Chapter 2
Research on PCIT

Stephanie Wagner

Early PCIT Research

Establishing an evidence-based treatment often involves single-subject studies, program evaluations, and randomized controlled trials. However, after research demonstrates the efficacy of a particular treatment through these methods, there are many additional areas to investigate before the intervention is disseminated and widely employed. PCIT, like other evidence-based interventions, has been developed in a similar way, beginning with early research demonstrating changes in disruptive behavior at post-treatment in comparison to waitlist children (e.g., McNeil, Capage, Bahl, & Blanc, 1999; Schuhmann, Foote, Eyberg, Boggs, & Algina, 1998). In addition to demonstrating efficacy, this research suggested additional benefits such as generalization to other settings (e.g., school) (McNeil, Eyberg, Eisenstadt, Newcomb, & Funderburk, 1991) and other individuals (e.g., untreated siblings) (Brestan, Eyberg, Boggs, & Algina, 1997). Furthermore, many of these beneficial results observed immediately after treatment were found to be maintained 1–6 years following PCIT (Boggs et al., 2004; Eyberg et al., 2001; Hood & Eyberg, 2003).

Herschell, Calzada, Eyberg, and McNeil (2002) reviewed the research on PCIT and offered suggestions for furthering the literature. Research was grouped into different categories including effectiveness, diagnostic variables, cultural variables, therapist variables, delivery of treatment, maintenance, and dissemination. The current review utilizes a similar organization to highlight progress in different lines of recent PCIT clinical research and also offers suggestions for future research endeavors. The goal of this chapter is to provide an update on PCIT research; and therefore, does not include a comprehensive review of the early PCIT literature.

Recent Research Initiatives

Diagnostic Groups. Since the review conducted by Herschell and colleagues (2002), examining the effects of PCIT with new diagnostic groups has received considerable
empirical focus. At the time of the review, Herschell and colleagues emphasized that the theoretical principles underlying PCIT apply to many different childhood disorders; however, limited literature existed on PCIT with diagnostic groups other than disruptive behavior disorders. Further work has been conducted on the use of PCIT with internalizing populations. In particular, Choate, Pincus, Eyberg, and Barlow (2005) examined standard PCIT in three children who met criteria for Separation Anxiety Disorder (SAD) and found that these children did not meet diagnostic criteria for SAD following treatment. Other research suggests that PCIT benefits both internalizing and externalizing symptoms in children with co-morbid SAD and Oppositional Defiant Disorder (ODD) (Chase & Eyberg, 2008).

The principles underlying PCIT also conceptually apply to families of children with developmental disabilities such as mental retardation and autism (Masse, McNeil, Wagner, & Chorney, 2008; McDiarmid & Bagner, 2005). Therefore, researchers have tested this intervention with children who are developmentally and cognitively delayed. Bagner and Eyberg (2007) randomly assigned children with mental retardation to PCIT or a waitlist control group and detected improvements in child disruptive behavior and parenting skills in the PCIT group. Furthermore, a recently completed study by Josh Masse and Cheryl McNeil at West Virginia University demonstrated the efficacy of PCIT for improving compliance in children with autism (Masse, McNeil, & Wagner, 2009).

Children with chronic illness or medical problems represent another population that has received limited focus in the PCIT literature. Bagner, Fernandez, and Eyberg (2004) reported positive child and parent behavioral change in a case study of a young child with cancer and ODD. PCIT was tailored slightly in this case so that the parents received help providing positive reinforcement for adaptive medical behaviors. Further research is needed to better understand the effectiveness of PCIT in pediatric settings for children with various medical conditions.

Cultural Groups. Additional research has specifically looked at PCIT outcomes with different cultural groups to help understand how to maximize treatment efficacy while maintaining cultural sensitivity (Butler & Eyberg, 2006). Borrego, Anhalt, Terao, Vargas, and Urquiza (2006) translated PCIT materials into Spanish and documented a successful case involving a Mexican family. Similar positive findings were found in a study translating, implementing, and evaluating PCIT in Puerto Rico (Matos, Torres, Santiago, Jurado, & Rodriguez, 2006) and in a modified version of PCIT for Mexican-American families termed Guiding Active Children (GANA Program; McCabe, Yeh, Garland, Lau, & Chavez, 2005). Based on these preliminary findings, it appears that many treatment components are acceptable to a range of parents and that this intervention may be efficacious with different Hispanic cultural groups.

Another culture that has been qualitatively and quantitatively studied in PCIT research is Chinese families in Hong Kong (Tsang, Leung, Chan, & Choi, 2007). Study findings indicated that PCIT led to significant decreases in child disruptive behavior and increases in effective parenting skills in Chinese families of children with behavior problems. Generally, these families were accepting treatment, although some skills such as praise may be less congruent with parenting practices in Hong Kong.
The research and utilization of PCIT in Hispanic and Chinese cultures suggest that it is a promising intervention for families located in many different regions and with various cultural backgrounds. However, it is likely that PCIT will need to be tailored slightly for widespread use with these cultures (See Chapter 19 and 24). For example, both Hispanic and Chinese cultures may benefit from systematic efforts by PCIT therapists to involve extended family members in treatment (i.e., Matos et al., 2006; Tsang et al., 2007).

**Other Parent Characteristics.** Early PCIT research often examined parent and child behavior changes after treating the mother–child dyad, which is consistent with methods commonly employed in the behavioral parent training literature (Tiano & McNeil, 2005). However, there is increased recognition of the need to include other individuals, particularly fathers, in research and clinical practice (Tiano & McNeil). PCIT researchers have attempted to extend research findings to other parental characteristics by investigating not only fathers, but physically abusive parents, parents who have experienced intimate partner violence (IPV), and foster parents.

An examination of family composition in several PCIT treatment outcome studies found different effects in families with involved fathers, uninvolved fathers, and absent fathers (Bagner & Eyberg, 2003). Although these researchers did not find many group differences at post-treatment, children in families with an involved father exhibited greater maintenance of treatment gains compared to other families. This study highlights the importance of engaging fathers in PCIT and conducting further work on treatment outcome and maintenance with involved fathers.

Recently, many PCIT researchers have been interested in utilizing this intervention with abusive parents. Since Urquiza and McNeil (1996) discussed how the principles underlying PCIT and the format of the intervention could apply to maltreating parents, empirical research has confirmed the usefulness of treatment in this population. For instance, Chaffin et al. (2004) compared standard PCIT, enhanced PCIT, and standard parenting program in groups of physically abusive parents. Results demonstrated that there were fewer drop-outs in the PCIT groups and that standard PCIT significantly reduced the reoccurrence of physical abuse in comparison to the other groups (Chaffin et al.). Also, Timmer, Urquiza, Zebell, and McGrath (2005) compared PCIT outcomes in families with and without maltreating caregivers, finding that PCIT decreased child behavior problems, parenting stress, and risk for abuse in families in both groups.

A characteristic of many abusive families is the presence of IPV. Children exposed to IPV often have internalizing and externalizing behaviors as well as problems in the bond with their parent (See Chapter 13). Therefore, theoretically, PCIT will likely be an efficacious intervention for children exposed to IPV (see Borrego, Gutow, Reicher, & Barker, 2008). To date, controlled research has not been used to directly address PCIT’s effects with this population, however, a published case study demonstrated success following PCIT (Pearl, 2008) and research is underway at West Virginia University comparing PCIT versus treatment as usual (Foley & McNeil, 2009).
In addition to examining the effects of PCIT on maltreating caregivers and children exposed to IPV, research has also focused on maltreated children in foster care (McNeil, Herschell, Gurwitch, & Clemens-Mowrer, 2005). Several researchers have published successful cases of PCIT with children placed in foster care (Fricker, Ruggiero, & Smith, 2003; Timmer, Urquiza, Herschell, et al., 2006). Also, Timmer, Urquiza, and Zebell (2006) conducted a more rigorous test of PCIT with foster families by comparing the effects of PCIT in foster parents and non-abusive biological parents with findings suggesting that the treatment is equally effective for the two groups.

**Therapist Characteristics and Behavior.** Compared to other areas of treatment development and investigation, less PCIT literature exists on therapist behaviors that enhance or hinder outcome. However, specific research on the interaction between the therapist and the client or therapy-process variables is imperative. Research has established that therapy-process variables are important for successful completion and outcome following intervention for child psychopathology (e.g., Kazdin, Holland, & Crowley, 1997; Shirk & Karver, 2003).

Harwood and Eyberg (2004) examined the relation between therapist behavior early in PCIT and treatment completion, which was defined as meeting the PCIT mastery criteria. These researchers found that therapist verbalizations (e.g., therapist support, questioning, and facilitation) during the assessment and first CDI coaching session predicted treatment drop-out. These findings are consistent with other research showing the importance of using skills to engage clients (Herschell, Capage, Bahl, & McNeil, 2008); however, more research on therapist–client interaction in PCIT is warranted to better understand the effects of therapeutic alliance on adherence and outcome.

**Intervention Format.** Considerable advances have been made in the area of the PCIT format including research on age range, group treatment, number of sessions, location of intervention (i.e., home-based services and classroom), and intensity of intervention. Although these innovations are still in the preliminary stages of design, implementation, and research, they may be promising adaptations that promote widespread use in a variety of contexts, while at the same time preserving many core components of treatment.

Parent-Child Attunement Therapy (PCAT) employs many behavioral techniques utilized in PCIT but was specifically designed to address needs and concerns of younger children (ages 12–30 months) (Dombrowski, Timmer, Blacker, & Urquiza, 2005). Differences between PCAT and PCIT include: (1) PCAT places a greater emphasis on physical praise (hugs) and enthusiasm, (2) PCAT does not include a phase comparable to PDI, and (3) PCAT is typically conducted in shorter sessions. Dombrowski and colleagues reported successful treatment with a mother and her 23-month-old child. Just as PCAT has been developed for younger children, there also have been attempts to extend PCIT’s age range to older children (Chaffin et al., 2004). See Chapter 9 and 10 for information regarding the adaptation of PCIT for children outside of the 2–7 age range.

Other research has examined more subtle changes to traditional PCIT. In particular, Nixon, Sweeney, Erickson, and Touyz (2003) developed an abbreviated version
of PCIT that incorporated didactic videotapes and telephone consultation. A comparison of standard PCIT, the abbreviated version which consisted of five sessions and five consultations, and a waitlist comparison group demonstrated that both treatment groups significantly improved and maintained behavioral change. Although this change appears relatively minor, the abbreviated format did not contain criteria for mastery, which is a critical feature of PCIT. Creativity in adapting traditional PCIT may be necessary in order to incorporate key components in altered versions, such as abbreviated treatment.

Another format variation that also faces the problem of integrating mastery criteria into the treatment is an intensive, brief PCIT workshop. Although both standard and abbreviated PCIT have clinical utility in treating children referred for disruptive behavior disorders, providing less intensive services may be an appropriate and sufficient method of prevention. McNeil et al. (2005) reported findings from a 2-day workshop that incorporated many of the core elements of PCIT with the exception of skill mastery (i.e., didactic and coaching). Findings indicated that foster parents were satisfied with the intervention and reported significant positive changes in child disruptive behavior following the workshop. Additional treatment adaptations and subsequent research would inform researchers and policy-makers as to whether PCIT can be an effective and efficient prevention program for populations of children at risk for developing behavior problems. Given the current structure of PCIT, which involves considerable time for families to learn and demonstrate skills, this treatment may not be well suited for prevention. However, it is possible that with changes that preserve core components (i.e., coaching, feedback, data-driven progression), PCIT in a shorter format has the potential of being an effective method of prevention.

Another exciting PCIT adaptation involves developing protocols for group treatment. Group treatment has several advantages over individual treatment including being more efficient and cost-effective to implement and providing the opportunity of increased social support (Niec, Hemme, Yopp, & Brestan, 2005). However, the coaching and mastery criteria in PCIT pose unique challenges to providing this treatment in group format (Niec et al.). Investigators interested in group treatment are still devising and empirically testing different mastery requirements.

Given the efficacy of PCIT in traditional clinic settings, research has begun to test the effects of PCIT conducted in other settings. Settings such as the home or schools may help reduce some common barriers to treatment such as transportation or availability (Ware, McNeil, Masse, & Stevens, 2008). Ware and colleagues examined the effects of PCIT provided in the home on parenting behavior and child behavior problems. Although study results suggest that home-based PCIT is efficacious, unique challenges are present in home-based interventions often stemming from the lack of environmental control (Masse & McNeil, 2008).

A version of PCIT has been designed for school settings termed Teacher–Child Interaction Therapy (TCIT). A case study demonstrated that teachers increased the frequency of positive skills utilized as well as decreased child disruptive behaviors and increased child compliance following TCIT (McIntosh, Rizza, & Bliss, 2000). Additionally, comparison of head start classrooms receiving training in TCIT...
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skills and comparison classrooms indicated that TCIT-trained teachers utilized the skills and child disruptive behaviors decreased (Tiano & McNeil, 2006). Budd et al. (2007) employed a multiple baseline design to examine the effectiveness of TCIT in a low-income, ethnically diverse daycare, finding some improvements in the majority of teachers’ behavior immediately following treatment. However, these gains diminished at a 4-month follow-up. Therefore, classroom-modified versions of PCIT likely need refinement to enhance treatment outcome and maintenance.

Attrition. Drop-out from psychotherapy is a serious problem when working with many populations and utilizing a variety of therapies (Wierzbicki & Pekarik, 1993). Parent training interventions are also subject to high rates of attrition (e.g., Kazdin, Mazurick, & Siegel, 1994; Prinz & Miller, 1994). Early termination of treatment is a concern in PCIT and research documents attrition rates ranging from 0–53% (Gallagher, 2003). Attrition is particularly concerning given that families who terminate early do not improve over time from their pre-treatment level of functioning (Boggs et al., 2004). Therefore, recent work has been conducted to identify variables predictive of drop-out (Werba, Eyberg, Boggs, & Algina, 2006). Werba and colleagues found that waitlist status predicts drop-out prior to starting treatment and that parenting stress and inappropriate parenting behaviors (parental sarcasm and criticism) predict drop-out in families who have begun PCIT. Although drop-out from waitlists has implications for clinical research, understanding drop-out in families who have begun treatment has enormous applied value. In particular, even though Werba and colleagues were able to identify several variables predicting drop-out, many factors contributing to early termination of PCIT remain unclear. Additionally, Chaffin and colleagues have been examining the effectiveness of a motivational enhancement add-on for decreasing attrition with clients with a history of child maltreatment (Chaffin et al., 2009).

Effectiveness/Dissemination Research. A major challenge for treatment outcome researchers, including PCIT researchers, is to replicate findings observed in university clinics in community settings. Many hurdles need to be overcome when attempting to transport an evidence-based treatment, including therapist motivation, training, and caseloads, as well as agency and community resources (Franco, Soler, & McBride, 2005; Sukumar, Johnson, McNeil, Brooks, & Manteuffel, 2008). Maintaining and measuring treatment integrity and fidelity is another challenge in community settings (Franco et al.). However, despite these obstacles, effectively disseminating PCIT has the potential to help more families and prevent future disruptive behavior problems in young children. Pade, Taube, Aalborg, and Reiser (2006) implemented a modified version of PCIT in a community setting, finding positive short-term and long-term treatment effects. However, the majority of families enrolled in the study utilized other interventions between the time that they completed PCIT and when they were contacted for follow-up (Pade et al.). Therefore, it is unclear whether functioning measured at follow-up occurred as a result of PCIT or another intervention. More work is needed to address implementation issues and investigate short- and long-term effectiveness in community settings.
Suggestions for Future Research

Training. Successful dissemination cannot occur in the absence of training competent PCIT therapists. There is a paucity of research on training PCIT clinicians; however, findings indicate that neither solely reading the PCIT manual nor attending a 2-day didactic training workshop is sufficient preparation to facilitate therapist mastery of the PCIT skills (Herschell et al., 2009). Current recommendations set forth by the PCIT National Advisory Board include 40 h of initial training with advanced training and supervision (Herschell & McNeil, 2007; See Chapter 25). However, more research on training is warranted to develop efficient and effective training methods.

Cost-Effectiveness. Evaluating the cost-benefits and cost-effectiveness of specific interventions is imperative in order to convincingly argue for widespread treatment dissemination. Given the efficacy and new developments in PCIT, it is not surprising that several cost-effectiveness analyses have been conducted (i.e., Aos, Lieb, Mayfield, Miller, & Pennucci, 2004; Goldfine, Wagner, Branstetter, & McNeil, 2008; Krivelyova, Sukumar, Stephens, & Freeman, 2007). These examinations calculated similar cost of treatment per child; specifically costs ranged from $1,025 to $1,296 (Aos et al., Goldfine et al.). Furthermore, Krivelyova and colleagues found that the cost of PCIT was $600 less per child than providing services as usual in a system of care program. These costs are all substantially less than the cost to society for persistent disruptive behavior throughout life and the incarceration of individuals whose problems progress into Antisocial Personality Disorder (Goldfine et al.). These favorable monetary results are certainly promising; however, additional cost examinations are warranted.

Suggestions for Future Research

In recent years, many exciting areas have been investigated in PCIT expanding the knowledge in regard to what types of clients benefit from PCIT and how the treatment can be packaged and delivered. Questions regarding what obstacles hinder treatment dissemination and whether the treatment is cost-effective have been posed by investigators. Research is beginning to provide insight into some of these inquiries. Specifically, findings suggest that this treatment is beneficial for many young children including children with a variety of concerns and problems such as mental retardation, developmental disorders, internalizing problems, and chronic illness. Studies also suggest that the treatment is appropriate for families with different cultural backgrounds and parents who are physically abusive. Research has shown support for treatment delivered in an abbreviated format, a workshop format, in classroom settings, and in the home environment. Additionally, the cost of treatment is quite low in comparison to the cost of untreated disruptive behavior disorders that persists throughout life and result in criminal behavior.

Despite these advances in PCIT research, there are many additional questions in need of investigation. Furthering the evidence base with regard to training and dissemination has the potential to benefit many families. However, current models
of training and dissemination are time-intensive and do not result in the same effects in the community as are obtained in university clinics. Therefore, it is evident that more work needs to be done to promote the widespread use and effectiveness of PCIT.

In order to disseminate successfully, additional research is necessary in many of the areas highlighted in this review (e.g., diagnostic, cultural groups, format, and training of clinicians). For instance, clearly specifying which diagnostic, cultural, and age groups the intervention works for helps clinicians select the most appropriate intervention for individual clients. It is likely that PCIT will not be the optimal intervention with certain populations (e.g., teenagers); more research is needed to guide clinical decisions on which families are likely to benefit from treatment.

Although there is a necessity for further research on PCIT with different groups, conducting format and training research is also of utmost importance. This research has the potential to both enhance community effectiveness and maximize cost-effectiveness. Therefore, this area of scientific inquiry is of particular interest to policy-makers.

One format option warranting further empirical scrutiny is the efficacy of in-room coaching. Traditional PCIT utilizes coaching from behind a one-way mirror with bug-in-the-ear technology. However, this equipment and costs to modify the structure of a therapy room are fairly expensive (with rough estimates of $14,000 to start-up PCIT) with the bulk of these costs consisting of technology and therapist training (Goldfine et al., in press). Due to the high price tag, standard coaching may not be feasible in the real world (e.g., Sukumar et al., 2008). Although some research suggests in-room coaching results in favorable outcomes (Rayfield & Sobel, 2000; Ware, McNeil, Masse, & Stevens, 2008), there is limited research comparing the two formats.

In addition to evaluating in-room coaching, there is a need for research on the length of PCIT. Specifically, several abbreviated or shortened adaptations of PCIT (e.g., Franco et al., 2005; Nixon et al., 2003) appear promising. However, many of these adaptations do not contain one of the integral components of PCIT, which is data-driven progress through treatment. More research is needed examining whether data-driven progression through treatment can be adapted for shortened formats and whether these formats have similar outcomes and adherence.

Another area lacking in research that has implications for treatment length and cost-effectiveness is component research. The need to evaluate individual components is most obvious in treatments that include many different elements (e.g., school interventions, parent training, social skills training, medication, and problem-solving training) that are often referred to as “kitchen-sink treatments” (Hoza, Kaiser, & Hurt, 2007). Although PCIT is not considered a multimodal treatment, the therapy does utilize many skills, some of which have not been subject to scientific scrutiny. Early PCIT research examined the order of treatment phases by comparing CDI-first and PDI first (Eisenstadt [Hembree-Kigin], Eyberg, McNeil, Newcomb, & Funderburk, 1993) and methods of training children to stay in time-out (McNeil, Clemens-Mowrer, Gurwitch, & Funderburk, 1994). Recent examination of change during CDI demonstrated that significant positive changes in parenting stress, parenting practices, and the child’s disruptive
behavior occur during this relationship-enhancing phase of treatment (Harwood & Eyberg, 2006). However, some of the skills taught in PCIT are based largely on theory and clinical observations such as parental use of reflections and behavioral descriptions. Currently, ongoing projects are experimentally examining the effects of these components. Obtaining empirical evidence on the utility of individual skills will aid researchers in attempts to maximize efficacy and cost-effectiveness of PCIT.

Even though discovering how to maximize costs and benefits by researching different formats and adaptations is a necessary step to successful dissemination, therapist training also is a critical element in widespread use of PCIT. Therapist training also significantly contributes to PCIT start-up costs (Goldfine et al., in press). Currently, there is much debate regarding training, yet little evidence to guide decisions about training requirements. The research that does exist and requirements of different trainers suggest that intensive training incorporating didactic and experiential components with follow-up supervision is necessary (Herschell et al., 2009). However, more research is warranted comparing different training formats. For instance, it is possible that combining education on the behavioral principles underlying PCIT with technical training on the PCIT manual would enhance clinicians’ understanding and mastery of PCIT. Given the concerns and controversies surrounding treatment manuals, this represents a relevant area to pursue scientifically.

Research in these areas is necessary to determine what treatment elements are mandatory for positive and clinically significant outcomes. Development in these areas could be used in a “bare-bones” empirically supported version of PCIT (Goldfine et al., 2008), which could be useful for community agencies with limited budgets. Increasing efficiency and reducing cost are key steps in bridging the gap between research and clinical practice.

Additionally, there is a need for researchers to think “outside of the box” to design and test models of delivery. For instance, some researchers have incorporated athletic training and sports skills in behavior parent training in attempts to engage fathers (e.g., COACHES; Fabiano, 2007). Developing novel formats may also enhance widespread PCIT prevention programs. Specifically, the Triple P Positive Parenting Program utilizes different levels of intervention depending on family needs with the lowest level of intervention implemented at a population-level through the media (e.g., mailings, articles about positive parenting, popular television shows about parenting, radio advertisements) (Prinz & Sanders, 2007). Utilizing the media as a tool in PCIT dissemination may aid prevention and intervention efforts.

Lastly, novel delivery methods may help enhance cost-effectiveness and reduce attrition. It is plausible that the once-a-week session schedule is not flexible enough for both clients and treatment providers. Urban environments may be able to capitalize on this need by offering PCIT walk-in clinics. For instance, treatment centers could offer different sessions (CDI didactic, PDI didactic, CDI coaching, etc.) at several different days and times during the week. Additionally, attrition may be reduced by adding incentives for parents and children to attend sessions (e.g., gift certificates, toys). This would enable families to pick the time that works for their
schedule based on what session they needed to attend. A method of tracking family progress such as providing certificates of session completion and mastery requirements would preserve key features while allowing this increased flexibility. Another potential advantage to this approach is that therapists could serve a greater number of clients and would not suffer from costs associated with families who do not attend scheduled appointments.

These research suggestions do not fully encompass every area in which PCIT research can be furthered, and these suggestions also do not guarantee solutions to problems of dissemination and drop-out. However, the ideas presented are intended to spur interest, discussion, and research. Since PCIT was developed in the 1970s, this intervention has been empirically validated, extended to many new populations, and adapted to better fit unique needs (e.g., TCIT in school settings). All of these findings suggest that PCIT has general utility. Therefore, the expansion of PCIT is as limitless as the innovation and creativity of clinicians and researchers.

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