CHILD DIRECTED INTERACTION TRAINING: THE IMPACT ON THE KINSHIP CAREGIVER-CHILD RELATIONSHIP AND CHILD EXTERNALIZING AND INTERNALIZING SYMPTOMS

By

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To the devoted caregivers who volunteered their time to this study and offered a loving home for children in need
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Maltreated children frequently exhibit maladaptive attachment styles and internalizing and externalizing psychological problems. Many available training programs offered to foster caregivers have been scarcely evaluated and appear poorly suited for addressing the mental health needs of foster children. A growing segment of foster caregivers are relatives of the foster child and tend to have less social support, economic resources, and more health-related difficulties than non-relative caregivers. Already established as a best practice in the field of child abuse treatment, Parent-Child Interaction Therapy (PCIT) holds particular promise for foster parent training. One component of PCIT is the child-directed interaction (CDI) in which parents learn to follow the child’s lead using play therapy skills and positive attention. This study presents results of a randomized controlled trial examining the efficacy of the child-directed interaction for improving relative caregiver-child attachment and child behavior in preschool-aged foster children. Eleven relative foster caregiver-child dyads participated in this study and were randomly assigned to an immediate training (IT) or to the 5-week waitlist control (WLC) group. Results revealed that after training, caregivers
in the IT group interacted more positively and reported having more positive relationships with their child than the WLC group. Caregivers that received training also reported significantly less externalizing behavior problems than those in the WLC group. No significant differences were found on attachment-related behaviors and child internalizing behaviors for the IT and WLC group. These results provide preliminary evidence of the efficacy of CDI training for relative caregivers of preschoolers.
CHAPTER 1
INTRODUCTION

The Mental Health Needs of Foster Children

Children involved in foster care are an especially at risk group in need of attention from the healthcare community. Involvement in the child welfare system (CWS) typically implies that a child has been suspected of being abused or neglected by a caregiver. Though regulations vary state-by-state, usually when these suspicions are deemed legitimate and to the degree that the child’s safety is at risk, the child is removed from their caregivers’ custody and placed within the foster care system. Not surprisingly, then, the majority of children in foster homes have experienced some form of abuse and/or neglect. According to the U.S. Department of Health and Human Services, 423,779 children were in the foster care system in 2009. Of these children 78.3% were neglected, 17.8% suffered from physical abuse, 9.5% were victims of sexual abuse, and 7.6% were classified as psychologically maltreated. Additionally, 2.4% were considered medically neglected and another 9.6% were classified as being victims of “other types of maltreatment” (e.g., abandonment, congenital drug addiction) (U.S. Department of Health and Human Services, 2010).

Accompanying this history, there is a high degree of physical health problems among foster children with estimates being that up to 92% of foster children have at least one physical abnormality or risk factor (e.g., vision and hearing problems, underweight, prenatal exposure to HIV) at the time of entry into foster care (Pearce & Pezzot-Pearce, 2001). In addition to physical health concerns, foster children exhibit greater psychosocial problems than the general population as well as children receiving
Medicaid making this group resemble clinical samples in terms of mental health concerns (Fisher, Burraston, and Pears, 2005; Harman, Childs, & Kelleher, 2000). Compared to children receiving Medicaid, children aged 5-17 in foster care have been found to be 3 to 10 times more likely to be diagnosed with a mental health disorder and 7.5 times more likely to be hospitalized for a mental health condition (Harman, Childs, & Kelleher, 2000). Estimates of emotional and/or behavior problems within foster children range from 35% to 85% compared to estimates in community samples of 11% to 25% (Pearce and Pezzot-Pearce, 2001). Research overwhelmingly shows that maltreated children are at higher risk for internalizing and externalizing behavior problems than their non-maltreated counterparts (Dozier et al., 2006). Abused and neglected children demonstrate more social withdrawal, somatic complaints, depressive symptoms, and suicidal ideation than non-maltreated children (Kaufman & Cicchetti, 1989; Salzinger et al., 1993). This population is also more at risk for cognitive and academic difficulties as well as language delays (Dozier et al., 2006; Kaufman & Cicchetti, 1989). Researchers have estimated the rates of mental health treatment utilization among foster children to be 10 times greater than that of children not involved in the CWS and have found that children in foster care account for 6.5 times more mental health claims than Medicaid-eligible children (Leslie, Landsverk, Ezzet-Lofstrom, Tschann, Slyment, & Garland, 2000; Harman, Childs, & Kelleher, 2000). Longitudinal research confirms that the need for services continues over time (Timmer, Urquiza, & Zebell, 2005).

Researchers, clinicians, and policy-makers should view this population as one in need of quality preventative care and intervention, not only for the sake of this vulnerable population but also because of the economic costs of such a medically-
needy group. The short and long-term outcomes for children and families involved in the foster care system constitute a serious public health concern. Direct and indirect (e.g., special education) costs to the public are estimated to be around $92 billion dollars annually (Nilsen, 2007). From a psychological as well as public health perspective, effective and efficient early intervention is paramount.

**Treatment Needs of Children in Foster Care**

**Attachment-Related Behaviors of Foster Children and Caregiver-Child Relationship Quality**

In typical child development, the child’s caregivers play a critical role in the development of regulatory capabilities through the provision of warmth and emotional availability (Dozier et al., 2006; Schofield & Beek, 2005). Attachment theory as posed by John Bowlby suggests that the quality of a person’s early experiences and relationships with caregivers, and therefore, the experience of separation and loss of those caregivers, may powerfully shape a person’s identity and quality of later life relationships (Schofield & Beek, 2005). Healthy interactions with caregivers early in life are important for the formation of a secure base, a theoretical relationship status that enables young children the security necessary to develop autonomy and emotional and behavioral regulation. The caregiver models responsive interpersonal interactions for the child so that the child develops the sensitivity and control necessary for regulating him or herself (Dozier, Higley, Albus, & Nutter, 2002). Essentially, the caregiver co-regulates the child’s emotions through acts such as comforting the child when frightened, and as the child develops, he or she begins to learn how to self-soothe. In the course of typical child development, children gradually become more and more independent in their ability to self-regulate (Dozier, Higley, Albus, & Nutter, 2002).
These early relational experiences of parental warmth have been linked to later psychological functioning, development of empathy, social competence, and the quality of future relationships (Steinberg, 2007). However, dysregulation can occur when these critical early relationships are disrupted or if the caregiver is unable to act as a co-regulator for the child (Dozier et al., 2006). Typically, the formation of the secure base is thought of in the context of infancy, but particularly for children removed from their primary caregivers, it may be necessary for that experience to occur later in life.

Upon entry into the CWS and alternative caregiver arrangements, children arrive with behaviors, emotions, and schemas associated with previous relationships. In situations involving abuse or neglect, there is often severe emotional dysregulation due to the nature of the child’s past relationships (Howe & Fearnley, 2003). For example, the child of a physically abusive parent learns that their caregiver can be at best only infrequently relied on for comfort. The relationship is characterized by fear and uncertainty rather than warmth and security. Children in this relationship may become withdrawn and submissive around their abusers or authority figures in order to avoid negative contact. On the other hand, these children may become aggressive and domineering in other relationships in an effort to experience some form of control. In a situation where a child is neglected, caregivers often have severe psychopathology and/or substance abuse, which can lead the child to perceive his or her caregiver as vulnerable, weak, and unreliable. In this relationship, the child may adopt “parenting behaviors” and typical parent-child roles become confused (Howe & Fearnley, 2003).

In contrast with healthy parent-child relationships, children who have been abused and neglected have experienced caregivers as the source of both danger and
comfort, which leads to confusion regarding how to respond to and seek out other relationships (Howe & Fearnley, 2003). When a child is removed from an abusive home, these maladaptive relationship patterns are likely to generalize to new caregivers. Because the child’s model for emotional regulation is disorganized and inconsistent, he or she also becomes disorganized and inconsistent in his or her own emotional responding and interpersonal interactions as he or she becomes more independent in regulation processes (Howe & Fearnley, 2003; Schofield & Beek, 2005).

Research shows that children exhibit this dysregulation at the behavioral and biobehavioral level (Dozier et al., 2006; Pears & Fisher, 2005). Research suggests that maltreated children tend to exhibit variable patterns of cortisol production throughout the day whereas non-maltreated children display a predictable pattern of cortisol production (Dozier et al., 2006; Pears & Fisher, 2005). While longitudinal studies have yet to conclusively link atypical cortisol production patterns with specific emotional difficulties, low levels of cortisol have been associated with conduct disorder, antisocial personality disorder, and substance abuse (Graham et al., 1999; McBurnett, Lahey, Rathouz, & Loeber, 2000; Dozier, et al., 2006). Thus there is a critical need for caregivers to provide predictable, stable environments for young children particularly to facilitate the development and/or remediate maladaptive formation of their regulatory capabilities.

For the purposes of this study, the affective bond in the foster caregiver-child dyad was based on measures of: (a) caregiver report of child attachment-related behaviors and (b) caregiver perception of their relationship with the child. Observational measures of the quality of caregiver-child interactions were also collected. The affective bond involves biological drives that are characterized by reactions and responses
between caregiver and child, and the nature of these define the level of comfort and security within that relationship (Sroufe & Waters, 1977). In this study, attachment-related behaviors refer to the observable reactions and responses of the child and caregiver towards each other and the child’s general behavior towards others. Based on Ainsworth and colleagues (1978) widely-accepted attachment classifications, these behaviors can be categorized into one of three attachment patterns (i.e., secure, avoidant, or resistant behavior).

Caregiver perception of the quality of their relationship with the child was captured by a measure of caregiver responsiveness, emotional and instrumental support, and the child’s responsiveness to interactions with the caregiver (CPRS; Pianta, 1997). The availability of traditional attachment assessment techniques (e.g., the Strange Situation) for the age range of interest is limited. However, the addition of an observational measure of caregiver-child interactions, the Dyadic Parent-Child Interaction Coding System, was a method of objectively quantifying positive and negative interactions.

**Disrupted Placements and Associated Implications**

Studies have indicated that maltreatment and disruption of care may directly interfere with a child’s ability to cope and therefore effectively regulate emotions (Dozier et al., 2006; Pears & Fisher, 2005). This adverse effect on a child’s stress response system puts them at risk for further difficulties as they develop and face routine life stress (Dozier et al., 2006; Pears & Fisher, 2005). It is no surprise, then, that numerous researchers have shown disruptions in placement to contribute negatively to internalizing and externalizing behavior of foster children placing them at high risk for poor outcomes in the future (Dozier, et al., 2006; Jonson-Reid & Barth, 2000; Newton,
Litrownik, & Landsverk, 2000). Specifically, disrupted placement has been linked to attachment problems, emotional difficulties, and disordered behavior. Researchers have hypothesized that these difficulties are associated with placement disruption in a cyclical way (Smith, Stormshak, Chamberlain, & Whaley, 2001). That is, children with more severe psychosocial difficulties are likely to be more difficult to care for resulting in increased parental stress and risk of placement disruption.

Studies have concluded that psychological and behavioral difficulties are not only a cause but a consequence of disrupted placements (Newton, Litrownik, & Landsverk, 2000). A sample of 415 foster children were studied over the course of 18 months and of these, a substantial portion of children did not demonstrate significant internalizing or externalizing symptoms at their initial placement but showed clinically elevated symptomatology after experiencing multiple placements. According to Newton, Litrownik, & Landsverk (200) number of placements was the strongest predictor of increased internalizing, externalizing, and total behavioral problems at the end of the study.

Other factors may contribute to placement stability. Maltreated children often display disorganized attachment patterns making it difficult to rapidly form a healthy bond with their foster caregivers (Newton, Litrownik, & Landsverk, 2000). The child may be extremely reactive at times but affectionate in other situations. Alternatively, the child may rarely show affection for his or her foster caregivers or may become overly clingy and dependent. These attachment difficulties may hinder the formation of healthy parent-child relationships putting the child at risk for disrupted placement. On the other hand, other factors not related to child behavior or emotional functioning can contribute
to disrupted placements such as social worker involvement and foster family expectations (Newton, Litrownik, Landsverk, 2000).

Despite alarming findings regarding the relationship between placement disruption and child psychological difficulties, promising outcomes have been demonstrated when effective interventions are applied to this population (Chamberlain, et al., 2000; Dozier et al., 2006; Fisher, Burraston, Pears, 2005). Chamberlain and colleagues (2008) have demonstrated that foster children involved in MTFC and EIFC have significantly fewer placement disruptions up to two years after treatment completion than those children that received treatment as usual. This suggests that the cycle of behavior problems leading to more placement disruptions and *vice versa* can be interrupted with effective intervention.

**The Current State of Foster Parent Preparation and Available Interventions**

Many states including Florida require potential foster parents to participate in a preparatory course entitled Model Approach to Partnerships in Parenting (MAPP) as a requirement for state certification (Florida Department of Children and Families, 2011). This 10-session program sets out to provide potential foster parents with knowledge, attitudes, and skills necessary to be effective and satisfied foster parents. The MAPP program identifies psychoeducation, behavior management skills, and the provision of child welfare system navigation tools as main objectives of the course. Though foster parents are required to receive some form of training, recent reviews state that the most frequently used curricula have practically no empirical support (Chamberlain et al., 2008). Foster parents who completed MAPP demonstrated significant change in only 4 of 12 areas of competency identified as program objectives by MAPP (Puddy & Jackson, 2003). Areas of improvement in Puddy and Jackson’s study reflected
increased knowledge of the foster care system rather than parenting skills. Only one other study concerned MAPP outcomes and found no statistically different outcomes on identified goals (e.g., more appropriate developmental expectations) between the MAPP training group and a group of untrained parents (Lee & Holland, 1991).

Children entering foster care are likely to exhibit psychosocial difficulties, and among young children, behavior problems are common. Therefore, it is essential that foster parents receive relevant and effective training. According to Puddy and Jackson (2003) numerous surveys have shown that difficulty understanding and managing child problem behaviors has been cited as a top reason for foster parents to discontinue providing foster care. To address the discrepancy between the need for better preparation and the apparent lack of adequate foster parent training, researchers have created interventions for this population or have adapted and modified evidence-based treatments for other populations to this population.

Chamberlain and colleagues (2008) have led the way in applying evidence-based programs to maltreated populations with the development of Multidimensional Treatment Foster Care (MTFC) and Early Intervention Foster Care (EIFC), programs designed to enhance the traditional role of therapeutic foster care. These programs incorporate foster parent pre-training, family therapy (for foster caregivers and permanent placements), individual therapy or therapeutic play groups (for younger children), collaboration with the child’s school, psychiatric consults, case management and liaison services, as well as developmental interventions if needed. Multiple studies have examined the impact of these programs on child psychosocial outcomes and length and number of placements (Chamberlain et al., 2008; Fisher, Gunnar,
Chamberlain, & Reid, 2000; Fisher, Burraston, & Pears, 2005). Findings suggest the intervention improves child behavior and attachment security and leads to more stable placements (Chamberlain et al., 2008; Fisher, Burraston, & Pears, 2005).

MTFC and EIFC are clearly intervention “packages” that take the ecological perspective in terms of addressing multiple areas of the child’s life (Fish & Chapman, 2004; Morrison & Mishna, 2006). Though the long-term benefits to society likely exceed the initial cost of the program, this approach is costly and time-intensive to implement (Lee et al., 2008). Because programs for maltreated children tend to be under-funded, under-staffed, and often characterized by burn-out and fatigue, finding the more cost- and time-efficient services is crucial.

The implementation and adaptation of Parent-Child Interaction Therapy (PCIT) for maltreated children may address these needs. The effectiveness of adapted versions of PCIT was studied in a population of maltreating parents as well as non-relative foster parents to first examine its impact and to then assess the differences in receipt of treatment by these two groups (Timmer, Urquiza, & Zebell, 2005). Results suggest that this adapted version of PCIT was effective at improving parenting practices and reducing child problem behavior within both groups. Results also showed that there were no significant differences in the impact of the treatment on foster parents versus biological parents. Differences emerged in the likelihood of treatment attrition, though, in that distressed biological parents were more at risk for drop-out than distressed foster parents perhaps but that more difficult child behavior problems were related to foster parent drop-out. Timmer and colleagues suggested that foster parents may feel less obligated to the child especially when behavior problems are severe. The relationship
between foster parent treatment attrition and child behavior problems has important implications for the link between disruptive behavior and disrupted placements in terms of addressing the need for additional support in these high risk situations.

In addition to Timmer, Urquiza, and Zebell’s 2005 study, PCIT has been adapted for use with foster parents by providing parents with a two-day, intensive workshop to assess the impact of this adaptation on parenting skills (McNeil, Herschell, Gurwitch, and Clemens-Mowrer, 2005). Groups of foster parents participated in didactic teaching, role-play, and video-taped vignettes, and results suggested significant improvements in parenting practices (McNeil, Herschell, Gurwitch, and Clemens-Mowrer, 2005). The promise of two-day workshops for foster parents marks progress in the way of adapting existing evidence-based programs, which are often time- and labor-intensive, to fit the needs of overburdened foster parents and in turn, the needs of an equally overburdened system. However, given the often long-standing maltreatment history of children placed in foster homes, training programs may need to extend beyond two days to make sustainable changes.

Though both studies provide support for the effectiveness of PCIT adaptations within the foster families, there are some limitations and indications for future research that should be acknowledged. Neither study utilized the randomized control trial methodology for evaluating the administered adaptations, which limits researchers from concluding that treatment outcomes were a result of PCIT. Only one of these studies collected follow-up data, but the small number of respondents prevented statistical analysis of results. Also, McNeil and colleagues (2005) did not include *in-vivo* coaching of parents, and thus, parents did not have the opportunity to practice PCIT skills with
their foster child while therapist support was available. Having parents practice parent training skills with their child during the treatment sessions with a therapist present is associated with better parent and child outcomes and is a more effective way of teaching parent skills than through instruction alone (Kaminski, Valle, Filene, & Boyle, 2008).

In both McNeil et al. (2005) and Timmer et al. (2005), relative foster caregivers were not specifically included as participants. According to the Adoption and Foster Care Analysis and Reporting System (U.S. Department of Health and Human Services, 2010), 24% of all children in the foster care system resided with relative foster caregivers in 2009. This segment of foster children makes up the second largest group within all foster children behind those placed with non-relative caregivers. Not only does the size of this group warrant attention, but relative foster caregivers, or kinship caregivers, have unique needs that should be considered.

Few studies have compared relative caregivers with non-relative caregivers, but those that do have found significant differences in these types of caregivers (Gebel, 1996; Harden, Clyman, Kriebel, Lyons, 2004). There are several notable demographic differences: relative caregivers are more likely to be African American, older, less educated, and less likely to be employed outside the home than non-relative foster parents (Gebel, 1996). Additionally, relative caregivers tend to have less social support, economic resources, and more health-related difficulties than non-relative caregivers suggesting the presence of significant stressors that may impact parenting (Harden, Clyman, Kriebel, Lyons, 2004).
Differences between attitudes toward parenting have also emerged in research on relative versus non-relative caregivers (Harden, Clyman, Kriebel, Lyons, 2004). Some researchers have found that compared with non-relative caregivers, relative caregivers report more negative parenting attitudes, which is reflected by less warmth and respect in the parent-child relationship, more parent-child conflict, and more strictness or overprotectiveness (Harden, Clyman, Kriebel, Lyons, 2004). Others have shown that relative caregivers are less likely to report difficulty handling children in their care and more likely to exhibit a lower level of empathy for their children as well as more favorable attitudes toward physical discipline than non-relative caregivers (Gebel, 1996). Significant differences also exist in the level of child welfare agency support offered to relative versus non-relative caregivers with non-relative caregivers receiving more home visits and phone contact from caseworkers than relative caregivers (Gebel, 1996). The combination of less desirable parenting attitudes, more socioeconomic stressors, and less agency support serves to place relative caregivers in an even more challenging position to parent effectively.

Despite these characteristics, relative caregivers comprise an important group in need of further research. Research shows that children residing in relative care tend to remain in their care for longer than children placed with non-relative caregivers (Berrick, Barth, and Needel, 1994). Relative caregivers are more likely to also care for siblings and to encourage visitation with the child’s family of origin, which increases the possibility of generalizing intervention effects throughout the family unit and assessing the long-term impacts of interventions (Berrick, Barth, and Needel, 1994; LeProhn, 1994).
Implementing Evidence-Based Treatments in Community Settings

Finding a balance between effectiveness and efficiency that maintains the integrity of an evidence-based treatment (EBT) is critical to the overall goal of demonstrating the applicability of EBTs in community settings. Proponents of EBTs suggest that the CWS may be resistant to the incorporation of EBTs into agency settings (Chaffin & Friedrich, 2004). A major reason for this attitude stems from the tension between the limited resources and the extensive need for services. Technological resources (e.g., videotaping equipment, bug-in-the-ear devices for live coaching, two-way mirrors), advanced training, and physical space can be expensive components of evidence-based treatments that are simply not available in the CWS without additional resources. Chaffin and Friedrich (2004) suggest that agencies are not necessarily geared toward an interest in EBTs as may be the case in many academic settings but are well-suited for EBTs in several ways (e.g., dissemination within large provider network, need for concrete, observable change). Chaffin and Friedrich also note that the need for programs capable of efficiently treating many clients is often the priority due to the volume of cases in the system, which EBTs tend to offer over more dynamically-oriented treatment approaches that lack a rigorous evidence base. In general, public policy lacks the advocacy to back the movement of EBTs into the CWS.

Within the foster care system, EBTs may be interpreted as not “adoption-sensitive” nor tailored to the needs of these unique families because the evidence base is not within the foster care population. As such it is important to evaluate EBTs within the foster care system. The need for effectively identification and response to attachment-related difficulties in childhood as well as typical childhood problems in
maltreated children is still great and further research on the assessment and treatment of these problems is much needed (Nilsen, 2003). Continued application of EBTs in the foster care system will help identify which treatments are not only most effective with maltreated children and their caregivers but those that can be most easily applied within the CWS.

The Child Directed Component of Parent-Child Interaction Therapy

Parent-Child Interaction Therapy (PCIT) is an empirically-supported intervention for disruptive behaviors in young children. PCIT is based on Baumrind’s (1961, 1991) developmental theory of parenting styles and corresponding research demonstrating that an authoritative parenting style, consisting of nurturance, clear communication, and firm control produces optimal child mental health outcomes (Franz, McClelland, & Weinberger, 1991; Querido, Warner, & Eyberg, 2002).

Specifically, PCIT consists of two phases in which parents are taught skills to improve warmth as well as establish behavioral regulation of their child in the parent-child relationship. In the first phase of PCIT, Child-Directed Interaction (CDI), parents are taught skills that help them follow their child’s lead in play by providing positive attention to prosocial child behaviors and ignoring negative behavior (Boggs & Eyberg, 2003). The goal of this phase is to strengthen parent-child attachment in preparation for the second phase of treatment, Parent-Directed Interaction (PDI).

As stated, the CDI component of PCIT was created to enhance the parent-child relationship and provide a foundation for implementing structured behavior management techniques. Skills taught in CDI draw heavily from therapeutic techniques commonly used in play therapy. Specific skills taught include Praise, Reflection, Imitation, Description, and Enjoyment (PRIDE skills). While parents are taught to
increase their use of these skills, they are coached to decrease their use of Commands, Questions, and Criticisms during specified play periods. An additional goal of CDI is to teach parents to use these skills to increase appropriate interactions and decrease inappropriate, attention-seeking behaviors. Parents do this by attending positively and enthusiastically to the child’s prosocial behavior and ignoring mildly disruptive or inappropriate attention seeking behavior (e.g., whining). When the child discontinues displaying inappropriate behaviors, the parent immediately reinforces the child's more appropriate interactions by providing positive attention. In addition to strengthening the parent-child bond and reinforcing prosocial behavior, CDI works to improve children’s self-esteem, a central goal for interventions used with this vulnerable population.

The impact of CDI in contrast to another phase of PCIT, the Parent Directed Interaction, has been evaluated (Eisenstadt et al., 1993). From CDI alone, improvements were found in child problem behavior, child internalizing symptoms, and parental stress after delivery of seven CDI sessions alone. Eisenstadt and colleagues’ (1993) study included mostly biological families, and the application of component analysis to different populations such as foster families needs to be examined.

**Theoretical Underpinnings for the Use of Child Directed Interaction Component with Foster Families**

The CDI component of PCIT offers particular benefit to foster families for a number of reasons. To begin, CDI is appropriate for young children, which provides a unique opportunity for early intervention. Comprising the largest age group, 36.7% of children entering foster care due to maltreatment are between the ages of 2 and 7 (U.S. Department of Health and Human Services, 2010). Thus, the disruptions in care and formation of new relationships associated with removing a child from the family of origin
occur during a formative developmental time frame when healthy attachment relationships are particularly vulnerable.

Researchers studying foster families suggest that a central goal of therapy for foster children and caregivers should be to facilitate a healthy bond within the dyad (Howe and Fearnley, 2003). Researchers build on this by suggesting that foster parents adopt a model of parenting based on theories of attachment and resilience that consists of four dimensions: 1. promoting trust and availability; 2. promoting reflection; 3. promoting self-esteem; and 4. promoting autonomy (Schofield & Beek, 2005). The central goal of CDI is to enhance the parent-child relationship and the dimensions cited by Schofield and Beek are reflected in the core principles of CDI.

The first dimension, promoting trust and availability, can be accomplished through CDI because of the importance of daily at-home practice of CDI skills in one-on-one play situations. This time, often referred to as “special time,” provides the child with a predictable, daily occurrence of uninterrupted quality time with his or her caregiver during which time the caregiver is allowing the child to lead the play without judgment and constantly providing attention and affirmation of the child’s positive choices and actions. This therapeutic time directly meets the goal set by Schofield and Beek of demonstrating caregiver availability and over time, trust. The second goal identified as key in parenting foster children, promoting reflection, refers to helping the child understand him or herself better. In CDI the reflection skill can be used to begin this process. Because preschool-aged children are still developing the capacity to understand motivations, desires, and patterns, the simple CDI exercise of the parent reflecting the child’s verbalizations can teach the child not only that the parent is
listening attentively and cares about what the child says, but can also teach the child to begin to self-monitor, an important component of self-reflection.

The third dimension described by Schofield and Beek, promoting self-esteem, is an integral part of the CDI. The CDI skills are designed to provide affirmation and praise to the child, which has the potential of being internalized by the child. Finally, CDI addresses the fourth dimension highlighted by Schofield and Beek, promoting autonomy. In typical development, children learn that behaviors can elicit actions from others (e.g., caregivers). In the case of maltreated children, behaviors have been met with minimal or no nurturance or at best, variable responding, which may foster a feeling of helplessness over their environment. Skills built into CDI can be used to restructure this learned history in order to engender a sense of autonomy by demonstrating how behaviors impact caregiver responding in a consistent manner. For example, when the child demonstrates effort to do well, he or she will evoke consistent positive responding from the caregiver, and over time the cause and effect of this behavior-response pairing can be used to correct previously held beliefs about the child's sense of control over his or her environment and ability to meet his or her needs.

Not only does CDI fit well with the theoretical model of parenting proposed by Schofield and Beek (2005), but empirical evidence suggests that core components of CDI are associated with large treatment effects on outcomes of parenting behavior, as well as child internalizing symptoms and externalizing behavior problems (Kaminski et al., 2008). In a meta-analysis of components of parent training, researchers examined various treatment protocols and delivery methods to evaluate the association between program characteristics and treatment effects (Kaminski et al., 2008). Parent training
components associated with the largest effect sizes include practice with the child, parental responsiveness and sensitivity, emphasis on nurturance, and consistent responding. Skills taught in CDI are emphasized through in-session and daily home practice with the child and are intended to enhance parental responsivity through the provision of positive attention for appropriate behavior. In-session practice with the child via coaching not only leads to more skillful application of CDI skills but allows the therapist to highlight the child’s appropriate and affectionate behaviors, a feature especially important for foster parents, who will likely benefit from increased awareness of the child’s positive attributes. Consistency is a key component of CDI, which enables parents to provide nurturance and sensitivity in a systematic way. Parent training components found to have no relation to treatment outcome include social skills training and other ancillary services, suggesting that a concise training package is most beneficial to providing the desired outcomes.

Techniques of CDI are innovative for this population. Some argue that because foster children’s difficulties are commonly attributed to attachment-related problems by programs such as MAPP and websites or resources intended for foster families, foster parents are at risk for perceiving child emotional and behavioral problems as irreversible attachment issues (Nilsen, 2003). The prevalence of this viewpoint has led many to believe that attachment-based therapies are the treatment options of choice for foster children. However, not only do many of these therapies offer little empirical support, they are considered to pose the potential for harm (Chaffin & Friedrich, 2004). Though early maladaptive relationship formation likely contributes to problematic behavioral and emotional functioning, there may be other contributing factors that should be explored.
Not only is the etiology of psychosocial difficulties in foster children unclear and multiply-determined, it is important for foster parents and mental health professionals working with maltreated children to view these difficulties as malleable and reparable rather than static, particularly in younger children (Nilsen, 2003). Interventions that work to provide parents with concrete skills and appropriate expectations will not only provide symptom relief but can engender confidence that maltreated children are not “damaged goods,” and maladaptive patterns can be corrected.

The CDI component of PCIT teaches parents traditional play therapy skills along with a behavioral management technique called differential attention. Teaching foster parents CDI skills can therefore empower foster caregivers to act as therapeutic agents (Herschell & McNeil, 2005; Kaminski, Valle, Filene, & Boyle, 2008). The effects of this positive play time have been theoretically and empirically shown to impact parent-child interactions in general (Bratton & Dee, 2000; Boggs & Eyberg, 2008). Skills taught in CDI increase the caregiver’s power as a reinforcing agent, which increases the likelihood that the child will obey the parent (Eisenstadt, Eyberg, McNeil, Newcomb, and Funderburk, 1993). According to Dowdney and Pickles (1991) mothers exhibiting more positive interactions with their child during play situations are less likely to become negative in other situations with their child. On the other hand, mothers demonstrating less affection and criticism during play situations exhibit more negativism around their child in general (Dowdney & Pickles, 1991). The CDI skills work to improve the quality of the parent-child interaction resulting in more positive interactions in general. This reinforcing cycle (i.e., the relationship between positive skills and positive interactions) increases the likelihood that parents will use these skills outside of the play setting.
Skills taught in CDI have been conceptualized as valuable for use in cases where children have been abused and therefore may have difficulty with emotional regulation (Herschell & McNeil, 2005). CDI skills can be used by parents to help model effective emotional regulation and reinforce healthy ways of managing negative affect and coping with frustration. For example, a child that becomes frustrated while building a tower with blocks may aggressively knock down the building and begin screaming loudly. In CDI, the parent would withdraw positive attention previously paid to the child while playing and only return the attention when the child had calmed him or herself and begun to display more appropriate behaviors. This differential social attention can be used in conjunction with parental praise for effort, persistence, and adaptive coping skills. Parents can also reward healthy displays of emotional regulation by praising and reflecting the child's appropriate expression of negative affect (e.g., Child: “I'm getting angry” Parent: “I like how you used your words to tell me how you are feeling.”).

Not only does CDI provide caregivers with practical, concrete skills to improve their relationship with their foster child, it addresses a common grievance of foster parents involved in therapy for their child. Many foster parents complain that available interventions typically do not include the foster child- that is, they are not actively involved in the session (Nilsen, 2003). The CDI techniques revolve around the child's in-the-moment activities and offer parents in-vivo coaching to respond to real time situations, which increases caregivers’ ability to generalize skills in their day-to-day activities (Callahan, Stevens, & Eyberg, 2010). Also, examining CDI alone rather than the entire PCIT protocol allows for a component analysis of this portion of PCIT with this population. This particular component of PCIT may be especially beneficial to foster
caregivers as standard foster parent training tends to address discipline practices (a key goal of PDI) but not how to improve the quality of the foster parent-child relationship (Mona Gil de Gibaja, pers. comm.).

**Study Objectives and Hypotheses**

The current study sought to evaluate the efficacy of parent-training in CDI skills in reducing child internalizing and externalizing behavior problems and improving the relative caregiver-child relationship. Caregiver skill acquisition was assessed by direct observation of parent-child interactions through a standardized laboratory situation and multiple measures were used to evaluate caregiver-child outcomes. Study objectives and aims were as follows:

**Objective 1:** Within and between group differences following CDI training were measured using a waitlist control (WLC) design. Post-training outcome measures of families assigned to immediately begin training were compared with pre-training measures of families assigned to the WLC group.

**Hypothesis 1:** Foster parents in the immediate training (IT) group will show significantly more use of CDI skills than WLC group following CDI training.

**Hypothesis 2:** Foster parents in the IT group will report more secure child attachment-related behaviors after training than the WLC group.

**Hypothesis 3:** Foster parents in the IT group will report more positive relationships after training with their foster children than the WLC group.

**Hypothesis 4:** Foster parents in the IT group will report fewer child problem behaviors than those in the WLC group after training.

**Hypothesis 5:** Foster parents in the IT group will report fewer child internalizing symptoms than those in the WLC group.
Objective 2: Identify a mechanism of child behavior change over the course of CDI utilizing a technique recommended by Preacher and Hayes (2008) for demonstrating mediation by examining the indirect effects of the proposed mediator.

Hypothesis 2: The indirect effect of change in relationship quality on child behavior change following CDI training will be statistically significant.

Objective 3: Three months following completion of CDI skill acquisition, parents completed measures of child attachment-related behaviors, child externalizing behavior problems, child internalizing symptoms, and parent-child relationship quality.

Hypothesis 1: Three months following CDI training completion, foster parents will continue to report more secure child attachment-related behaviors.

Hypothesis 2: At follow-up, foster parents will continue to report improved perceived relationships with their foster child.

Hypothesis 3: Foster parents will continue to report decreased child problem behaviors three months following CDI training.

Hypothesis 4: Foster parents will continue to report decreased child internalizing symptoms three months following CDI training.
Participants were 11 female relative caregivers and their 2- to 7-year-old children. A priori power analyses were conducted using G*Power 3.1.2 statistical software to determine the number of caregiver-child dyads needed to conduct the proposed analyses using ANCOVA F tests. Analyses utilized ECBI and CBCL effect sizes reported within an earlier study of PCIT that reported pre-post changes of CDI completers (Eisenstadt et al., 1993). Power was set at .80 with alpha = .05 in order to yield an 80% confidence interval for statistically significant results. Appendix A displays the anticipated means and standard deviations based on Eisenstadt et al. (1993) as well as the obtained means and standard deviations. Based on these calculations, an a priori power analysis yielded a sufficient total sample size of 6 participants to detect between group differences on the ECBI Intensity scores and a sample size of 9 to detect between group differences on the CBCL externalizing scores. Power analyses were not conducted based on internalizing or attachment-related behaviors.

Participating families learned of the study in a variety of ways: two were referred after being screened out of an existing parent-training study, two were self-referred after learning of the study at the Library Partnership, two were referred by a nurse practitioner at Children's Medical Services, three self-referred after seeing flyers, newspaper ads, or other recruitment materials announcing the study, one was referred by a pediatrician, and one was referred by the University of Florida Multidisciplinary Diagnostic and Training Program.
Inclusion and exclusion criteria. Children included in this study met the following inclusion criteria: (a) between the ages of 2 and 7; (b) were residing in a relative caregiver foster home for the duration of the study; (b) had a caregiver rating at or above 15 on the Eyberg Child Behavior Inventory (ECBI) problem scale, a score that represents a rating 1 standard deviation above the normative mean for parents of young children on this scale.

Children were not included in this study if there was a pre-existing or suspected diagnosis of Autism or major sensory impairment. No child entering the study was suspected of undiagnosed Autism. One child was screened out of the study during the phone screening due to a pre-existing diagnosis of Autism.

Caregivers included in this study (a) were relative caregivers with temporary or permanent custody of the child (b) were able to attend twice weekly 60-minute training sessions; (c) agreed to daily 5-minute skills practice at home; 4) were able to communicate by telephone or have email access. Potential caregiver participants were excluded if they had 1) significant psychopathology which would interfere with training participation; 2) apparent cognitive delays that would interfere with training participation. No caregivers were excluded from this study on the basis of significant psychopathology or cognitive delay.

Children’s mean age at the time of the screening assessment was 5 years 4 months and (63%) were females. Although females typically make up a minority of children receiving treatment for behavior problems (Keenan & Wakschlag, 2000), females tend to be overrepresented among children in foster care and in kinship care in particular (Berrick, Barth, & Needel, 1994; Iglehart, 1994). The racial/ethnic
Composition of the families was: 64% Caucasian, 18% African American, 9% Hispanic, and 9% Biracial. Most participants completed at least some college or technical training but one caregiver had not completed seventh grade and two caregivers reported having a graduate or professional degree. The mean reported annual income was $46,000. Of the 11 families, 91% were grandmothers and the remaining were great-grandmothers.

Regarding characteristics specific to foster parents, two caregivers reported receiving previous parent training. Two caregivers also reported having custody of another foster child. The mean length of placement with the participating relative caregiver for all children was 45.27 months with a range of 9 to 89 months.

Families were randomly assigned to the immediate training \((n = 5)\) or waitlist control group \((n = 6)\). There were/were not significant differences between the two groups (Table 2-1).

**Table 2-1. Demographic Characteristics of Immediate Training (IT) and Wait-List (WLC) Groups**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>IT(^a)</th>
<th>WLC(^b)</th>
<th>(t(9))</th>
<th>(p)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child age (months)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>67.20</td>
<td>58.67</td>
<td>.65</td>
<td>.53</td>
</tr>
<tr>
<td>Child sex (% female)</td>
<td>80.0</td>
<td>50.0</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Child ethnicity (% minority)</td>
<td>40.0</td>
<td>33.4</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Caregiver age (months)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>651.4</td>
<td>692.83</td>
<td>-.74</td>
<td>.48</td>
</tr>
<tr>
<td>Income(^c)</td>
<td>51200</td>
<td>21183</td>
<td>.61</td>
<td>.56</td>
</tr>
</tbody>
</table>

Note. It was not possible to analyze differences between groups for the categorical variables because the sample size was too small to meet the Chi Square calculation assumptions.

\(^a n = 5\). \(^b n = 6\). \(^c n = 10\)
Figure 2-1 displays participant screening, enrollment, and randomization. Of the 11 participants, the “training completers” (i.e., those who completed 8 CDI training sessions) included 5 IT families. The “study completers” included the 2 IT families that completed their 3-month follow-up assessment. There were 4 WLC families that completed a post-training Time 4 assessment. The one family that dropped out of the study did so prior to beginning training. Overall, the study dropout rate was 9%, which is less than the lower end of the 27 to 47% range reported in efficacy studies of PCIT (Bagner and Eyberg 2007; Boggs et al., 2004; Fernandez and Eyberg 2009; Schuhmann et al., 1998; Werba et al., 2006). Studies of PCIT within community settings report a wider range of attrition, 12 to 77% (Chaffin et al., 2009; Phillips et al., 2008; Timmer et al., 2005). Sample size limitations in the present study prevent non-parametric analyses examining the differences of child sex and ethnicity between groups as well as differences in drop-out rates between the groups.

**Trainers and Assessors**

**Trainers**

To order to align the protocol of this study with standard foster parent training offered by CWS, this program referred to as “parent-training” rather than therapy. Rather than referring to a CDI “therapist,” the term “trainer” was used. Graduate students, who were trained in PCIT at the University of Florida Department of Clinical and Health Psychology served as parent trainers in this study. All students who served as parent trainers received PCIT training in a 3-credit-hour course and received supervision for at least two individual PCIT cases prior to training study participants, and thus were well-trained in the provision of CDI. Each caregiver-child dyad was assigned one trainer for the duration of the study. The investigator, under the supervision of a
licensed psychologist, Sheila Eyberg, Ph.D., familiarized all trainers with the training protocol and met regularly with trainers to help ensure protocol integrity and provide support for clinical issues that arose.

Figure 2-1. Participant Flow Diagram

Assessors

Graduate students in the University of Florida Department of Clinical and Health Psychology trained undergraduate psychology research served as assessors in this study. All undergraduate research assistants were trained by PCIT-trained graduate
students (including the investigator) in the University of Florida Child Study Lab. All assessment coders were trained in the Dyadic Parent-Child Interaction Coding System, Third Edition, (DPICS-III; see measures section for complete description) to 80% percent agreement on the following categories included in this study: Labeled Praise, Behavioral Description, Reflection, Question, Command, Criticism, Child Answer, Child Yell, and Child Whine. Two assessment coders, the investigator and another Child Study Lab graduate student, conducted DPICS-III coding.

**Measures**

Study measures of child internalizing and externalizing behavior problems, caregiver relationship quality, and observational measures of the caregiver-child relationship were selected based on administration time and psychometric strength. The measure of child attachment-related behaviors was chosen due to significant correlations to Strange Situation classifications (Dozier, Stovall, & Albus, 1999), a well-researched measure of attachment (Ainsworth, et al., 1978), as well as the ability to measure attachment-related behaviors of children in the study age range. Measure descriptions and psychometric support for each measure are described below, and administration points are shown in Table 2-2.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Time 1</th>
<th>Weekly</th>
<th>Time 2</th>
<th>Time 3</th>
<th>Time 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demographics</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECBI</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>CBCL</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PAD</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>CPRS</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>DPICS</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2-2. Study Time Points at which Assessment Instruments were Administered
Family Demographic Questionnaire

A questionnaire created by the investigators was administered to collect socio-demographic information about the caregiver and child including age, sex, ethnicity, foster caregivers’ highest education level and marital status. Information specific to foster parenting was also collected including the number of previous foster child placements with the caregiver, previous parent training and/or family therapy involvement, length of placement with the target child as well as the number of other children in the household and their relationship to the foster child. Foster caregivers were asked to complete this questionnaire during the pre-training assessment (Time 1). A copy of this questionnaire is included in Appendix B.

Eyberg Child Behavior Inventory

The ECBI (ECBI; Eyberg & Pincus, 1999) is a 36-item parent report measure of disruptive behavior in children between 2 and 16 years of age. It measures disruptive behaviors in terms of their frequency (intensity scale) and the degree to which these behaviors are problematic for the parent (problem scale). On this 7-point scale, the total intensity score can range from 36 to 252, with a normative mean of 96.6 and a standard deviation of 35.2. Within a community sample, the problem and intensity scales have 12-week test-retest reliability of .85 and .80 and 10-month test-retest reliability of .75 and .75, respectively (Funderburk, Eyberg, Rich, & Behar, 2003). The ECBI norms are similar to the scale norms found in African-American and Hispanic populations (Butler, Brestan, & Eyberg, 2008; McCabe, Yeh, Garland, Lau, & Chavez, 2005). This instrument takes approximately 10 minutes to complete. In this sample, Cronbach’s alpha for the ECBI Intensity and Problem scales were .86 and .40 respectively. ECBI Problem scores were used only as a screening measure. Unlike the 7-point Likert type
response-format of the Intensity scale, the yes-no Problem scale contains only two response choices for each item, which limits variability. Alpha may have been impacted due to limited response variability and low sample size.

**Child Behavior Checklist**

The Child Behavior Checklist (CBCL 1.5-5 years; 6-18 years; Achenbach & Rescorla, 2000 & 2001) is comprised of two forms, containing similar items, and is administered to children in different age ranges. The CBCL is a comprehensive instrument designed to assess the frequency of a variety of specific behaviors in children during the past 2 months for the 1.5-5 year version and during the past 6 months for the 6-18 year version. Both forms were used because the study children crossed both CBCL age ranges. With the CBCL, parents rate their child’s behavior or emotional presentation on 100-items (1.5-5 year version) or 113-items (6-18 year version) 3-point Likert-type scale. The Externalizing and Internalizing Scale score were used as a measure of treatment outcome. The Externalizing scale has 1-week test-retest reliability of .90, and the Internalizing scale has 1-week test-retest reliability of .83 (Achenback & Rescorla, 2000 & 2001). This instrument takes approximately 15 minutes to complete. In this sample, Cronbach’s alpha for the CBCL 1.5-5 Externalizing and Internalizing scales was .81 and .80 respectively. Internal consistency estimates for the CBCL 6-18 Externalizing and Internalizing scales were .82 and .81 respectively.

**Parent Attachment Diary**

The Parent Attachment Diary (PAD; Stovall-McClough & Dozier, 2000; 2004) is a 13-item parent-report questionnaire that measures secure, resistant, and avoidant child attachment-related behaviors. This questionnaire was originally designed for use with infants and toddlers but the content and format have been applied to preschool
populations (Fisher & Kim, 2007). The PAD was developed to address the need for a relatively brief parent-report instrument that allowed for recording of child attachment-related behaviors (Stovall-McLough & Dozier, 2004). On the PAD, caregivers are asked to describe how their child reacted to situations in which he or she was hurt, frightened, and separated from the caregiver over the past two weeks. To describe their child’s reactions, caregivers can choose from a list of common child reactions or write in their own description if none of the provided reactions adequately describe the child’s response. For example, caregivers are asked, “Which of the following did your child most commonly do after he or she was hurt?” Caregivers are asked to circle all responses which apply to this situation from a list of responses such as “looked at me for reassurance” or “acted as if nothing was wrong.” Each reaction listed on the measure is associated with reactions typically displayed by children with secure, resistant, or avoidant attachment styles and has been categorized as a secure, resistant, or avoidant attachment-related behavior by the developers of the questionnaire (Stovall-McClough & Dozier, 2000; 2004). Three separate scores are calculated on the PAD, and these scores are reported as percentages. Percent secure attachment-related behaviors is calculated by summing all secure reactions and dividing that number by the total number of reactions. The same calculations are completed for avoidant and resistant reactions.

Adequate concurrent validity has been established for this measure. Stovall-McClough and Dozier (2004) found the PAD to significantly correlate with classifications from the Strange Situation assessment system. Proximity-seeking ratings from the Strange Situation correlate with diary security scores (r = .46) and avoidance scores (r
Avoidance ratings on the PAD correlation with avoidance and security scores on the Strange Situation (avoidance scores r = .74; security scores r = -.67). Cronbach’s alpha could not be calculated for this instrument as responses are open-ended rather than scaled. Inter-scorer reliability was not calculated. This instrument takes approximately 10 minutes to complete. A copy of this instrument is included in Appendix C.

**Child–Parent Relationship Scale**

The CPRS (CPRS; (Pianta, 2004) is a 30-item parent-report questionnaire that assesses parents’ perceptions of the quality of their relationship with their child. Parents rate the degree to which each item applies to their relationship with their child on a 5-point Likert-type scale. The CPRS is composed of three subscales: Dependence, Closeness, and Conflict. The Dependence subscale focuses on the parent’s perceptions regarding the degree to which their child is dependent on him or her with items such as “My child reacts strongly to separation from me” and “My child is overly dependent on me.” The Closeness scale measures the overall security in the relationship by assessing the parent’s positive feelings toward the child and vice versa (e.g., “I share an affectionate, warm relationship with my child,” “My child openly shares feelings with me”). The Conflict subscale examines the parent’s perceptions regarding the conflictual nature of their relationship with the child with items such as “My child feels that I treat him/her unfairly” and “My child and I seem to be struggling with each other.” Cronbach’s alpha for these subscales is .50 (Dependence), .72 (Closeness), and .83 (Conflict) (Pianta, 2004). Scores on each subscale are calculated by summing the individual items. Higher scores indicate more dependence, closeness, and/or conflict with the child. In this study, only the Closeness subscale was used. This instrument
The DPICS (DPICS-III; Eyberg, Nelson, Duke, & Boggs, 2005) is an observational coding system that measures the quality of parent-child interaction during three standard 5-minute situations that vary in the degree of parental control required. This study used the child-led play situation, which directs parents to follow along with their child in any game the child chooses. The DPICS is especially useful for assessing parent CDI skill acquisition, which allows these skills to be monitored and targeted for improvement within the training session. During the child-led play observation the following parent behaviors were coded: behavioral descriptions, labeled praises, unlabeled praises, reflections, questions, commands, and criticisms as well as child prosocial talk, negative talk, and questions.

The investigator served as the primary coder while graduate students served as reliability coders. Coders were uninformed of training condition. All coders completed DPICS training, which includes completion of the coder-training workbook (Fernandez, Chase, & Eyberg, 2005) and demonstration of ability to reach 80% accuracy with a criterion tape coded by expert DPICS coders. One-third of the parent-child observations were randomly assigned to be coded by a graduate student assessor. These data were used to calculate inter-coder reliability (percent agreement and Cohen’s kappa). Total percent agreement was 86%.

Interrater and Cohen’s kappa reliabilities for the DPICS categories included in this study were calculated for the eight 5-minute child-led coding segments that were randomly selected for reliability coding (Table 2-3). Initially, percent agreement and
kappa for behavior descriptions and reflective statements fell below 40% or .40, which is considered unacceptably low (Landis, 1977). These categories likely produced low inter-coder reliabilities due to the low frequency of behavior descriptions and reflections that occurred at pretreatment. There were only 3 behavior descriptions and 7 reflections among the eight pretreatment segments that were coded. Due to the low reliabilities, these categories were re-coded by both the primary and the reliability coder. Percent agreement on all segments after re-coding of behavior descriptions and reflections, ranged from 78% (indirect command) to 100% (labeled praise). Cohen's kappa reliabilities ranged from .70 (indirect command) to 1.0 (labeled praise).

Table 2-3. Inter-coder Reliability of the Dyadic Parent-Child Interaction Coding System-III (DPICS-III) for Kinship Caregivers

<table>
<thead>
<tr>
<th>DPICS Category</th>
<th>Percent Agreement</th>
<th>Kappa</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDI Do Skills</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Behavior Description</td>
<td>81</td>
<td>.80</td>
</tr>
<tr>
<td>Unlabeled Praise</td>
<td>85</td>
<td>.83</td>
</tr>
<tr>
<td>Labeled Praise</td>
<td>100</td>
<td>1.0</td>
</tr>
<tr>
<td>Reflective Statement</td>
<td>85</td>
<td>.83</td>
</tr>
<tr>
<td>CDI Don’t Skills</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indirect Command</td>
<td>78</td>
<td>.70</td>
</tr>
<tr>
<td>Direct Command</td>
<td>89</td>
<td>.87</td>
</tr>
<tr>
<td>Descriptive/Reflective</td>
<td>88</td>
<td>.83</td>
</tr>
<tr>
<td>Question</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information Question</td>
<td>85</td>
<td>.84</td>
</tr>
<tr>
<td>Criticism</td>
<td>96</td>
<td>.95</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Percent Agreement is based on summing the agreements across participants and dividing by the agreements plus disagreements.

Procedures

The study was approved by the University of Florida Health Science Center Institutional Review Board. A randomized controlled trial (RCT) with a waitlist control design was utilized for this study. Upon entry to the study, participants completed a pre-training assessment (Time 1) as described below. Following this assessment, families
were randomly assigned to the immediate training (IT) group or the waitlist control (WLC) group. All families were informed prior to study enrollment of the possibility of being assigned to the WLC group, which involved a waiting period of approximately 5 weeks. Following the end of the waiting period (immediately prior to beginning training), families in the WLC group completed an additional assessment (Time 2), which included the same measures and procedure described below in the “pre-training assessment” section.

The use of RCTs including a control group has been advocated by Chambless and Hollon (1998) and others as an effective research design for evaluating intervention outcomes. According to the Chambless and Hollon criteria, interventions may be considered possibly efficacious, or promising but in need of replication, if the intervention is compared to no treatment or an alternative treatment in a RCT. These criteria also specify that interventions use a treatment manual or logical equivalent, use of reliable measures, and uninformed data coding. In this study, parent-training sessions followed the standard PCIT protocol for CDI sessions (Eyberg & Child Study Lab, 1999).

**Study Design and Procedure**

**Recruitment**

Original plans for recruitment relied exclusively on referrals through PSF staff. Due to receiving no referrals from this source within the first three months of this study, additional recruitment strategies were implemented. Along with referrals from PSF staff, potential participants were targeted through newspaper advertisements, flyers and brochures placed in schools and healthcare offices, and by referral from Shands
Hospital pediatric social workers. Families were required to contact study investigators to initiate screening for the study.

**Initial screening**

Initial screening procedures involved collecting basic identifying information from families including caregiver and child name, child birth date, contact information, and information regarding the presence of child pre-existing or suspected diagnosis of Autism or major sensory impairment. The investigator administered the ECBI intensity and problem scales by telephone. Caregivers rating their child at or above 15 on the ECBI problem scale and those who met the additional inclusion criteria were scheduled to complete an in-person pre-training assessment at the Library Partnership community facility. Figure 2-2 displays the assessment and training schedule for all participants.

![Figure 2-2. Training flow diagram](image)
**WLC and IT time 1 assessment**

All assessment appointments and training sessions took place at the PSF community facility, the Library Partnership: A Neighborhood Resource Center (NRC). The average Time 1 (pre-training) assessment lasted 90 minutes. Families that met study eligibility criteria and expressed interest in participating were provided with and required to sign and return a copy of the University of Florida’s Institutional Review Board Informed Consent Form (ICF). Study assessors reviewed the ICF with each caregiver during the Time 1 appointment. Following the consent process, the caregiver and child were observed in a 5-minute standardized DPICS child-led play situation. Caregivers then completed a CBCL, PAD, CPRS, and demographic questionnaire. A second 5-minute DPICS child led play observation was conducted following completion of Time 1 assessment questionnaires in order to increase the stability of the observational data. Caregivers assigned to the IT group were then scheduled to begin training within 1 week of completing the Time 1 assessment. The waitlist control families were scheduled for a post-wait assessment (WLC Time 3) 5 weeks following the initial Time 1 assessment. Caregivers assigned to the WLC group began training within 1 week of the Time 3 assessment (described below).

**WLC and IT time 2 assessment**

All WLC participants completed a “mid-wait” or Time 2 assessment three weeks after the Time 1 assessment. All IT participants completed a “mid-training” or Time 2 assessment two weeks after beginning their training. The mid-training assessment was expected to last no longer than 30 minutes in addition to the regular 60 minute training session. During these assessments all participants completed the CPRS.
Training

A training manual that provided written outlines in checklist form for each session was followed to help ensure treatment fidelity (Eyberg & Child Study Lab, 1999). The initial training session was 90 minutes, and all subsequent sessions were 60 minutes. During the first session, the trainer conducted an unstructured clinical interview in order to gather information regarding child behavior problems and other mental health concerns, typical discipline techniques, family structure, caregiver expectations for the relationship with the child, and other relevant clinical information. This interview also served to establish rapport with participants. According to standard PCIT protocol, the initial CDI session was a Teach session in which trainers defined each CDI skill and its specific effect on the child. This session facilitated caregiver skill acquisition by engaging the caregiver in discussion and role-play of the skills. The “do skills” of CDI are referred to as the PRIDE skills (i.e., Praise, Reflection, Imitation, Description, Enthusiasm) and the “don’t skills” of CDI, which apply to specific caregiver-child play situations, include giving no questions, commands, or criticisms. During this session and throughout CDI training, caregivers were taught to use the technique of “active ignoring,” which involves removal of caregiver attention when the child engages in negative, attention-seeking behaviors. At the end of this session, trainers assigned daily 5-minute practice of CDI skills at home between sessions. The trainer scheduled the caregiver and child to attend the next session, the first “coach” session in which the trainer coaches the caregiver in the use of CDI skills while the caregiver plays with the child.

All remaining sessions were coach sessions, which began with a 5- to 10-minute check-in for reviewing CDI homework and the child’s behavior since the last session. All
caregivers were asked to complete an ECBI at the beginning of each training session. The trainer then prompted the caregiver to begin the CDI with the child in a playroom while the trainer tallied CDI skills. This initial observation period allowed the trainer to assess progress made since the previous session and determine which skills to target during coaching. “Coaching” in sessions involved providing positive feedback and constructive guidance to the caregiver by pointing out how the caregiver’s skill use affects the child’s behavior. In this study, all coaching occurred from within the play room with the caregiver and child.

In the standard PCIT protocol, therapists work with caregivers to achieve pre-set criteria for use of CDI skills as an indication of skills mastery and readiness to proceed to the next phase of treatment. In this study, families participated in 8 CDI sessions over the course of 4 weeks regardless of CDI skills mastery. On average, by CDI session 8, caregivers independently gave 5.63 labeled praises, 5.25 reflections, 6.58 behavior descriptions, 3.38 questions, 1.6 commands, and 0.25 criticisms during a 5 minute play observation as recorded by the trainer during the session indicating that they had achieved a little over 50% of the CDI Do skills at completion of the 8 sessions and were very close to the mastery criteria for CDI Don’t skills. The weekly ECBI intensity and problem T scores are shown in Figure 2-3. Prior to training, all caregivers reported child behavior problems in the clinically significant range (ECBI Intensity score ≥ 132). Following training, all caregivers rated their child’s behavior within the normative range and close to the criterion for treatment completion in standard PCIT (i.e., ECBI Intensityy score < 114). In this sample ECBI change was both clinically and statistically significant, t(4) = 9.55, p = .002.
Figure 2-3. Eyberg Child Behavior Inventory scores during treatment. Raw scores are graphed. The horizontal line indicates the ECBI clinical cut-off score (132).

At the conclusion of the final session, families received a certificate of completion and a handout with information on discipline techniques appropriate for young foster children (Eyberg & Funderburk, 2011).

**Post-training assessment**

The average post-training assessment lasted 60 minutes. As in the Time 1 assessment, the caregiver and child were observed in a 5-minute standardized DPICS child-led play situation. Caregivers then completed an ECBI, CBCL, PAD, and CPRS. A second 5-minute DPICS child-led play observation was conducted following completion of post-training assessment questionnaires. Caregivers in the WLC were compensated $25.00 for their participation in the study. Caregivers in the IT group were then reminded of the follow-up questionnaires they would be asked to complete 3 months later either via mail or telephone.
IT Follow-up assessment

Three months following completion of the post-training assessment, all IT families were asked to repeat the questionnaires completed at the Time 1 and Time 3 assessment. These questionnaires include the ECBI, CBCL, PAD, and CPRS. Families were compensated with $25.00 for their participation in the study.

Training integrity

Training integrity was evaluated by examining session outline checklists. Trainers recorded training activities on weekly session outlines. Undergraduate research assistants calculated the total recorded activities and divided that number by the total required training activities. Accuracy was 96% with the training protocol across all training sessions according to the trainer’s self-ratings.

Statistical Analysis

Data analysis was conducted using the Statistical Package for the Social Sciences 18.0 (SPSS). Preliminary statistical analyses and specific analyses for each hypothesis are detailed below.

Data was screened to ensure univariate normal distribution prior to statistical analyses using a number of indicators. Normality assumptions were first assessed with descriptive statistics and boxplots. Values of kurtosis and skewness were considered, and a z-score value at or above 2.58 was used to indicate a significantly non-normal distribution. Finally, Kolmogorov-Smirnov and Shapiro-Wilk tests were used as a further indication of non-normal distributions (Field, 2005). Using these multiple indicators, significantly non-normal distributions were corrected using statistical transformations in order to preserve data points. Time 1 and 3 CDI Don’t Skill distributions were adjusted with square root transformations to correct for significant non-normality.
Descriptive statistics, including means and standard deviations of the DPICS, CBCL, CPRS, and PAD have been reported in Table 3-1 and 3-2. For the CBCL, mean scores on the two broadband scales (Internalizing and Externalizing Problems scales) have been reported. Subscale scores on the CPRS positive scale have been reported, and mean scores and overall percentages per attachment category will be reported for the PAD.

Mixed between-within subjects analyses of covariance (ANCOVA), with pretreatment scores as covariates, were used to determine training effects from CDI pre-training to post-training on each measure (Objective 1).

As recommended by Preacher and Hayes (2008), Hayes (2009), and Fritz & MacKinnon (2007), a bootstrapping sampling procedure was used to determine the indirect effect of the proposed mediator, relationship improvement, on behavior change (Objective 2). Figure 2-4 depicts the proposed mediator model.

![Figure 2-4. Proposed Indirect Effects of Relationship Change on Behavior Change.](image-url)
This method has emerged as a procedure superior to Baron and Kenny’s (1986) causal method for determining mediation not only because it provides optimal power for identifying existing effects while maintaining good control over Type I error, but it also has the capacity to determine the overall indirect effect rather than relying on inference of the effect based on constituent paths. Unlike Baron and Kenny’s causal approach, this method is well-suited for use with non-normal distributions such as those associated with small sample size (Preacher & Hayes, 2007). Essentially, bootstrapping treats the given sample as a representation of the larger population and repeatedly re-samples during analysis as a way to mimic the original sampling process. This process is done by continuously replacing sampled data so that the new sample size is built by sampling cases from the original sample while maintaining original sample size. This process repeats itself many times (in our case, 5000 times) in order to produce estimates of the indirect effect. A sampling distribution of the indirect effects is generated when sampling from the original population so that an inference can be made about the size of the actual indirect effect in the population within a given confidence interval (in our case, 95% CI). A point estimate for the indirect effect was considered significant if zero was not included in the 95% percentile-based bootstrap confidence interval.

Limited follow-up participation prevented analysis of maintenance of change in child behavior, internalizing symptoms, and the caregiver-child relationship (Objective 3) 3 months after completion of training.
CHAPTER 3
RESULTS

This study evaluated the efficacy of CDI skills training in reducing child internalizing and externalizing behavior problems and improving the caregiver-child relationship. Analyses of covariance (ANCOVA), with pre-treatment scores as the covariate, were used to determine CDI training effects. Recommended for randomized clinical trials, ANCOVA offers a more statistically powerful analytic method than repeated measures analysis of variance (Rausch, Maxwell, & Kelley, 2003). Alpha was set at .05 for all analyses because each dependent variable was independently of interest but exact alpha levels have been reported. All analyses were conducted using comparisons between (a) the 5 IT participants who completed all training sessions and their post-training assessment and (b) the 6 WLC participants who completed their post-wait assessment. Cohen’s $d$ has been reported to reflect the strength of these comparisons by dividing the pooled variance by the difference in Time 3 IT and WLC mean scores. Following conventional guidelines, effect sizes are labeled as follows: .2 is small, .5 is medium, and .8 is large (Cohen, 1988).

**Observed Parent-Child Interaction**

Results revealed that after training, caregivers in IT group used significantly more CDI Do skills, $F(1, 6) = 43.97, p = .001$ and significantly fewer CDI Don’t skills, $F(1, 6) = 28.91, p = .002$ than WLC caregivers. Mean skills totals and effects sizes of change between the IT and WLC group on these observational measures at Time 1 and Time 3 assessment points are presented in Table 3-1.
Table 3-1. Time 1 and 3 Scores for Maternal Caregivers During 5-Minutes of Observed Child-Led Play

<table>
<thead>
<tr>
<th>Measure</th>
<th>Group</th>
<th>Time 1</th>
<th></th>
<th>Time 3</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
<td>p</td>
<td>d</td>
</tr>
<tr>
<td>Do skills</td>
<td>IT</td>
<td>8.10</td>
<td>5.95</td>
<td>29.5</td>
<td>4.04</td>
<td>.001</td>
<td>6.19</td>
</tr>
<tr>
<td></td>
<td>WLC</td>
<td>3.67</td>
<td>3.37</td>
<td>4.50</td>
<td>4.04</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Don’t skills</td>
<td>IT</td>
<td>36.7</td>
<td>13.07</td>
<td>5.00</td>
<td>2.35</td>
<td>.002</td>
<td>2.53</td>
</tr>
<tr>
<td></td>
<td>WLC</td>
<td>45.08</td>
<td>32.00</td>
<td>50.80</td>
<td>25.49</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. IT = immediate treatment (n = 5), WL = wait-list control (n = 6).

*Cohen’s d = effect size of change between IT and WLC groups at the Time 3 assessment

*^b^Do Skills include behavior descriptions, reflections, and labeled praise.

*^c^Don’t Skills include questions, commands, and criticisms.

**Caregiver Report of Child Attachment-Related Behaviors**

Results show that after training, there is no significant differences in caregiver report of secure child behaviors on the PAD between the IT and WLC groups, $F(1, 7) = .187, p = .68$. There were no significant differences in caregiver report of avoidant child behaviors on the PAD between the IT and WLC groups, $F(1,7) = 0.06, p = .82$. Results show that there were no significant differences in caregiver report of less resistant child behaviors on the PAD between the IT and WLC groups, $F(1,7) = 0.47, p = .51$.

On the PAD, IT caregivers reported that their child demonstrated 81% secure attachment-related behaviors, 11% avoidant behaviors, and 8% resistant behaviors on average in response to stressful events prior to beginning training (Time 1). Following training (Time 3), caregivers reported 89% secure attachment-related behaviors, 6% avoidant behaviors, and 4.8% resistant behaviors in the same situations. On average, WLC caregivers reported that their child demonstrated 67% secure attachment-related behaviors, 22% avoidant behaviors, and 17% resistant behaviors at Time 1. Following the wait period, WLC caregivers reported 77% secure attachment-related behaviors, 21.6% avoidant behaviors, and 5% resistant behaviors as demonstrated by their child.
under stressful circumstances. Table 3-2 displays the mean raw scores, standard deviations, \( p \) values, and effect sizes of the caregiver reports of child attachment-related behaviors.

**Caregiver Report of Relationship Quality**

After training, IT caregivers reported having significantly more positive interactions with their child than WLC caregivers on the CPRS, \( F(1, 7) = 8.01, p = .03 \). Table 3-2 displays the mean raw scores, standard deviations, \( p \) values, and effect sizes of caregiver CPRS reports.

**Caregiver Report of Child Behavior**

Results show that after training, there were significant differences in caregiver CBCL report of child externalizing behaviors between the IT and WLC groups, \( F(1, 7) = 5.91, p = .05 \). Eighty percent of those in the IT group showed clinically meaningful changes on the CBCL externalizing scale compared to 0% of the WLC group. There were no significant differences in caregiver CBCL report of child internalizing symptoms between the IT and WLC groups after training, \( F(1, 7) = 0.26, p = .63 \). Table 3-2 displays mean T-scores, standard deviations, and \( p \) values of the caregiver reports on the CBCL. Effect sizes of post-training differences between IT and WLC are also been presented in Table 3-2.

**Indirect Effects of Child Behavior Change**

In order to identify if change in relationship quality indirectly affects change in child behavior, a bootstrapping procedure was used to determine total and indirect effects of the proposed mediator, change in relationship quality. Child behavior was measured by caregiver report of CBCL externalizing problems and relationship quality was measured by caregiver report on the CPRS. Change in relationship quality was calculated by
Table 3-2. Mean Caregiver Report Scores on the PAD, CPRS, and CBCL for Time 1 and Time 3 Assessments

<table>
<thead>
<tr>
<th>Measure</th>
<th>Group</th>
<th>Time 1</th>
<th></th>
<th>Time 2</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
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<tbody>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>p</td>
<td>d*</td>
<td></td>
</tr>
<tr>
<td>PAD</td>
<td>Secure</td>
<td>IT</td>
<td>9.75</td>
<td>4.57</td>
<td>10.5</td>
<td>2.08</td>
<td>.81</td>
<td>0.21</td>
</tr>
<tr>
<td></td>
<td></td>
<td>WLC</td>
<td>10.00</td>
<td>4.53</td>
<td>11.2</td>
<td>4.55</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Avoidant</td>
<td>IT</td>
<td>1.75</td>
<td>2.36</td>
<td>0.75</td>
<td>0.96</td>
<td>.63</td>
<td>0.71</td>
</tr>
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<td></td>
<td></td>
<td>WLC</td>
<td>3.80</td>
<td>4.90</td>
<td>2.80</td>
<td>4.20</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Resistant</td>
<td>IT</td>
<td>1.50</td>
<td>1.92</td>
<td>0.50</td>
<td>0.57</td>
<td>.87</td>
<td>0.81</td>
</tr>
<tr>
<td></td>
<td></td>
<td>WLC</td>
<td>3.00</td>
<td>4.97</td>
<td>2.80</td>
<td>4.21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CPRS</td>
<td>Positive</td>
<td>IT</td>
<td>44.00</td>
<td>3.16</td>
<td>48.50</td>
<td>1.73</td>
<td>.03</td>
<td>2.12</td>
</tr>
<tr>
<td></td>
<td></td>
<td>WLC</td>
<td>36.6</td>
<td>6.54</td>
<td>38.8</td>
<td>4.32</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CBCL</td>
<td>Externalizing</td>
<td>IT</td>
<td>67.75</td>
<td>4.27</td>
<td>53.75</td>
<td>8.92</td>
<td>.05</td>
<td>-0.86</td>
</tr>
<tr>
<td></td>
<td></td>
<td>WLC</td>
<td>69.2</td>
<td>9.73</td>
<td>67.67</td>
<td>11.68</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Internalizing</td>
<td>IT</td>
<td>62.75</td>
<td>15.5</td>
<td>51.75</td>
<td>4.99</td>
<td>.69</td>
<td>-0.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>WLC</td>
<td>62</td>
<td>5.43</td>
<td>54.33</td>
<td>9.5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: IT = Immediate treatment (n = 5), WLC = waitlist control (n = 6)

*Cohen's d = effect size of post-training difference between IT and WLC groups.

Taking the difference between pre- and post-training caregiver CPRS report. Bootstrap results show that the model’s constituent paths are approaching significance at the .05 level. Results indicated that the total indirect effect for the proposed mediator, relationship change, was not significant (Z = - 1.90, SE = .37; p = .06). Significant values for the direct effects within the model are depicted in Figure 3-1.

**Maintenance of Training Gains**

Although low follow-up response rate prevented statistical analysis of maintenance of training gains, data from the two respondents that completed follow-up questionnaires (Table 3.3) showed that child externalizing and internalizing behavior problems as reported on the CBCL remained the same or decreased over the three month follow-up period. Although caregiver report of child behavior problems as rated on the ECBI Intensity Scale increased over the follow-up period, scores remained in the normative range. Consistent with pre-post training results, changes in attachment-
related behaviors were reported on the PAD after the follow-up period. Finally, these two caregivers reported a slight decrease in positive interactions with their child after the follow-up period.

Figure 3-1. Direct effects of mediator model. Path values represent unstandardized regression coefficients and the corresponding $p$ values. Values in the parentheses represent the direct effect of pre-training behavior problems on post-training behavior problems before inclusion of the proposed mediator.
Table 3-3. Three-month follow-up data

<table>
<thead>
<tr>
<th></th>
<th>Participant</th>
<th>Post-Training</th>
<th>3-Month Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Child Behavior Checklist</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Externalizing</td>
<td>A</td>
<td>43</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>51</td>
<td>51</td>
</tr>
<tr>
<td>Internalizing</td>
<td>A</td>
<td>45</td>
<td>37</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>56</td>
<td>49</td>
</tr>
<tr>
<td><strong>Eyberg Child Behavior Inventory</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intensity</td>
<td>A</td>
<td>85</td>
<td>97</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>74</td>
<td>102</td>
</tr>
<tr>
<td>Problem</td>
<td>A</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td><strong>Parent Attachment Diary</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secure</td>
<td>A</td>
<td>10</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>13</td>
<td>16</td>
</tr>
<tr>
<td>Avoidant</td>
<td>A</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Resistant</td>
<td>A</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td><strong>Child-Parent Relationship Scale:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive</td>
<td>A</td>
<td>46</td>
<td>43</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>50</td>
<td>49</td>
</tr>
</tbody>
</table>

Note. n = 2 (referred to as participants A and B in this table).
CHAPTER 4
DISCUSSION

Results of this study provide preliminary support to suggest that CDI training with kinship caregivers of young children is effective at decreasing child behavior problems and improving the quality of the caregiver-child relationship. Caregivers who received training reported significant improvements in child behavior and relationship quality which resulted in large effect sizes and clinically meaningful change. Though meaningful these results must be interpreted cautiously in consideration of the small sample size and the unique characteristics of study participants. Also of importance are the factors that influenced recruitment and retention as these issues have major implications for future study design.

The first objective of this study was to examine differences in caregiver skill acquisition, attachment-related behaviors, positive interactions, and child internalizing and externalizing behavior problems between the IT and WLC group following training. As expected, caregivers in the IT group significantly increased their use of CDI “Do” skills and decreased use of “Don’t” skills. Following training, these caregivers were observed to interact more positively with their children and reported improvements in the caregiver-child relationship and child externalizing behavior problems. Caregivers learned to interact more positively with their children by increasing positive attention to appropriate behaviors.

Significant differences between the IT and WLC group were not found in child attachment-related behaviors following CDI training. Overall, however, secure attachment-related behaviors increased, and avoidant and resistant attachment-related behaviors decreased following CDI training in the immediate treatment group.
Interestingly, the WLC group also showed an increase in secure attachment-related behaviors. This increase in secure attachment-related behaviors for both groups may be due to naturalistic changes in the attachment relationship that result from increased contact with the primary caregiver. Behaviors associated with secure attachment style (e.g., comfort-seeking behaviors) are more likely to be reinforced over time by caregivers that are sensitive to their child’s cues resulting in more frequent demonstration of these behaviors (Dozier, Stovall, Albus, & Bates, 2001). It may be that caregivers who are motivated to seek parent training are more likely to be predisposed to sensitive and responsive caregiving, which is critical in healthy attachment formation (Dozier, Stovall, Albus, & Bates, 2001; Dozier, et al., 2006). It may also be that this characteristic alone (i.e., sensitive caregiving) increases secure attachment-related behaviors as both the IT and WLC group showed improvements. Caregivers involved in on-going custody cases are often mandated to participate in parent training courses or mental health services for the target child. Future research examining changes in attachment over time in those caregiving situations would be particularly useful for understanding whether or not voluntary participation in parent training is related to attachment change.

The IT group showed significant improvements in the quality of the caregiver-child relationship compared to the WLC group. Results showing improvement in relationship quality are consistent with the primary goal of CDI to enhance the relationship between caregiver and child and reflects an increase in warmth and sensitivity within this relationship. Given the importance of establishing consistently warm and loving relationships with children who have histories of disrupted attachments and
maltreatment (Dozier, et al., 2006; Newton, Litrownik, & Landsverk, 2000), the increased report of positive caregiver-child relationships following CDI is particularly promising for the use of CDI training with relative caregivers.

Consistent with previous PCIT research (Eisenstadt et al., 1993; Eyberg et al., 2001), significant reductions in CBCL externalizing behavior problems were reported following CDI training. Notably, ratings of child externalizing behavior in the IT group reliably decreased from within the clinical range to within the normal range, and no clinically or statistically significant changes occurred in the WLC group. In addition, all caregivers’ weekly ratings of child behavior on the ECBI decreased from within the clinical range to the normal range over the course of training. The ECBI decreases were also found to be not only clinically but statistically significant.

A pattern emerged in which caregivers consistently reported a spike in behavior problems at the third CDI session followed by a decrease in behavior problems for the remaining 5 sessions. Because of the small sample size of this study, this finding may be strictly due to chance. However, the pattern of increased behavior problems at the beginning of treatment may be unique to children with maltreatment histories. Maltreated children are more likely to have attachment difficulties (Dozier et al., 2006). These difficulties are manifested by avoidant, reactive, or disorganized behavior (e.g., ignoring, hitting, tantrumming) toward caregivers due to the child’s history of encountering unpredictable behavior from abusive caregivers (Dozier, et al., 2006). More research is needed to determine if this pattern is in fact unique to children with maltreatment histories.
No statistically significant changes were found on the CBCL Internalizing scale which was not outside normal limits at pre-training. It may be that no significant changes occurred because the children did not have significant internalizing symptoms prior to training. Research suggests that children with maltreatment histories have significant internalizing symptoms, though, (Kaufman & Cicchetti, 1989; Salzinger et al., 1993) and the lack of significant internalizing symptoms at pre-training may be the result of difficulty detecting internalizing symptoms in young children. Research shows that internalizing symptoms are more difficult to detect in young children due to difficulty assessing symptoms (Lavigne, et al., 1996). Future research may benefit from inclusion of detailed diagnostic instruments specifically designed to measure of internalizing symptoms such as the Diagnostic Infant and Preschool Assessment (DIPA; Scherringa, 2004) and may consider reports from other respondents such as teachers and other caregivers.

The second objective of this study was to identify if relationship quality is a mechanism of child behavior change over the course of CDI training. Preliminary findings suggest that the indirect effects of relationship improvement on child behavior change are not significant. Bootstrapping methods for estimating indirect effects are relatively recent within the literature, and limited examples exist from which to estimate adequate sample size for detecting effects, and the sample size in this study may still be too small regardless of how robust the bootstrapping method may be. Research suggests, though, that detecting indirect effects via bootstrapping requires the smallest sample size of all well-regarded statistical methods for this analysis (Preacher, Rucker, & Hayes, 2007; Preacher & Hayes, 2008). Conversely, factors other than relationship
quality may better explain the mechanism of child behavior change during CDI such as change in parental perceptions of their ability to manage child behavior, parental stress, or child internalizing symptoms such as PTSD symptoms or anxiety. Further research should investigate multiple mediators particularly because kinship caregivers have been reported to have more stressors than non-relative caregivers (Gebel, 1996) and the mechanism of behavior change may be complicated.

The third objective of this study was to examine maintenance of training gains three months following CDI training. Attrition between post-training assessment and the 3-month follow-up was 60%. Although low response rates prevented statistical analysis of follow-up data, considering factors that may have contributed to study retention through the follow-up assessment may be useful in reducing follow-up attrition for families participating in continuation of this study currently or in the future. Caregivers who provided follow-up data had more economic resources than caregivers who did not provide follow-up data, and one of these caregivers had extensive experience caring for foster children. Caregivers who did not provide follow-up data may have encountered more barriers to returning questionnaires such as time limitations due to working multiple jobs or caring for more children and may have been more likely to provide data with greater incentives. Some caregivers may have lacked motivation to complete follow-up questionnaires because doing so may have been perceived as not beneficial to the caregiver and child whereas completion of earlier assessments was more closely tied to receiving the benefits of CDI training or were more conveniently scheduled immediately after the last training session.
This study has important limitations to be acknowledged. Perhaps most importantly, the small sample size limits the generalizability of these results and may limit detection of true effects in some analyses (e.g., CBCL internalizing problems, follow-up data). The small sample size also limits confidence in the outcome of objective two Objective 2, in which a relatively new statistical procedure designed to take into account small sample size, was used.

The study sample contained unique demographic characteristics that may also limit our ability to generalize results to all kinship caregivers. Caregivers in this sample were, on average, more highly educated and had more economic resources than what is reported in other studies of kinship caregivers. Whereas the majority of caregivers in the study sample had some college or technical education, previous studies of kinship caregiver characteristics report that these caregivers tend to have no more than a high school education (Harden, Clyman, Kriebel, Lyons, 2004; Berrick, Barth, & Needel, 1994). Reported annual income in this study sample is also higher than what has been reported in previous studies of kinship caregivers (Berrick, Barth, & Needel, 1994; Gebel, 1996), Given that previous studies on kinship caregiver demographics occurred over ten years ago, this difference may be due to inflation and other economic factors. On the other hand, because the study caregivers are also more highly educated than caregivers in previous studies, we expect that the difference in income is an important limitation to the generalizability of our sample to the population of kinship caregivers at large.

In addition to these, threats to generalizability, a majority of participants in this study were Caucasian, whereas previous studies indicate that a majority of kinship
caregivers are African American (Harden, Clyman, Kriebel, Lyons, 2004). Research has shown that minorities and individuals of lower socio-economic status are less likely to seek and access health care services and mental health services in particular (Adamson, Ben-Shlomo, Chaturvedi, & Donovan, 2003; Weissman, Stern, Fielding, & Epstein, 1991). It may be that our sample represents a particular subset of kinship caregivers that are more likely to access health care services.

Recruitment strategies in future research should be designed to attract typical kinship caregivers as reported in previous research. Specifically, recruitment strategies need to be sensitive to the needs of caregivers that are African American, less educated, older, and less likely to access available social services for kinship caregivers. Participants with these characteristics are historically difficult to include in research due to factors such as mistrust of researchers and academic institutions and low stated need for services or aversive past experiences in accessing services (Yancey, Ortega, & Kumanyika, 2006). Dennis and Neese (2000) stated that researchers wishing to include low-income, African American families should establish partnerships with formal and informal community leaders, build trust by communicating in understandable and culturally sensitive terms, and highlight the mutual benefits of research participation to the participant as well as researcher. Although limited research exists on specific design and recruitment strategies for families with characteristics typical of kinship caregivers, previous research suggests including brief assessment measures so that research is viewed as less intrusive, minimizing length of participation, and developing flexible intervention delivery options (e.g., in-home services) (Heinrichs, Bertram, Kuschel, & Hahlweg, 2005). This study required relatively brief participation
and took place within a community center, which was purposely chosen as a more convenient, comfortable, and low-stigma location. However, the study was affiliated with a large university, which may have negatively impacted perception of the study in that it was associated with an academic institution rather than trusted community leaders.

Future research should consider building relationships with relevant community resources and leaders in the early phases of study design. For example, it may be important to allocate time for regularly attending valued community events such as health fairs and local school functions in order to establish a consistent presence within the community. Upon establishing this presence, researchers may also wish to consider gathering information from potential participant pools prior to study design regarding what characteristics help and hinder program participation.

Although we attempted to establish a strong relationship with the local child welfare agency, we did not receive referrals from this potentially rich source. Case worker time constraints and lack of knowledge of the program likely interfered with receiving referrals from this source. Future recruitment efforts should focus on more active and personal involvement with case workers. Throughout this study, we attended case worker meetings and provided fliers, brochures, and information about the progress of the study to case workers and supervisors. It may be beneficial to work toward establishing more personal relationships with case workers and maintaining frequent contact in order to build rapport and maintain consideration as a viable referral option. There also appeared to be regulations regarding referring families to agency-approved interventions versus “experimental” interventions associated with research. This barrier is challenging in that strict policies may dictate referral options. Researchers
must establish clear lines of communication with individuals involved in establishing and implementing such policies in order to understand ways in which research and policy can work together to advance service options for this needy population.

Future research should examine the potential role of length of placement or age at placement with caregiver on intervention outcomes. For example, it is important to consider whether length of placement prior to intervention impacts behavior change. Research suggests that age of placement with a caregiver may impact attachment formation in that placement earlier in life is related to better outcomes (Dozier, et al., 2001) and that attachment quality is related to externalizing and internalizing symptoms (Steinberg, 2007). Understanding the role of placement length or age of placement on the outcome of intervention may guide recommendations for timing interventions to protect further against placement disruption and subsequent behavior problems.

Measurement of attachment was also a limitation in this study due to limited availability of psychometrically sound and objective measures of attachment for the entire age range included in this study. Valid and reliable objective measures exist for more limited age ranges, but no objective measure exists for the entire age range of this study. The PAD was utilized due to the ability to capture attachment-related behaviors in this relatively broad age range due to the ease of administration, and its ability to capture daily information about attachment over a period of time. A strength and limitation of the PAD is its reliance on caregiver report of child behavior, which may be influenced by demand characteristics but is an important source of information on attachment.
Measures of attachment such as the Strange Situation or the Crowell procedure could be used to provide a more objective measure of attachment (Lamb, Thompson, Gardner, & Charnov, 1985; Crowell, Feldman, & Ginsberg, 1988). However, these procedures are designed primarily for children ages 5 and under and therefore more restricted age range criteria would be required to gather this information. The Strange Situation and Crowell require extensive training and only allow for examining attachment behaviors in a brief period of time (Dozier, 2004). The Attachment Q-Set is a Q-sort instrument that may be completed by a familiar caregiver or by a clinician. This instrument may provide more objective data than the PAD, but this measure has been criticized for being too time-consuming and tedious (Dozier, 2004). More research on parent-training and the impact on attachment is needed utilizing both observational and parent-report measures in order to provide a more comprehensive view of the impact of parent-training on attachment.

Low enrollment rates coupled with low rates of response to follow-up measures also limited analysis of follow-up data. Fernandez and Eyberg (2009) report high rates of attrition in family therapy during follow-up periods ranging from 22% to 40%, and 60% of participants in this study did not complete follow-up measures. Difficulty reaching caregivers 3 months following training either by phone or mail was the primary reason for not gathering follow-up data. These caregivers were either unreachable or opted to discontinue involvement at that time point without informing the investigator. Future research should incorporate methods for maintaining contact with families once training has been completed as long-term effects of CDI training on relationship quality and child behavior is important for understanding factors that contribute to placement stability in
this population. Methods such as weekly check-ins with CDI trainers and motivational enhancements at the end of training and throughout the follow-up period have been suggested by researchers as strategies for reducing attrition (Fernandez & Eyberg, 2009).

Despite limitations, these results show promising support for the use of CDI training with relative caregivers to address behavior problems and improve relationship quality. Identifying relatively brief and effective interventions for kinship caregivers and their children is crucial for preventing negative psychosocial outcomes within this vulnerable group. Results of this study also provide important information about conducting research within this population. Accessing relative caregivers of maltreated children poses unique challenges that may hinder scientific efforts to produce meaningful and generalizable information about the target population. As a result, much consideration must go into study design, recruitment, and retention efforts to further empirical work in this field.
# APPENDIX A

EXPECTED AND OBTAINED MEANS FOR POWER ANALYSIS

<table>
<thead>
<tr>
<th>Measure</th>
<th>Time</th>
<th>Anticipated</th>
<th>Obtained</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>M&lt;sup&gt;1&lt;/sup&gt;</td>
<td>SD</td>
</tr>
<tr>
<td>Child Behavior Checklist</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Externalizing</td>
<td>Pre CDI</td>
<td>74.3</td>
<td>7.3</td>
</tr>
<tr>
<td></td>
<td>Post CDI</td>
<td>69.9</td>
<td>8.0</td>
</tr>
<tr>
<td>Internalizing</td>
<td>Pre CDI</td>
<td>66.2</td>
<td>8.0</td>
</tr>
<tr>
<td></td>
<td>Post CDI</td>
<td>61.5</td>
<td>7.9</td>
</tr>
<tr>
<td>Eyberg Child Behavior Inventory</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intensity</td>
<td>Pre CDI</td>
<td>171.6</td>
<td>24.6</td>
</tr>
<tr>
<td></td>
<td>Post CDI</td>
<td>143.2</td>
<td>24</td>
</tr>
</tbody>
</table>

<sup>1</sup> <sup>n</sup> = 24; <sup>2</sup> <sup>n</sup> = 5
APPENDIX B
DEMOGRAPHIC QUESTIONNAIRE

CHILD INFORMATION

(Child’s) First Name: ____________________
Last Name: ____________________

Child’s Date of Birth: ___/ ___/ ____

Child’s Sex: (circle one) Male   Female

Child’s Ethnicity: (check one)
___Caucasian
___African-American
___Hispanic
___Native American
___Asian-American
___Bi-racial (please specify) __________________
___Other (please specify) ________________

Is the child currently in school? (check one)
___No
___Daycare
___Preschool
___Kindergarten
___1st grade
Other: ____________

Does the child have any of the following conditions (circle Yes or No):
1. Long-standing illness? Yes No If Yes, please describe:
________________________________________________________

2. Learning/developmental problems? Yes No If Yes, please describe:
________________________________________________________

3. Diagnosis of Autism? Yes No

4. Have you or anyone else ever suspected the child has Autism? Yes No
If Yes, please describe:
________________________________________________________

When was this child placed in your home? Please give your best guess if you are unsure.
___/ ___/____

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What is your relationship to this child? (check one)

___ Aunt    ___ Uncle
___ Grandparent
___ Sibling
___ Cousin
___ Other (please specify) _________________________

Does the child have contact with his or her biological parents? (circle one) Yes    No
If Yes, please describe:
______________________________________________________________________

___
CAREGIVER INFORMATION

First Name: ____________________  Last Name: ____________________

Date of Birth: ___/ ___/ _____

Sex: (circle one)  Male    Female

Ethnicity: (check one)
___Caucasian
___African-American
___Hispanic
___Native American
___Asian-American
___Bi-racial (please specify) __________________
___Other (please specify) ________________

Highest level of education: (check one)
___less than grade 7                             ___junior high school (grades 7-9)
___some high school (grades 10-11) ___high school graduate
___some college or technical school   ___college or technical school graduate
___graduate or professional degree

What is your yearly household income?  ______________

What is your marital status? (please check one)
___ Single    ___Married    ___Separated    ___Divorced    ___Widowed

How many children live in your home?
___Biological    ___Foster    ___Adoptive

Have you had any parent training classes or counseling related to parenting? (circle one)    Yes     No
If Yes, please describe
______________________________________________________________________

____

Have you been granted custody for any other children other than your own? (circle one)    Yes   No
If Yes, please describe
______________________________________________________________________
APPENDIX C

1. Think of any times in the past 2 weeks when your child was physically hurt, and answer the following: (This includes anything like falling down, scraping a knee, bumping into something, etc.)

A. Which of the following did your child most commonly do after he or she was hurt?

**CIRCLE ALL THAT APPLY.**

1. looked at me for reassurance
2. acted as if nothing was wrong
3. acted angry/frustrated (ex. stomped feet, kicked legs)
4. looked at me very briefly then looked away and went on
5. signaled to be picked up or held, reached for me
6. did not indicate he/she wanted or needed me
7. cried and remained where he/she was, did not signal for me
8. whimpered or cried briefly and kept on going, did not look at me
9. sought to be physically close to me (but actual contact did not occur)
10. went off by him/herself
11. acted cool or aloof
12. called for me
13. came to me
14. cried
15. other(s) ___________________________ ___________________________

16. did not happen **SKIP TO ITEM 2**

B. What were your most common immediate response(s)?

**CIRCLE ALL THAT APPLY.**

1. hugged and/or held child
2. rubbed back, stomach, head, etc.
3. kissed child
4. did not touch child in any way
5. asked child to hop up or get up
6. spoke firmly to child
7. remained silent
8. put child in crib, play pen /lay child down for nap
9. gave child medicine, band aid, etc.
10. said something like “oh you’re fine, you’re not hurt” or told child not to be upset
11. picked child up
12. used soothing or explanatory talk to reassure child
13. hit, slapped, spanked
14. laughed
15. ignored child
16. went to another room
17. put child in another room
18. tried to distract child with something else
19. called a doctor, friend, relative for help
20. other(s) ____________________________________________.

C. Which of the following did your child do next?  
**CIRCLE ALL THAT APPLY.**
1. was soon calmed or soothed
2. pushed me away angrily or in frustration
3. stomped and/or kicked feet
4. remained upset, was difficult to soothe
5. did not indicate he/she needed my help
6. turned away when picked up or made contact
7. sunk into me or held on to me until calmed down
8. did not easily let me hold him/her but remained upset (ex. arched back, put arm in between us)
9. acted cool or aloof
10. continued to play, did not notice me
11. hit, kicked at me
12. turned from me angrily or in frustration
13. ignored me
14. became quiet and then fussy again
15. other(s) ____________________________________________

2. Think of any times in the **past 2 weeks** when your child was frightened or afraid of something. (This should not include dropping child off, leaving child, or any other separations)

A. Which of the following did your child most commonly do when he or she was frightened? **CIRCLE ALL THAT APPLY.**
1. looked at me for reassurance
2. acted as if nothing was wrong
3. acted angry/frustrated (ex. stomped feet, kicked legs)
4. looked at me very briefly then looked away and went on
5. signaled to be picked up or held, reached for me
6. did not indicate he/she wanted or needed me
7. cried and remained where he/she was, did not signal for me
8. whimpered or cried briefly and kept on going, did not look at me
9. sought to be physically close to me (but actual contact did not occur)
10. went off by him/herself
11. acted cool or aloof
12. called for me
13. came to me
14. cried
15. other(s) ____________________________________________

16. did not happen  **SKIP TO ITEM 3**

**B. What were your immediate response(s)? CIRCLE ALL THAT APPLY.**

1. hugged and/or held child
2. rubbed back, stomach, head, etc.
3. kissed child
4. did not touch child in any way
5. asked child to hop up or get up
6. spoke firmly to child
7. remained silent
8. put child in crib, play pen, lay down for a nap
9. gave child medicine, band aid, etc.
10. said something like “oh you’re fine, you’re not scared” or told child not to be upset
11. picked child up
12. used soothing or explanatory talk to reassure child
13. hit, slapped, spanked
14. laughed
15. ignored child
16. went to another room
17. put child in another room
18. tried to distract child with something else
19. called a doctor, friend, relative for help
20. other(s) ____________________________________________

**C. What did your child do next? CIRCLE ALL THAT APPLY.**

1. was soon calmed or soothed
2. pushed me away angrily or in frustration
3. stomped and/or kicked feet
4. remained upset, was difficult to soothe
5. did not indicate he/she needed my help
6. turned away when picked up or made contact
7. sunk into me or held on to me until calmed down
8. did not easily let me hold him/her but remained upset (ex. arched back, put arm in between us)
3. Think of any times in the past 2 weeks when you and your child were separated – preferably when your child became upset or distressed. (This can include leaving to go out, going to another room, dropping the child off, etc...This does not include putting child to bed.)

A. How did your child respond to the separation?

**CIRCLE ALL THAT APPLY.**

1. cried, screamed, or yelled
2. went off by him/herself
3. went after me
4. held on to me, wouldn’t let go
5. was happy to keep doing what he/she was doing
6. acted angry or frustrated (ex. stomped feet, kicked legs)
7. was upset but did not indicated that he/she wanted or needed anyone
8. whimpered or cried briefly and kept going, did not look at me
9. acted as if nothing was wrong
10. called after me
11. wanted to be picked up or held
12. acted cool or aloof
13. hit, kicked, or pushed me
14. other(s)__________________________________________

B. What was your child’s immediate reaction when he/she saw you again?

**CIRCLE ALL THAT APPLY.**

1. greeted me (ex: smiled, said my name, said hello)
2. came to me
3. brought me a toy or other object
4. turned away as I picked up or made contact
5. if upset, was easily soothed and calmed by me
6. pushed me away angrily
7. crawled or walked away when he/she saw me
8. sunk into me or held on to me until calmed down
9. did not easily let me hold him/her but remained upset (ex. arched back, put arm in between us)
10. whimpered quietly to him/herself (may have looked at me briefly)
11. wanted to be held, fussed and wanted to get down, then wanted to be picked right back up again
12. continued doing what he/she was doing before (didn’t notice me)
13. looked at me briefly then looked away, did not smile or greet me
14. started to approach me then turned and wandered somewhere else
15. if upset, was not easily soothed and/or calmed by me
16. stomped and/or kicked feet
17. signaled to be held and/or picked up
18. acted as if he/she was angry with me
19. acted cool or aloof
20. hit, kicked me
21. cried and remained where he/she was
22. cried, screamed
23. other(s)__________________________________________

____________________

24. did not happen
Child-PARENT RELATIONSHIP SCALE

Robert C. Pianta

Child: ___________________________      Age: ___
Parent: ____________________________

Please reflect on the degree to which each of the following statements currently applies to your relationship with your child. Using the scale below, circle the appropriate number for each item.

<table>
<thead>
<tr>
<th>Definitely does not apply</th>
<th>Not really</th>
<th>Neutral, not sure</th>
<th>Applies somewhat</th>
<th>Definitely applies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

1. I share an affectionate, warm relationship with my child.  1  2  3  4  5
2. My child and I always seem to be struggling with each other.  1  2  3  4  5
3. If upset, my child will seek comfort from me.  1  2  3  4  5
4. My child is uncomfortable with physical affection or touch from me.  1  2  3  4  5
5. My child values his/her relationship with me.  1  2  3  4  5
6. My child appears hurt or embarrassed when I correct him/her.  1  2  3  4  5
7. My child does not want to accept help when he/she needs it.  1  2  3  4  5
8. When I praise my child, he/she beams with pride.  1  2  3  4  5
9. My child reacts strongly to separation from me.  1  2  3  4  5
10. My child spontaneously shares information about himself/herself.  1  2  3  4  5
11. My child is overly dependent on me.  1  2  3  4  5
12. My child easily becomes angry at me.  1  2  3  4  5
13. My child tries to please me.  1  2  3  4  5
14. My child feels that I treat him/her unfairly.  1  2  3  4  5
15. My child asks for my help when he/she really does not need help.  1  2  3  4  5
16. It is easy to be in tune with what my child is feeling.  1  2  3  4  5
<table>
<thead>
<tr>
<th>17.</th>
<th>My child sees me as a source of punishment and criticism.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>18.</td>
<td>My child expresses hurt or jealousy when I spend time with other children.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>19.</td>
<td>My child remains angry or is resistant after being disciplined.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>20.</td>
<td>When my child is misbehaving, he/she responds to my look or tone of voice.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>21.</td>
<td>Dealing with my child drains my energy.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>22.</td>
<td>I've noticed my child copying my behavior or ways of doing things.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>23.</td>
<td>When my child is in a bad mood, I know we're in for a long and difficult day.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>24.</td>
<td>My child's feelings toward me can be unpredictable or can change suddenly.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>25.</td>
<td>Despite my best efforts, I'm uncomfortable with how my child and I get along.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>26.</td>
<td>I often think about my child when at work.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>27.</td>
<td>My child whines or cries when he/she wants something from me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>28.</td>
<td>My child is sneaky or manipulative with me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>29.</td>
<td>My child openly shares his/her feelings and experiences with me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>30.</td>
<td>My interactions with my child make me feel effective and confident as a parent.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

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LIST OF REFERENCES


BIOGRAPHICAL SKETCH

Monica Leah Stevens was born in Laurel, Mississippi. She was raised in Mississippi along with her older and younger brother and graduated from the Mississippi School for Mathematics and Science in May of 2002. She then enrolled in the University of Southern Mississippi Honors College and graduated *summa cum laude* with a Bachelor of Science in psychology in 2006. In the fall of that year, Monica enrolled in the University of Florida’s Department of Clinical and Health Psychology doctoral program. At the University of Florida, Monica served as a graduate research assistant in the Child Study Lab under the mentorship of Sheila Eyberg, Ph.D. and Stephen Boggs, Ph.D. and was awarded the University of Florida Florence Shafer Memorial Award for Excellence in Psychotherapeutic Counseling. Monica went on to complete her pre-doctoral internship and was awarded at post-doctoral fellowship at Tulane University. She received her Ph.D. from the University of Florida in the fall of 2011. Her future plans include continuing to evaluate and provide effective interventions for children with traumatic histories.