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## RESEARCH REPORT

# An Evidence-Based Parent-Child Relational Intervention for Young Children At-Risk for Abuse and Neglect

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## Abstract

Effective early identification and intervention among high-risk families is essential to the prevention of future maltreatment and placement in out-of-home care. Despite improvements in the identification of families who are at risk for maltreatment and the availability of evidence-based intervention programs for the prevention of child maltreatment, many at-risk families do not receive evidence-based services. The purpose of the Support for Adaptation and Family Enrichment in Homes (SAFE Homes) project was to examine the feasibility and initial effectiveness of implementing an evidence-based parent-child relational intervention, Parent-Child Interaction Therapy (PCIT), with a motivational enhancement for the prevention of child maltreatment among a sample of families identified as at risk for abuse and/or neglect. Using a randomized control trial methodology, the investigators partnered with two community-based care providers and trained 14 therapists to implement PCIT with a motivational enhancement. Fifty-five families who had been investigated by the Department of Children and Families (DCF) for abuse and/or neglect and were determined to be at moderate- or high-risk for maltreatment recurrence were referred to the project and were randomly assigned to receive PCIT or services as usual (SAU) from therapists at community partner providers. Obstacles to implementation included high rates of therapist turnover, extensive appointment scheduling delays with the providers, and difficulty maintaining contact with families. Findings from the study indicate that while PCIT has the potential to be an effective intervention for the prevention of future maltreatment, the feasibility of implementing these services is substantially limited by several system-level factors.

## Project Description

Child abuse and neglect have severe consequences for children's physiological, cognitive, emotional, and social development and are very costly to society.<sup>1, 2, 3, 4, 5</sup> Moreover, many families who are characterized by harsh, over-reactive, coercive, and controlling or uninvolved parenting practices might not have verified maltreatment reports, but these experiences contribute to problems with emotion regulation, social acceptance, and aggression.<sup>6, 7, 8, 9, 10</sup> Despite the proliferation of high-quality, evidence-based intervention services, children who are identified as being at risk for maltreatment but remain at home with voluntary family services are often provided with ineffective services.<sup>11, 12, 13</sup> The provision of high-quality, evidence-based intervention services for this population is crucial to promoting the safety of these vulnerable children.

A number of clinical trials have now demonstrated the efficacy and effectiveness of Parent-Child Interaction Therapy (PCIT) for the prevention of child abuse and neglect, particularly when it is paired with Motivational Interviewing (MI) techniques,<sup>14, 15, 16, 17, 18</sup> and it has received the highest scientific rating from the California Evidence-Based Clearinghouse for Child Welfare, "1: Well-Supported by Research" Scientific Rating. These findings are perhaps not surprising given the focus of PCIT on building a safe and nurturing parent-child relationship while also teaching parents to use appropriate discipline strategies.<sup>19, 20</sup> However, these services have not been well integrated into the child welfare service system.<sup>21, 22</sup> There are a variety of potential barriers to evidence-based service integration, including the feasibility of services for the settings in which services are typically delivered, incongruence with existing clinic/agency-based service delivery models, advanced required credentials that are not reflective of the child welfare services workforce, and the poor retention of families in services.<sup>23</sup>

## The SAFE Homes Project

The Support for Adaptation and Family Enrichment in Homes (SAFE Homes) project aimed to enhance the provision and quality of child welfare services to improve the safety and well-being of children determined to be at risk for abuse and neglect who remain at home following a Department of Children and Families (DCF) investigation. In order to accomplish this goal, researchers from the Florida International University (FIU) Center for Children and Families (CCF) and the Stempel School of Public Health and Social Work partnered with two community-based care (CBC) agencies, ABCs for Success, LLC (ABCs), and Banyan Health Systems (Banyan), and trained their staff to implement PCIT and MI. The specific objectives were to:

1. empirically evaluate the feasibility of training CBC agency therapists to implement in-home PCIT and MI among children who are at moderate- or high-risk for abuse and/or neglect and remain at home.
2. establish preliminary evidence of the impact of these intervention services for improving the safety of these children in their homes.
3. explore the impact of these services on the capacity of families to provide for their children's needs and obtain appropriate educational, physical, and mental health services for their children.

In order to accomplish these goals, the SAFE Homes Project was designed to be implemented in three phases: 1) Development; 2) Randomized Trial; and 3) Evaluation.

## Phase 1: Development

During the first phase of the project, all project activities were planned and all project materials were developed during biweekly meetings with the project consultant and the Clinical Director of ABCs, Ms. Soraya Melegi-Diaz. Intervention manuals were adapted, training materials were developed, the electronic data collection forms and databases were built, all research team members were recruited and trained, the training and supervision schedules for ABCs Agency Therapists were planned, and eight ABC's agency therapists were recruited and trained.

**Intervention Protocol.** PCIT protocols that have previously been implemented in-home and empirically evaluated<sup>24, 25</sup> were integrated with those that have included MI strategies and targeted child welfare-involved families<sup>26, 27</sup> in order to develop the intervention protocol for the proposed project. Although PCIT was developed for use with parents of children ages two to seven years, (Co-Investigator) Dr. Bagner has conducted two clinical trials that have demonstrated the efficacy of PCIT for improving caregiver and child behaviors with parents of infants as young as 12-months old.<sup>28, 29</sup> Given the objectives to ensure the safety of young at-risk children in their homes and improve children's well-being, procedures for implementing PCIT with infants as young as 12-months old were also included.

**Assessment Protocol.** Assessment and assessment feedback protocols were developed based on the format of brief, assessment-driven family MI interventions used by previous researchers.<sup>30, 31</sup> This includes conducting a thorough ecological family assessment and providing feedback using MI techniques to engage families in appropriate adjunctive services in addition to PCIT. Computer-based assessment forms and an electronic database were developed for data collection purposes using Qualtrics. The project coordinator was trained to screen, schedule, and coordinate all baseline assessment sessions between families, research assistants, and ABCs' agency therapists. Research assistants were trained in the administration of all assessments, including the Dyadic Parent-Child Interaction Coding System - Third Edition.<sup>32</sup>

**Measures.** Child maltreatment risk was assessed by parent report using The *Child Abuse Potential Inventory* (CAPI),<sup>33</sup> a 160-item parent report questionnaire initially developed as a screening instrument for child physical abuse. Items are presented in a forced choice (agree/disagree) format. The Abuse Scale is made up of 77 items, which are divided among 6 subscales: 1) Distress; 2) Rigidity; 3) Unhappiness, 4) Problems with Child and Self; 5) Problems with Family; and 6) Problems with Others. The CAPI also includes three validity scales, which form three indices of response distortion: 1) faking good; 2) faking bad; and 3) random response.

*The Parent-Child Conflict Tactics Scales (CTSPC)*<sup>34, 35</sup> is a 22-item parent report measure of three dimensions of parents' responses to their child's behavior: 1) nonviolent discipline; 2) psychological aggression; and 3) physical assault (divided into minor, severe, and very severe). Moreover, a supplemental 5-item Neglect Scale can also be included. The response categories gauge the frequency with which parents used specific tactics during conflict with their child in the past year using a 6-point scale ranging from "once" to "20 or more times". There are also response options of "Not in the last year, but it did happen before," and "This has never happened." At post-treatment caregivers were asked to report about the frequency of each of these behaviors in the past month. Responses to each item were dichotomized to indicate whether or not each behavior had occurred during the referent period.

*The Dyadic Parent-Child Interaction Coding System-Fourth Edition*<sup>36</sup> is a behavioral coding system that measures the quality of interactions between parents and their children. All parent-child interactions were videotaped during a 5-minute child-led play, 5-minute parent-led play, and a 5-minute cleanup at the baseline and post-treatment assessments. Research team members who were masked to the intervention condition of the families and timing of the assessments (i.e., baseline or post-treatment) coded videos for caregivers' verbalizations and children's responses to caregivers' commands. Caregiver verbalizations were combined into two composite categories of do (praises, behavior descriptions, and reflections) and don't (questions, commands, and negative talk) skills reflecting verbalizations parents were taught during PCIT to use and not use.

Parenting behaviors were also assessed using parent report on the *Alabama Parenting Questionnaire*,<sup>37</sup> a 42-item measure of five dimensions of parenting behaviors (i.e., parental involvement, positive parenting, poor monitoring/supervision, inconsistent discipline and corporal punishment). Although the APQ was developed for use with parents of children between ages 6 and 18, a preschool version was also developed using a subset of 32-items from the original measures (i.e., excluding developmentally inappropriate items).<sup>38</sup>

*The Drug History Questionnaire (DHQ)*<sup>39</sup> was used as a self-report measure of nine different drug classes: alcohol, cannabis, hallucinogens, depressants, inhalants, narcotics, stimulants, tranquilizers, and other drugs. For each drug class, the following information was collected: was the drug ever used and, if so: a) number of years used; b) whether the drug was ever prescribed; c) year last used; d) frequency of past use during a typical month (e.g., once a month, 2-3 times a week, daily); e) the age a drug was first used; and f) the route of administration.

*The Parenting Stress Index-Short Form, Fourth Edition (PSI-4)*<sup>40</sup> was used to measure stress within the caregiver-child system. The PSI-4 is a 36-item inventory that measures stress which can be attributed to three main contributors: Parental Distress, Parent-Child Dysfunctional Interaction, and a Difficult Child. The PSI-4 also includes a Defensive Responding subscale that indicates whether parents seem to have distorted their responses in a socially desirable way. Finally, it includes percentile scores

from normative samples to which parents can be compared and has excellent internal consistency (Cronbach's alphas ranging from .75 to .96), adequate test-retest reliability (.55 to .96), and validity.

*The Center for Epidemiologic Studies Depression Scale (CES-D)* is a 20-item self-report measure of depressive symptoms experienced by adults in the past week.<sup>41</sup> A cut-off score of 20 is indicative of clinically elevated depressive symptoms. The scale has demonstrated good reliability (Cronbach's alphas ranging from .85 to .90) and construct validity. The *Emotion Regulation Questionnaire (ERQ)*<sup>42</sup> is a 10-item self-report measure of emotion regulation strategies that yields two subscales, Reappraisal and Suppression. Each subscale has shown adequate internal consistency (Cronbach's alphas ranging from .68 to .82) across samples and evidence of convergent and discriminant validity.

*The Services for Children and Adolescents-Parent Interview (SCAPI)*<sup>43</sup> is a structured parent interview for collecting information on the type, number, duration, and intensity of physical and mental health services provided for the child within the past six months. Child behavioral problems were assessed by parent report on the Child Behavior Checklist (CBCL).<sup>44</sup> The CBCL assesses the frequency (0 = not true; 1 = sometimes true; 2 = often true) of 113 child behaviors during the previous six months, which form broadband scales representing child internalizing (i.e., withdrawn depression, anxious/depression, somatic complaints) and externalizing (i.e., aggression and delinquency) behavior problems. The CBCL has been empirically validated and internationally normed and has extensive evidence of reliability and validity.

**Training.** Although we aimed to randomize the 16 ABCs' agency therapists to either receive training in PCIT and MI or receive their usual supervision in services as usual (SAU), we were not able to randomly assign the therapists to conditions. Logistically, the agency reported that they needed to select a subset of therapists, but assured the research team that their selection would include therapists with a range of training backgrounds, years of experience, and interest in evidence-based practices. In August 2015, Dr. Bagner, a Master Trainer for PCIT International and a Licensed and American Board of Professional Psychology Certified Psychologist, and Dr. M. Villodas, a Licensed Psychologist, conducted a 40-hour training in the PCIT intervention. Dr. Margaret Sibley, Licensed Psychologist and a Certified Trainer for the Motivational Interviewing Network of Trainers, and Dr. M. Villodas conducted an eight-hour training in the MI enhancement component over approximately two and one-half weeks, also in August. The training consisted of didactic training, in-vivo role-plays, and live coaching and supervision with a parent-child dyad. As a result of these high rates of turnover (see findings below), a second training was conducted in April 2016. The training included an additional two therapists from ABCs, as well as four additional therapists from Banyan.

## Phase 2: Randomized Trial

During the second phase of the project, the feasibility and promise of the combined PCIT and MI intervention relative to SAU were evaluated in a small, randomized clinical trial.

**Recruitment.** Although the randomized trial was scheduled to begin in September 2015, ABCs did not begin receiving referrals for the services until November 2015. Although agreements to provide referrals had been established with service partners, very few materialized. Through extensive investigation, it was discovered that Child Protective Investigators (CPIs) make the majority of referrals for families at the conclusion of their investigations. The research team began meeting with CPIs at their regional headquarters to make them aware of the available services and to promote the direct referral of families to the project.

**Participants.** The project aimed to recruit 60 families with children between the ages of one and seven years, who were determined to be at moderate or high risk for abuse and/or neglect, for participation. In all, 55 families were recruited to participate, 45 were referred to ABCs and 10 were referred to Banyan for parenting services. Referrals predominantly came directly from CPIs, although five cases were referred directly from Intensive Family Preservation Services providers and case management agencies. Children ranged from 18 months to seven years and eight months old ( $M = 4.73$ ,  $SD = 1.7$ ) at their baseline assessment. Caregivers ranged from 18 to 57 years old ( $M = 28.21$ ,  $SD = 7.1$ ) at their baseline assessment. Caregivers were diverse (7% White, 36% Black or African American, 52% Hispanic/Latina/o, 5% Mixed) and 61 percent reported speaking primarily English, 37 percent reported speaking primarily Spanish, and 2 percent reported speaking primarily Haitian Creole at home. Approximately 70 percent reported having family incomes below \$30,000 per year, 64 percent were unemployed, and 1 percent were married.

**Screening and Baseline Assessment.** Initial screening was conducted in both English and Spanish over the phone by project coordinators following referrals to ensure that families met the eligibility criteria for the study. A baseline study assessment was scheduled with the family and two research team members. Caregivers provided informed consent to participate in the study and completed the baseline assessment. The baseline assessments lasted approximately three hours and consisted of a brief intelligence screening, a video-taped parent-child interaction, and a series of caregiver-reported measures that were completed on tablets using electronic data collections forms via Qualtrics. Caregivers were compensated \$40 for participating in the baseline assessment. The research team intended to include only those parents whose estimated IQ scores were  $> 70$  on the two-subtest (vocabulary and matrix reasoning) version of the *Wechsler Abbreviated Scale of Intelligence* (WASI; Wechsler, 1999) for primarily English-speaking parents or an average standard score  $> 4$  on the vocabulary and matrix reasoning subtests of the *Escala de Inteligencia Wechsler Para Adultos - Third Edition* (EIWA-III; Pons et al., 2008) for primarily Spanish-speaking parents. However, all caregivers were included regardless of their estimated IQ score so that the feasibility of teaching the intervention strategies to caregivers with

greater functional impairments, a large proportion of maltreating caregivers, could be evaluated. In families with more than one child who was the subject of a maltreatment report within the age range, caregivers were asked to identify the child with whom they had the greatest amount of conflict to participate in the services. Caregivers were encouraged to use the strategies that they learned with their other children as well.

**Random Assignment.** Following the baseline assessment, families were randomly assigned to receive either the combination of PCIT and MI or SAU using computer-generated random number lists. Clinical directors at each agency were then notified of the assignment so that they could assign either a PCIT-MI or SAU therapist.

**Agency Intake.** Following the baseline assessment and randomization of the families, the agencies reported that they needed to conduct their own intake assessments. Intake assessments at each agency were completed by licensed masters-level assessors. Intake assessments were either completed in home or at the agency by ABCs assessors, while Banyan assessments were only completed at the agency, which required families to arrange for transportation.

**Assessment and Randomization Feedback.** ABCs' agency therapists met with each family for their first therapy session in which they provided feedback about the intake assessment, informed families of their treatment group assignment, planned for subsequent treatment sessions, and presented additional service options based on the assessment results. PCIT-MI therapists also conducted portions of the PCIT Intake Interview that is typically conducted during the first session to collect information that was not consistently collected during the intake assessments (e.g., typical discipline strategies).

**Intervention Implementation.** PCIT-MI therapists then began with the first didactic session of PCIT in which parents learn the Child-Directed Interaction (CDI) skills. SAU therapists began the services that they would typically provide. Sessions for families in both conditions were conducted individually with families in their homes, although two cases preferred to be seen at ABCs. Sessions lasted approximately one hour. Each PCIT session began with a five-minute observation of a parent-child interaction, during which therapists coded parents' use of skills with their children. Each phase (i.e., CDI and Parent-Directed Interact, PDI) continued until parents met mastery criteria. Although we intended to audiotape all PCIT sessions for supervisory purposes, therapists did not consistently tape their sessions. Nevertheless, all PCIT-MI therapists participated in one-hour biweekly co-supervision with Drs. Bagner and M. Villodas. All SAU therapists participated in biweekly supervision with their agency supervisors as usual.

## Phase 3: Evaluation

The evaluation phase of the project consisted of post-treatment assessments with families who completed or discontinued treatment and the collection, screening, and analysis of data.

**Post-Treatment Assessment.** Therapists at both agencies and in both conditions alerted the project coordinator when families would be discontinuing services prior to the final treatment session and the families were contacted to schedule their post-treatment assessments. Post-treatment assessments were identical to baseline assessments (i.e., in-home, two-hour, conducted by two research team members, and included computer-mediated caregiver report measures and observations of parent-child interactions), except caregivers did not complete the intelligence screener again. The post-treatment assessments lasted approximately two hours and caregivers were compensated \$40 for completing the assessment.

**Focus Groups.** Although we intended to conduct focus groups with all families that participated in the PCIT and MI intervention, and invited all families to participate, only two families were available to participate. Reasons for unavailability included no current contact information, no transportation, moving out of the area, and work schedules.

**Data Analysis.** Drs. Huang and M. Villodas cleaned and prepared all data prior to analysis. The analysis plan was modified because the small sample size that resulted from study attrition did not provide adequate power to detect between-group differences after controlling for baseline levels. In addition, the Cox proportional hazards regression models that were proposed for time-to-event data (i.e., time to maltreatment report or out-of-home placement) could not be performed because of the low occurrence of these events. Nevertheless, the proposed descriptive analyses, within-group analyses of change, and between-group analyses were conducted whenever possible. Cohen's *d* is presented as a measure of standardized mean differences for significant results when relevant and is interpreted as small = .2, moderate = .5, and large = .8.

## Results

### Feasibility

**Training.** Fourteen agency therapists across two agencies were successfully trained in PCIT and MI strategies. All fourteen therapists successfully met all training criteria for certification in PCIT. However, only one therapist carried a case to completion, meeting full criteria for certification.

**Recruitment.** Although recruitment was challenging, once the appropriate referral sources were identified and referral procedures were established, a large number of cases that met criteria for the study and needed PCIT services were identified.

### Retention

**Therapists.** One therapist left the agency because of a family move in April 2016. By October 2016, only two of the therapists were available to take cases. Two therapists were promoted and were no longer seeing cases and three left the agencies for opportunities at other agencies. By December 2016, only two of the eight therapists that had originally been selected for training were available to take cases. One therapist was terminated from the agency, another left for a promotion, and four others were promoted within the agency and were no longer accepting therapy cases. In total, we trained 14 therapists in the PCIT and MI intervention.

**Families.** As mentioned above, 55 families were recruited for participation and completed baseline assessments. On average, it took nine and one-half days (ranging between 2 and 27 days) from the time that the referral was received for participants to complete their baseline assessments with the research team. Participants were either randomly assigned to a therapist trained in PCIT ( $n = 26$ ) or a therapist who would provide SAU ( $n = 29$ ).

Of the 55 participants who completed the baseline assessment, 39 (71%) completed intake interviews with the agency. On average, it took 26.4 days (ranging between 0 and 115 days) from the time that the baseline assessment was completed for families to complete their intake assessment with the agencies. Of the 39 families who completed the agency intake assessment, 27 (69%) completed at least one treatment session. On average, it took 26 days (ranging between 4 and 125 days) from the time that the agency intake assessment was completed for families to complete their first treatment session.

Of the 27 families who completed at least one session, 14 were assigned to a therapist trained in PCIT and 13 were assigned to a therapist providing SAU. Post-treatment assessments were conducted when families completed or discontinued treatment. Overall, 21 families completed post-treatment assessments, including 12 families who were assigned to a PCIT therapist and 9 families who were assigned to a SAU therapist. Six families could not be reached or were unwilling to complete the post-treatment assessment.

On average, families completed 10.76 (standard deviation [SD] = 6.17) sessions, including 12.63 (SD = 6.63) sessions for SAU cases and 9.11 (SD = 5.58) sessions for PCIT cases. Rates of session cancellations were low overall on average ( $M = 2.47$ ,  $SD = 2.03$ ) and for each group (SAU:  $M = 2.63$ ,  $SD = 2.33$ ; PCIT:  $M = 2.33$ ,  $SD = 1.87$ ). Of the 21 who completed post-treatment assessments, eight reported that their cases were discontinued because of scheduling conflicts between the families and therapists, for four (two PCIT and two SAU) there was not an appropriate therapist available to take the case, three were ongoing SAU cases who were assessed as a result of the project ending, two reported discontinuing treatment because their DCF investigations were closed, one moved out of the area, and three (two PCIT and one SAU) reported that they completed or no longer needed treatment.

**Validity of Caregiver Reports.** The present study relied heavily on caregivers' reports of their children's and families' functioning. The Defensive Responding scale of the PSI-4 indicated that approximately 24 percent of caregivers responded defensively during the baseline and post-treatment assessments. The CAPI includes validity scales that are designed to unobtrusively detect distorted or inaccurate response patterns. In particular, the CAPI includes scales indicating whether or not respondents appear to be responding in a socially desirable manner ("Faking Good"), in an exaggeratedly negative manner ("Faking Bad"), or in an inconsistent manner ("Random Response"). At baseline, 80 percent ( $n = 44$ ) of the caregivers were suspected to be Faking Good, while none were suspected to be Faking Bad, and only 2 percent ( $n = 1$ ) was suspected to have a Random Response pattern. In all, 82 percent ( $n = 45$ ) of the profiles were identified as invalid according to the CAPI. At post-treatment, 71 percent ( $n = 15$ ) were suspected to be Faking Good, none were suspected to be Faking Bad, and 10 percent ( $n = 2$ ) were suspected to have Random Response patterns.

### Safety

**Child Safety.** Although one of the aims of the present study was to examine the utility of PCIT for the prevention of subsequent reports to DCF for abuse and/or neglect, re-reports occurred at a very low rate in the current sample. In particular, two additional reports (one in each treatment group) of physical abuse occurred during the study and no children were placed in out-of-home care. Thus, statistical analyses for this outcome could not be performed. However, at the baseline assessment 65 percent of caregivers reported that their children had been victimized by some form of violence (i.e., familial, extra-familial, peer, etc.) at least once and 50 percent reported that their children had been victimized two or more times. In addition, 26 percent reported that their children had been exposed to at least one significant trauma. Traumatic exposures included natural disasters, serious accidents, being the victim of or witness to an assault, witnessing a violent attack, someone close dying suddenly or violently, and stressful or scary medical problems. In addition, approximately 17 percent of caregivers reported that they had physically assaulted their child in the past year, including punching, kicking, slapping, shaking, or hitting their child with an object.

At post-treatment, 44 percent of caregivers assigned to SAU and 25 percent of caregivers assigned to PCIT reported that their child had been victimized by some form of violence since the baseline assessment. In addition, 22 percent of caregivers assigned to SAU and 17 percent of caregivers assigned to PCIT reported that their child had been exposed to at least one significant trauma since the baseline assessment. Traumatic exposures reported at post-treatment included natural disasters, serious accidents, being the victim of or witness to an assault involving a family member, witnessing a violent attack, someone close to the child being murdered, and stressful or scary medical problems.

Neither caregivers assigned to PCIT nor caregivers assigned to SAU reported significant reductions on the CAPI Abuse Scale from baseline treatment (PCIT:  $M = 100.17$ ,  $SD = 90.5$ ; SAU:  $M = 162.22$ ,  $SD = 84.29$ ) to post-treatment (PCIT:  $M = 98$ ,  $SD = 77.81$ ; SAU:  $M = 149.67$ ,  $SD = 82.47$ ), PCIT:  $t(11) = .16$ ,  $p > .05$ ; SAU:  $t(8) = 1.18$ ,  $p > .05$ . As can be seen in Table 1 below, fewer caregivers assigned to PCIT reported using physically aggressive and assaultive discipline strategies with their children at post-treatment, while caregivers assigned to SAU did not report a change in their discipline strategies with their children. However, almost all caregivers in both groups reported using non-violent discipline strategies at both baseline and post-treatment. While the proportions of caregivers who reduced their use of physically aggressive discipline strategies did not significantly differ between groups,  $\chi^2(1) = 2.87$ ,  $p > .05$ , the reduction in the proportion of caregivers who reported using physically assaultive discipline strategies was significantly greater among caregivers assigned to PCIT, relative to caregivers assigned to SAU,  $\chi^2(1) = 4.2$ ,  $p < .05$ .

**Table 1. Proportions of Caregivers Reporting Different Discipline Strategies.**

	SAU		PCIT	
	Baseline <i>n</i> (%)	Post <i>n</i> (%)	Baseline <i>n</i> (%)	Post <i>n</i> (%)
Non-Violent Discipline	8 (89%)	8 (89%)	11 (92%)	10 (83%)
Physical Aggression	7 (78%)	7 (78%)	9 (75%)	6 (50%)
Physical Assault	6 (67%)	6 (67%)	8 (67%)	5 (42%)

Note: SAU = Services as usual; PCIT = Parent-Child Interaction Therapy.

### Well-Being

**Child Behavior.** Caregivers assigned to PCIT reported that their children's externalizing behavior problems were significantly lower at post-treatment ( $M = 1.27$ ,  $SD = .36$ ), relative to baseline ( $M = 1.35$ ,  $SD = .41$ ),  $t(11) = 2.49$ ,  $p < .05$ , Cohen's  $d = -.34$ . However, caregivers assigned to SAU reported that their children's externalizing behavior problems did not significantly differ at post-treatment ( $M = 1.49$ ,  $SD = .31$ ) from baseline ( $M = 1.57$ ,  $SD = .32$ ),  $t(8) = .77$ ,  $p > .05$ . A one-way, between-subjects ANCOVA comparing post-test scores, while controlling for baseline scores, revealed that the reductions in externalizing behavior problems among children of caregivers assigned to PCIT were not significantly greater than those among children of caregivers assigned to SAU,  $F(1, 18) = .36$ ,  $p > .05$ . Neither caregivers assigned to PCIT nor caregivers assigned to SAU reported significant changes in their children's internalizing problems from baseline (PCIT:  $M = 1.18$ ,  $SD = .22$ ; SAU:  $M = 1.30$ ,  $SD = .28$ ) to post-treatment (PCIT:  $M = 1.12$ ,  $SD = .18$ ; SAU:  $M = 1.21$ ,  $SD = .2$ ), PCIT:  $t(11) = 2.055$ ,  $p > .05$ ; SAU:  $t(8) = .88$ ,  $p > .05$ . At post-treatment, caregivers assigned to PCIT did not report significantly different levels of externalizing behavior,  $t(19) = .17$ ,  $p > .05$ , or internalizing behavior problems,  $t(19) = 1.13$ ,  $p > .05$ , relative to caregivers assigned to SAU.

**Parenting Behavior.** Caregivers did not report significant changes in their caregiving behaviors from baseline to post-treatment on the APQ (see Table 2 for means and *t*-statistics). Although significant changes in caregivers' behaviors during parent-child interactions, measured using the DPICS, were not observed among caregivers assigned to PCIT or caregivers assigned to SAU for most behaviors, significant increases with a large effect size, Cohen's *d* = .73, were observed among caregivers assigned to PCIT in their use of reflections (see Table 2 for means and *t*-statistics). In addition, caregivers assigned to PCIT used significantly more reflections during their child-led interactions with their children, relative to caregivers assigned to SAU, Welch's *t* (12.33) = -2.18, *p* < .05 (Levene's test revealed that equal variances could not be assumed, *F* = 10.95, *p* < .05, so this violation of homogeneity of variance was corrected) with a large effect size, Cohen's *d* = .86. However, a one-way, between subjects ANCOVA comparing post-test scores, while controlling for baseline scores, revealed that the increased use of reflections among caregivers assigned to PCIT was not significantly greater than the increased use of reflections among caregivers assigned to SAU, *F* (1, 17) = 2.85, *p* > .05.

**Table 2. Within-Groups Changes in Parenting Behaviors.**

	SAU			PCIT		
	Baseline <i>M</i> ( <i>SD</i> )	Post <i>M</i> ( <i>SD</i> )	<i>t</i> (8)	Baseline <i>M</i> ( <i>SD</i> )	Post <i>M</i> ( <i>SD</i> )	<i>t</i> (11)
<b>APQ</b>						
Involvement	3.62 (.7)	3.43 (.81)	1.54	3.63 (.90)	3.8 (.91)	-1.85
Positive Parenting	4.54 (.35)	4.37 (.71)	.67	4.28 (.66)	4.43 (.83)	-.75
Poor Monitoring	1.42 (.48)	1.27 (.33)	.92	1.38 (.37)	1.38 (.34)	.08
Inconsistent Discipline	2.54 (.37)	2.39 (.46)	.86	2.25 (.69)	2.08 (.76)	.96
Corporal Punishment	2.22 (.75)	2.30 (.65)	.36	1.81 (.78)	1.83 (.82)	-.23
<b>DPICS – Child-Led Play</b>						
“Do” Skills	2.88 (2.23)	2.63 (3.42)	.33	3.42 (3.65)	10.58 (16.25)	-1.4
Labeled Praise	.38 (.74)	.38 (1.06)	0	0 (0)	1.67 (3.37)	-1.72
Reflection	.63 (.74)	.63 (.74)	0	.5 (1)	2.75 (3.39)	-2.2
Behavioral Description	.25 (.71)	.13 (.35)	1	.08 (.29)	2 (4.29)	-1.53
“Don’t” Behaviors	36.38 (16.88)	26 (13.67)	1.58	24.83 (22.82)	15.08 (11.46)	1.92
Negative Talk	5 (6.37)	2.88 (4.02)	1.16	1.92 (.32)	1.25 (1.82)	.98
Command	11 (6.87)	10.25 (10)	.16	13.58 (15.92)	7 (6.16)	1.91
Questions	20.38 (18.55)	12.88 (8.85)	1.58	9.33 (8.35)	6.83 (5.67)	1.13

**Caregiver Functioning.** Approximately 17 percent of caregivers reported that they had experienced sexual abuse during childhood. At the baseline assessment, approximately 39 percent of caregivers reported having clinically elevated depressive symptoms. Approximately 18 percent reported using marijuana and 4 percent reported using stimulants (i.e., cocaine or crack) in the past six months. At post-treatment, 24 percent (*n* = 5) of caregivers reported clinically elevated depressive symptoms. In addition, 24 percent (*n* = 5) reported using marijuana, 14 percent (*n* = 3) reported using stimulants (i.e., cocaine or crack), and 5 percent (*n* = 1) reported using opioids (e.g., Oxycodone, OxyContin, etc.) in the past month.

Caregivers who were assigned to PCIT reported significantly lower levels of parental distress at post-treatment (*M* = 20.33, *SD* = 7.33, Percentile = 26<sup>th</sup>), relative to baseline (*M* = 27.5, *SD* = 9.77, Percentile = 53<sup>rd</sup>), *t* (11) = 2.42, *p* < .05, with a large effect size, Cohen's *d* = -.72. However, caregivers assigned to SAU did not report significantly different levels of parental distress at post-treatment (*M* = 27.67, *SD* = 8.08, Percentile = 29<sup>th</sup>), relative to baseline (*M* = 29, *SD* = 7.12, Percentile = 30<sup>th</sup>), *t* (8) = .45, *p* > .05. A one-way, between-subjects ANCOVA comparing post-test scores, while controlling for baseline scores, revealed that the reduction in parental distress among caregivers assigned to PCIT were marginally significantly greater than those of caregivers assigned to SAU, *F* (1, 18) = 4.38, *p* = .05, with a large effect size, Cohen's *d* = -.91.

In addition, caregivers in the PCIT group significantly reduced their use of emotion suppression measured by the ERQ at post-treatment (*M* = 3.15, *SD* = 1.37), relative to baseline (*M* = 4.4, *SD* = 1.28), *t* (11) = 2.35, *p* < .05, with a moderate-to-large effect size, Cohen's *d* = -.68. However, caregivers assigned to SAU did not report significantly different levels of emotion suppression at post-treatment (*M* = 4.44, *SD* = 1.32), relative to baseline (*M* = 3.83, *SD* = 2.43), *t* (8) = -.72, *p* > .05. A one-way, between subjects ANCOVA comparing post-test scores, while controlling for baseline scores, revealed that caregivers assigned to PCIT reduced their use of emotion suppression significantly more from baseline to post-treatment than caregivers assigned to SAU, *F* (1, 18) = 4.8, *p* < .05, with a large effect size, Cohen's *d* = -.92.

**Service Utilization.** Thirteen percent of caregivers reported that their children received services for a behavioral or developmental problem prior to the baseline assessment and 16 percent reported that they had received counseling or family therapy. Children's services included speech and language, occupational therapy, physical therapy, early intervention, and behavioral therapy. At post-treatment, 67 percent of the caregivers assigned to PCIT and 78 percent of the caregivers assigned to SAU reported that their children had received behavioral or developmental services, in addition to the services provided by the study. Among families assigned to PCIT, five families (42%) had started these services since the baseline assessment, while one family (11%) started these services since the baseline assessment among families assigned to SAU. Families reported that their children received speech and language and early intervention services. At post-treatment, 29 percent of caregivers, including 25 percent of caregivers assigned to PCIT and 33 percent of caregivers assigned to SAU, also reported that they had received counseling or family therapy services in addition to the services provided by the study. Three of the families (25%) assigned to PCIT and two of the families (22%) assigned to SAU reported that they started these services since the baseline assessment.

## Discussion

The findings of the present study highlight important implications about the feasibility of implementing high-quality, evidence-based interventions for the prevention of child abuse and neglect among at-risk families. In addition, these findings provide preliminary evidence of the effectiveness of PCIT with MI for promoting the safety and well-being of families who are at risk for abusing and/or neglecting their children. Although the researchers were able to successfully partner with two CBC agencies to successfully train 14 therapists in PCIT and MI, substantial rates of agency turnover reduced the availability of these services to at-risk families. Moreover, inefficient agency policies, long wait times for intake and first therapy appointments, and scheduling conflicts further reduced the feasibility of implementing these services among at-risk families. Nevertheless, for those families who engaged in services, even a small dose of the PCIT with MI intervention had significant impacts on caregivers' parental distress and use of physically assaultive discipline strategies, emotion suppression strategies, and positive parent-child interaction strategies, as well as children's externalizing behavior problems. The results of the present study indicate that procedural and policy changes that support the full implementation of these evidence-based intervention services could substantially contribute to the safety and well-being of children and families who are identified as being at-risk.

## Feasibility

In the present study, researchers at FIU worked collaboratively across three colleges and in partnership with two CBC agencies to develop research, training, assessment, and intervention protocols to execute the SAFE Homes Project. This level of coordination was challenging at times, but was facilitated through frequent and active communication and coordination. The researchers were able to provide two 48-hour trainings, including 5-day, 40 hour trainings in PCIT and 1-day, 8-hour trainings in MI, with 14 agency therapists. However, the second training was only necessary as a result of high rates of therapist turnover within the first partner agency, ABCs, following the first training. The reasons for turnover were largely for promotions to positions in which direct service provision was no longer a primary responsibility. In only one case was a therapist's turnover the result of employment termination. Similarly, following the second training, the majority of therapists transitioned into positions in which they were no longer directly providing services. Given the time and financial resources required to train therapists in these intervention procedures, these high rates of turnover are likely to serve as a significant logistical barrier to the dissemination of evidence-based interventions in the child welfare system.

In order to reduce the burden of extensive training in evidence-based interventions on agencies and their staff,<sup>45</sup> pre-service training and certification in these interventions will be crucial. For example, as a result of the SAFE Homes Project, the FIU CCF has developed a close training partnership with ABCs. In particular, a substantial proportion of the Master's in Mental Health Counseling students from the FIU Professional Counseling Psychology program now complete their internships at ABCs and are subsequently hired as therapists. This partnership has

created an opportunity for FIU faculty to train Mental Health Counseling students in evidence-based interventions, including PCIT and MI, before they enter the workforce. This system will ensure that these students will be available to provide high-quality evidence-based services while they are completing their internships and for any time that they serve as agency therapist thereafter, without additional training time or cost to the agency. Similar training opportunities could be established for students from the Masters in Social Work program who intend to pursue employment as agency therapists.

Another barrier to the dissemination of these services to at-risk families was the extensive wait times for agency intake appointments following referrals and for the first appointment following the intake. For the at-risk families in the present study, there was an urgent need for intervention as evidenced by their recent investigation for child abuse and/or neglect and their designation as moderate or high risk. The CPIs who referred these families reiterated this urgency. Although the research team was able to quickly schedule and conduct baseline assessments with most families who were referred to the project, the agencies' procedures for conducting intake assessments, assigning therapist, completing and distributing intake assessment reports to therapists, and scheduling first appointments contributed to the very long wait times between appointments. In particular, both agencies required that intake assessors be licensed, while therapists typically were not licensed. As a result, two different staff conducted the intake assessments and therapy sessions and only communicated with each other through the clinical directors. This often led to delayed, inconsistent, or non-existent communication about cases and prolonged the engagement of families in treatment. As a result, a number of families who were recruited for the present study indicated that they were no longer interested in services or had started services elsewhere by the time the agencies were ready to begin treatment. Moreover, scheduling conflicts between therapists and families further added to the discontinuation of services among families who had started therapy. More efficient agency policies and procedures could reduce wait times and maximize engagement of at-risk families who urgently need services.<sup>46</sup>

Finally, in order to effectively intervene in at-risk families, therapists must be able to establish trust and comfort with caregivers. In the present study, caregivers displayed a high degree of social desirability in their responses prior to and following services. In fact, their response patterns indicated that, in the majority of cases, they were attempting to distort their responses to appear more positively. In addition, several families reported that they had discontinued services because their DCF cases were closed and they were no longer required to engage in services. Although services for all families were "voluntary," it seems that families felt substantial pressure to portray their families as less problematic in order to remove the supervision of DCF in their homes. Perhaps building a stronger rapport with families by using a more supportive and less punitive approach would facilitate their engagement in voluntary services that could improve their families' functioning.

## Safety

With regard to promoting child safety, it appears that families in the present study attempted to increase their children's general safety, as evidenced by the reduced proportions of children who were exposed to victimization and trauma during the study period. Fortunately, rates of re-reports and out-of-home placements were too low for analysis, which indicates that most families were maintained in their homes safely during the study period. While caregivers' scores on the Child Abuse Potential Inventory did not reflect a significant decrease in their abuse potential, it is noteworthy that nearly all of these scores were considered invalid as a result of socially desirable response distortions. Nevertheless, a significantly greater proportion of caregivers who were assigned to PCIT and MI reported discontinuing their physically assaultive discipline strategies, such as hitting or spanking with objects or slapping their children. Although these findings were expected outcomes of the project, it was surprising that these changes in discipline strategies were identified in the present study, as very few families remained in treatment long enough to receive training in appropriate discipline strategies. Rather, most families only received the initial module of PCIT that focuses on teaching caregivers positive parent-child interaction skills and engaging them in more positive interaction contexts. It is possible that the increased positivity in the parent-child relationship that was introduced by these activities resulted in a decreased escalation in discipline strategies from non-violent to assaultive strategies. It is noteworthy that most parents in both groups reported using non-violent discipline strategies even prior to treatment.

## Well-being

Despite the challenges to engaging and retaining families in these services, the PCIT and MI intervention had some positive effects on families' well-being. First, caregivers who were assigned to the PCIT and MI intervention reported that their children's externalizing behavior problems significantly decreased. Despite the relatively low dose (i.e., few sessions) of the intervention, the services appeared to have an effect on children's behavior. In addition, caregivers who were assigned to the PCIT and MI intervention reported significantly greater decreases in their parenting distress and use of emotion suppression strategies following treatment, relative to caregivers assigned to SAU. Emotion suppression is a response-focused strategy in which individuals attempt to effortfully contain their emotional reactions so that their internal emotional experiences are not visibly apparent. Emotion suppression has not been found to be an effective strategy for regulating emotions as it uses excessive cognitive resources and can result in discomfort or distress from the incongruence between an individual's emotional expression, whether positive or negative, and their internal experiences. In addition, suppressing emotions restricts both positive and negative affective expression.

In this context, it makes sense that PCIT, particularly the initial phase, would decrease emotion suppression, as parents learn to enthusiastically express positive emotions toward their children while engaging in focused, child-led play activities. To do this successfully requires parents to express positive emotions toward their children during interactions, which is something that previous researchers have noted is particularly difficult

for maltreating parents.<sup>47</sup> It is also not surprising that PCIT and MI were associated with greater decreases in caregivers' perceptions of distress from parenting. In addition to the reduced distress that they could experience from decreasing their emotion suppression, it is likely that engaging in positive activities with their children reduces the amount of time that is spent in conflict with one another. It is noteworthy that these findings were specific to distress that was attributed to parenting, as the same proportion of caregivers reported clinical elevated depressive symptoms at post-treatment as at baseline in each group.

Finally, greater proportions of caregivers in both groups reported that they engaged in mental health services for themselves and for their children. This is not surprising, as very few of these families reported previously engaging in any services prior to participating in the study. It is likely that engaging at-risk families in services early will promote their continued engagement in additional services.

## Limitations

Although the present study had several notable strengths, these findings should be considered in the context of a number of methodological limitations. First, because of high rates of attrition from the study, the resulting sample size is very small, which reduced the statistical power to conduct many of the planned quantitative analyses. As a result, many of the findings are qualitative in nature and require replication in additional samples. In addition, given the study timeline, too few families experienced some of the more extreme adverse events (e.g., maltreatment re-report, placement in out-of-home care) which the intervention was proposed to prevent. While it is encouraging that these adverse events occurred at very low rates, it is likely that these rates would have been high enough to facilitate the computation of statistical analyses in a larger sample that was monitored over a longer period of time. Nevertheless, the present study was able to identify some important changes and trends in the current sample that should be replicated in larger and longer-term research studies evaluating the effectiveness of these services. It is important to note, however, that the primary aim of the present study was to evaluate the feasibility of training agency therapists to competently implement these evidence-based interventions and to recruit, engage, and retain families in these services. Rigorously evaluating the effectiveness of these services will require a larger-scale and longer-term research design.

Another limitation of the present study was the lack of control over the agencies' policies and procedures. While it is ideal in a feasibility study to evaluate the implementation of a program in a naturalistic setting without interference from research teams, it is likely that additional involvement of the research team in the intake, therapist assignment, contact, and progress monitoring of cases could have improved the engagement and retention of families in services and ultimately improved families' outcomes. Finally, the reliance of this project on caregiver reports is a substantial limitation given the indications from more than one measure that caregivers were distorting their responses in a socially desirable manner. While observational data were collected during parent-child interactions, additional objective data and ecologically valid data are necessary for future investigations.

## Summary

Despite these limitations, the primary objectives of the present study were achieved. While there is certainly great promise for the effectiveness of PCIT with MI to contribute to the safety and well-being of families at risk for child abuse and neglect, additional policy and procedural barriers need to be addressed to increase the feasibility of these services among at-risk families. Consistent with previous theoretical models of evidence-based service integration, adjustments that address intensive training requirements and costs and incongruence with agency procedures and policies are needed.<sup>48, 49</sup> Although a result of this research has been the establishment of a pre-service training partnership in which students are trained in these and other evidence-based intervention strategies before completing their internships at CBC agencies, additional training partnerships need to be established in order to promote the feasibility and sustainability of the time and cost-intensive trainings that are required for therapists to implement evidence-based interventions. In addition, a paradigm shift is likely necessary to facilitate the engagement of at-risk families in voluntary services in order to prevent future abuse and neglect.

To increase the likelihood of engaging at-risk families in services, agencies should improve the efficiency of their intake processes. Considering that families are volunteering to pursue services, agencies should make every effort to reduce the time from initial referral to intake and first therapy appointments. Improved communication between agencies and CPIs would likely facilitate this transition, as well as the CPIs monitoring of treatment progress. Using evidence-based family engagement strategies, such as MI, rather than pressure and threats of judicial involvement, is also likely to facilitate a stronger rapport and alliance between therapists and families, which could improve engagement and retention in services. Consistent with the findings of the present study, even a small dose of evidence-based intervention services can produce robust improvements in children's and families' safety and well-being.

## Policy Recommendations

The findings of the present study support several important policy recommendations. First, training in evidence-based intervention strategies should be integrated in the preservice training curricula of all master-level programs designed to prepare therapists to serve at-risk families (e.g., Social Work and Mental Health Counseling programs). Ideally this training would be relatively specialized to equip therapists to provide effective services for families who are facing particular challenges. All therapists should be trained in evidence-based techniques for effectively engaging families in services, such as Motivational Interviewing. Collaborative partnerships should be established between university-based training programs and community-based care agencies to more efficiently equip therapists to provide evidence-based services for families in the child welfare system before entering the workforce. Given the substantial cost and burden to agencies and therapists who provide intensive training in evidence-based interventions, universities should integrate this training into pre-service curricula before students begin internships. These partnerships would be mutually beneficial, as they would create a training pipeline for students to complete their internships and potentially create post-training job opportunities, while preparing therapists to provide evidence-based services immediately upon entering the workforce.

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