(61) = .04$, $t(56.08) = .25$, $p > .05$, with the outliers included in analyses. When the outliers were removed from analyses responsive coaching techniques were significantly correlated with labeled praises, $\beta(59) = .29$, $t(58.00) = 2.35$, $p < .05$, but not behavior descriptions, $\beta(59) = .12$, $t(58.99) = 1.04$, $p > .05$, or reflections, $\beta(58) = .12$, $t(53.62) = .24$, $p > .05$. This suggests that therapists only gave more positive reinforcement to parents that initially had higher levels of labeled praises.

Table 6. *Correlations Between Parenting Skill and Therapist Coaching*

	RF	BD	LP
Total Coaching	-.02	-.22	-.03
Directive Coaching	-.08	-.38**	-.33**
Responsive Coaching	.12	.12	.29*

Note. RF = DPICS-III assessment of reflections. BD = DPICS-III assessment of behavior descriptions. LP = DPICS-III assessment of labeled praises. Outliers removed. $N = 58$ for RF. $N = 59$ for BD. $N = 59$ for LP. * = $p < .05$ ** $p < .01$.

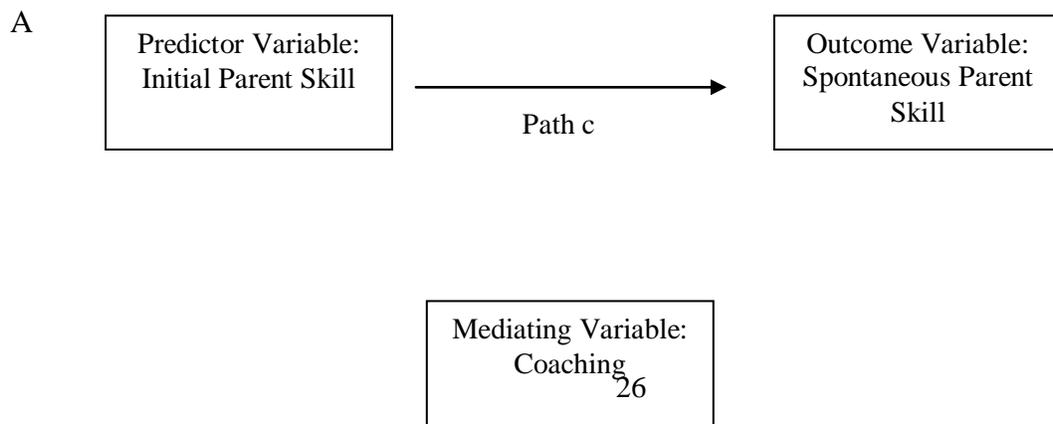
Mediation of Coaching on Parenting Skills

Baron and Kenny's (1986) conceptual and statistical recommendations for testing mediation were used to examine if coaching mediated the relationship of targeted parenting skills at the beginning of session and the end of session. Preconditions were not met with the outliers included in the analyses, and so the same outliers removed for the correlational analyses were removed for the regression analyses. Simple regression analyses were conducted to see if preconditions were met for the mediation hypotheses. First, the parent skill level at the end of session was regressed on the skill level from the beginning of session to see if there was an effect to mediate (Path c). Then the number of times a therapist coached the particular skill was regressed on the initial skill level to establish Path a in the mediational chain. In the third

equation the parent's skill level at the end of session was regressed on the number of times the skill was coached to establish Path b. If all three of these paths were significant then preconditions were met, and the mediation model could be tested. To test the mediational model, parent skill level at the end of session was regressed on both parent skill level at the beginning of the session and the coaching of this skill. If the strength of the relation between the predictor (initial skill level) and outcome (later skill level) was significantly decreased then mediation is supported.

The original hypothesis stated that coaching would mediate the relationship between initial skill level and skill level later in session (See Figure 1). Preconditions were not met for any of skills the for this hypothesis. It is possible that the behavior counts at the end of session were weak measures of the parent's skill because the therapist was still coaching, which could impact the parent's ability to demonstrate their skill level. Further analyses were conducted to test mediation between a parent's initial skill level and skill level in the following session.

Preconditions for mediation were met for labeled praises with responsive coaching. No other combination of parent skill and coaching technique met the preconditions for mediation so further analyses were not conducted. One-tailed tests of significance were used based on hypothesized directionality of relationships.



B

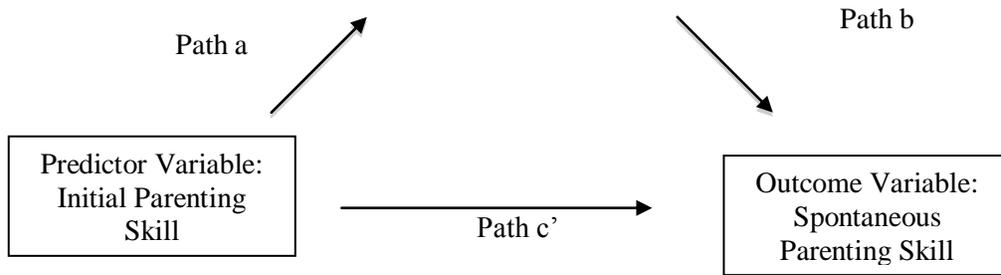
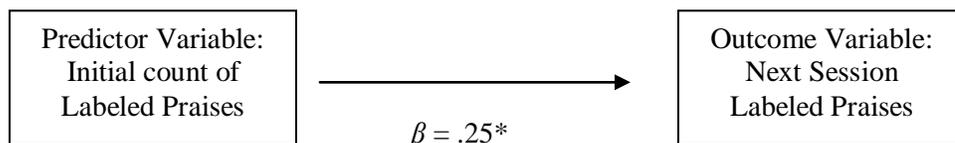


Figure 1. *Diagram of Paths of Hypothesized Mediation Model*

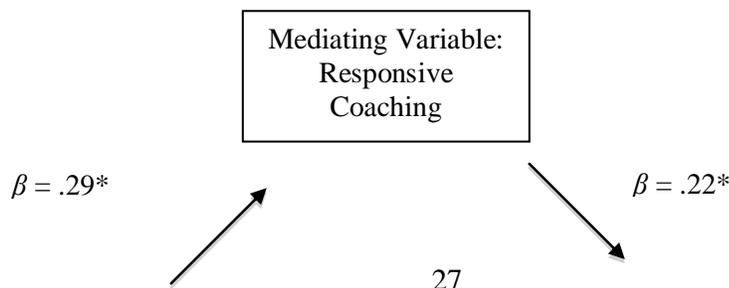
Responsive Coaching and Labeled Praises

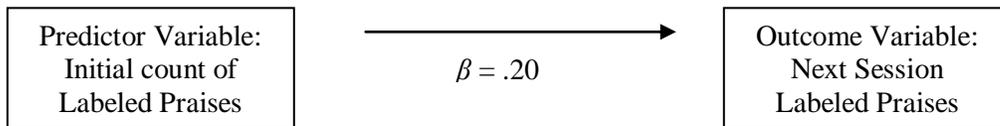
The RRM model was used to test the hypothesis that coaching would mediate the relationship between a parent's initial and later skill level. Preconditions for the hypothesis were met (see Figure 2). The significant relationship between the parents' initial skill level and next-session skill level, $\beta(52) = .25, t(47.72) = 1.85, p < .05$, was no longer significant when responsive coaching was added to the regression equation $\beta(52) = .20, t(49) = 1.44, p = .08$. This suggests that responsive coaching had a mediation effect on a parent's initial and next session skill level with labeled praises.

A



B





Note. $N = 52$. $* = p < .05$ (1-tailed).

Figure 2. *Diagram of Mediational Model for Labeled Praises and Responsive Coaching*

Relationship of Coaching Techniques and Parent Behavior Changes

Additional analyses were conducted to investigate the relationship between the type of coaching and both in-session and between-session behavior changes in the parents. Spontaneous parent skill level at the end of session was regressed on parent's skill levels at the beginning of session to obtain residuals as a measure of in-session change. Residuals of the parent skill levels at the beginning of the initially coded session and the skill levels at the beginning of the following week's session were obtained as a measure of between-session change.

Total coaching was not significantly related to in-session or between-session behavior change for any of the skills. Directive coaching was not significantly related to in-session or between-session behavior change for any of the skills. The relationship between responsive coaching and in-session behavior change was significant for reflections $\beta(48) = .22, t(45.31) = 2.13, p = .05$. Furthermore, the relationship between responsive coaching and between-session change for reflections was approaching significance, $\beta(53) = .25, t(52.02) = 1.90, p = .06$. These results suggest that the more the therapist reinforced reflections the more this behavior increased. There was no support that directive coaching techniques led to behavior changes within session or in the next session.

Influence of Therapist's Experience on Parent Behavior Change

Exploratory analyses were conducted on the relationship between a therapist's experience in the clinical psychology program and in-session client outcomes. Residuals were obtained by regressing spontaneous parenting skills at the end of session on the initial observed skills to measure in-session skill acquisition. Also parental skill levels from the following session were regressed on the initial observed skills to measure between-session skill acquisition. Pearson Product Moment Correlations were calculated between the residuals and the years of experience a therapist had in the graduate program. There were no significant correlations between therapist experience and changes in the parent's behaviors for any of the skills. See Table 7 for correlations.

Table 7. Correlations Between Experience and Parent Behavior Change

	Experience	1	2	3	4	5	6
Experience	--						
1	-.09	--					
2	-.17	.14	--				
3	.05	-.04	.32	--			
4	-.01	-.17	.33	.43	--		
5	-.04	.04	-.13	.10	-.24	--	
6	-.11	.15	-.22	-.02	.22	-.04	--

Note. $N=48$. 1 = In-session change for labeled praises. 2 = Between-session change for labeled praises. 3 = In-session change for behavior descriptions. 4 = Between-session change for behavior descriptions. 5 = In-session change for reflections. 6 = Between-session change for reflections.

CHAPTER IV

DISCUSSION

This study moved beyond the question, “Does treatment work?” and began to answer the question, “How does treatment work?” (Brestan & Eyberg, 1998; Eyberg et al., 2008).

Determining the mechanisms that cause parental behavior change is necessary to improve treatment models and effectively train therapists in the ones that exist (Kazdin & Nock, 2003; Weersing & Weisz, 2002). Even though there is wide-reaching consensus that it is necessary to study mechanisms of change in BPTs, the majority of literature on the topic is theoretical rather than empirical (Kazdin, 2007). Recent research has begun to address the question of which components make parent training effective. For example, a meta-analysis of parent training programs identified components, such as in vivo feedback, which lead to larger effect sizes in treatment (Kaminski et al., 2008). Furthermore, analogue studies support in vivo feedback as a mechanism of change (e.g., Herschell et al., 2008; Shanley & Niec, 2010); however, these conclusions are limited by the use of a community sample.

This study had several strengths that addressed the past research’s limitations. Actual therapist and parent behaviors were coded. The therapy sessions involved a clinical population with children, who all met criteria for ODD or Conduct Disorder. The study design was based on recommendations to use behavior observations to better understand how therapist-parent interactions lead to in-session behavior changes (Snyder et al., 2006). Direct observations of actual behaviors allowed insight into how therapists used assessment in session, the coaching techniques used, and parent behavior change. Furthermore, this study addressed issues of non-independence by using the random-effects regression model (RRM), which controlled for the degree of dependence on a family level, allowing for inferences to be made at an individual

level. This is a strength of the study because the majority of research on dyads and families ignore the violation of independence, which can increase Type I and Type II errors, and compromise the validity of the results (Kenny, Kashy, & Cook, 2006).

PCIT has a strong emphasis on using behavior observations to guide the feedback therapists give parents in session (Bahl et al., 1999), but there was previously no empirical evidence of this occurring. This is the first study that supports that therapists effectively use behavior observations at the beginning of treatment to guide their coaching techniques and frequency. Specifically, parents who were low in behavior descriptions received more directive forms of coaching. When outliers were removed from analyses for labeled praises the DPICS behavior observations significantly related to both responsive and directive coaching techniques for this skill as well. This suggests that the majority of therapists use assessment-guided treatment, but that some do not do this. Weaker correlations for some of the skills and outliers suggest that some therapists do not use behavior observations to guide their coaching and more emphasis on this component of treatment is necessary in training and evaluating PCIT therapists.

A mediational model between skill levels and coaching techniques was evaluated to better understand the importance of assessment-guided coaching in changing parent behaviors. This mediational model was supported with responsive coaching techniques mediating a parent's skill-level with labeled praises in two separate sessions. Researching mediators of change has been recommended as a way to better understand treatment components that lead to both short and long term behavior change (Kazdin, 2007). The mediation between the parents' labeled praise skill level in two sessions and responsive coaching met basic requirements to understand mediators of change. First, a strong positive relationship existed between the assessment and the coaching style, suggesting the use of assessment-guided treatment.

Secondly, there was a strong positive relationship between coaching and the outcome the following session, suggesting the coaching related to a parent's skill level the following session. Finally, the relationship between a parent's initial skill level and following-session skill level decreased significantly when coaching was included in the equation, suggesting that coaching, and specifically assessment-guided coaching, is related to changes in treatment. Mediation does not imply cause of change, and only explains the relationships in different components and outcomes of treatment, however, this finding provides preliminary support for hypothesized mediator of change in PCIT.

The conclusions from the mediation analyses are limited because only one combination of different parent skills and different coaching techniques met Baron and Kenny's (1986) three preconditions for analyses. Various explanations are possible for the scarcity of results. Though it was unexpected that directive coaching and total coaching would have little to no relationship with later parent behaviors based on past research (Gulanick & Schmeck, 1977), research on parent resistance offers a possible explanation for this finding. Parents that receive more directive techniques in other parent training models tend to be more resistant to implementing these skills, while at the same time, therapists tend to be more directive with resistant parents (Forgatch & Patterson, 1985). Another factor that limited the number of preconditions met was the lack of correlation between initial parent skill level with reflections and behavior descriptions and responsive coaching. Clinical recommendations to use responsive techniques to shape parents behaviors may explain the lack of relationship these skills and responsive coaching (e.g., Borrego & Urquiza, 1998). If therapists are using responsive coaching to reinforce any attempt a parent makes at a skill, including mimicking a therapist's suggestion, then the parent's skill level may not relate to this type of coaching.

Another important contribution of this study was the development and preliminary validation of the Therapist-Parent Interaction Coding System. It is important to have a better understanding of techniques that therapists use in session, and which of these techniques improve the client's skills. Assessment guided treatment and coaching are integral to successful delivery of PCIT, so a psychometric tool that measures both elements can also serve as a measure of therapist competence in PCIT. For this reason, the creation of the TPICS offers a valuable addition to PCIT. Before the creation of the TPICS, there was no validated measure of therapist competence for PCIT, even though there is general support for the relationship between a therapist's competence and treatment outcomes for parents in the BPT literature (Eames et al., 2008; Forgatch et al., 2005). The TPICS demonstrated good psychometric properties, including good inter-rater reliability. In order to be a measure of coaching competence the TPICS should be able to measure coaching strategies that successfully lead to behavior change. Analyses suggested that responsive coaching led to more in-session and next-session behavior change in parents. The relationship between the coaching styles and short-term parent behavior change provided some construct validation to use the TPICS as a competence measure (i.e., more competent coaches would use more responsive techniques to shape parent behaviors).

Finally, exploratory analyses were conducted to analyze the relationship between therapist experience and parent behavior change both within-session and between session. There was no support for a relationship between a therapist's experience and their ability to promote behavior change in parents. Conclusions from the results on therapist experience are extremely limited due to problems with the measure of experience. There was not a fine-grained measure of therapist experience (e.g., number of PCIT cases seen) so experience was operationalized as the number of years a therapist was in the graduate training program. This study was conducted

over four years and the majority of the therapists saw multiple cases over multiple years. This further weakened the measure of experience because therapists saw clients in various years of their training, so individual therapist effects influenced the measure of experience. However, the finding that experience did not predict behavior change does relate to some research, which has found little to no relationship between therapist experience and client outcomes (Stein & Lambert, 1984). More fine-tuned analyses are needed in the future to determine the role experience plays in promoting behavior change in PCIT.

Strengths & Limitations

This study had several limitations. The therapists were all graduate clinicians in the same training clinic under the same supervisor, which may limit the ability to generalize findings to other therapists in community settings, more experienced therapists, or those with different supervision. Furthermore, the parents and children came from a relatively homogenous population from a rural area. This may limit the generalizability of the findings about behavior change to parents from different cultural groups or geographical areas. Finally, the TPICS only measured therapist behaviors during the first phase of PCIT, the Child Direct Interaction phase. The difference in content and coaching style between the two phases of treatment limits the generalizability of the findings to the discipline phase of treatment.

Though it is strength of this study that actual clinical behaviors from real sessions were used, interpretation of the findings is limited because the majority of analyses were correlational. Therefore, we are not able to infer the exact cause of therapist behaviors or parent behavior changes. Furthermore, the sample size in the study was small, and results were easily influenced by outliers. Outliers were removed in order to explore how the majority of therapists coached; however, it is frequently recommended that outliers remain in data unless they are due to entry

error (Goodwin & Leech, 2006), which was checked for this project. For this reason results were presented with and without outliers.

Implications

The TPICS has potential to improve training and evaluation of PCIT therapists, and more research on this measure is warranted in the future. The TPICS can be used in supervision to evaluate how effectively the therapists use the DPICS to guide their coaching and which types of coaching they use. Another potential use of the TPICS would be to train therapists to use it to evaluate their own coaching. More research should continue to validate if the TPICS can be used to measure coaching styles that predict short and long-term behavior change in parents, in order to develop a better measure of competent coaching. Another interesting area of research would be to investigate if therapists change and improve their coaching techniques based on the feedback they receive from the TPICS. The TPICS could be used to provide “assessment-guided supervision,” which may improve training and dissemination practices.

The findings from this study have important implications for clinical practice, research, and training and dissemination issues related to PCIT and other BPTs. First, though there was evidence that the majority of therapists use the behavior observations to guide their coaching, it was also apparent that it should not be assumed that this happens consistently. More research should investigate how frequently and effectively therapists incorporate this assessment in their treatment. It is recommended that controlled experiments be conducted where a proposed mechanism of change (e.g., assessment-guided treatment) are provided for some participants and not others in order to better understand the role this component of treatment plays on the outcomes (Kazdin, 2008). Future research using controlled experiments would further illuminate how the behavior observation influences treatment outcomes.

Furthermore, while directive coaching techniques (e.g., modeling) are necessary to teach parents a skill, only positive reinforcement mediated the relationship with a parent's skill level between two sessions. The relationship between responsive coaching and behavior change was supported by further analyses, which found positive relationships with responsive coaching and in-session and between-session change, but no such relationships for directive coaching. These findings support past research that suggests that compliance with therapist suggestions increase when parents feel supported by the therapist (Forgatch & Patterson, 1985). However, the therapist's use of reinforcement is dependent on the parent's behaviors as well. Parent's who are weak in a skill or non-compliant might be less likely to receive the reinforcement. In order to understand if it is the therapist or parent behaviors, or a combination of the two, that lead to the relationship between behavior change and responsive coaching further research is necessary. One direction for further research would be to evaluate the immediate influences of different coaching styles through sequential coding (code the therapist's verbalizations and then the parents).

This study provided both a psychometric tool to study mediators and mechanisms of change in PCIT. It was the first study to look at how therapists use behavior observations to guide their treatment. Furthermore, the study added to the growing body of evidence that in vivo feedback is related to behavior change in parents (Kaminski et al., 2008; Shanley & Niec, 2010) and that certain feedback styles related to more behavior change than others (e.g., Herschell et al., 2008). Overall, this study increased understanding of how to change parent behaviors in session, which has important implications for therapists who use BPTs.

APPENDIX A

Manual for the
The Therapist Parent Interaction Coding System (TPICS)

1st Edition

Barnett & Niec

April, 2011

Basic Coding Rules

The Complete Thought Rule

One unit of therapist behavior is defined by a complete thought, which is either expressed as a sentence or a short phrase made either in response to what a parent does or to guide the parent's behavior. In general, the therapist will make one verbalization at a time while coaching, however, sometimes they will have fragments with separate meanings. If multiple separate meanings are expressed, regardless of pauses, then they will be coded as separate behaviors (e.g., That was a great praise. I noticed that he gave you a big smile when you said that to him [code Labeled Praise, Process Comment.]) Please note exception to this rule for Drills.

The "Code What is Coached" Rule

It is possible that therapists will sometimes incorrectly respond to a parent's behavior in their coaching (e.g., saying, "That was a great behavior description" when the parent said, "You drew a beautiful house," instead of coaching it as a labeled praise). The coach code is based on what the therapist says, not based on the parent behavior. If the therapist does not label what they are coaching (e.g., "Good job"), only then does the coder determine the parenting behavior category based on the parent's behavior.

The Two-Second Rule

When it is unclear whether a verbalization is a separate, complete, meaningful thought or is part of the verbalization occurring immediately before or after it, the coder may apply the two-second rule. This rule states that when there is a pause of two or more seconds between verbalizations, the observer codes the verbalizations separately. When it is clear that the two verbalizations constitute separate, meaningful thoughts, a two-second pause is not necessary for coding the verbalizations separately.

Priority Order

When a therapist's verbalization meets the criteria for more than one category only one category is coded. For example, "I want you to focus on saying as many praises as you can in two minutes" is both a *Direct Command* and a *Drill*. A priority order has been established to clarify these decisions based on the amount that a therapist's comment intends to directly modify a parent's behavior. In the order given the prior example would be coded as a *Drill* because the statement was intended to modify a parent's behavior for an extended period of time.

Priority Order Rules

1. Drill (DR)
2. Direct/Indirect Command (DC/IC)
3. Modeling (MO)
4. Prompting (PR)
5. Constructive Criticism (CC)
6. Process Comment (PC)
7. Labeled Praise (LP)
8. Unlabeled Praise (UP)
9. Reflective Description (RD)
10. Child Observation (CO)
11. Neutral Talk (TA)

Decision Rules

There will be times when the coder is *not certain* which category in a class should be coded. When the coder cannot decide between two categories, the manual has *Decision Rules* to guide the choice. The decision rules lists categories in exactly the reverse order from the priority order. That is, when in doubt, the decision rule guides the coder to code the therapist verbalization that is least directive of the parent's behavior.

1. Neutral Talk (TA)
2. Child Observation (CO)
3. Reflective Description (RD)
4. Unlabeled Praise (UP)
5. Labeled Praise (LP)
6. Process Comment (PC)
7. Constructive Criticism (CC)
8. Prompting (PR)
9. Modeling (MO)
10. Direct/ Indirect Command (DC/IC)
11. Drill (DR)

Superfluous Talk

Occasionally, the therapist's verbalizations will be overheard that are targeted to another therapist or parent that is not being coached. These verbalizations are not coded.

Modeling

Definition: Modeling is a therapist's verbalization of a PCIT parenting skill.

Therapist Modeling Examples	
Child: Stacking a block	Therapist: "You are stacking a block"
Child: Picks up a toy	Therapist: "Thank you for picking up those toys."
Child: "I just built a house."	Therapist: "Oh, you built a big house."

Guidelines:

1. The statement is modeling if it is a statement that demonstrates an appropriate skill. It is Prompting the skill if the statement begins a verbalization but then trails off allowing a parent to finish.

Therapist: You are drawing with blue. (MO)

BUT: You are... (PR)

Therapist: I like it how you are writing your name so carefully. (MO)

BUT: I like it how... (PR)

2. The statement is modeling if it includes the action verb even if the therapist trails off after this verb has been stated.

Therapist: You are putting...(MO)

BUT: You are...(PR)

Therapist: Thank you for handing... (MO)

BUT: Thank you for...(PR)

3. The statement is modeling if it occurs without a direct or indirect command to the parent to make a particular verbalization.

Therapist: Try a behavior description. (DC)

Parent: No response (5 second pause)

Therapist: You are putting a green piece on the red piece. (MO)

BUT: Therapist: Say, "You are putting a green piece on the red piece." (DC)

4. The therapist's verbalization is modeling if it corrects a parent's verbalization with a complete statement that demonstrates the correct verbalization.

Parent: Thank you.

Therapist: Thank you for playing next to me. (MO)

BUT: *Parent:* Thank you.

Therapist: Thank you for.... (PR)

Parent: Are you making that tower taller?

Therapist: You're making that tower taller. (MO)

5. The therapist's verbalization is modeling if it corrects a parent's verbalization without telling a parent what to do. If the therapist tells the parent what to do then it is a direct command.

Parent: You have a cat?

Therapist: You have a cat. (MO)

BUT: *Therapist:* Watch out for that inflection. (DC)

6. The therapist's verbalization is modeling if it demonstrates other verbalizations that are not specific PCIT parenting skills (Praise, Behavior Description, Reflection).

Therapist: Describe what you are doing (DC). I am making the biggest tower of all time! (MO)

Therapist: Say, "Special time is almost over." (DC) I'm going to start to clean up the blocks. (MO).

Prompting

Definition: Prompting is a therapist's verbalization of the beginning of an appropriate skill intended to allow a parent to finish the statement.

Therapist Prompting Examples

You are...

Thank you for...

I like how you...

Guidelines:

1. The statement is prompting if it begins a statement that demonstrates an appropriate skill and then intentionally trails off. If the parent interrupts and completes the verbalization when the therapist has provided the action verb it is modeling, but prompting if the therapist has just begun the sentence.

Therapist to parent: You are ... (PR)
Thank you for... (PR)

BUT: *Therapist:* You are starting... (MO)
Parent interrupting: You are starting your car.

Therapist: Thank you for handing... (MO)
Parent interrupting: Thank you for handing me the toy.

2. If the statement occurs with a direct or indirect command without a 2 second pause code direct or indirect command. If there is a 2 second pause code the command and prompting

Therapist: Try a behavior description. (DC)
Parent: No response (2 second pause)
Therapist: You are... (PR)

BUT: *Therapist:* Label that by saying, "Thank you for..." (DC)
Therapist: Label that praise. (2 seconds) "Thank you for..." (DC, PR)

3. The therapist's verbalization is prompting if it corrects a parent's verbalization with an incomplete statement that demonstrates the beginning of a correct verbalization.

Parent: Thank you.

Therapist: Thank you for... (PR)

BUT: *Parent:* Thank you.

Therapist: Thank you for helping. (MO)

4. The therapist's verbalization is prompting if it provides one word that implies that a parent needs to continue their verbalization to make it PCIT skill.

Parent: Great Job.

Therapist: With... (PR)

Parent: Thanks!.

Therapist: For... (PR)

Direct and Indirect Commands

Direct Command Definition: Direct commands are declarative statements that contain an order or direction for a vocal or motor behavior to be performed by the parent.

Indirect Command Definition: An indirect command is a suggestion for a vocal or motor behavior to be performed by the parent that is implied or stated in question form.

Therapist Indirect Commands	Therapist Direct Commands
Let's try a behavior description	Try doing a behavior description.
How about a reflection here?	Now do a reflection.
Can you label your praises?	Try labeling your praises.

Guidelines (Distinguishing Direct and Indirect Commands):

1. The verbalization is a direct command if it includes a declarative statement that tells the parent what to say or do. Commands in question form are always indirect commands.

Therapist: Please move those toys to the ground. (DC)

Therapist: Could you move those toys to the ground? (IC)

Therapist: Give him a praise now. (DC)

Therapist: Can you think of something to praise him for? (IC)

2. The verbalization is a direct command if the subject of the sentence is "you." If the therapist and the parent are the subject of the command then it is indirect (e.g., "let's...", "we're going to..."). When the subject of the sentence is the child the verbalization is coded as neutral talk (e.g., "He needs to come back to the table.").

Therapist: Focus on Tommy. (DC)

Therapist: We're just going to focus on Tommy now. (IC)

Therapist: Try a behavior description. (DC)

Therapist: Let's try another behavior description. (IC)

Therapist: Ignore him until he comes back to the table. (DC)

We're just going to ignore him until he comes back to the table. (IC)

BUT: He needs to be at the table to get your attention. (TA)

3. The verb phrase in a Direct Command may be modified by words that imply that compliance is necessary, such as “must,” “should,” “have to,” “need to,” “supposed to,” and “ought to.” When the modifiers of the verb phrase do not indicate the necessity of compliance, such as “might,” “may,” “could,” “can,” and their synonyms, code Indirect Command.

Therapist: You should take a deep breath. (DC)

Therapist: You might want to take a deep breath. (IC)

Therapist: Ok, you need to keep describing what he is doing. (DC)

Therapist: You could keep describing what he is doing. (IC)

Therapist: After he complies you are supposed to praise him for minding. (DC)

Therapist: You can praise him now. (IC).

4. The sentence structure of the command determines whether it is coded as a Direct Command or Indirect Command, regardless of the specificity of the requested behavior.

Therapist: Praise him for that. (DC)

Therapist: Praise him for that, ok? (IC)

Therapist: I need you to sound more enthusiastic. (DC)

Therapist: Let’s really use that enthusiasm. (IC)

5. Verb phrases calling for unobservable internal behaviors, when stated in imperative form, are coded Direct Commands. When stated in the question form they are coded as Indirect Commands.

Therapist: Stay calm. (DC)

Therapist: Can you take a deep breath for me? (IC)

Therapist: Remember to watch those questions. (DC)

Therapist: Remember to watch those questions, ok? (IC)

Therapist: Notice how calm he is. (DC).

Therapist: Can you notice how much calmer he is? (IC)

6. Statements beginning with “You are going to...” are coded as Direct Commands when they contain a specific suggestion for a behavior or verbalization that the parent has not initiated yet. Statements beginning with “We are going to...” are indirect commands.

Therapist: You are going to tell Sara that special time is almost over. (DC)

Therapist: We are going to end play time now. (IC)

Therapist: You are going to ignore him until he comes back to the table. (DC)

Therapist: We are going to ignore him until he comes back to the table. (IC)

7. The same single word command repeated without a 2 second pause is coded as one command.

Therapist: Breath, breath, breath (DC)

BUT: *Therapist:* Breath, ok, (2 seconds) breath again. (DC, DC)

Therapist: Breath, stay calm, relax. (DC, DC, DC)

Guidelines (Distinguishing Direct/Indirect Commands and Other Therapist Codes)

8. The verbalization is a direct or indirect command if it includes a verb that tells the parent what to say or do. It is modeling if it does not specifically use a verb that tells the parent to use the suggested verbalization, or if there is a two second pause after the therapist gives a command.

Therapist: Say, “you are pushing your car back and forth.” (DC)

BUT: *Therapist:* You are pushing your car back and forth.” (MO)

Therapist: Now you try one (no pause), “You are building a tower” (DC)

BUT: *Therapist:* Now you try one (2 second pause) “You are building” (DC, MO).

9. Direct and indirect commands include commands for behavior that will occur in the future. When the therapist describes other behaviors that will occur in the future code as talk.

Therapist: After you tell him that it is time to clean up tell him all the things you liked doing with him today. (DC)

Therapist: When you are at home you can ignore like you are right now. (IC)

Therapist: You will probably give him a bath later tonight. (IC)

BUT: *Therapist:* I’m guessing you are going to want to rest tonight. (TA)

10. Direct and indirect commands are always worded positively. They tell a parent what to do. Statements that tell a parent what not to do are Corrective Criticism.

Therapist: Watch your inflection. (DC)

BUT: Therapist: Don't raise your voice at the end. (CC)

Therapist: Watch those questions! (DC)

BUT: Therapist: Whoops! That was a question. (CC, RD).

Therapist: Look away from him right now. (DC)

BUT: Therapist: Don't look at him. (CC)

11. If a direct or indirect command includes a process comment or labeled praise and it is not possible to observe if the parent complied because it is a command related to an internal state (e.g., notice, pay attention, look) then code process comment or labeled praise.

Therapist: Notice how calm he is right now. (DC)

BUT: Therapist: Notice how calm your descriptions make him. (PC)

Therapist: Look at how he is drawing. (DC)

BUT: Therapist: Look at how great you are doing with praises today! (LP)

Drills

Definition: Drills are exercises when the therapist tells the parent to focus on one targeted parenting behavior for a specific period of time or until they meet a specified goal for the number of time they use that skill. The therapist's explanation of a drill is an exception to the complete thought rule because the Drill code includes the introduction the exercise, and may include several sentences that include commands or other therapist verbalizations. Once the timing of the drill begins return to coding.

Therapist Drills Examples

Now we are going to focus on behavior descriptions, I want you to do as many behavior descriptions as you can in 2 minutes.

We are going to do a labeled praises drill. Do as many as you can in the next minute.

Let's see how many behavior descriptions you can do while I time you for a minute.

Guidelines:

1. Drills need to include specific directions with either a number or a time limit that a parent is focusing on.

Therapist: Ok now we are going to focus on doing as many behavior descriptions as you can for 2 minutes. (DR)

Therapist: Let's see how many labeled praises you can say in a minute. (DR)

Therapist: I want you to come up with five behavior descriptions in a row. (DR)

BUT: *Therapist:* I want you to say some behavior descriptions now. (DC)

Therapists: Try to focus on labeling your praises for a while. (DC)

2. Once a therapist has finished giving the initial descriptions for a Drill continue coding the other verbalization categories throughout the drill.

Therapist: Let's see how many labeled praises you can do in two minutes starting now (DR).

Parent: Thanks for passing me that block.

Therapist: Ok that's one. Great work! Keep going! (RD, UP, DC)

Therapist: This drill is going to focus on behavior descriptions. We are going to see how many you can do in a minute. Start now! (DR)

Parent: You built an amazing tower.

Therapist: Great labeled praise, but keep focusing on behavior descriptions for this drill (LP, DC).

Labeled Praises

Definition: Labeled praises provide a positive evaluation of a specific behavior, activity, product, or verbalization of the parent.

Therapist Labeled Praises Examples	
That was a great labeled praise.	Great enthusiasm with those descriptions.
Nice reflection.	Great behavior description.
Great job getting his attention without a command.	Nice job keeping him in the lead.

Guidelines

1. Labeled Praises must contain both the positive evaluation and the description of the specific action or verbalization to be coded as a Labeled Praise.

Therapist: Nice job labeling your praises. (LP)

Therapist: Those are great descriptions. (LP)

Therapist: Nice reflection.

BUT: *Therapist:* Good work. Now let's hear another behavior description just like that (UP + IC)

Therapist: That was another behavior description. Great job! (RD, UP)

Therapist: Congratulations on reaching mastery criteria on reflections. (LP).

BUT: *Therapist:* Congratulations! You met mastery criteria for reflections today. (UP,RD)

2. Labeled Praises specifically refer to the parent, the parent's skills, the parent's verbalizations, or the interaction between the parent and child. It does not refer to the child.
 - a. Positive evaluations include good and all of its synonyms, including nice, wonderful, marvelous, awesome, excellent. Other words in the TPICS that are considered to be praises are smart, polite, brilliant, perfect, wonderful, patient, fun, enjoyable, top-notch, marvelous, cool, kind, warm and their synonyms.

Therapist: You just said that praise in such a kind way. (LP)

Therapist: You are being so patient with him right now. (LP)

Therapist: You are doing amazing staying calm. (LP)

Therapist: You are having such a warm interaction right now. (LP)

BUT: *Therapist*: It looks like he is having a lot of fun with you right now. (CO)
Therapist: Those great praises are keeping him focused at the table. (PC)
Therapist: She's being so polite. (CO)

- b. Descriptive words not considered sufficiently positive to constitute a praise include quiet, interesting, silly, exciting, energetic, and alright.

Therapist: You two are being really silly right now. (TA)

Therapist: Wow! There's a lot of energy in that room right now. (TA).

BUT: *Therapist*: You have great energy! (LP)

- 3. Praises containing nonspecific nouns such as job, expert, idea, champion are Labeled Praises only when these nouns are qualified by verbs or verb phrases describing more specific behavior, or a specifically labeled parenting skill.

Therapist: You are an expert at behavior descriptions. (LP)

BUT: You are a champion! (UP).

Therapist: Great idea to move closer to her. (LP)

BUT: *Therapist*: Great idea! (UP)

- 4. If a statement contains two or more meaningful verb phrases or parenting skills describing clearly independent parenting behaviors and at least one positive evaluative word each modified verb phrase or parenting skill is coded as a separate praise.

Therapist: Great praising and describing what he is doing. (LP, LP)

Therapist: Excellent work with those reflections and descriptions. (LP, LP)

BUT: Super! That was a description and a reflection. (UP, RD, RD)

Therapist: Great job praising him and staying enthusiastic. (LP, LP)

BUT: *Therapist*: Great job with praising him with enthusiasm. (LP)

- 12. If a Labeled Praise is preceded by a command and it is not possible to observe if the parent complied because it is a command related to an internal state (e.g., notice, pay attention, look) then code Labeled Praise. If it is possible to see if a parent complies code Direct or Indirect Command.

Therapist: Notice how many great praises you are using! (LP)

BUT: *Therapist*: Do another praise like that last excellent one you just did. (DC)

Unlabeled Praises

Definition: An unlabeled praise provides a nonspecific positive evaluation of the parent.

Therapist Unlabeled Praises Examples

That was a great.

Very good.

Nice job.

Way to go!

Guidelines:

1. An unlabeled praise does not specify the behavior, action, or verbalization that the therapist is praising. If a therapist has no opportunity to label the praise because the parent interrupts it is coded as unlabeled praise.

Therapist: Great! (UP)

Therapist: Excellent! You are doing a ton of descriptions today! (UP, RD)

Parent: I like how you cleaned up.

Therapist: Nice (UP) *Parent (keeps talking to child):* You are the fastest cleaner-upper.

2. Positive nonspecific nouns like expert, champion, job, work or their synonyms are unlabeled praises unless they have a qualifying statement, in which case they are labeled praises.

Therapist: You are such an expert! (UP)

BUT: Therapist: You are such an expert at praising! (LP)

Therapist: Great work! (UP)

Therapist: Great work with your enthusiasm! (LP)

Constructive Criticism

Definition: A constructive criticism is either a phrase or statement that is negatively stated or gently critical of a parent's behaviors.

Therapist Constructive Criticism

Oops, that's a question.
Whoops!
Don't raise your voice at the end.
Don't look at him now.
Don't pay attention to that.

Guidelines:

1. A constructive criticism tells a parent what not to do. Direct and indirect commands tell a parent what to do.

Therapist: Don't pay attention to that. (CC)

BUT: Therapist: Ignore that. (DC)

Therapist: Don't bother cleaning up. (CC)

BUT: Therapist: You can leave that. I will do it after you leave. (IC, TA)

Therapist: Try not to raise your voice at the end of that reflection. (CC)

BUT: Therapist: Try to lower your voice at the end. (DC).

Therapist: Don't tell him what not to do, say what he should do. (CC, DC)

2. A constructive criticism tells a parent when a verbalization is not a skill. A reflective description labels a verbalization.

Therapist: That's not quite a reflection. (CC)

BUT: Therapist: That was a question. (RD)

Therapist: That was almost a reflection. (RD)

Therapist: It's not a labeled praise if you don't tell him why you liked it. (CC)

BUT: That's an unlabeled praise. (RD)

3. A constructive correction includes a gently negatively stated evaluative comment regarding "don't skills," which includes a word like, oops, whoops, uh-oh and all synonyms.

Therapist: Oops, that was a question. (CC, RD)

Therapist: Uh-oh that was a hidden command. (CC, RD)

Therapist: Whoops! (CC)

BUT: That was an indirect command (RD).

Reflective Descriptions

Definition: Reflective Descriptions are non-evaluative, declarative sentences or phrases in which the subject is the parent or the parent's most recent verbalization or behavior and the label describes the parent's immediately completed (<5 sec.) parenting behavior.

Reflective Descriptions Examples

That was a labeled praise.

You just did 3 behavior descriptions in a row!

You are on a roll, you keep doing reflection after reflection.

That was an unlabeled praise.

You just turned that into an unlabeled praise.

That praise really focused on a behavior we want to see again.

Guidelines:

1. Reflective Descriptions contain no positive evaluation statements. If the statement includes a positive evaluation statement code Labeled Praise. If the praise is a separate, independent thought, code Reflective Description and Unlabeled Praise.

Therapist: That was a behavior description. (RD)

Therapist: Another labeled praise. (RD) Excellent work! (UP)

BUT: Therapist: That was an excellent labeled praise (LP).

2. Reflective Descriptions only describe a skill or action the parent has already completed. They do not interpret internal states. Code Neutral Talk for comments about the parent's internal states.

Therapist: That was a behavior description. (RD)

BUT: Therapist: You look like you are trying to think of a description. (TA)

3. Reflective Descriptions can be distinguished from Neutral Talk by the time frame. A Reflective Description gives only an account of the parent's current or immediately completed behaviors. Descriptions of the past (more than 5- seconds) or future behaviors are not Reflective Descriptions.

Parent: You cleaned up two blocks, great cleaning!

Therapist: That's a behavior description and a praise!

BUT: Parent: You cleaned up two blocks (5-seconds). Great cleaning

Therapist: That was a behavior description and then a praise.

Therapist: I bet you have another praise in you. (TA)

4. When a statement contains two or more complete descriptions (i.e., each description has a verb, or are two separate PCIT skills) joined by "and" code both descriptions.

Therapist: You just said an unlabeled praise and then you labeled it! (RD, RD)

Therapist: You caught that question and made it a reflection. (RD, RD)

Therapist: That was a reflection and then a labeled praise. (RD, RD)

BUT: Therapist: That was a description and then another one. (RD)

5. Reflective Descriptions describe specific, non-evaluative ways that a parent enhanced or changed a PCIT skill.

Therapist: You made that question into a reflection when you changed your inflection. (RD)

BUT: Therapist: Good job making that a reflection by bringing your voice down. (LP)

Therapist: You are really describing things you like to see like being calm. (RD)

BUT: Therapist: Good job describing how he was playing calmly. (LP)

Therapist: When you describe how calm he is he stays calm. (PC)

6. Reflective Descriptions describe other parenting behaviors that are not verbalizations in a non-evaluative way.

Therapist: You are using a lot of enthusiasm right now. (RD)

BUT: Therapist: Great job with your enthusiasm. (LP)

Therapist: You are really following his lead. (RD)

BUT: I like how you keep following his lead. (RD)

Therapist: You are staying so calm right now. (RD)

BUT: Good job staying calm right now. (LP)

Process Comments

Definition: Process comments are statements that tie a child's behavior to the parent's treatment related behavior, or describe the purpose of a particular skill used in treatment.

Process Comments Examples

Your behavior descriptions are really keeping him focused on the table now.

He just smiled when you gave him that praise.

He has changed so much since *you* started in treatment.

I can tell that he really likes this time he spends with you.

Guidelines:

1. Process comments describe the connection between a PCIT parenting behavior and how it modifies a child's behaviors.

Therapist: When you praise him for that he wants to keep doing it. (PC)

BUT: Therapist: That was a nice praise you just gave him for cleaning up (LP).

Therapist: He really responds to those descriptions. (PC)

Therapist: Your reflections are helping build his vocabulary. (PC)

2. Process comments describe something a parent already did, not an action the therapist is telling the parent to do in the present, or something they will do.

Therapist: When you ignored him he stopped whining (PC)

BUT: Therapist: Ok just ignore him until he comes back to the table (DC)

Therapist: If you ignore that behavior it will stop (IC)

3. Process comments directly link a parent behavior to a child behavior. If the therapist only comments on a child's behavior code Child Observation.

Therapist: He smiled when you praised him. (PC)

BUT: Therapist: He just gave you such a nice smile. (CO)

Therapist: He really enjoys your enthusiasm. (PC)

BUT: Therapist: He looks like he is really enjoying himself. (CO)

Therapist: He has changed so much since you started treatment. (PC)

BUT: Therapist: I notice a lot of changes in him. (CO)

4. If a process comment starts with a direct command and it is not possible to observe if the parent complied because it is a command related to an internal state (e.g., notice, pay attention, look) then code process comment.

Therapist: Notice how your praises are keeping her motivated. (PC)

BUT: Keep praising her to keep her focused. (DC)

Child Observation

Definition: Child Observations are any observation that the therapist makes about the child that is not related to parenting behaviors. Child Observations are used to draw a parent's attention to the child.

Child Observations Examples

He sure is having fun today.

He just came back to the table.

He is really playing gently right now.

He just used a nice quiet voice.

1. Child Observations may implicitly direct the parent by providing information; however, code command only when the statement contains an action verb calling for vocal or motor behavior from the parent.

Therapist: He just got out of the chair. (CO)

BUT: Since he's out of the chair tell him that he will have to go to the timeout room. (DC)

Therapist: He is playing so gently. (CO)

BUT: Praise him for how gentle he is being. (DC)

Therapist: He's coming back to the table. (CO)

BUT: Praise him when he comes back to the table. (DC)

Therapist: Oh, he's screaming again. (CO).

BUT: Ignore that screaming (DC).

Therapist: We will praise him every time he shares. He just shared. (IC, CO)

2. Child Observations may implicitly model a verbalization for a parent. Code Modeling when the therapist's verbalization about the child is in the second person (you) and Child Observation when the verbalization about the child is in the third person (he, she, child's name).

Therapist: He's staying really calm while he builds. (CO)

BUT: Therapist: You're building that so calmly. (MO)

Therapist: He came back to the table. (CO)

BUT: Therapist: Thank you for coming back to the table. (MO)

3. Child Observations comment on the child's behaviors in isolation from the parent's behaviors. If the therapist connects the child behaviors to the parent or parent's behaviors code Process Comment.

Therapist: He's watching you. (CO)

BUT: Therapist: He's watching you because you are describing what you are doing. (PC)

Therapist: He looks like he is having a blast today! (CO)

BUT: He is having a blast with you today. (PC)

Therapist: He's really staying focused right now. (CO)

BUT: Your behavior descriptions are really keeping him focused. (PC)

Therapist: He's changed so much since I first met him! (CO)

BUT: He's changed so much since you started bringing him! (PC)

Neutral Talk

Definition: Neutral talk is comprised of statements that introduce information about people, objects, events, or activities, but do not clearly describe the parent or child's current or immediately completed behaviors.

Neutral Talk Examples

You're almost done today.

I'm not sure what he just said.

You seem tired today.

There you go.

1. Neutral talk may give an account of:

a. The therapist's independent behavior, feelings, or thoughts.

Therapist: I didn't quite hear that. (TA)

Therapist: I can't understand what he is saying. (TA)

Therapist: I'm having trouble seeing what he is doing. (TA)

Therapist: I can't even keep up with all of your behavior descriptions. (TA)

BUT: That was a lot of behavior descriptions! I'm having trouble keeping up with you. (RD, TA)

b. Toys and objects.

Therapist: That's quite a tower you guys built.

Therapist: The blue block is under the chair.

Therapist: There are more farm animals in the other box.

- c. Feelings or motivations of the parent. Interpretations of the child's feelings or motivations are coded as Child Observation.

Therapist: You look tired.

Therapist: You are staying really focused.

BUT: *Therapist:* He seems tired today. (CO)

Therapist: He is really staying focused. (CO)

Therapist: You're staying very calm.

BUT: *Therapist:* Good job of staying calm. (LP).

2. Neutral Talk can be distinguished from Reflective Descriptions by the time frame. Descriptions of past behavior (>5 seconds) is Neutral Talk, in contrast to Reflective Descriptions which describes immediately completed behaviors.

Therapist: You clearly did your homework this week. (TA)

Therapist: That homework is paying off. (TA)

Parent: You shared the crayon. (5 seconds) I like it when you share with me.

Therapist: That was a labeled praise. And a behavior description before that! (RD, TA)

BUT: *Parent:* You shared the crayon. Thank you for sharing.

Therapist: That was a behavior description and a labeled praise! (RD, RD)

3. Neutral Talk contains no praise or criticism of a parent's verbalizations or behaviors.
- a. When a statement includes praise or criticism of some aspect of the play situation (e.g., objects, activities, ideas) that is not owned or created by either the parent or the child, it is coded as Neutral Talk.

Therapist: That is a really fun train set. (TA)

BUT: *Therapist:* He built a really fun train track. (CO)

Therapist: You did a nice job helping him with that train set. (LP)

Therapist: Whoops, the tower fell. (TA)

BUT: Whoops, that was a question. (CC, RD)

- b. Certain phrases of Neutral Talk are commonly used to correct the parent's verbalization. The expressions (e.g., Oop! Whoops! Uh-oh!) are coded as Corrective Corrections instead of Neutral Talk.

Parent: The puzzle broke.

Therapist: Oops! (TA).

BUT: *Parent:* What does a cow say?

Therapist: Oops!

4. Neutral talk refers to actions or verbalizations completed by another individual, who is not the parent or child.

Therapist: Karen will hold the door so he can't get out. (TA)

Therapist: Trevor just let me know he's impressed with how calm you are staying. (TA)

5. Questions that the therapist asks the parent are coded as Neutral Talk.

Therapist: Does she need to use the bathroom?

Therapist: Can you hear me?

How to Code the Parent Behavior that the Therapist Coaches

Definition:

The TPICS codes both the type of therapist verbalization (see above TPICS codes) along with the parent behavior that the therapist is either directing or responding to. For example, if a therapist says, “Good behavior description,” they used a Labeled Praise to respond to a parent’s Behavior Description. A coding matrix is used to simultaneously code both categories of the therapist’s verbalization.

It is necessary to understand all of the rules in the DPICS-III to simultaneously code the parent behavior with the therapist verbalization.

Parent Behavior Categories for Simultaneous Coding:

The TPICS codes if the therapist directs or responds to each individual “Do Skill” (Behavior Descriptions, Reflections, and Praises), a composite code for all “Don’t” behaviors (Criticism, Commands and Questions), and “Other” parenting behaviors (e.g., ignoring, moving toys, describing their own behavior, enthusiasm, quality of the interaction).

When to Code a Parent Behavior:

Each coach verbalization that directly relates to a parent behavior should be coded for one target parent behavior.

Coach verbalizations that are Neutral Talk, Child Observation, or Unlabeled Praise are NOT coded for parent behaviors because it is not possible to identify the parent behavior that the coach is targeting.

Specific Rules for Therapist Verbalization Categories:

Note: After each verbalization the code is indicated with the therapist category followed by the parent category. Example, if the therapist praises a parent's behavior description it will be coded as (LP/BD).

1. Modeling

- a. Code the parent behavior that the coach is modeling.

Therapist: Great job stacking those blocks (MO/LP).

Therapist: You're putting the green one on top (MO/BD).

Child: I want a yellow block.

Therapist: You want a yellow block. (MO/RF).

- b. Code as a "Don't Behavior" or "Other Behavior" if the therapists models a parent behavior that is not a "Do Skill" even if it appears that they are trying to model a "Do Skill."

Therapist: You have a red block! (MO/Other) *DPICS-III BD Rule 3*

Therapist: That doesn't go there. (MO/ Don't) *DPICS-III NT Rule 5*

Therapist: You look sad. (MO/Other) *DPICS-III TA TA Rule 3*

Child: Put it there!

Therapist: Put it there! (MO/Don't) *DPICS-III RF Rule 16*

2. Prompting

- a. Code Behavior Description if the prompt starts with a statement that leads a parent to describe what the child is doing.

Therapist: You are... (PR/BD)

Therapist: You're ... (PR/BD)

Therapist: Now you're ... (PR/BD)

- b. Code Labeled Praise if the prompt starts with a positive evaluation statement (e.g., thank you for..., I like it how..., Good job....")

Therapist: Thank you for.... (PR/LP)

Therapist: Good job of (PR/LP)

Therapist: I like how (PR/LP)

- c. Code Labeled Praise if the prompt includes a connecting word that would make an Unlabeled Praise a Labeled Praise

Parent: Nice job!

Therapist: Of.... (PR/LP)

Parent: Thank you!

Therapist: For... (PR/LP)

Parent: Great idea!

Therapist: To.... (PR/LP)

- d. Code Reflection if the therapist begins to reflect what a child is saying and trails off so the parent can finish.

Child: Put it here!

Therapist: You want me to... (PR/RF)

Child: Where is dad?

Therapist: You're wondering ... (PR/RF)

3. Direct and Indirect Commands

- a. Code the parent behavior that the therapist directs a parent to do with their command.

Therapist: Try a behavior description. (DC/BD)

Therapist: Label that praise. (DC/LP)

Therapist: Tell me what he is doing. (DC/BD)

Therapist: Repeat what he says. (DC/RF)

Therapist: We're going to try behavior descriptions now (IC/BD)

- b. Code as "Other," if a therapist directs a parent to ignore the child's behaviors, describe what they are doing, move toys, etc.

Therapist: Just ignore him right now. (DC/Other)

Therapist: Could you move those blocks? (IC/Other)

Therapist: Describe what you are doing now. (DC/Other)

- c. Code as “Don’t Behavior,” if a therapist directs a parent to do a question, criticism, or command.

Therapist: Ask him if he has to go to the bathroom. (DC/Don’t)

Therapist: Tell him not to stand on the table. (DC/ Don’t)

Therapist: Tell him to hand you that toy. (DC/Don’t)

4. Drills

- a. Code the behavior the therapist says they will target in the drill.

Therapist: You are going to come up with as many behavior descriptions as you can in 5 minutes (DR/BD)

Therapist: I want you to do three labeled praises in a row. (DR/ LP)

Therapist: I want you to reflect everything he says in the next 2 minutes (DR/RF).

5. Labeled Praises

- a. Code whatever “Do Skill” that the therapist praises. If a therapist incorrectly praises a skill code what is coached.

Parent: You’re pushing the train.

Therapist: Great behavior description. (LP/BD)

Child: Put the block on top.

Parent: Put the block on top.

Therapist: Great reflection! (LP/RF)

Therapist: You’re doing great with labeled praises today (LP/LP).

- b. Code two or more Labeled Praises if two separate PCIT skills are joined by the word “and.”

Therapist: Great reflection and labeled praise! (LP/RF, LP/LP)

Therapist: I like how you are working in lots of praises and descriptions today. (LP/LP, LP/BD)

- c. Code as “Other” if the therapist praises the parent’s enthusiasm, behaviors, or another aspect of the parent’s interaction with their child that is not a Behavior Description, Reflection, or Praise.

Therapist: Great ignoring. (LP/ Other)

Therapist: What a warm interaction you are having right now. (LP/Other)

Therapist: You are doing a great job of staying calm. (LP/Other).

Therapist: Thank you for moving those toys so I can see you (LP/Other).

6. Process Comments

- a. Code Reflection, Behavior Description, or Labeled Praise if the therapist connects the parent's usage of one of these skills with the child's behaviors or feelings.

Therapist: Those descriptions are really keeping her focused. (PC/BD)

Therapist: That labeled praise made her smile. (PC/LP)

Therapist: When you label your praise like that she knows what you want to see more of! (PC/LP).

Therapist: When you reflect what he is saying he knows you are listening (PC/LP).

- b. Code the first parent behavior that the therapist verbalizes if they incorporate two "Do Skills" in a Process Comment.

Therapist: She really likes those praises and reflections! (PC/LP)

Therapist: All your behavior descriptions and reflections are keeping him really engaged right now. (PC/BD)

- c. Code "Other" if the therapist connects a parent behavior or verbalization that is not a Behavior Description, Reflection, or Praise to the child's behaviors or feelings.

Therapist: He stopped because you ignored him. (PC/Other)

Therapist: When you described what you were doing he wanted to come back to the table. (PC/Other)

Therapist: Your enthusiasm is really keeping him engaged. (PC/Other)

- d. Code "Other" when the therapist points out that child feelings or behaviors related to being with the parent or the time they spend together.

Therapist: He really loves this time with you. (PC/Other)

Therapist: He's changed so much since you started spending this time with him. (PC/Other)

- e. Code "Don't" Behaviors if the therapist connects a parent's Question, Command, or Criticism with a child behavior.

Therapist: He stopped talking when you asked him those questions. (PC/Don't)

Therapist: He looked sad when you told him not to do that. (PC/Don't)

Therapist: She is ignoring your command. (PC/Don't)

7. Reflective Description

- a. Code whatever "Do Skill" that the therapist labels. If a therapist incorrectly labels a skill code what is coached.

Parent: You're opening the box.

Therapist: That's a behavior description. (RD/BD)

Child: It goes choo-choo.

Parent: The train says choo-choo?

Therapist: There was one reflection! (RD/RF)

Parent: Thank you.

Therapist: That was an unlabeled praise (RD/UP).

Parent: Thank you for handing me that.

Therapist: Now you labeled it. (RD/LP)

- b. Code two or more Reflective Descriptions if two separate PCIT skills are joined by the word "and."

Therapist: That was a labeled praise and then a description. (RD/LP, RD/BD)

BUT: That was a description and then another one. (RD/BD)

Those were three labeled praises in a row! (RD/LP)

Therapist: You caught that question and made it a reflection. (RD/Don't, RD/RF)

- c. Code as "Other" if the therapist describes the parent's enthusiasm, behaviors, or another aspect of the parent's interaction with their child that is not a Behavior Description, Reflection, or Praise.

Therapist: Now you're ignoring. (RD/ Other)

Therapist: You grabbed that just in time. (RD/Other)

Therapist: You are staying really calm. (RD/Other).

Therapist: Thank you for moving those toys so I can see you (RD/Other).

- d. Code “Don’t” Behavior if the therapist points out a Question, Command, or Criticism.

Therapist: That was a hidden command. (RD/Don’t)

Therapist: That sounded like a question. (RD/Don’t)

Therapist: When you raise your voice like that it makes it a question.
(RD/Don’t)

Therapist: That sounded like a criticism. (RD/Don’t)

8. Constructive Criticism

- a. Code whatever “Don’t” Behavior or “Do Skill” that precedes a therapist’s critique (e.g., whoops, oops, don’t)

Parent: How tall are you going to make it?

Therapist: Whoops. That was a question. (CC/Don’t, RD/Don’t)

Child: It is going to stop here.

Parent: Why will it stop there?

Therapist: Oops! (CC/Don’t)

Parent: Thank you.

Therapist: Don’t forget to label that! (CC/Don’t)

Therapist: Don’t stop describing what she is doing. (CC/BD)

- b. Code as “Other” if the therapist tells a parent not to do a behavior that is not a Behavior Description, Reflection, Praise, or “Don’t” Behavior.

Therapist: Don’t look at her. (CC/ Other)

Therapist: Don’t worry about that. (CC/Other)

Therapist: Don’t stop using your enthusiasm. (RD/Other).

9. Neutral Talk, Child Observations, and Unlabeled Praises

- a. Do NOT code a parent behavior for all therapist verbalizations that are Neutral Talk, Child Observations, or Unlabeled Praises because it is not possible to imply their intention for these verbalizations.

Therapist: I have a hard time with questions sometimes too. (No Code/TA)

Therapist: Oh he is coming back to the table. (No Code/CO)

Therapist: Great job! (No Code/UP)

Therapist: He's really smiling now. (No Code/CO)

BUT: He's smiled after you gave him that praise. (PC/LP).

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