Parent-Child Interaction Therapy for Children Diagnosed With Reactive Attachment Disorder

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Parent-Child Interaction Therapy for Children Diagnosed
With Reactive Attachment Disorder

by

Demetria Soulounias-Arriaga

A thesis submitted in partial fulfillment
of the requirements for the degree of
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Dedication

This thesis would have been nearly impossible without mention of the many people who supported me throughout this process. I would like to thank my mother and father for instilling in me the value of education and a lifetime of encouragement and support. I must also thank my husband and children for allowing me the opportunity to pursue my goals and for their love, laughter and energy that make life a gift everyday. You are all the great loves of my life.

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ABSTRACT

Parent-Child Interaction Therapy is a probably efficacious, evidenced-based treatment, which has been proven to decrease problem behaviors of children, as well as improve parent-child interactions. The first phase is the Child-Directed Interaction (CDI), which allows the child to lead the play session, while parents are taught to interact without giving demands, asking questions, or providing criticism. According to the DSM-IV-TR, Reactive Attachment Disorder is a rare diagnosis. Many attachment therapists indicate that traditional approaches to treatment have not been demonstrated as being effective with these children. This study will examine the CDI phase of Parent-Child Interaction Therapy as a potential treatment option for children diagnosed with Reactive Attachment Disorder.
Chapter 1 Introduction

Literature Review

Parent-Child Interaction Therapy (PCIT) is an evidence-based treatment for families of young children with behavior problems. Treatment begins with a child-directed interaction (CDI) phase in which parents learn to follow their child’s lead in play situations, using skills similar to traditional play therapy techniques to enhance the parent-child relationship. The purpose of the CDI phase is to “restructure the parent-child relationship and provide the child with a secure attachment to his or her parent” (Storch, 2005, p. 106). The parent-directed interaction (PDI) phase of treatment is introduced after CDI skills are mastered. In the PDI phase, parents learn ways to provide consistent consequences for child appropriate behaviors as well as a systematic time-out procedure for child non-compliance (Brinkmeyer & Eyberg, 2003). Both phases of PCIT teach parents basic behavioral principles for managing child behavior; parents learn to ignore or punish maladaptive child behaviors and to reward appropriate child behaviors with positive attention.

As cited in Timmer, Urquiza, Zebell, and McGrath (2005, p. 828) “PCIT has been effective in reducing behavior problems in children (Eisenstadt, T. H., Eyberg, S., McNeil, C., Newcomb, K., & Funderburk, B., 1993; Eyberg, 1988; Eyberg & Robinson, 1982), and maintaining these positive effects up to 6 years post treatment (Hood & Eyberg, 2003). Treatment effects also have been shown to generalize to school settings...
(Funderburk, B., Eyberg, S., Newcomb, K., McNeil, C., Hembree-Kigin, T., & Capage, 1998; McNeil, Eyberg, Eisenstadt, Newcomb, & Funderburk, 1991), and to untreated siblings (Brestan, Eyberg, Boggs, & Algina, 1997; Eyberg & Robinson, 1982). In addition, PCIT also has been shown to be as effective for foster parents as biological parents. According to parent reports, child behavior problems go from above normal limits at pre-treatment to within normal limits at post-treatment. In addition, parents report less personal distress as their child’s disruptive behavior decreases” (Schuhmann, Foote, Eyberg, Boggs & Algina, 1998).

Although empirically established for the treatment of disruptive behavior, researchers have also proposed PCIT for treating the internalizing behavior disorders of young children, including Generalized Anxiety Disorder (GAD) and Separation Anxiety Disorder (SAD) (Choate, Pincus, Eyberg & Barlow, 2005; Eyberg, 1979; Lyman & Hembree-Kigin, 1994). PCIT provides opportunities for parents to model and reinforce many positive coping skills. PCIT also helps reduce harsh discipline (Eisenstadt et al., 1993), which is significantly linked to both internalizing and externalizing behavior disorders in young children. A study of PCIT with children with a primary diagnosis of SAD demonstrated significant reductions in anxiety, along with lower rates of disruptive behavior (Choate, Pincus, Eyberg, & Barlow, 2005). Based on these studies, PCIT seems to be a promising treatment for internalizing disorders.

Reactive attachment disorder

The diagnosis of Reactive Attachment Disorder (RAD) of Infancy or Early Childhood from the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV-TR, American Psychiatric Association [APA], 2000), is
characterized by disturbed and developmentally “inappropriate social relatedness in most contexts, that begins before age 5 and is associated with grossly pathological care” (APA, 2000, p. 127). Two different types are described. The Inhibited Type includes: “persistent failure to initiate or respond in a developmentally appropriate fashion to most social interactions, as manifest by excessively inhibited, hyper vigilant, or highly ambivalent and contradictory responses (e.g., the child may respond to caregivers with a mixture of approach, avoidance, and resistance to comforting, or may exhibit frozen watchfulness” (APA, 2000, p. 130). The Disinhibited Type is described by “diffuse attachments as manifest by indiscriminate sociability with marked inability to exhibit appropriate selective attachments (e.g., excessive familiarity with relative strangers or lack of selectivity in choice of attachment figures)” (APA, 2000, p. 130). Also, to be diagnosed with RAD, the child must not have a developmental delay as in Mental Retardation and does not meet criteria for a Pervasive Developmental Disorder (APA, 2000). The DSM-IV-TR criteria also states that the child’s history should also include “pathogenic care”, as evidenced by at least one of the following: “persistent disregard of the child’s basic emotional needs for comfort, stimulation, and affection; persistent disregard of the child’s basic physical needs, repeated changes of primary caregiver that prevent formation of stable attachments (e.g., frequent changes in foster care)” (APA, 2000, p. 130). According to the DSM-IV-TR, “…Reactive Attachment Disorder appears to be very uncommon” (APA, 2000, p. 129).

Forms of attachment therapy. Werner-Wilson and Davenport (2003, p. 182) discuss how “It would seem logical that a form of family therapy would be the treatment choice” for children with RAD based on the description in the DSM IV TR; however,
“most of the current clinical writing takes an individualized approach in which the child is the primary target of intervention.” In many instances, a diagnosis of RAD is made off of a questionnaire called the Randolph Attachment Disorder Questionnaire (RADQ) (Randolph, 2001). The RADQ is one of the better known checklists and is used by attachment therapists and others, but critics consider it lacks specificity and is unvalidated. The checklist includes 93 behaviors. Many of these behaviors either overlap with other disorders, like Conduct Disorder and Oppositional Defiant Disorder, or are not related to attachment difficulties. Randolph is often cited by other Attachment Therapists around the country as being the foremost researcher in Attachment Therapy. Her RADQ, though invalidated by independently published research, is widely used in the Attachment Therapy (AT) community to diagnose and evaluate the condition called "attachment disorder", which is not found in the DSM-IV-TR. None of Randolph's research has been published in peer-reviewed psychology journals (Mercer, 2002).

AT has also been referred to as holding therapy, rage-reduction therapy, and Z-process therapy, among other terms (Maloney, 2003). Jean Mercer, a psychology professor at Richard Stockton College in New Jersey is an outspoken critic of holding therapy and other aspects of attachment therapy. AT is a broad term with no generally agreed-upon meaning. AT as applied in attachment disorders has involved one or more of the following techniques: Therapeutic Parenting, Holding Therapy and Rebirthing (Mercer, 2002).

Therapeutic Parenting could be viewed as the least physically intrusive of all of the techniques. For example, these “therapeutic parenting” techniques may be used either by parents in the child’s own home or by specially trained foster parents who care for
children while they are receiving other forms of AT. Thomas (2000) explains how parents are to achieve the position of “stronger and/or wiser” person by “commanding and demanding respect and by using eye contact to assure the child of the presence, love, and attentiveness” (p.85). One main component of this technique enforces child compliance with such practices as “strong sitting,” or “power sitting”. “Power sitting” is a tool used by some attachment therapists to teach children “self control”. Parents are told to choose a “think spot”, which should be a spot on the floor with a small washable, rubber-backed rug for children over four years of age. Correct body position includes legs and hands folded, back straight, head straight, no other body parts moving as well as no talking is permitted. Parents are recommended to face the children toward a blank wall. Power sitting is recommended to be 5 consecutive minutes in length with an additional 1 minute per age year of the child (Thomas, 2000). The child is to be given positive attention only when doing this properly and no privileges are to be allowed until the sitting is completed; this is to be done three times a day. The child is given the choice between the prescribed period of power sitting or 2 hours of “wimpy sitting,” for lack of compliance with the “power sitting rules” (Thomas, 2000, p.73). Other forms of parental control are seen as necessary for the child’s establishment of “self-control”. For example, children may not be allowed to speak until spoken to in the car. If they speak, they must be required to hold their hand over their mouths for 5 to 15 minutes. Withholding of food and completing heavy chores are other aspects of this technique. Mercer (2001) describes that of all the aspects of AT, therapeutic parenting seems to come closest to any accepted practice. She states that some aspects of therapeutic parenting seem to “resemble applied behavior analysis” (p. 8). However, she mentions that in AT, the main
objective is to strengthen the “authority of the therapeutic parent which makes many of 
the possible reinforcers non-contingent on the child’s behavior” (p. 8). Also, Mercer 
points out that any written materials describing the practice of therapeutic parenting fails 
to clarify how procedures such as power sitting are actually induced. There are many 
distinct differences between “therapeutic parenting” and applied behavior analysis (ABA). 
One distinction of ABA is that child behavior is observed and analyzed to determine a 
function, in which a treatment is designed based on that function. In ABA, the least 
restrictive procedure is always recommended and considered and procedures that have 
not been evaluated for effectiveness are not used in case they could cause potential 
psychological or physical harm.

The practice of holding therapy involves “restraint that is intended to stimulate the 
release of old anger and to ready the child for the formation of good relationships” 
(Mercer, 2001, p. 2). Although holding therapy is an important feature of AT, 
practitioners vary greatly in their opinions about details of the treatment. Delaney and 
Kunstal (1993) regard holding as a treatment of last resort and have cautioned 
practitioners to check on legal and insurance guidelines and never to threaten a child with 
abandonment or use of excessive provocation (Mercer, 2002).

The AT controversy has mostly centered on “rage reduction therapy”, more 
currently known as “holding therapy”. A mild form of holding therapy may just include 
a child being held by his/her parent while enforcing eye contact in an effort to improve 
the attachment. However, in some instances, this therapy may include verbal abuse, 
restraining, or procedures such as deep tissue massage, aversive tickling, “compression 
holding therapy”, and punishments related to food and water intake and enforced eye
contact. One or more adults sit on the floor or on a sofa restraining the child being treated. Practitioners base its use on the assumption that rage resulting from early mistreatment must be provoked and released in order for the child to form an emotional attachment (Mercer, 2001).

Mercer (2001) describes the most disturbing technique used by some attachment therapists called “rebirthing” from Crowder’s (2000) article. Crowder (2000) states the procedure involves wrapping a child tightly in blankets, covering them with pillows, and holding them down by several adults who push on the pillows in imitation of uterine contractions (Mercer, 2001). The child is to work to escape from the restraint and to be “reborn”. The claim is that this process will allow for a readiness to enter new positive relationships because the negative relationships from the past have been deleted. Mercer (2001) discusses how attachment therapists have been implicated in the deaths of at least four children (Crowder, 2000; Horn, 1997; Smith, 1996). The most publicized case occurred in April 2000. A child undergoing the rebirthing therapy at the Attachment Center at Evergreen was held tightly inside a blanket for more than 70 minutes as five adults pushed on her and encouraged her to be “reborn,” and told her to “go ahead and die”. She vomited and was asphyxiated (Crowder, 2000).

Available research on attachment therapies. Mercer (2001) explains that the available evidence regarding the efficacy of AT is weak because there are not any reported studies of the effect of AT on children using random assignment to groups. Much of the referenced evidence involves three quasi-experimental studies, a dissertation, and one journal article based on this dissertation (Mercer, 2002).
In a study conducted by Lester (1997), 12 families with adopted children received AT. The children experienced different levels of treatment, many with 3-hour sessions, daily for weeks. The parents completed two rating scales on four occasions (before the child’s initial assessment, at the time of the initial assessment, after the assessment but before therapy began, and at least 4 weeks after therapy began). Average scores were presented, but there were no statistical analyses. Lester reported that all scores improved over time, but that the greatest improvement occurred before therapy had begun. She noted that the parents might simply have felt better after talking to someone about their difficulties.

A study conducted by Becker-Weidman (2006), attempted to use the RADQ and a behavior checklist pre-post for 34 children. Becker-Weidman reported statistically significant improvements and attributed them to the treatment. In the absence of a comparison group, it is not possible to state that the treatment was effective.

The one published study conducted by Myeroff, Mertlich, and Gross (1999) conducted a two group, pre-post-design of convenience. Twenty-three families who had contacted the Attachment Center at Evergreen (ACE) for their adopted children were the participants in the study. The parents completed the Child Behavior Checklist (CBCL, Achenback & Rescorla, 2001; Achenback & Rescorla, 2000) before and after treatment. This instrument lists approximately 100 problem behaviors that children might display. These measures ask parents or caregivers to report on the frequency of specific problem behaviors displayed by their children on a three-point scale (0=never to 2=often). Normative data were derived from a large diverse population of both non-referred and clinic-referred children and their parents. The use of the CBCL’s two scales of
Internalizing and Externalizing behaviors are scored as a measure of the severity of children’s symptoms.

The treatment group was composed of 12 children and the untreated comparison group was composed of 11 children whose parents made contact with, but were unable to bring them to ACE. Therefore, this was not a controlled study, as there was not a random assignment of participants. The dependent variables were the scores on the CBCL on the dimensions of aggression and delinquency, and the independent variable was the implementation of a two week intensive treatment package which included: therapeutic holding, cognitive restructuring, psycho-dramatic reenactment, and inner child metaphor therapy. Both groups of parents completed the CBCL after their initial contact and again after a 4-week interval. For the treatment group, the two week “intensive therapy” occurred midway between the two reports. The referred child, parents, and treatment team consisting of one therapist and the treatment foster mother, were all present for 30 hours of therapy. Specifically, the 30 hours of therapy was broken down into three hours per day for 10 consecutive days. Each family entering treatment at Evergreen was assigned to a therapeutic parent who houses the child for the two weeks of treatment. This means that the interactions the parent and child have together are the three hours during the actual treatment time, weekends, and certain times during the two weeks when the parent and child have interactions for limited amounts of time. All therapists and therapeutic parents were trained systematically at the Attachment Center.

In this study, the therapeutic holding technique is described as being “designed to imitate the infant nurturing position on a couch. The child lies across the therapist’s lap with their head resting on a pillow. This allows for close proximity, eye contact, and
physical restriction” (Myeroff et al., 1999, p. 307). Psychodramatic reenactment involved
the treatment team using role-plays of important people in the child’s past allowing for a
gradual progression into the events of the past, and the ability to confront and express
what is needed leading the child to an interpersonal sense of mastery. This also allows
for “revisions of old self perceptions and fantasies about self and past significant figures”
(Myeroff et al., 1999, p. 308). Inner child metaphor is also utilized during these sessions
as the child is asked to visualize himself/herself in the past, and while being held, is asked
a series of questions about that early time and how those experiences and feelings relate
to his/her present relationships. In addition to these techniques, mother-child exercises
are repeated many times including holding, covering with blankets, and feeding with a
bottle. Sessions also include exploration of any birth father issues that may be present.
The adoptive father now holds the child, as psycho-dramatic reenactment is utilized to
provoke and resolve these father issues. The process of grief and mourning is explored in
relation to the many losses experienced by these children. This process allows for
cognitive restructuring through dialogue with the role–played birth parents.

Myeroff et al. (1999) reported significant differences between the two groups,
with the treatment group showing significant improvements on both the aggression and
delinquency subscales. Some threats to internal validity include that the parents of the
children paid thousands of dollars for their children to receive treatment and the
children’s problem behaviors and delinquency were measured only by parental reports.

None of the reported studies involved a randomized experimental design. All of
the studies on AT reported positive treatment results based on pre-post ratings, or quasi
experiments. Attachment was never defined in these studies, and there were no direct measures of problem behaviors.

Parent-Child interaction therapy

Parent-Child Interaction Therapy (PCIT) is a manualized treatment developed for children between the ages of 2 and 7 years with behavior problems (Hembree-Kigin & McNeil, 1995). PCIT is based on the 2-stage operant model developed by Hanf (1969). Eyberg (1988) modified the Hanf model by incorporating aspects of traditional play therapy. PCIT incorporates both traditional play therapy and behavioral techniques. Throughout the intervention, the therapist observes parent-child interactions from behind a one-way mirror. The parent often wears a bug-in-the-ear device, a small earphone that allows the therapist to coach and provide feedback on skills throughout the session. In the absence of this technology, the coaching may be provided in the home environment or clinic, with a therapist shadowing the parent and providing feedback discretely.

*Child directed interaction (CDI).* PCIT begins with a relationship enhancement phase, or Child Directed Interaction (CDI) phase. This phase of the treatment is based on attachment theory and designed to create more positive interactions between the parent and child and to teach parents to build better relationships with their children. This is accomplished in a variety of ways. First, the parent learns to implement new skills in the context of play. The parent is instructed to follow the child’s lead during play. Parents are taught to avoid questions, criticisms, and commands, in an effort to allow their child to lead during play time. Allowing the child to lead the play increases the likelihood that the child’s behavior will be appropriate, giving parents many opportunities to praise good behavior. During this phase, parents also are instructed in the use of differential
reinforcement. Parents provide enthusiastic attention using behavioral play therapy skills. These skills come together to create the acronym PRIDE (praise, reflection, imitation, description, enthusiasm). If the child becomes disruptive (e.g., playing roughly with the toys), parents are instructed to ignore the behavior. While ignoring, the parent physically turns away from the child such that there is no eye contact, physical contact, or verbal contact. Once the child returns to appropriate play, the parent is instructed to turn his or her attention back to the child enthusiastically. This phase lasts approximately 4-7 weeks or until the parent has reached the “mastery criteria” for the parenting skills (e.g., 10 labeled praises in 5 minutes).

Parent-directed interaction (PDI). Parent-Directed Interaction (PDI) is the next phase, during which parents are taught a safe and effective discipline procedure. During this phase, child compliance is targeted. Parents are taught three skills to manage problem behaviors: (1) how to give an effective instruction, (2) how to praise compliance to instructions, and (3) how to punish non-compliant behavior, using a systematic time-out procedure. Parents are coached to be consistent and remain calm during these interactions.

Available literature on sequence effect

Eisenstadt, et al. (1993) evaluated the effectiveness of Parent-Child Interaction Therapy (PCIT) for 24 mother-child dyads. Families received 14 weekly sessions of PCIT, with half receiving Child-Directed Interaction training first (CDI-First group) and half receiving Parent-Directed Interaction training first (PDI-First group). At midtreatment, the PDI training stage was more effective than the CDI stage for reducing non-compliance and disruptiveness. The groups were also compared at post-treatment to
examine the impact of stage sequence. The PDI-First group was more improved on parent report of conduct problems, and mothers were more satisfied with therapy. The two groups were combined to examine overall treatment outcome. Families moved from outside normal limits to within normal limits on compliance, conduct problems, activity level, and maternal stress, and showed improvement in internalizing problems and child self-esteem. Gains were maintained at 6-week follow-up.

Available literature on the maintenance effects of PCIT

Eyberg et al. (2001) examined 1- and 2-year long-term outcomes of PCIT treatment. Twenty families completed the treatment program and 13 were available for a follow-up evaluation. Along with other rating scales, the Dyadic Parent-Child Interaction Coding System (DPICS) (Eyberg, Nelson, Duke, & Boggs, 2005) was used in this study. The DPICS was designed to assess the quality of parent-child social interactions. It provided an observational measure of parent and child behaviors during three 5-minute standard situations that varied in the degree of parental control required. Adequate reliability, discriminative validity, and treatment sensitivity have been established in several studies (Eyberg & Robinson, 1982). Coders were two graduate students unaware of the study’s purpose or hypotheses that attained 80% agreement with a criterion training tape prior to coding the participants in the study. Child categories were clustered into summary variables labeled child verbal positive and child deviant behavior. Child verbal positive behavior consisted of a child’s laugh or self-praise, and child deviant behavior consisted of yell, whine, cry, smart talk, or destructive behavior. Additional child categories were examined separately, including alpha compliance (ratio of compliance to total commands that provide an opportunity for compliance) and
inappropriate physical behavior. Parent categories were clustered into summary variables labeled parent follow, parent lead, parent affection, and parent negative behavior. Parent follow consisted of descriptive and reflective statements. Parent lead consisted of questions or commands. Parent affection consisted of praise or positive touch. Parent negative behavior consisted of criticism or physical negative behavior.

An analysis of pretreatment demographic characteristics of those who participated in the follow-up assessment and those who did not participate revealed no significant differences. Both frequency of maladaptive behavior and related parental concerns were significantly lower than the pretreatment score at both the 1- and 2-year follow-up.

Hood and Eyberg (2003) examined the maintenance of PCIT results three to six years after treatment. Twenty-three of fifty parent-child dyads who had completed PCIT treatment and an initial assessment participated in the follow-up evaluation. An analysis of pretreatment demographic characteristics and Eyberg Child Behavior Inventory (ECBI) (Eyberg & Robinson, 1983) scores of those who participated in the follow-up assessment and those who did not participate revealed no significant differences. The ECBI is a 36-item scale that measures specific behavior problems exhibited by children ages 2-16. Compared to the CBCL, the ECBI lists more commonly observed child behavior problems, including arguing and fighting with siblings. Caregivers indicate the frequency of certain behaviors along a seven-point scale (1=never to 7=all the time) and whether they are considered to be problems (1=yes, 0=no). Scores are summed to obtain an Intensity score and a Problem score (Eyberg & Pincus, 1999; Eyberg & Robinson, 1983; Eyberg & Ross, 1978). ECBI scores at follow-up showed statistically significant differences when compared to pretreatment scores, although to a slightly lesser degree
than immediately following treatment. The authors concluded that “the children not only maintained their gains but also showed continuing behavioral gains with time. The mothers’ confidence in their ability to “control their child’s behavior was also maintained” (p. 426).

An important study by Boggs, Eyberg, Edwards, Rayfield, Jacobs, Bagner, and Hood (2004) compared completers of PCIT treatment versus study dropouts 1- to 3-years post-treatment. The authors concluded: “Results indicated consistently better long-term outcomes for those who completed treatment than for study dropouts” (p. 2). The study emphasized, “…without completing treatment, parents see little change in the very severe behavior problems . . . ” (p. 18). This study exemplifies how PCIT treatment is successful because it is carried out to a specific criterion level. There is a performance based evaluation of treatment progress.

*PCIT for foster parents and biological parents.* McNeil, Eyberg, Eisenstadt, Newcomb, & Funderburk (1991) evaluated generalization of treatment effects from home to school setting in ten 2-to 7-year-old children who were referred for treatment of severe conduct problem behaviors occurring both at home and in the classroom. Families received 14 weeks of PCIT. No direct classroom interventions were conducted. The treatment group displayed significantly greater improvements than two control groups on all measures of conduct problem behavior in the classroom. Results in the areas of hyperactivity/distractibility and social behavior were less supportive of generalization. Positive school generalization results contradict previous findings that children's behavior in the classroom either shows minimal improvement or worsens following parent training.
Timmer et al. (2005) conducted a study to examine the effectiveness of PCIT with maltreating parent-child dyads. This study used a pre-post, group design with 136 biological parent-child dyads in which 66.9% or 91 of the children had been maltreated. Of the 91 maltreated children, 64.8%, (59) of the parents had maltreated their children, and were considered to be at high risk of repeating the abuse. Children were between the ages of 2-8 years and had behavior problems. Parents were required to complete a number of rating scales prior to treatment and again during their last treatment session.

Parents completed a Child Abuse Potential Inventory (CAPI) (Milner, 1986), which is an inventory that includes an abuse potential scale and several validity scales. These scales are normed and validated by a multitude of studies. The CBCL and the ECBI were also used. The Parenting Stress Inventory (PSI) (Abidin, 1995) was also used to identify parent-child dyads that are experiencing stress and are at risk for developing dysfunctional parenting and child behavior problems. The PSI contains 120 items rated on a five-point scale (1=Strongly Disagree to 5=Strongly Agree).

The Symptom Checklist 90-R (Derogatis, 1977) is a 90-item self-report symptom inventory designed to assess current presence of psychological symptom patterns. Each item is a brief description of a psychological symptom and is rated on a five-point scale (0=no discomfort to 4=extreme discomfort). The SCL-90-R has nine symptom subscales; somatization, obsessive compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism. T-scores were calculated using the norms for adult non-patients.

Maltreatment history was obtained from therapists’ reports, social worker’s reports, and by research staff’s review of any available court records. Children were
classified as either having a suspected or documented history of maltreatment, or having no history of maltreatment. For the purposes of the study, children with suspected and documented histories of maltreatment were both classified as having a history of maltreatments. Results indicated that there was a decrease in child behavior problems, a decrease in parental stress, and a decrease in abuse risk from pre-to post-treatment for dyads with and without a history of maltreatment. The conclusions from the results may add to the body of research supporting PCIT as a promising intervention and as a means to aid both children and parents in high-risk families for maltreatment.

Timmer et al. (2005) discuss several limitations to their study. First, there was no random assignment of abusive parent-child dyads to a PCIT condition. There was no follow-up data to demonstrate the maintenance of treatment effects over time, but relied on pre- versus post-treatment comparisons as indicators of treatment effectiveness. Timmer et al. (2005) discuss how “recent research of PCIT has documented maintenance of reductions in child behavior problems after participation in PCIT for up to 6 years post-treatment” (Hood & Eyberg, 2003, p. 838). The PCIT paradigm is founded on the belief that by coaching parents to praise their children’s positive behaviors, ignoring their inappropriate behaviors, and teaching those skills, the children will behave well and parents will be happy with them. In other words, parents’ reports of improvements in children’s behavior are more a reflection of a shift in their own attitudes towards their children than a change in children’s behavior. Perhaps by shifting the parents’ behavior to focus on positive aspects of their children, there is a shift in attitudes about and perceptions of their children, and their own functioning could be an extension of their
own desire to present themselves in a favorable light in order to retain custody of their children or to feel more competent as parents.

There are a number of methodological limitations of the studies reviewed that should be considered when interpreting the findings. First, all of the dependent measures were based on parental reports. The possibility for bias always exists when relying solely on parental report. Parents in the treatment group, for example, may have been biased to report positive behavioral improvements because of expectancy effects (i.e., “placebo” effects) or a desire to please the therapists. Only subjective rating scales were used as methods to obtain baseline data of children’s behavior problems. Specific targeted behaviors were never defined. The parents involved in the study had invested time into the study and expressed that they felt it was an important study from the onset. This could be a potential threat to internal validity because the parents had invested time and energy into attending the sessions and could have become a variable that influenced their rating scores for post-tests. Additional behavioral observation data is needed to objectively measure the quantity and severity of behavior problems at both assessment periods.

The Present Study

Applying PCIT in a typical behavior analytic, multiple baseline design could be an effective design to show potential robust treatment effects and to rule out extraneous variables causing behavior to change. Future studies could include baseline data collection using direct measurement of behavior as well as including parental stress or other means of obtaining social validity measures.
It seems to be good practice to include measures such as the stress inventory, but not to solely use subjective questionnaires and rating scales as the only means of collecting data.

The purpose of this study will be to conduct a systematic replication of the CDI phase of PCIT, extending the research to the population of children diagnosed with RAD, in an attempt to increase positive interactions between children and parents and possibly decrease behavior problems.
Chapter 2 Method

Participants

Prior to the initiation of this research project, approval from the Institutional Review Board (IRB) for the Protection of Human Participants at the University of South Florida was obtained, as well as an additional approval from the Department of Children and Families, Office of Family Safety. The following criteria were used to select participants:

A flyer was sent out to various agencies which work with foster children and provide trainings to foster parents. Two foster parents independently contacted the principal investigator and the children involved met all of the criteria to participate in the study. During the consent process, the parents reviewed a consent form which explained the type of assessment and treatment which was part of the study, the time required for their participation, and conditions in place that ensured confidentiality. The parents were informed that all identifying information will remain confidential and that their responses will be used for research purposes only. Parents were also informed that they have the right to withdraw at any point. Parents were asked to sign a consent form for the child’s participation. In the presence of a parent or guardian, the principal investigator explained participation in the study to the child using words that were age appropriate and allowed the child to ask questions and receive answers. Only participants receiving parent permission were included in the study.
The participants involved in the study were two parent-child dyads. Both dyads included the foster mother and child (Natalie and Trevor; Carla and Jimmy). In both cases, the foster parents were in the final stages of permanently adopting the child participant and had the legal authority to sign the consent form. Trevor and Jimmy were aged 6.9 years, and 5 years, respectively. Both children displayed multiple behavior problems including, verbal and physical aggression, non-compliance, hyperactivity, and impulsivity. Information was taken from previous reports and from parent report.

Trevor had a history of neglect. Trevor’s history was reported to be significant with the diagnosis of Reactive Attachment Disorder (RAD), Inhibited Type, Attention Deficit/Hyperactivity Disorder (ADHD), Oppositional Defiant Disorder (ODD), Post Traumatic Stress Disorder (PTSD), and Major Depressive Disorder. Trevor was diagnosed by a licensed Psychiatrist. Trevor takes Ritalin and Focalin, medications which attempt to help with symptoms or behaviors associated with ADHD. (He was given the same medication and dosage during the baseline and treatment sessions.) Trevor was removed from his biological mother’s care at 18 months of age. The biological mother would reportedly leave him alone in a playpen, placed in a closet for extended periods of time, while she would leave the home to work. Trevor was placed in the care of his aunt and uncle until the age of 5. Due to behavioral difficulties, his aunt and uncle were unable to care for him further. Trevor was then placed in therapeutic foster care for two years. Natalie, who is the participant parent in the study, worked closely with the therapeutic foster mother in an effort to become the legally adoptive mother. During the course of the study, Natalie was in the final stages of permanently adopting Trevor. It was decided that the PCIT therapy would be the most beneficial for
the potential adoptive mother. Natalie is married and a mother of 3 biological daughters. She homeschooled all of her daughters and wished to do the same for Trevor. She expressed her frustration with Trevor’s behavior at times, but acknowledged that his behavior was much more intense and frequent in the school setting. Trevor has had a history of significant behavior problems at his school setting, where he was placed in a special classroom for Emotional Disturbed children. Trevor’s problem behaviors include: verbal and physical aggression toward others, property destruction, self-induced vomiting, self-injurious behavior, excessive tantrums, which include screaming, crying, and self-injury. These behavior problems had resulted in Trevor requiring time-out and physical restraint procedures.

Jimmy has a diagnosis of RAD, Inhibited Type, Oppositional Defiant Disorder, and Obsessive Compulsive Disorder. He has a formal diagnosis by a licensed therapist. He has never been prescribed medications for any of his behavioral problems. Jimmy also had a history of abuse and neglect. He was removed from his mother’s care at the age of 2. His biological mother was reportedly abusing “crack” cocaine and taking psychotropic medications during her pregnancy with Jimmy. Jimmy has been placed in numerous foster care placements as his problem behaviors were so intense and frequent, that individuals attempting to care for Jimmy were unable to properly help him. Jimmy was placed in the care of his adoptive mother three years ago. During the course of the present study, Jimmy was permanently placed in the care of Carla, the participant parent. Carla also legally adopted Jimmy’s younger brother and has three other foster children living in the home. Jimmy has a history of being verbally and physically aggressive
toward others, having intense temper tantrums, destroying property, and having night terrors.

Treatment sessions were conducted in each participant family’s homes. The living room was used for the sessions.

Instrumentation

All aspects of the implementation of PCIT were consistent with the PCIT Treatment Manual (Eyberg and Members of the Child Study Laboratory, 1999) unless otherwise specified. The PCIT Treatment Manual outlines specifically what goals should be achieved during each session. Each parent-child dyad participated in a 60 to 90 minute session, at least once per week. Treatment sessions lasted between 6 and 16 videotaped sessions (3 to 8 meetings). Initially, a Motorola Ultra light headset/walkie talkie was attempted to be used by both the coach and parent in order to communicate during training and experimental sessions. However, during the first treatment session with Carla and Jimmy, Jimmy became increasingly distracted by the headset/walkie; therefore, it was discontinued for the remainder of sessions and was never initiated with the other parent-child dyad. During treatment sessions, a partial interval recording was used to measure the dependent variables. This investigation used direct observation of operationally defined behaviors as the primary source of data collection.

Indirect Measures Using Rating Scales

Data from parent report measures were utilized to assess the behavior problems exhibited by the children.

*Eyberg child behavior inventory (ECBI).* The Eyberg Child Behavior Inventory (ECBI) was administered once per week. The ECBI (Eyberg & Pincus, 1999) is a
36-item parent rating scale of externalizing behavior in children between the ages of 2 and 16. The Intensity Scale measures the frequency of child problem behaviors on a 7-point scale from (1) never to (7) always. The Problem Scale measures the degree to which the child’s behaviors are problematic for the parent on a yes-no scale.

Social validity questionnaire. The Social Validity Questionnaire was administered post treatment. The mothers completed the questionnaire to determine the social significance of the goals, appropriateness of treatment, and the social relevance of the outcome. This measure was used to assure the relevance of this research for the participants. The parents completed a questionnaire consisting of 7 items using a 5-point Likert rating-scale.

The kinship center attachment questionnaire (KCAQ). The Kinship Center Attachment Questionnaire or KCAQ was administered post treatment. The KCAQ is a newly developed attachment measure for children younger than 6 years of age. It is designed to be completed by the caregiver. Kappenberg & Halpern (2006), report that it is different from other attachment measures. The KCAQ was designed to meet the need of foster and newly adopted children. Other attachment measures available assume that an attachment is already present. Those measures are used to describe the type of attachment (e.g., secure attachment, anxious-avoidant). The authors of the KCAQ claim that it is different because it is time efficient behaviorally based, standardized, normed, psychometrically sound and can track child behavior changes over time. Kappenberg & Halpern (2006) note that nonclinical sample have scores have a mean of 22 and a standard deviation of 11.4, whereas the clinical sample have scores with a mean of 31.8 and a standard deviation of 14.0. However, only about 17% of that standardization
sample were children diagnosed with RAD and there appears to be a range of disorders, diagnosed and not, represented by the children in the “attachment” sample. This appears to be a limitation in the standardization sampling.

Experimental Design

This study employed a multiple baseline design across participants. After stability was established in baseline, the intervention using the procedures of CDI were introduced sequentially across participants.

The single-case experimental design evaluated the treatment effects of the Child-Directed Interaction Phase of PCIT (independent variable) on parental behavior and attachment. The general requirements of a single-case experimental designs are: (a) repeated observations of performance over time; (b) behavior observations beginning for several sessions prior to the implementation of the intervention; (c) stability of performance (absence of a decrease or increase in behavior over time) prior to the implementation of the intervention; and (d) examination of changes in the stability level, or trend in a series of data points following the introduction of the intervention (Kazdin, 1982). This single-case experiment was designed to rule out factors other than the treatment variable as possible causes of changes in the dependent variable. The following techniques were used to achieve high internal validity in the single-case designs. First, steps were taken to assure reliable observations. For example, observers were trained, behaviors to be observed were operationally defined in the treatment manual, and periodic observer reliability checks were implemented (Borg & Gall, 1989). Single-case designs also require repeated and standardized measurements meant to control for internal validity. The use of repeated measurements provided a more reliable description
of how the participants’ behavior changed as a result of the treatment condition. The third threat to validity that was considered was the description of experimental conditions. The description of each experimental condition was precise, to promote replication within the experiment and for other researchers to replicate in the future. Thus, the descriptions of the baseline and treatment conditions were specified precisely to control for internal and external threats to validity. Finally, the baseline and treatment phases in this single-case design were stable in order to assess the effect of the treatment variable (Borg & Gall, 1989). For example, the baseline phase continues until the rate of the response appeared to be stable or until the responses did not increase or decrease over time.

Variables Defined

Independent variable. The independent variable included the Child Directed Interaction (CDI) phase of PCIT. This phase of the treatment is based on attachment theory and designed to create more positive interactions between the parent and child and to teach parents to build better relationships with their children. First, the parent is instructed to follow the child’s lead during play. Parents were taught to avoid questions, criticisms, and commands, in an effort to allow their child to lead during play time. Allowing the child to lead play increases the likelihood that the child’s behavior will be appropriate, giving parents many opportunities to praise good behavior. During this phase, parents also are instructed in the use of differential reinforcement. Parents provide enthusiastic attention using behavioral play therapy skills. These skills come together to create the acronym, PRIDE (praise, reflection, imitation, description, enthusiasm). If the child becomes disruptive (e.g., playing roughly with the toys), parents are instructed to
ignore the behavior. While ignoring, the parent physically turns away from the child such that there is no eye contact, physical contact, or verbal contact. Once the child returns to appropriate play, the parent is instructed to turn his or her attention back to the child enthusiastically. The therapeutic goal of CDI was for parents to reach mastery criteria of 10 or more labeled praises, behavioral descriptions and reflective statements, while having less than 3 questions, criticisms and commands during a 5 minute observation.

**Dependent variables.** The dependent variables included parent behaviors to increase, such as labeled praises, reflections, and behavioral descriptions and behaviors to decrease, including: questions, criticisms and commands. These behaviors are defined as outlined in the DPICS code (Eyberg et al., 2005). The DPICS was designed to assess the quality of parent-child social interactions. It provided an observational measure of parent and child behaviors during three 5-minute standard situations that varied in the degree of parental control required. Adequate reliability, discriminative validity, and treatment sensitivity have been established in several studies (Eyberg & Robinson, 1982).

In the present study, the parental behaviors targeted to increase and decrease include:

- **Labeled praise** - any specific verbalization that expresses a favorable judgment on an activity, product, or attribute of the child (That is a terrific house you made; You have a beautiful smile);

- **Behavior Descriptions** - a declarative sentence or phrase that gives an account of the objects or people in the situation or the activity occurring during the interaction (for example, You are building a pickup truck; You are sitting quietly);
• **Reflections** - a declarative phrase or statement that immediately repeats the child’s verbalization. The reflection may be exactly the same words the child said, may contain synonymous words, or may contain some elaboration on the child’s statement, but the basic content must be the same as the child’s message (for example, CHILD: “I made a big square”. PARENT: “You made a big square inside this circle”)

• **Questions** - a descriptive or reflective comment expressed in question form. Some questions are differentiated from statements by voice inflection; (That’s the baby?).

• **Critical Statements/Criticisms**: a verbalization that finds fault with the activities, products, or attributes of the child (You are being naughty; That is a sloppy picture)

• **Commands: A direction to the child**

  • **Indirect command**: An order, demand, or direction for a behavioral response that is implied, nonspecific, or stated in question form (e.g., Put it here, OK?; Johnny!; Lets take out the red blocks).

  • **Direct command**: A clearly stated order, demand, or direction in declarative form. The statement must be sufficiently specific as to indicate the behavior that is expected from the child (e.g., Put your hands in your lap; Please put that block here).

Baseline data will establish behavior frequency and continued data collection will assess effectiveness of the treatment condition.
Procedures

The principal investigator served as the therapist and was a graduate student in Applied Behavior Analysis and a Certified assistant Behavior Analyst, who was also experienced in outpatient work with children and families. The principal investigator was supervised by a licensed clinical psychologist and University of South Florida (USF) professor. The USF professor had extensive knowledge and training in implementing PCIT procedures. The CDI skills were taught to the principal investigator by the professor and assistance was given by practicing the skills and providing feedback. Videotaped practice sessions were conducted with the principle investigator and a 4 year old child. The principle investigator reached mastery criteria of the CDI skills prior to the beginning of the study. The initial sessions with the participant dyads lasted approximately 60-90 minutes, while treatment sessions lasted between 90-120 minutes. Baseline lasted about nine to 11 sessions. CDI was initially taught to parents during one session. The overall effectiveness of the CDI therapy was evaluated by repeated measure behavior observations, comparing Eyberg Child Behavior Inventory Scores, and social validity scores.

**Baseline sessions.** Prior to collecting baseline data, a pre-treatment assessment was conducted. The participants were introduced to the principal investigator, research procedures were explained, and consent was obtained. Following the informed consent process, the principal investigator conducted an interview with the parent and administered the ECBI.

During baseline, the intervention was not implemented. Parents were asked to bring Legos, Lincoln Logs, or Crayons and Paper to the sessions in 3 separate bins. The
therapist asked the parents to play with their child as they usually would. No other instructions were given. These were 5 minute videotaped sessions. No feedback was provided following the 5 minute session. After one 5 minute observation of the parent-child dyad, the ECBI was administered, and then the parent and child were asked to play for another 5 minute session. Two observations were videotaped per meeting. The baseline phase lasted 8-10 sessions. It is recommended that a stable baseline must be present so that any behavior change noted during the introduction of the intervention can be attributed to the independent variable (Kazdin, 1982).

*Treatment session.* Following a stable baseline, the introduction of PCIT was given to the parents during one teaching session. Procedures were implemented in the manner specified by the PCIT manual (Eyberg et al., 1999). The manual (see Appendix F) specifies procedures as follows: The goal of the CDI sessions is to teach parents the kinds of skills that play therapists use with children to build a good relationship with them and help them feel safe and calm. It also teaches parents how to communicate with preschoolers with limited attention spans. It teaches ways to teach your child without placing too many demands on the child, and results in a secure, warm relationship between parents and child, which often gets strained with oppositional children. The basic rule of CDI is to follow the child’s lead. Parents are asked to find 5 minutes of uninterrupted time every day in which CDI sessions can take place as a special therapeutic time. Parents are taught that there are numerous other times throughout the day when it is necessary to direct the child’s activities; therefore, this 5 minute play time should be a special time for both the parent and child. All toys will be removed from the specified playroom or play area except for three specific toys which will be used during
treatment. Some suggested toys for the CDI sessions include: building blocks, legos, Lincoln logs, crayons and paper, etc. Some toys to avoid during CDI include ones that encourage rough play, such as bats, balls, boxing gloves, punching bags; toys that lead to aggressive play, such as toy guns, toy swords, toy cowboys and Indians, super-hero figures; ones that could get out of hand and require limit setting, like paints, markers, bubbles, scissors, play dough, hammers; toys that have pre-set rules, such as board games, card games; toys that discourage conversation, like books and video games; and ones that lead to parent or child imagining that they are someone else, like puppets or costumes.

The first rule to learn during the CDI session is to avoid commands. Commands try to direct the play by suggesting what the child should do. There are two kinds of commands: direct commands (“Sit down.”) and indirect commands (“Would you like to sit down?”). Commands take over the lead of the play. If the child does not obey, the play could stop being fun. CDI is a time when the child is supposed to learn that it is fun to get along and play together nicely. The second rule parents learn is to avoid questions. A question asks for an answer from the child. There are different kinds of questions: some questions ask for information (who, what, where, when, how); some are unintentional questions (voice goes up at the end of a sentence); question tags; questions that are really hidden commands (“Would you like to clean up?”); questions that take over the conversation; questions that sometimes suggest disapproval; and questions that often suggest that you are not really listening to your child. The third rule of CDI is to avoid criticism. Criticism is a negative or contradictory statement about the child or his/her actions, such as “You are not nice” or “That does not go that way.” Criticism tells
the child what NOT to do (“Stop that, “Don’t do that!”) Criticism creates a negative interaction.

Instead, parents are taught the skills which form the acronym “PRIDE” (Praise, Reflect, Imitate, Describe, and Enthusiasm). Parents first learn to praise their child’s appropriate behavior. There are two kinds of praise. Labeled praise is specific praise, such as “You choose such pretty colors!” and “You are being so careful with that pen!” Labeled praise is more effective because it lets children know exactly what you like. Praise increases the behavior that it follows, and it makes the interaction more pleasant for both the child and parent. Next, parents are taught to reflect appropriate talk. Reflection is repeating or paraphrasing what your child says: “Yes, that is a blue crayon.” Reflection allows the child to lead the conversation. It shows the child that you are really listening, and it actually helps parents learn to listen. It shows children that their parents accept and/or understand what they are saying. Reflection also improves and increases child’s speech and language. Parents are then taught imitation. Imitation means doing the same thing that the child is doing, such as drawing a tree if the child is drawing a tree. This skill helps parents keep their attention focused on what the child is doing. Imitation helps parents to play at the child’s developmental level. This allows the child to lead the play, making it fun for the child and showing parental approval of the child’s activity. Describing appropriate behavior is taught by teaching parents to state exactly what the child is doing. For example, “You are drawing a sun”. Descriptions seem as though the parent is a sports announcer or providing a running commentary of the child’s activities. This shows the child that you are interested and paying attention to him or her and shows them that the parent approves of their behavior. Descriptions model speech and teach
vocabulary and concepts. They also hold the child’s attention to the specific task and teach him/her how to hold their attention to a task. Parents are also taught to be enthusiastic! Using enthusiasm shows the child that the parent is enjoying the time that they are spending with their child and increases the positive interaction. Parents are taught to let their voice show excitement about the child’s appropriate behavior, such as. “You are being SO nice to share with me!”

If children engage in inappropriate behavior during a CDI session, parents are taught to ignore. Ignoring inappropriate behavior is the correct approach if the behaviors (yelling, whining, crying) are attention-seeking behaviors. Parents are taught that any attention, either positive or negative can increase attention-seeking behaviors. Avoiding any verbal or nonverbal reactions to inappropriate behaviors must be continued until the behavior stops. Parents are taught to ignore the inappropriate behavior until the child is doing something appropriate. The child should be praised immediately for appropriate behavior, which teaches the child the difference between responses to good and bad behavior. Parents are informed of the process of extinction and the extinction burst, in which ignored behavior may get worse before it gets better and consistent ignoring eventually decreases many behaviors when combined with attention for appropriate behaviors.

Parents are also taught that if a child engages in aggressive or destructive behaviors, these behaviors can not be ignored. CDI sessions should be discontinued. Stopping the play teaches the child that good behavior is required during special time and shows the child that limits are being set. The child will be told, “Special time is stopping
because you hit me. Maybe next time you will be able to play nicely during special time.” If possible, CDI can be attempted again later in the day.

The principal investigator coached the parents in the CDI skills while they played with their child. Parents continue in the CDI phase of treatment until they achieve pre-set skill levels indicating mastery of the CDI. During the 5-minute coding interval at the beginning of the session, parents must give 10 behavioral descriptions, 10 reflective statements, and 10 labeled praises, as well as less than 3 questions, commands, or criticisms. Parents must also ignore non-harmful inappropriate behavior.

Interobserver Reliability

Inter-observer agreement of the observation procedures were collected for at least 33% of the sessions distributed across experimental conditions. A video camera was set up in a corner of the room during all training and treatment sessions. The principal investigator served as the therapist and data collector during the sessions, in order to provide immediate feedback to the participants. Video tapes were reviewed by the principal investigator and an independent observer scoring the experimental sessions. Inter-observer agreement was calculated by dividing the number of agreement on behaviors by intervals, by the number of agreements on behaviors by intervals plus disagreement intervals, and multiplying by 100. If there was a discrepancy in the data from the direct observation and the video tapes, data displayed on the final graphs reflect information from the video tapes.
Chapter 3 Results

Efficacy of PCIT’s Child Directed Interaction Phase was evaluated in this study. Baseline periods consisted of 8-10 videotaped sessions prior to implementation of the treatment phase, which lasted 8-15 videotaped sessions. Two 5-minute videotaped observations were conducted once per week. Data gathered from direct observation in the home and parental ratings of their children on standardized measures are presented below. The two parent-child dyads who participated in the study reached the mastery criteria.

CDI Skills

*Parent Behavior to Increase.* Figure 1 represents a multiple baseline design of participants across baseline and treatment conditions. Figures 2, 3 and 4 represent a multiple baseline for each individual behavior (labeled praises, reflective statements and behavioral descriptions).

Carla demonstrated a stable baseline condition. She did not use labeled praises, behavioral descriptions or reflective statements regularly during play with Jimmy. She did use each of the behaviors on one occasion out of the 8 baseline sessions. Following the CDI teaching session, Carla did not show an immediate increase in labeled praises or behavioral descriptions; however, she did increase the reflective statements. Carla reached criteria of having 10 or more labeled praises within the third treatment observation. Mastery of reflective statements and behavioral descriptions was reached by
the 6th and 7th and treatment observations (Sessions 14 and 15), however, all three CDI increase skills did not remain at the mastery level at the same time until session 24.

Natalie demonstrated a stable baseline condition and did not have knowledge of the CDI skills or use them all regularly during play with Trevor. She did use labeled praises on occasion (up to 4 per session), 0 behavioral descriptions, and one reflective statement in a session. Following the first treatment teaching session, Natalie’s data reflect an immediate increasing upward trend to well over mastery criteria in labeled praises and behavioral descriptions. Within the second treatment session, Natalie reached beyond mastery criteria of reflective statements.
Figure 1. Multiple baseline across participants for CDI increase skills.
Figure 2. Multiple baseline across participants for labeled praises.
Figure 3. Multiple baseline across participants for reflective statements.
Figure 4. Multiple baseline across participants for behavioral descriptions.
**Parent Behavior to Decrease.** Figure 5 represents a multiple baseline design across behaviors to decrease (questions, criticisms and commands). Carla’s baseline data indicate a high frequency of questions, ranging from 16-28 per 5-minute observation, a moderate frequency of commands, ranging from 2-19, and a low frequency of criticisms. Following the first treatment session, Carla demonstrated a reduction in all behaviors targeted to decrease. Questions remained above criterion level for three sessions, but remained at a level trend of mastery level by the third teaching session (session 14), and throughout the remainder of the sessions.

Natalie’s baseline data reflected a high frequency of questions, ranging from 18-34 in a 5 minute observation, a moderate range of commands, ranging from 2-15, and a 0 to low frequency of criticisms. During baseline, the data reflect a slightly decreasing trend in questions. Treatment was not implemented until stability was established in sessions 8, 9, and 10. Following the implementation of the first CDI teaching session, Natalie immediately reached mastery criteria for questions, criticisms and commands. Session 13 reflects a slight increase in questions, however, Natalie displayed a reduction in all behaviors targeted to decrease throughout the remainder of the sessions.
Figure 5. Multiple baseline data for parent CDI skills to decrease.
Eyberg Child Behavior Inventory (ECBI)

Figure 6 displays the ECBI Intensity Graph for both Jimmy and Trevor. Both parents rated the children’s behavior as being in the clinical range (132 or above) pre-treatment, and there does not seem to be a significant change in the total intensity scores following treatment. Figure 7 displays the ECBI Problem Graph for both Jimmy and Trevor. There is not a significant change in trend for Trevor’s problem score. However, Jimmy’s problem score totals represent a decreasing trend and were not in the clinical range post treatment.

Figure 6. ECBI total intensity scores for Jimmy and Trevor.
Social Validity

Table 1 displays the results of the post treatment parental ratings for their overall satisfaction with the treatment goals and outcomes. The social validation data showed that the parents were satisfied with the goals, procedures and outcomes of the treatment program.

Figure 7. ECBI total problem scores for Jimmy and Trevor.
Table 1

*Parental Ratings of Overall Satisfaction with Treatment Goals, Procedures and Outcomes*

<table>
<thead>
<tr>
<th>Questions</th>
<th>Natalie</th>
<th>Carla</th>
</tr>
</thead>
<tbody>
<tr>
<td>To what extent are you satisfied with the improvement of your child’s behavior?</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>To what extent are you satisfied with the improvement of your parenting skills?</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>How satisfied are you with the changes in your parent-child relationship following PCIT?</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>To what extent do you agree you and child have a stronger “attachment” as a result of PCIT?</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Overall, how has the quality of your child’s interactions changed a result of PCIT?</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Overall, how has the quality of your interaction skills changed a result of PCIT?</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>To what extent do you believe the study was important and meaningful?</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

*Note.* Ratings were obtained using a 5-point Likert type rating scale ranging from “strongly disagree = 1” to “strongly agree = 5”.

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Kinship Center Attachment Questionnaire (KCAQ)

The Kinship Center Attachment Questionnaire (KCAQ) was administered post treatment. Jimmy and Trevor’s total scores on the KCAQ were 57 and 50. The nonclinical sample have scores with a mean of 22 and a standard deviation of 11.4, whereas the clinical sample have scores with a mean of 31.8 and a standard deviation of 14.0. Both participants scored more than one deviation above the mean for assessments of a sample of children identified in their clinical sample. Both Jimmy and Trevor scored in the range of having attachment difficulties according to the KCAQ.
Chapter 4 Discussion

The purpose of this study was to increase our knowledge about the effective treatments for children diagnosed with Reactive Attachment Disorder. Thus, the research examined the CDI portion of Parent Child Interaction Therapy in an effort to teach parents appropriate skills to improve attachment with these children.

A multiple-baseline design across participants was used to demonstrate the effects and of the treatment in an experimentally controlled manner. The controlled effects were determined by systematically introducing the intervention at different points of time to different participants, and showing the changes in behavior demonstrated after the intervention and not at prior times.

During the early treatment sessions, both parents commented that they found it difficult to say anything because they were focusing so much on what they should not say. The therapist explained that this is when they should practice the behavioral descriptions. Carla seemed to have problems with the reflective statements and behavioral descriptions. Carla tended to interpret what Jimmy was doing while she gave behavioral descriptions. For example, if Jimmy was drawing a circle, Carla would state, “Jimmy, you are drawing a sun”. Jimmy would become upset and state, “No I am not drawing a sun”. The therapist suggested that Carla refrain from interpreting anything, and to simply state the behavior. For example, “Jimmy, you are drawing a circle,” or “You are using a red crayon”. For Natalie, some of the interpretation during the behavioral descriptions
allowed more conversation from Trevor. During some sessions, Trevor would remain very quiet, so Natalie found it difficult to have any comments to reflect. The data of Carla’s reflective statements and behavioral descriptions indicate that these were more difficult skills for her to master and the frequency varied from session to session. Both skills increased over time.

Some individual differences between the mother participants exemplified some issues in teaching the CDI skills. Both parents had a high rate of questions and commands in baseline. Natalie’s initial treatment data reflect an extremely high frequency of behavioral descriptions. This excessively high level of behavioral descriptions seemed to make her interactions “feel” much less genuine. She seemed to forget to actually “play” with Trevor and solely focused on the skill. Natalie later stated that she thought that she was supposed to comment about every behavior in which the child engaged. The researcher provided feedback to Natalie to decrease the number of behavioral descriptions and to still “have fun” with Trevor. Natalie was immediately receptive to the feedback and reduced the number of behavioral descriptions, which resulted in a much more genuine interaction style.

There were a couple of instances in between taping sessions when Jimmy would engage in whining, screaming, non-compliance, and low intensity physical aggression. These behaviors typically occurred after being denied access to a preferred food item or activity. During the actual videotaped sessions, problem behaviors did not occur.

Carla’s behavior was a bit more resistant to change. She was receptive to the teaching sessions and obtaining feedback; however, on many occasions, she seemed to have difficulty focusing on specific skills as suggested by the therapist. For example,
when the therapist would suggest “Just practice giving as many behavioral descriptions as possible, within the next 5 minutes”, Carla would not necessarily practice the skill for the entirety of the session.

Another issue which seemed to affect Carla reaching mastery criteria involved the homework requirement and the number of sessions per week. At the initial teach session, parents were told to practice their CDI skills (homework) with the child, 5 minutes per day. The homework was not always submitted or discussed the following session, as suggested in the treatment manual. It is believed that consistently practicing the CDI skills on a daily basis would have allowed the participants to reach criteria in fewer sessions. During session 21, Carla was reminded to complete her homework for the upcoming week. An additional session with Carla was held (session 22). This was the only time during treatment in which Carla had two sessions within a week. This is the week when she reached her mastery criteria. This data suggest that the more consistent the homework is completed and the more frequent the treatment sessions occur, the faster the criteria will be met.

Both parents’ data suggest that there was quite a bit of variability in learning the CDI skills. Being able to meet criteria for all skills at the same time seemed to be difficult for both parents. The variability in the data suggests that the parents would focus on learning one skill at a time or would only be able to increase one skill at a time.

An informal observation occurred with both parents. On occasion, following an incident or anecdote of the child’s inappropriate behavior, both parents would seem to blame the behavior on the child’s diagnosis of RAD, when in fact other explanations were possible. For example, Natalie referenced that when picking up Trevor from school,
he would engage in constant “chatter”. She referred to this as a problem and as a symptom of his RAD. Her response to this constant “chatter” was a request for him to decrease his questions, talking, etc. during the car ride home. It is hypothesized that parents of children who are diagnosed with RAD often attribute many behaviors, even age appropriate or typical behaviors on the diagnosis of RAD. It is possible that Trevor felt the need to interact or enjoys interaction with Natalie. It seems detrimental to punish attempts for interactions, based on the assumption that there is a negative intention. Some treatment options available for this population seem to overgeneralize behaviors exhibited by the child diagnosed with RAD as being manipulative or having ill intentions. This path only seems to further punish any attempts exhibited by the child for social interaction.

If the assumption of reasonable clinical sample in the standardization of KCAQ is accepted for the research, the two participants scored more than one deviation above the mean for assessments of a sample of children identified in their clinical sample. This means that the CDI intervention has not shown an effect on the KCAQ measure of attachment. If the present research had completed a pre-test assessment, there may have been an improvement on this attachment measure with this intervention. It is also possible that the intervention was too brief to show an effect or that other therapeutic interventions are needed in addition to have a cumulative effect, such as the PDI component of PCIT. These are relevant issues for future research.

A notable change in the children’s behavior toward the researcher became apparent over the course of the research sessions. Initially, both children did not initiate interaction with the researcher and would only interact minimally when prompted by the
parent, with little to no eye contact provided. The researcher did not initiate many interactions with the children during baseline. However, during the treatment sessions, the researcher increased the initiation of interactions with the children. Positive praise was provided to the children anytime appropriate behavior was displayed (outside of the 5 minute videotaped sessions) during the remainder of the sessions. During the course of the treatment sessions, both children began to independently initiate interaction with the researcher. For example, Jimmy sat next to the researcher on the couch on a couple of instances and asked her to read a book. Trevor would independently attempt to help the researcher with her video camera, and attempt to provide food items. Another interesting observation occurred during the interactions with Jimmy. During a break in a session, Jimmy and the researcher colored together. When Jimmy grabbed the crayon out of the researcher’s hand, the researcher prompted him to ask appropriately when he wanted something. He was prompted to ask nicely, and he immediately complied. It is noteworthy that Jimmy would follow a command of the researcher after a short time of interaction. At the conclusion of the study, for the first time, Jimmy provided the researcher with a warm, genuine hug. It is hypothesized that this informal observation may provide some meaningful information on how individuals must attempt to interact with children diagnosed with RAD as well as potential treatment implications. In this particular scenario, the researcher slowly began to interact with the children. In following with the criteria of CDI, no commands, questions or criticisms were provided during the initial sessions. It seemed as though enough time was given for the children to “trust” the researcher or to be able to predict that they were a safe person to be around. In addition, positive interactions provided a means for additional interactions. By the
conclusion of the study, the children and the researcher were “friends”. The researcher was also able to provide Jimmy with a direct command and compliance was given.

As mentioned above, during the treatment sessions, the researcher increased the initiation of interactions with the children. The researcher also began to model or demonstrate an appropriate interaction style with the parents by using positive praise to the children anytime appropriate behavior was displayed (outside of the 5 minute videotaped sessions). For example, when Trevor would offer assistance with the researcher’s video camera, the researcher would provide a big labeled praise for “being so helpful”. Trevor’s helpful behavior seemed to increase immediately. The researcher pointed out these examples to Natalie and re-iterated the power of praising and attending to behavior that she wanted to see increase in the future. This seemed to be an effective training component.

The social validation data showed that the parents were satisfied with the goals, procedures, and outcomes of the treatment program. Although Natalie was the most receptive in learning the new skills, she scored her treatment satisfaction lower than Carla. It is believed that this is because Natalie seemed to have a higher expectation for Trevor’s behavior. Even though she was satisfied with the treatment procedures, Trevor still displayed some problem behaviors. It is possible that although she expressed appreciation for the treatment and felt it was beneficial, Trevor’s behaviors of concern did not reduce to a level that was acceptable to Natalie. Both parents seemed to be accepting of their child’s behaviors differently.

The results of the parent behaviors indicate that there was experimental control. The intervention was presented once baseline was stable for each of the participants.
Limitations and Recommendations for Future Research

A number of limitations became evident over the course of this study. Some limitations were a function of the number of sessions that occurred each week, the duration of the sessions, and whether or not the homework assignment was completed daily. Sessions only occurred once per week. Having more frequent sessions would allow the participants to have more training sessions, thus may have had a larger or quicker effect on the targeted behaviors of interest. Future research should focus on increasing the number of treatment sessions per week and reinforcing the importance of the parent homework assignment. It is believed that consistently practicing the CDI skills on a daily basis would have allowed the participants to reach criteria in fewer sessions.

Since the bug in the ear device was not used, the researcher provided feedback to the parents in the presence of the children as they played. There was no privacy in communications between the therapist and the parents during the sessions. This may be considered a limitation because the feedback from the researcher could have altered the children’s behavior.

The researcher served as the PCIT therapist. Although the researcher did meet the mastery criteria and was assisted by an experienced clinical psychologist and PCIT therapist, the researcher was not formally trained in PCIT. The results indicated however, that the researcher was able to coach the participants to criterion level in the standard length of time. This may have been true because the researcher was a Certified assistant Behavior Analyst and has had over 6 years of experience working with children and families. The researcher conducted the treatment and coaching sessions and scored the videotapes. It would have been beneficial to have an assistant present during all baseline
and treatment sessions in order to help videotape and/or take data. Future replication studies should assess whether the researcher has adequate experience to serve as a coach or therapist for PCIT if formal training is not an option.

Another limitation includes sampling issues. The present sample was a sample in which the participants were not randomly selected but were identified as individuals who “fit” the research and who contacted the researcher independently. The participants in the research were those with high levels of parent involvement and who were interested in the study and believed from the onset that it was going to be beneficial to them and their child. They were actively seeking out additional help for the children.

This study was conducted with two child participants who were both diagnosed with Reactive Attachment Disorder-Inhibited Type. Additional studies with both Inhibited Type and Disinhibited Type, Reactive Attachment Disorder would be beneficial to see if there is a difference.

Replication of these results with other families would be beneficial. Further research should consider implementing treatment in more than one setting and with other individuals to increase the generalizability of the results. For example, both of the children included in the study also displayed problem behaviors within the school environment. Implementing treatment with their teachers, with whom they had problematic interactions, would be beneficial at improving the teacher-child relationship.

It would also be beneficial to see whether both phases of PCIT (CDI and Parent-Directed Interaction (PDI)) would be effective at improving parent-child interactions as well as reducing problem behaviors in children diagnosed with Reactive Attachment Disorder. However, based on the results of this study and the informal observations noted,
the PDI portion of PCIT may not be a suitable treatment option for children diagnosed with RAD. Since PDI utilizes a time-out procedure, there is potential for parents to have to use physical guidance procedures to follow through on the recommended procedures. These procedures may not be appropriate for children who have experienced abuse and/or neglect. More research in this area would be valuable.

Further research may also investigate whether these treatment effects are maintained over time. Follow up or “booster” sessions one, three, and six months post treatment would be beneficial to examine the long-term effects of the trainings on the parent behavior.

Future research should also look at treating problem behaviors in a typical behavior analytic fashion, such as conducting a behavioral assessment to determine the functions of the problem behaviors and design and implement interventions accordingly.

Informal observations by the researcher may have provided some meaningful treatment implications. For example, it is possible that punitive techniques including physical restraint procedures should not be used with this population. Parental reports indicated that these techniques did not improve Trevor’s behavior either in the school or home setting. On the contrary, when Trevor was no longer attending school, his behavior improved. A consideration could be made that if children diagnosed with Reactive Attachment Disorder have experienced abuse and/or neglect in their histories, which is true in most cases, treatments for their behavior problems should not involve punitive measures such as physical restraint procedures. It is possible that these types of procedures may further traumatize the child and make them less likely to interact appropriately with individuals who utilize those procedures. The informal observation
exemplified that the researcher was able to build a rapport with the children by simply allowing them time to feel comfortable and safe without initially placing demands on them. This observation further exemplifies that treatment options targeted for this population should always emphasize having safe, healthy relationships at its core.

Conclusions

The application of PCIT effectively increased appropriate interactions among parents and their children. Following treatment, both Jimmy and Trevor scored in the range of having attachment difficulties according to the KCAQ. It is also possible that the intervention was too brief to show a long lasting effect or that other therapeutic interventions are needed in addition to have a cumulative effect, such as basic behavioral techniques or functional assessment. CDI seems to be an effective initial treatment component for any problem associated with “attachment”. Considering the potentially dangerous treatments that are available for families of children diagnosed with RAD, promising findings in this study could indicate that PCIT could be part of a treatment package designed for these children. PCIT is a safe, empirically based intervention that may be an effective treatment component in helping children with RAD.
References


Appendices
Appendix A: Direct Observation Form: Parent CDI Skills

Parent CDI Data Sheet

Date: ____________________
Individual observed: ____________________
(parent’s name)
Observer: ____________________

30 Second Intervals

<table>
<thead>
<tr>
<th>Skills</th>
<th>30sec</th>
<th>1min</th>
<th>1.30</th>
<th>2.00</th>
<th>2.30</th>
<th>3.00</th>
<th>3.30</th>
<th>4.00</th>
<th>4.30</th>
<th>5.00</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavior Descriptions</td>
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<td>Labeled Praise</td>
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<td>Unlabeled Praise</td>
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<td>Positive Physical Touch</td>
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<td>Mistakes</td>
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<td>Questions</td>
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<td>Direct Command</td>
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<tr>
<td>Indirect Command</td>
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<tr>
<td>Criticism</td>
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<tr>
<td>Negative Physical Touch</td>
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</table>
Appendix B: Behavioral Definitions

- **Behavior Descriptions** - a declarative sentence or phrase that gives an account of the objects or people in the situation or the activity occurring during the interaction (for example, You are building a pickup truck; You are sitting quietly)

- **Reflections** - a declarative phrase or statement that immediately repeats the child’s verbalization. The reflection may be exactly the same words the child said, may contain synonymous words, or may contain some elaboration on the child’s statement, but the basic content must be the same as the child’s message (for example, CHILD: “I made a big square”. PARENT: “You made a big square inside this circle”)

- **Labeled praise** - any specific verbalization that expresses a favorable judgment on an activity, product, or attribute of the child (That is a terrific house you made; You have a beautiful smile)

- **Unlabeled praise** - a nonspecific verbalization that expresses a favorable judgment on an activity, product or attribute of the child (Great; Nice; Good work; Perfect!)

- **Positive physical touch** - anytime the parent puts their arm around the child, gives a hug or kiss, puts hand on child’s leg, has teddy bear kiss child’s cheek or otherwise touches the child in a manner that is not a negative physical touch

- **Questions** - a descriptive or reflective comment expressed in question form. Some questions are differentiated from statements by voice inflection;

- **Direct Command** - declarative statements that contain an order or direction for a vocal or motor behavior to be performed and indicate that the child is to perform this behavior

- **Indirect command** - an order, demand, or direction for a behavioral response that is implied, nonspecific, or stated in question form (put it here, OK.; Johnny!).

- **Critical Statement** - a verbalization that finds fault with the activities, products, or attributes of the child (You are being naughty; That is a sloppy picture)

- **Negative physical touch** - any physical touch which is intended to be directive, antagonistic, aversive, hurtful, or restrictive of the child’s activity
## SOCIAL VALIDITY QUESTIONNAIRE

To what extent are you satisfied with the improvement of your child’s behavior?

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very dissatisfied</td>
<td>Somewhat dissatisfied</td>
<td>Neutral</td>
<td>Somewhat satisfied</td>
<td>Very satisfied</td>
</tr>
</tbody>
</table>

To what extent are you satisfied with the improvement of your parenting skills?

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very dissatisfied</td>
<td>Somewhat dissatisfied</td>
<td>Neutral</td>
<td>Somewhat satisfied</td>
<td>Very satisfied</td>
</tr>
</tbody>
</table>

How satisfied are you with the changes in your parent-child relationship following PCIT?

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very dissatisfied</td>
<td>Somewhat dissatisfied</td>
<td>Neutral</td>
<td>Somewhat satisfied</td>
<td>Very satisfied</td>
</tr>
</tbody>
</table>

To what extent do you agree you and child have a stronger “attachment” as a result of PCIT?

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completely disagree</td>
<td>Somewhat agree</td>
<td>Neutral</td>
<td>Somewhat agree</td>
<td>Completely agree</td>
</tr>
</tbody>
</table>

Overall, how has the quality of your child’s interactions changed as a result of PCIT?

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
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<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Much worse</td>
<td>Somewhat worse</td>
<td>No change</td>
<td>Somewhat improved</td>
<td>Much improved</td>
</tr>
</tbody>
</table>

Overall, how has the quality of your interaction skills changed as a result of PCIT?

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
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<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Much worse</td>
<td>Somewhat worse</td>
<td>No change</td>
<td>Somewhat improved</td>
<td>Much improved</td>
</tr>
</tbody>
</table>

To what extent do you believe the study was important and meaningful?

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>2</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not important</td>
<td>Somewhat important</td>
<td>Neutral</td>
<td>Somewhat important</td>
<td>Very important</td>
</tr>
</tbody>
</table>
Appendix:  D

Kinship Center Attachment Questionnaire

Child’s name: __________________        Relationship to child:

Date: ____________________________        ☐ Adoptive Mother
                                                   ☐ Adoptive Father
                                                   ☐ Foster Mother
                                                   ☐ Foster Father
                                                   ☐ Other (please specify)

**Directions:** Please read each item below and circle the number that you think **BEST** describes how often your child behaves as described in the item. Please answer all questions and circle only one number for each item. If you make a mistake, please put an “X” through the mistake and circle the right number. Please rate your child based on his/her current behavior.

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>never/rarely</td>
<td>once in a while</td>
<td>occasionally</td>
<td>sometimes</td>
<td>often</td>
<td>usually</td>
</tr>
</tbody>
</table>

1. My child is very clingy
   0 1 2 3 4 5 6

2. If things don’t go his/her way, my child gets very upset
   0 1 2 3 4 5 6

3. When my child gets hurt, he/she refuses to let anyone comfort him/her
   0 1 2 3 4 5 6

4. My child understands what is said to him/her
   0 1 2 3 4 5 6

5. My child learns from his/her mistakes and stops a behavior when that behavior results in a negative consequence
   0 1 2 3 4 5 6

6. When my child is in pain, he/she doesn’t show it
   0 1 2 3 4 5 6

7. My child is kind and gentle with animals
   0 1 2 3 4 5 6

8. My child does not like being separated from me except on his/her terms
   0 1 2 3 4 5 6

9. My child is very whiny
   0 1 2 3 4 5 6

10. My child talks as well as other children of the same age
    0 1 2 3 4 5 6
11. When my child is upset, he/she does not allow familiar adults to comfort him/her, but will go to strangers for comfort.

12. My child teases, hurts, or is cruel to other children.

13. My child hoards food or has other unusual eating habits (e.g., eats paper, raw flour, packaged mixes, feces, etc.).

14. My child destroys or breaks his/her own things.

15. My child destroys or breaks things that belong to others.

16. My child has an easy time making and keeping friends.

17. My child steals things and doesn't seem to feel bad about his/her behavior.

18. My child seems overly interested in fire, gore, and blood.

19. My child has told others that I abuse him/her even though I never have.

20. My child plays well with other children.
Scoring the Kinship Attachment Center Questionnaire:

All positively phrased items need to be reverse scored so that a low score (e.g., a caregiver responds “1-Never/Rarely” to the item “My child understands what is said to him/her”) reflected more attachment difficulty. The following items need to be reversed:

(0 = 6); (1 = 5); (2 = 4) (3 = 3) (old value = new value for reverse scoring.

4. My child understands what is said to him/her.
5. My child learns from his/her mistakes and stops a behavior when that behavior results in a negative consequence
7. My child is kind and gentle with animals
10. My child talks as well as other children of the same age
16. My child has an easy time making and keeping friends
20. My child plays well with other children

After reversing these items, add totals for total score.