


# Evidence-Based Treatment in Practice: PCIT Research on Addressing Individual Differences and Diversity Through the Lens of 20 Years of Service

Shawna M Campbell<sup>1</sup>, Tanya Hawes<sup>1</sup>, Kellie Swan<sup>1</sup>, Rae Thomas<sup>2,3</sup>, Melanie J Zimmer-Gembeck<sup>1,4</sup> 

<sup>1</sup>School of Applied Psychology, Griffith University, Gold Coast, QLD, Australia; <sup>2</sup>Tropical Australian Academic Health Centre, Townsville, QLD, Australia; <sup>3</sup>College of Medicine and Dentistry, James Cook University, Townsville, QLD, Australia; <sup>4</sup>Griffith Centre for Mental Health, Griffith University, Gold Coast, QLD, Australia

Correspondence: Melanie J Zimmer-Gembeck, School of Applied Psychology, Griffith University, Parklands Drive, G40\_7.86, Southport, Gold Coast, QLD, 4222, Australia, Tel +61 07 5678 9085, Email [m.zimmer-gembeck@griffith.edu.au](mailto:m.zimmer-gembeck@griffith.edu.au)

**Abstract:** Parent–Child Interaction Therapy (PCIT) is an intensive parent support program for caregivers and their children who exhibit difficult-to-manage disruptive behaviors. After more than four decades of research supporting its efficacy for reducing children’s disruptive behaviors and improving parent–child relationships, PCIT has become one of the most popular and widely disseminated parenting support programs in the world. The evidence for the efficacy of PCIT can be found in many reviews of randomized clinical trials and other rigorous studies. To add to those reviews, our aim was to provide practical guidance on how PCIT can be part of an evidence-based program for families that depends on practitioner expertise, as well as attention to families’ diverse needs. To do this, we describe the evolution of PCIT as practiced in a university-community partnership that has continued for over 20 years, alongside a narrative description of selected and recent findings on PCIT and its use in specific client presentations across four themes. These themes include studies of 1) whether the standard manualized form of PCIT is efficacious across a selection of diverse family situations and child diagnoses, 2) the mechanisms of change that explain why some parents and some children might benefit more or less from PCIT, 3) whether treatment content modifications make PCIT more feasible to implement or acceptable to some families, at the same time as achieving the same or better outcomes, and 4) whether PCIT with structural modifications to the delivery, such as online or intensive delivery, yields similar outcomes as standard PCIT. Finally, we discuss how these directions in research have influenced research and practice, and end with a summary of how the growing attention on parent and child emotion regulation and parents’ responses to (and coaching of) their children’s emotions has become important to PCIT theory and our practice.

**Keywords:** parent–child interaction therapy, parent support, child externalizing behavior, emotion regulation, autism spectrum disorder, evidence-based practice

## Introduction

Externalizing behavior problems during childhood, including aggressive behavior, excessive tantrums, rule-breaking and oppositional defiance, are some of the primary reasons for family distress and requests for professional help.<sup>1,2</sup> Externalizing behaviors (also called disruptive behaviors or problem behaviors) are also troubling because they can result in daycare/school disruptions, academic disengagement and failure, victimization by peers and other relationship or social problems.<sup>3–6</sup> Moreover, children with the most elevated levels of externalizing behavior problems often experience chronic problems without intervention, which has significant detrimental effects on the future health and well-being of the individuals, their families, and their broader communities – especially given increased risk of contact with the criminal justice system.<sup>7,8</sup>

To address children’s externalizing behavior problems early in life, multiple classic and contemporary theories of child development suggest that working with parents and family relationships is a preferred and effective approach.<sup>9,10</sup> In fact, although there can be multiple causes for externalizing behavior, many children with elevated levels of problems

have caregivers who would benefit from learning new or additional skills for parenting. Some of these parents not only need skills because their children are especially challenging, but they can have their own histories of aggression or other behavioral or mental health problems. Thus, we have seen decades of development, implementation, and evaluation of multiple parent training programs that are applicable across a range of child and caregiver problems.

Lists guiding practitioners and parents to services identify over 30 manualized evidence-based treatments (EBTs) that aim to reduce child externalizing behavior problems, teach parents skills that can be useful in their caregiving role, and improve parent–child relationships (see the California Evidence-Based Clearinghouse for Child Welfare). When these treatments are examined closely, a high degree of content overlap and similarity in theoretical foundations and implementation can be found.<sup>11–14</sup> Many of these treatment programs have important core components that (a) support parents to use reinforcement through positive attention and to establish appropriate boundaries and guidelines, (b) provide information about and practice with effective parent–child interactions, and (c) assist parents and children in improving their regulation of emotions.<sup>12,14</sup> Programs with these components are often found to have the most robust efficacy in rigorous studies and the greatest effectiveness in real-world settings.<sup>14–17</sup>

Parent–Child Interaction Therapy (PCIT)<sup>18–20</sup> is one of the most popular and widely disseminated of these programs, despite the significant training and practice required to become an expert therapist. PCIT (described in more detail below) is an individual manualized parent management training intervention designed for caregivers and young children (usually children between the ages of 2 and 7 years, but many studies include children ages 2 to 12 years). Initially, PCIT was designed for children who exhibit difficult-to-manage disruptive behaviors. In weekly sessions of PCIT that occur across two phases, parents (or other caregivers) first learn skills through a psychoeducation (“didactic”) session in each phase and then practice these parenting skills with their own children over repeated sessions of coaching and feedback (see <http://www.pcit.org/> for more details about PCIT).<sup>19</sup> Numerous adapted versions of PCIT have been developed to suit a range of families with diverse needs and for children under age 2, some of which will be addressed in our narrative description of relevant research presented below.

PCIT itself has more than four decades of research supporting its efficacy and effectiveness. In recent years, these findings, including numerous randomized controlled trials (RCTs), have been reviewed.<sup>21–27</sup> In general, these reviews conclude that PCIT is effective for reducing children’s externalizing behaviors. In one PCIT meta-analysis<sup>24</sup> summarizing the effects of RCTs, large effects on child externalizing behavior were reported, with a standardized mean difference (SMD) between PCIT ( $n = 647$ ) and comparison group ( $n = 497$ ) of  $-0.87$  (SMD values over  $|.8|$  are considered large). These positive outcomes can be found when behaviors are measured using surveys completed by parents<sup>28,29</sup> and when observed by others.<sup>30–32</sup> Moreover, many studies have found that the positive outcomes from PCIT extend to reductions in parents’ reports of their own stress and distress.<sup>33,34</sup> For example, in the same meta-analysis described above,<sup>24</sup> the SMD between PCIT ( $n = 214$ ) and comparison group ( $n = 175$ ) for parent stress was  $-6.98$ . Some studies also find that PCIT is associated with improvements in children’s internalizing symptoms, such as anxiety and depression.<sup>35,36</sup>

## Purpose of This Paper

The purpose of this paper was to provide a narrative description of past review findings, as well to briefly summarize selected and recent research that chronicles the effectiveness of PCIT across families or within subgroups of families with specific needs. We focus most attention on what is known about the effectiveness of PCIT from recent research addressing outcomes for parents and children who differ in background and/or in presenting diagnoses, with a particular focus on recent trends in evaluation and program modification. For this paper, we could not cover all the research on modifications of PCIT, but we place a focus on multiple areas that have been relevant in our research and service. We contextualize these research findings by drawing from our experiences working with families in the day-to-day of a clinic setting, describing our research but also describing how we attended to others’ research to understand our own service and its effectiveness as part of an evidence-based parenting program (EBPP) supported by a more than 20-year community-university partnership. Thus, along the way, we note how we have integrated our own research findings, other published research, listening to our families, and practitioner expertise to contribute to the evidence base, while also applying the findings to improve our service – the Family Interaction Program (FIP). We describe our work in FIP as the

integration of the best available research on PCIT with clinical expertise, in the context of client characteristics, culture and preferences, aligning it with the definition of evidence-based practice (EBP).<sup>37</sup>

Our overarching purpose was to summarize selected and recent trends in research on PCIT, especially research on flexible individualization of PCIT to meet specific client needs, without compromising effectiveness. We draw upon this research to illustrate how adopting an EBP model allows for space within manualized PCIT to meet the needs of many families, without compromising the tenants of the program that are responsible for PCIT's long history of benefits and positive outcomes. After describing PCIT within our own program, we begin by summarizing recent research evidence on standard PCIT and its outcomes, before describing the EBP approach and how PCIT is being modified. We then describe what is known about the effectiveness of PCIT when modified, adapted, or individualized for specific client needs and preferences, including for children on the autism spectrum and children with signs of attention-deficit hyperactivity disorder (ADHD), and changes to content and mode of delivery. We finish with a discussion of what to consider before and after individualizing PCIT to ensure it continues to be a beneficial intervention for children with disruptive behaviors and distressed parents.

## Brief Overview of Parent–Child Interaction Therapy (PCIT)

PCIT is a parent training program that is usually described as founded on two theories of the development of problematic externalizing behavior in children:<sup>20</sup> attachment<sup>38</sup> and social learning (later social cognitive theory),<sup>39</sup> with a special emphasis on social learning theory applied to understanding aggression and the development of coercive cycles between carers and children.<sup>40</sup> Although PCIT has a core component of coaching parents to recognize and reward positive child behavior, it is also designed to guide parents to use these skills to increase parent–child positive interactions (ie, enhance the parent–child relationship), while reducing parent and child hostility and, relatedly, lowering the risk of coercive cycles of interactions.<sup>19</sup> In the “standard” PCIT format, the vast majority of the individual sessions are interactive caregiver-child play sessions that occur while a therapist observes the dyad through a window (this can be a one-way or a two-way viewing window) and uses a communication device (ie, ‘bug in the ear’, an earpiece for the caregiver to hear the therapist) to coach the parent to practice attending positively, consistently and predictably to the child's play and other behaviors. However, there are modifications of PCIT than involve in-room coaching, which can be appropriate for some parents and children.

PCIT has two sequential phases, with the first phase often longer than the second phase. Each phase begins with a didactic session to teach the parent skills relevant to that phase, which is then followed by direct coaching sessions throughout the rest of each phase. The first phase, child-directed interaction (CDI), which has also been referred to as the relationship enhancement phase (REP), is designed to strengthen the positive relationship between caregiver and child through teaching and coaching parents' practice of skills in positive parenting. These skills are referred to as PRIDE skills – Praise, Reflect, Imitate, Describe, Enjoy. The skills include praise and description of the child's appropriate behavior; interest in the child's ideas; positive emotional displays and modeling emotion regulation; and positive regard, as well as limited hostility and interference in children's play. At the same time, parents are also coached to respond to their children's externalizing/disruptive behaviors through practice at staying calm and avoiding reinforcing behavior via selective attention, being a positive soothing presence, providing emotional support, and giving positive attention to children's appropriate behavior within the social context. Caregivers typically attend several sessions of CDI coaching, with the precise number of sessions varying depending on how quickly caregivers acquire skills. When it is agreed between the caregiver and therapist that CDI mastery (ie, a minimum number of PRIDE skills and limits on negative responses) has been reached, the family will move onto the next phase of parent-directed interaction (PDI).

The PDI phase, also called the additional skills phase (ASP), helps the caregiver to confidently know when and how to constructively and carefully implement additional behavior management techniques, such as giving choices and the use of time-out that is reasonable, careful, and correct depending on the circumstances and the child. Time-out is briefly removing the child from a preferred activity or rewarding experience as a result of ongoing non-compliance or aggression that is within the child's capacity and control, while the parent also concentrates on maintaining positive interactions as developed through REP. Time-out can also involve removal of other privileges (such as no screen time for a period of time or until the child responds as requested). Ideally, PCIT is completed when parents show significant mastery of all

skills and the presenting child problem behaviors have been resolved or have otherwise significantly improved. The end of the PCIT journey is often celebrated with a graduation ceremony and follow-up contacts may be planned as check-ins or for booster sessions.

Coaching parents as they interact with their children provides numerous opportunities for repetition of skills, while also giving therapists the chance to provide immediate feedback on both specific skill development and improvements to parent–child interactions within each session and over time. Practice and repetition, plus the ability to understand the needs and preferences of each family as they progress through PCIT, increases the chance that parents will come to understand their own competencies and build confidence in their parenting. Considering these change processes within an attachment theory framework suggests that the repeated practice and the associated self-observed competencies (and personalized feedback) from PCIT will facilitate growth in understanding of the self in interaction with their children. This understanding directly links to parents' development of more secure internal working models and forms a socioemotional template which should guide continued positive caregiver–child relationship development during and after involvement in PCIT.

## PCIT at the Family Interaction Program (FIP)

For over 20 years, FIP, located within Griffith University Gold Coast, Queensland, Australia, has delivered PCIT to the local community, as a combined research and service program funded through the child welfare (ie, child protection) branch of the state government. FIP is an example of the service and research outcomes that can be achieved via a longstanding university–community partnership built on the goal of improving family relationships to support children's future opportunities in life and reduce parents' risk of involvement in the child welfare system.<sup>29,32,34,36</sup> Through many years of community contacts and linkages, families are referred from a variety of sources spanning across government and nongovernment agencies, from health care providers, and from schools and daycare settings. With approximately 2.5 FTE of training or expert therapists who are often drawn from the clinical psychology training program at Griffith University, approximately 1500 families have received PCIT during about 20 years of service (including an estimated more than 50,000 hours of coaching of families). At all times, data have been collected from families including, at a minimum, parent-report surveys pre- and post-PCIT and repeated recorded observations of interactions between parents and children. To date, some repeated data have been collected from almost 900 families.

Working closely with the community over multiple years has helped us to have a clear perception of the level of family commitment needed to complete PCIT. Thus, families referred to FIP often attend after they have accessed multiple other services, including other parenting programs. This means that the children and parents referred for PCIT at FIP are generally there due to child aggressive behavior, or angry outbursts and hostility that have been difficult to manage for some time. However, a proportion are directly referred from child welfare for suspected or confirmed child abuse, and these families, who also are connected to other family support services, are invited to participate in PCIT, knowing that not all children will display high levels of disruptive behavior (eg, some may be withdrawn and fearful, and many have experienced significant adversity). Currently, about 25% of children have symptoms that are suggestive of being on the autism spectrum or ADHD. The caregivers often report that they experience high levels of distress, that they can display hostility unexpectedly, can appear disengaged from parenting, and/or report being unable to manage the demands of their children. The families who attend PCIT at FIP frequently report stressors such as caregiver separation/divorce, historical domestic violence, and parental mental health difficulties such as anxiety, depression, and a trauma history or post-traumatic stress disorder.

Despite this adversity, our research shows that families who complete PCIT at FIP have significant improvements to child disruptive behaviors and develop closer and warmer parent–child relationships – the target outcomes that PCIT was developed to address. Evaluations of our service have shown that PCIT at FIP is an effective treatment for reducing child behavior problems and parent stress.<sup>29,34</sup> In an RCT, families who completed PCIT reported significant improvements in child behavior, parent stress, and parent–child interactions compared to waitlist parents, and were less likely to be notified for child abuse or neglect after treatment compared to families who do not complete PCIT.<sup>32</sup> Further, we have found that PCIT improves parents' emotion regulation, which in turn improves child behavior outcomes,<sup>36</sup> demonstrating a change mechanism (parent emotion regulation) through which PCIT positively impacts children.

Across these 20 years of service and research,<sup>16,24,29,32,36</sup> FIP has developed strategies to apply manualized PCIT to best meet the needs of this diverse community of families. We have done this by conducting research as part of regular practice, keeping up to date on the broader research available, and continually improving by gathering feedback from families and referral sources. We also have methods of gathering practitioners' reflection through informal and formal meetings and supervision opportunities, and we provide opportunities for formal training outside of our service. In community-based clinics such as FIP, the evidence-informed approach of EBP, rather than an exclusive evidence-driven approach, has become helpful in decision-making about support services, especially where staff are tasked with meeting the diverse needs of clinical populations,<sup>41,42</sup> which can be more complex than those in rigorous clinical trials.<sup>43</sup> Although studies of PCIT have consistently demonstrated positive outcomes via rigorous RCTs based on a set of suitability criteria<sup>16,24,44–46</sup> and we conducted some of these RCTs in FIP,<sup>32,34</sup> because of the diversity and complexity of community-based clinic presentations and our desire to maximise the number of people who can benefit from PCIT, we have increasingly witnessed the need for more flexible implementation by clinicians, or “local scientists”.<sup>47–50</sup> In FIP today, ascribing to an EBP approach has been important in order to integrate EBTs along with clinical expertise, in a way that suits the local context, including client characteristics, culture and preferences.

## Current Research on Standard PCIT, Generalizability, and Mechanisms of Change

Even prior to the establishment of FIP in 2002, the effectiveness of PCIT had been established for reducing children's externalizing behaviors and parent stress, and for improving parenting practices such as parent warmth and involvement or sensitivity with their children (and decreasing negative practices such as hostility and coercion).<sup>51,52</sup> Our earliest studies of PCIT involving FIP families confirmed and extended these results<sup>32,34</sup> and in more recent years, the effectiveness of PCIT has continued to garner support. For example, a meta-analysis of 100 studies, including those with between and within-group comparisons, post-treatment follow-ups, and random and factorial designs, reported that PCIT is a Level 1, well-established treatment for reducing behavioral problems in children ages 2–12 years.<sup>25</sup>

In reviewing the literature evaluating PCIT in the last decade, we focus on four notable trends in research and delivery of PCIT that coincide with the evolution of our clinical experiences in FIP. First, given the solid base of evidence supporting PCIT at the group level, researchers have turned their attention towards addressing complex questions of the generalizability of effectiveness of standard PCIT (that is, the standard manualized version of PCIT without description of any specific modifications, enhancements, or other changes) to diverse groups. Second, there is a growing interest in evaluating if PCIT is associated with additional positive outcomes, which may indicate when or where modification to PCIT could be of most benefit and could serve to identify “change mechanisms” within treatment that deserve further emphasis in treatment and coaching.

Third, there has been a proliferation of materials available that describe how PCIT has been adapted, modified, or otherwise adjusted with the aim of improving outcomes for diverse family needs. In conjunction, researchers have started to investigate the efficacy or effectiveness of these adaptations. Finally, partly motivated by the COVID-19 pandemic but also because of the need to improve access to services, PCIT is taking advantage of new modalities for service provision and researchers have been examining feasibility and acceptability, as well as the effectiveness, of PCIT when using these modalities.

### Topic Trend I. Generalizability of Standard PCIT

For many years, the evidence has indicated that standard PCIT reduces externalizing behavior problems in children across diverse populations, including children living in socially disadvantaged families or culturally and linguistically diverse (CALD) families, and children with challenges that may add complexity to the treatment of their externalizing behavior problems.<sup>53</sup> PCIT has been found to reduce children's externalizing behavior problems and improve parenting practices in parents of low SES and in families from a diversity of backgrounds (low SES,<sup>54,55</sup> CALD<sup>33,56</sup>). For example, a study of 18 low-SES African American families with 3- to 6-year-old children diagnosed with a behavioral disorder found that for families who completed treatment, children's disruptive behaviors were significantly improved.<sup>54</sup>

However, it is notable that maternal depression and stress did not improve, with maternal stress remaining above the 90th percentile post-treatment. Further, the high attrition rate (upwards of 60%) in already small samples is a limitation in studies of PCIT in low-SES samples,<sup>54,55</sup> with SES considered a significant predictor of PCIT attrition.<sup>57</sup> Further work is warranted to understand how best to retain families in PCIT who would benefit, as it may be that families with numerous stressors related to low SES could most benefit from more accessible program designs, such as shorter programs delivered in an online format or provided within their own community (eg, in a local school environment).

McCabe and Yeh<sup>56</sup> found in a sample of Mexican American children aged 3–7 years presenting with clinical levels of behavior problems, that both standard PCIT and a modified version for Spanish-speaking families were equally as effective at reducing behavior problems to below clinical levels, although it was noted that these families took longer to complete PCIT (approximately 4 sessions longer) than reported in previous PCIT trials with native English speakers. Hence, a modification to Standard PCIT (ie, allowance for extra sessions) may ensure CALD families get the most benefit from PCIT.

Standard PCIT has also been found to be an effective intervention for improving child externalizing behavior, as well as parenting and parent–child functioning, among families involved in child welfare and child protection, which often includes parents with low SES, who report trauma in their backgrounds, have experienced domestic violence, report histories of mental health diagnoses, live in unstable housing, or face other chaos and stressful events.<sup>27,32,58</sup> Notably, PCIT has been associated with a reduction in the risk of future notification to child protection for suspected child maltreatment in samples of parents from the US<sup>58</sup> and from Australia.<sup>32</sup>

Finally, there has been an obvious desire in the field to establish if the positive effects of standard PCIT can be found in specific diagnostic populations of children, with the most notable focus on children displaying signs of or diagnosed with autism spectrum disorder (ASD) or ADHD. These are important given questions concerning the applicability of certain parenting strategies when children have compounding difficulties with regulation (as with ASD) and attention and impulsivity (as with ADHD). Some studies begin with the assumption that it is important to establish that PCIT without modification is appropriate in the treatment of externalizing behaviors in children with diagnosed ASD or ADHD before making decisions about the benefits of PCIT for these families and/or assuming the need for modifications. Others have moved forward with modifying PCIT based on preliminary evidence, theory, expert opinion, and/or family feedback, with the aim of improving outcomes for carers and children with ASD or ADHD (or other diagnoses or symptom profiles); we describe these studies in a later section.

There is solid evidence that standard PCIT is beneficial for reducing externalizing symptoms in children with ASD or ADHD (or both). A 2018 review of treatment outcomes of PCIT across these two diagnostic groups found reductions in behavioral problems and improvements in parenting skills. Yet, more improvements in behavior were found among children with ADHD compared to ASD.<sup>59</sup> In addition, there were greater reductions in parent stress in parents of children with ADHD compared to ASD. However, the author highlighted the need for more detailed description of the treatment population (reporting ranges and means for all participants) for facilitating more precise analyses of outcomes for participant subgroups. Indeed, PCIT as an intervention is designed to treat specific symptoms (disruptive behavior) and not a specific diagnostic group. Hence, information about child diagnosis or symptom profile (outside of disruptive behavior) is not typically reported. Further, children can be referred to the program from as young as 2 years old, often before formal assessment and diagnosis occur.

In two RCTs of carers of children with ASD combined with disruptive behavior, standard PCIT was reported as effective in reducing children's externalizing symptoms and improving observed positive parenting skills (children ages 4 to 10;<sup>60</sup> children ages 3 to 7<sup>61</sup>). Notably, the effect sizes for children's externalizing/disruptive behavior improvements were comparable to effect sizes in studies of children not diagnosed with ASD,<sup>62,63</sup> with the effects moderate to large. However, there is evidence to suggest that the observed improvements to parenting skills for those with children diagnosed with ASD were more modest (but still significant and clinically meaningful) when compared to findings for parents of children without this diagnosis.<sup>64</sup> There were mixed results for improvements in maternal stress across these two RCTs, with Allen et al<sup>60</sup> reporting greater improvement in stress for parents in PCIT compared to the comparison group and Scudder et al<sup>61</sup> reporting no difference in parental stress between parents who received PCIT and parents on the waitlist. In addition, Zlomke et al<sup>65</sup> found, in a sample of 17 children with a primary diagnosis of ASD who also

scored at a clinically significant range for disruptive behavior, reductions pre- to post-treatment for children's withdrawal (avoiding social contact) and attention problems, and improvements to social skills. Yet, they did not find the expected improvements in children's adaptability and functional communication.

Standard PCIT is designed to assist parents to maintain positivity and consistency when they have children who display many of the symptoms of ADHD such as impulsivity, inattentiveness, and hyperactivity, especially given that these symptoms can co-occur with anger and aggression when the context (eg, daycare and school) requires different behaviors and sustained attention for children's successful progress and development. Thus, as would be expected, PCIT has been found to be effective for reducing behavioral problems among children diagnosed with ADHD.<sup>66,67</sup> However, compared to studies of children with ASD, fewer studies have specifically recruited children with an ADHD diagnosis (potentially due to a later average age of diagnosis). In one RCT that recruited 64 families who had children aged 2–7 years diagnosed with ADHD or ADHD features, PCIT led to a significantly greater reduction in behavior problems, parental stress, and negative parenting practices compared to a waitlist control group.<sup>67</sup> Importantly, this study also reported that PCIT led to improvements in children's attention. Further, PCIT has been shown to be superior to mindfulness-based interventions in a quasi-experimental design in a study of 45 children aged 6–12 years diagnosed with ADHD.<sup>66</sup> This older age range is notable, considering the average age of diagnosis is 7 years.<sup>68,69</sup> Seven years was described as the top of the age range for standard PCIT when it was originally developed (although there are extensions available for older children). Yet, considering that behavioral parent training is an established and recommended treatment for children with ADHD (either alone or alongside pharmacological intervention),<sup>70</sup> standard PCIT is likely to reduce externalizing symptoms for most children with behavioral signs of or diagnosed with ADHD and their parents, as well as reducing these symptoms in children with signs of a diagnosis of ASD, where there are disruptive behaviors present.

## Topic Trend 2. Mechanisms of Change

A second trending topic in recent PCIT research is the identification of mechanisms of change. PCIT researchers have begun to identify some of the specific reasons (mechanisms) that could explain exactly when and why PCIT improves children's externalizing behavior problems and parent-child relationships. Two potential mechanisms that could account for these improvements include parents' or children's improvements in emotion regulation and parents' more positive (and less negative) specific parenting practices.<sup>36,71,72</sup> Focusing on change mechanisms exhibited by the caregiver, we found in FIP<sup>36</sup> that PCIT improves parenting practices, parent self-perceived emotion regulation, and one subscale of reflective functioning (understanding your child's mental state). These may be some of the mechanisms underlying improvements in children's externalizing behaviors, given that improvements in parent's emotion dysregulation and negative parenting practices were associated with greater relative declines in children's externalizing behaviors.

In another study of the mechanisms that could account for children's externalizing behavior improvement during PCIT, Skowron et al<sup>72</sup> reported that PCIT had a direct effect on parenting behavior rather than an effect mediated via parent's self-regulation skills (measured by parent self-report and observation) in a RCT of high-risk child welfare involved families. Further, the use of less negative and controlling behavior by parents when interacting with their children (as a result of engaging in PCIT) was associated with an increase in parent reported self-regulation of emotions. The study also concluded that the greatest gains in observed parenting skills were in parents with the most negative child attributions. These findings may suggest that the teaching and coaching parents to interact calmly with their children during PCIT may be one mechanism directly linked to parents' improvements in regulating their emotions.

Other research has begun to consider children's emotion regulation as a positive outcome of PCIT that may explain children's externalizing behavior change (or addressed the converse – whether behavior change results in improvements in children's emotion regulation). Overall, PCIT has been found to improve parents'<sup>36,73</sup> and children's emotion regulation.<sup>71,73</sup> Further, in one study,<sup>71</sup> children's emotion regulation improvement was associated with improvements in children's behavior during PCIT. Moreover, the authors concluded that parenting skills are important for improvements in child externalizing behavior, but that it was improvement to child behavior, and not improved parenting skills, that was the unique mechanism linked to improved child emotion regulation. Overall, the findings suggest that when children's emotional needs are better understood by parents, and children are praised for emotionally regulated responses (eg, gentle

play, talking calmly when upset), externalizing behavior problems decline and, in turn, children's emotion regulation skills improve.

### Topic Trend 3. Individualizing and Modifying PCIT

Given PCIT's strong history of benefit for children and parents and its versatility, many of the most recent lines of research address adaptations and modifications of standard manual practice to improve acceptability and applicability, improve outcomes for parents and children, or increase accessibility or retention. The attention on modification and tailoring of PCIT is testament to the needs of service users and providers, who often express they are searching for a program that has flexibility, tackles specific groups/symptoms (eg, children living with ASD), or addresses specific challenges (eg, high attrition, missed sessions, access, COVID-19). Primary research themes in the past 10 years have been whether PCIT can be improved (or is equally efficacious) with adaptations for populations of children at risk of or with clinical diagnoses, for children or parents with internalizing symptoms or disorders, for children with specific clusters of traits (eg, callous emotional traits), and when models of program delivery are modified (eg, brief PCIT, telehealth, virtual reality).

Studies that address PCIT modifications and adaptations for a broad range of diverse groups<sup>56,58,74</sup> often begin with the assumption that the positive outcomes from standard PCIT can extend to more families if modifications to the protocol are made keeping in mind the evidence of parent and child diversity of needs. Thus, modifications are designed to directly acknowledge and attend to client characteristics, culture and preferences, especially those that appear not to directly align with elements of a manualized protocol.<sup>75,76</sup> Thus, these approaches follow the principles of an EBP approach.

This direction in the research is partly a result of practice experience. Individualization and adaptations of PCIT are very common in practice. In fact, research has shown that clinicians ordinarily make practice-based adaptations to PCIT. In a mixed-methods study of 314 community-based PCIT clinicians focused on identifying practice-based adaptations to PCIT, clinician adaptations based on reducing or reordering components of PCIT (eg, omitting DPICS) were rarely reported.<sup>42</sup> However, adaptations based on augmenting and adding components to PCIT (eg, emotion coaching, elements of trauma-focused cognitive-behavioral therapy) were more common. Clinicians reported that adaptations to PCIT were primarily due to client clinical diagnoses or presentation, as well as developmental level and emergent life events within the family. The outcomes pertaining to practice-based adaptations seem consistent with the literature on adaptations to EBTs and research on parenting and child development more generally. Below we summarize what is known about the effectiveness of PCIT modifications designed to improve outcomes for children on the autism spectrum or for children who need extra support for emotional development (those with signs of ADHD, with comorbid anxiety, or with callous unemotional traits). We end with a summary of research on modifying PCIT to address cultural and linguistic/language diversity, and when PCIT is provided in different modalities than originally designed.

### Autism Spectrum Disorder (ASD)

Considerable modifications to PCIT have occurred in treating behavioral concerns in children on the autism spectrum or diagnosed with ASD. PCIT seems amenable for families who attend with children on the autism spectrum, given that children often exhibit aggression, emotional dysregulation, and non-compliance<sup>77</sup> and are more likely to exhibit challenging behaviors than their same-aged and typically developing peers.<sup>78</sup> As the presentation of each child with signs of ASD varies greatly,<sup>77</sup> modifications to the PCIT protocol can seem necessary, when it is still possible to maintain treatment fidelity and when integrating PCIT within a continuum of services including speech therapy and occupational therapy.

Numerous case studies, pilot intervention studies, and clinical evaluations on the utility of PCIT for children on the autism spectrum have appeared in recent years.<sup>79</sup> These studies describe multiple-treatment adaptations and supplementary components. For example, modifications include changing mastery criteria in CDI to account for expressive language delays;<sup>65,80,81</sup> adapting treatment to the client's home for twice weekly sessions;<sup>82</sup> adapting the PDI (ie, ASP) procedures to include steps such as modeling compliance after an instruction and reducing sit-time during time out,<sup>80,81</sup> limiting PCIT to a CDI (ie, REP) only protocol;<sup>83</sup> using visual supports and social stories;<sup>84</sup> allowing reinforcing "social interest"



toys to be brought from home to help create interest in play and practice of prosocial behaviors like sharing, waiting and turn taking,<sup>85</sup> the addition of a Social Directed Interaction Phase (SDI)<sup>86</sup> and group PCIT.<sup>87</sup> Many of these studies report good outcomes for children and parents when PCIT is modified with ASD presentation in mind, including numerous case studies and experimental/quasi experimental research studies.<sup>84,85,88</sup> For example, when adapting PCIT to include only CDI sessions, Ginn et al<sup>83</sup> found that post-treatment scores for disruptive behavior significantly decreased, and scores on the social awareness subscale significantly increased for children with ASD in the treatment condition, compared with the children with ASD in the waitlist condition. PCIT has also been shown to have adjunct benefits for children with signs of (or diagnosed with) ASD when adapted for their specific presentation. For example, specific coaching for parents to prompt their children to repeat their vocalizations and then to use positive reinforcement via praise and imitation was found to increase children's verbalizations from pre- to post-observation sessions for children with language impairments.

In general, modifications suggested for PCIT are described as necessary in order to accommodate the unique needs of each child with signs of ASD while also focusing more uniquely on communication, teaching positive social interactions, and challenging rigidity and also continuing to focus on the original protocol components to reduce disruptive behaviors and parental stress. In addition, there has been a dynamically evolving shift towards the support of neuro-affirming psychological and parenting practices. This shift considers that some behaviors that can be misconstrued as disruptive (eg, children's repetitive noises and behaviors that could interfere with other activities or goals) are regulatory and soothing for children. This shift also considers that neurodivergent children can communicate their needs through their behaviors, especially for children with language delays (eg, sensory overstimulation can result in screaming, running, or tantrums to get away), without the intent to be disruptive. This can mean a change in PCIT coaching procedure, with more emphasis on coaching parents to interpret the meaning of behavior rather than verbal communication and facial emotional displays. A trained PCIT therapist will have more tools to draw upon to address the challenges and concerns within this population and differentiate between when difficult to manage behaviors are functional for regulation (eg, jumping around the room seeking deep pressure sensory input) or assisting with symptoms that are defiant or oppositional (eg, jumping around the room to avoid complying with an instruction) and coach parents on how to improve their responses to either scenario. Further training via PCIT master clinicians and/or in neurodivergent affirming practices would be one way to assist with applying PCIT with families managing difficult behaviors associated with ASD.

## ADHD and Comorbid Anxiety

ADHD is one of the most prevalent childhood disorders,<sup>89</sup> where behavioral symptoms such as hyperactivity, impulsivity, and inattention mix with frustration and overload to give rise to non-compliance, defiance, and emotional dysregulation. ADHD has high comorbidity with oppositional defiance disorder (ODD), conduct disorder (CD), and anxiety symptoms. Thus, PCIT for children with signs of or diagnosed with ADHD can often appear to need additional attention for parents to address children's excessive worries, fears, and other symptoms of anxiety. Although children at risk of or diagnosed with ADHD show a decrease in their symptoms of ADHD, including externalizing and internalizing symptoms, following standard PCIT,<sup>26</sup> many studies are now tailoring PCIT to this population with positive findings. For example, there are now PCIT programs for emotional development (PCIT-ED),<sup>90,91</sup> PCIT with additions to incorporate more emotion coaching (PCIT-Eco),<sup>92</sup> and additions designed to coach approach behavior (while minimizing the common avoidance behavior of children with anxiety symptoms) and leading by modeling (PCIT CALM).<sup>93</sup> Studies using these PCIT adaptations report promising outcomes for children's comorbid ADHD and internalizing symptoms, with reductions in both anxiety and depressive symptoms. Earlier studies of children diagnosed with ADHD have added new psychoeducation content and handouts to PCIT, which were designed to increase understanding of the etiology of ADHD, to describe how ADHD relates to behavior problems and other child difficulties, and to summarize treatment options. Another extension was inviting extended family into the PCIT sessions.<sup>94</sup>

PCIT has also been adapted in other ways for comorbid anxiety disorders via the addition or substitution of phases that focus on anxiety symptoms, placing emphasis on behavioral intervention methods that aim to extinguish the use of avoidance of feared states or objects, while encouraging approach instead.<sup>95,96</sup> The rationale for these adaptations was fuelled by preliminary evidence that standard PCIT, specifically the CDI phase, was effective in reducing internalizing

symptoms without any adaptations. Recently, DADS (Describe, Approach, Direct command, Selectively attend) steps were added to the PCIT CALM adaptation,<sup>93,97</sup> which was an extension of strategies developed by Pincus et al<sup>98</sup> when they added a bravery directed interaction (BDI) phase, applied to separation anxiety. In another adaptation, a Verbal Directed Interaction (VDI) Phase was substituted for PDI to target selective mutism (PCIT-SM).<sup>99</sup> While this research has tended to confirm the acceptability and the effectiveness of these adaptations for targeting anxiety in children, there are still mixed results in the effectiveness of PCIT for internalizing symptoms so further research is required.<sup>23,100</sup>

## Callous Unemotional Traits

Modifications are also being tested for children with callous unemotional (CU) traits. Children with CU traits exhibit a pattern of behavior that reflects a lack of empathy and remorse.<sup>101</sup> CU traits are described as a risk factor for psychopathy and children exhibiting these traits have a reputation as being treatment resistant.<sup>102</sup> Yet, PCIT augmentation for emotional development (PCIT-ED) seems to benefit children described to have CU traits. In an RCT comparing PCIT-ED (n = 64) to a waitlist control group of families (n = 50), Donohue et al<sup>102</sup> found that not only did the level of CU traits decrease more from pre-to-post treatment (and the improvement was maintained 18 weeks later) in the PCIT-ED group relative to waitlist but also that the existence of CU traits at pre-treatment did not interfere with the reduction of depression and ODD symptoms in the PCIT-ED condition for children aged 3- to 5-years-old.

Modifications were also made to PCIT in another RCT for CU traits (PCIT-CU).<sup>103</sup> In PCIT-CU, standard PCIT was augmented with three components that present specific challenges to children with CU traits including: 1) adding the skill of “emotional expression” to the PRIDE skills for parents to practice; 2) child emotional insensitivity, which adds the CARES (Coaching and Rewarding Emotional Skills) module that utilizes parent modeling, role plays, positive reinforcement, and social stories to help children recognize and improve their use of prosocial responses; and 3) child insensitivity to punishment, which aims to increase reward dominance using a token economy (rewarding desirable behaviors with tokens that can be exchanged for something desired by the child). This RCT that compared standard PCIT with PCIT-CU showed that children’s CU traits and conduct problems improved significantly in both conditions, but only the PCIT-CU group improvements were maintained at 3-month follow-up. Overall, evidence is mounting that modifying PCIT to directly address CU traits can be effective relative to no parenting training and to standard PCIT. This has great potential to address what had been considered relatively resistant behaviors to change in other parent training and support programs.

## Modifications Related to Inclusivity

The breadth of research on PCIT that has emerged from many countries and regions around the world suggest that it can be successfully implemented across cultures and can produce robust treatment outcomes among diverse groups.<sup>56,94,104,105</sup> However, this evidence is not sufficient to conclude that PCIT, which was developed in the USA for English-speaking families, does not need adjustments for some families given their sociocultural or linguistic backgrounds.

Up until recently adaptations to PCIT for various diverse populations have been done locally, for specific populations, and applied as a standard across families or applied in an ad hoc basis in conjunction with therapist experience.<sup>42</sup> This approach makes it difficult to gauge the extent and possible impact of these modifications. For example, many modifications seem to concentrate on translating the psychoeducation and didactic materials from English to another language, and these changes may be minimal or may be more significant because of changes to the meaning of content and the delivery of information. However, more recent adaptations have focused on matching psychoeducation and specific skills and strategies to family structures, parenting styles and values related to ethnicity or other aspects of sociocultural experiences (eg, migrants). Notably, research on adapting evidence-based behavior parent training programs, such as PCIT, for Mexican American families – an adaptation called *Guando a Niños Activos* (Guiding Active Children; GANA)<sup>45,56</sup> – has reported positive experiences for family and positive effects for child behavior and parenting. Similarly, Yeh et al<sup>106</sup> developed the personalized approach (PersIn) of providing flexible PCIT for a variety of ethnicities, family structures, and parenting styles. As another example, MYPCIT<sup>106,107</sup> begins by assessing a Parent Explanatory Model (PEM) for each family that maximizes the potential for treatment success. The PEM measures the

modifications made to individualize or personalize treatment for each family across four areas (parental treatment expectancies, parental etiological expectations, endorsement of parenting styles, and family support for treatment) and subsequently delivers MYPCIT according to the PEM profile.<sup>107</sup> Although this is a promising approach and seems to make explicit the clinical behaviors and considerations that probably occur in practice, MYPCIT does not yet seem to improve on the outcomes of standard PCIT. In one pilot feasibility study, MYPCIT was shown to produce significant changes in child and parent outcomes comparable to existing PCIT studies.<sup>106</sup>

Another way that PCIT is reaching a greater diversity of families is by modifying standard PCIT for use in maltreating and welfare populations. Although there has long been evidence that standard PCIT is beneficial for these high-risk families,<sup>32,58</sup> adaptation for these families can now be found in the literature. Given the high rates of dropout (up to 50–60%) of these families from PCIT and other parent support programs, many of the modifications have been concerned with reducing the burden on families in terms of time commitment and location, but also in targeting barriers to effective treatment, with modifications such as motivational interviewing designed to encourage positive change and resolve ambivalence.<sup>29,108</sup> While the premise for this augmentation is solid for reducing recidivism (notifications for child abuse following treatment) and improving program retention,<sup>58,109,110</sup> a randomised trial of PCIT with motivation enhancement versus standard PCIT showed no difference in child behaviors and parent stress or retention rates between the two treatment conditions.<sup>29</sup> There are other modifications that keep the high possibility of trauma exposure in mind for these families, referred to as adding a trauma directed interaction (TDI) phase.<sup>111</sup> This phase is designed to create a consistent strategy so that therapists can address trauma and trauma-related symptoms while maintaining treatment fidelity. Efficacy research is not yet available for this modification but could be beneficial given that at FIP we have worked with many caregivers and children with trauma experiences and found the need for treatment modifications. Examples of necessary modifications we have made include adding a “time-in” approach (eg, parent remains with child when the privilege of play is removed) to improve warmth and sensitivity; adjusting expectations of the speed of treatment progress when caregivers need more practical experience and given their own histories of dysfunction in caregiver–child relationships; and extending or only implementing the CDI (ie, REP) phase when relationship enhancement is prioritised over discipline skills, especially when working with punitive caregivers.

#### Topic Trend 4. Modalities and Content of PCIT: Online Delivery and Briefer PCIT

One of the biggest events impacting on intensive, in-person parent support programs in the last few years has undoubtedly been the COVID-19 pandemic. Even before the pandemic, but especially following it, the emerging theme has been “flexibility”— including flexibly delivered PCIT, in terms of mode and length of delivery. During pandemic restrictions, traditional forms of face-to-face and in-clinic services were abandoned with a quick change to online or other forms of telehealth delivery. To get the findings of design issues, feasibility and acceptability of PCIT in an online format out quickly, PCIT providers started documenting case studies on the provision of PCIT via online services within months of the start of the pandemic.<sup>112,113</sup>

However, online delivery has also been discussed as necessary and important to broaden inclusion in general, by removing common barriers of location, accessibility and transport, time, and discomfort within a clinical environment. Connecting with PCIT providers online opens possibilities for PCIT reach, including servicing more families in rural and remote areas, allowing flexible work-at-home arrangements for providers, provision of services for parents who are unable to make in-person clinic appointments, further engagement of fathers, and engagement of children and caregivers or teachers within the school environment. One such case study summarised that “telehealth-delivered PCIT shows promise as a parent-directed intervention that can reduce parental distress and the frequency of externalizing behaviors in young children”.<sup>112</sup> Furthermore, an RCT of Internet delivered PCIT (I-PCIT)<sup>114</sup> found that 70% of children in the I-PCIT group showed treatment response, compared with 55% in clinic-based PCIT. Also, 55% of children in I-PCIT continued to show treatment response after 6 months compared with 40% for clinic-based PCIT. Additionally, fewer parent barriers were perceived.

In our experience at FIP, providing PCIT during the pandemic (with a switch from in-clinic to online services occurring within the span of one week), we were surprised by the reach and acceptability of I-PCIT, despite our concerns about access to technology and family circumstances that could limit involvement and increase risk (partner violence,

shared or unstable housing, multiple young children, history of child abuse). Most families had smartphones or were quite inventive at finding ways to connect online (sharing devices among households or between family members). However, following a return to in-clinic services, our preference is a hybrid model where there are some in-clinic sessions/meetings prior to shifting to hybrid services or only online sessions for those who prefer it. Some in-person contacts facilitate greater connection and trust and provide parents the guidance they need to understand the components of PCIT. We expect that more work will be forthcoming soon on using digital devices to deliver the core components of PCIT to address barriers to engagement and accessibility and examine effectiveness.

## Brief Versions of PCIT

High attrition rates, recorded to be between 30% to 69% in PCIT programs<sup>115</sup> have instigated modifying standard PCIT to more brief versions with less time investment, but with similar effectiveness. Increasingly practitioners are realizing that the intensive support and skill practice provided for up to 16 weeks of PCIT may be overservicing some families. Thus, some researchers are piloting shorter and “lighter touch” protocols. Several research studies have identified shorter versions of PCIT to be feasible and effective.<sup>34,116</sup> While the standard PCIT protocol is intended to be time unlimited until a mastery level of skills is met, time limited PCIT has been found to be equally as effective or significantly better, while also reducing time burden on families and service providers.<sup>31,34</sup> Most promising, was an intensive (but shortened in time commitment) version of PCIT (I-PCIT), which found that delivery of I-PCIT over five days a week for two weeks, showed comparable improvements in parenting skills, discipline practices and child externalizing at post treatment and follow-up relative to PCIT once a week for 10 weeks.<sup>116</sup>

While not technically a modification of PCIT but a new parent management training program with its own structure and materials, the Parent-Child CARE program (PC-CARE) has also sought to solve the problem of high attrition by synthesizing the central tenants (based on attachment, social learning, operant conditioning, and behavior theories), skills and strategies of PCIT, including direct coaching, and PCIT-based coding techniques within a 7-week protocol.<sup>117,118</sup> Besides being a shorter intervention than PCIT, PC-CARE scaffolds didactic education week-by-week with the child present as well as the parent rather than in two distinct sessions teaching the parent only. The sessions are also structured to include a weekly check-in, the didactic teaching of new skills, an observational assessment, and a check-out component. Just like PCIT, there is also a live coaching component most weeks. To date, research supports a higher retention rate to completion in PC-CARE (94%), while still reporting significant improvements in child behavior.<sup>118</sup> Moreover, in a recent comparison of PC-CARE to PCIT, PC-CARE participants (n = 69) reported significantly greater rates of improvement in child behavior and parent stress and were also 2.5 times more likely than PCIT participants (n = 135) to complete seven continuous sessions.<sup>119</sup> This emerging evidence makes PC-CARE a promising alternative to PCIT for some families. In FIP, we have developed a system to triage families to PCIT or PC-CARE depending on background, current concerns, barriers to attendance, and client preferences.

Other modes and methods of PCIT delivery have also been developed and are not inferior to standard PCIT, including Group PCIT aimed to deliver PCIT to more families in the community in a cost-effective way,<sup>87,120–122</sup> PCIT augmented with an e-book (Pocket PCIT),<sup>123</sup> and delivery of PCIT using virtual reality (VR).<sup>124</sup> PCIT-VR enables caregivers to practice PCIT skills in VR scenarios within their own homes, in addition to practicing with their children during actual playtime at home. The extra practice time, flexibility in practice responses, tailored scenarios to meet individual practice goals and live feedback made available through the VR augmentation are expected to further improve parenting skills and promote faster skills growth. Results of a single case experimental design study for PCIT-VR are expected to be published in 2023 and this could present a promising technological advancement for the delivery of PCIT.

## Summary and Implications for PCIT Practice

In summary, multiple reviews have concluded that PCIT results in substantial improvements in behavioral problems in children, improvements in the quality of parent–child relationships, and reductions in parent- and child-related stress in caregivers.<sup>21–27</sup> Research has confirmed and extended this to diverse families<sup>56,107</sup> and children with suspected or diagnosed ASD or ADHD,<sup>59,79</sup> anxiety<sup>93</sup> or CU traits.<sup>101,103</sup> Furthermore, there has been substantial progress across the entire field of parenting support towards unpacking the black box of interventions by identifying effective

components, with the most prominent and beneficial described as positive reinforcement (particularly praise); consistent, natural and logical consequences; relationship enhancement and family communication; parental self-management; and emotion understanding and regulation.<sup>12,14</sup> To unpack the reasons for the benefits found from PCIT itself, researchers have shifted, as has parenting theory and research in general,<sup>125–133</sup> to emphasize emotion and its expression, as well as its regulation or dysregulation, in parents and children as important drivers of behavior change or as the important outcomes themselves. At the same time, researchers are questioning whether changing parenting behavior has downstream effects on emotions (reactivity or regulation) and cognitions (attention, attributions) of either parents or their children.

These directions in research provide information that can be useful for improving the effectiveness of PCIT for each family. Understanding the change mechanisms supported in research, as well as staying connected to the evidence-base of PCIT for specific demographic, social, and diagnostic groups, are foundations of maintaining an EBP – they help practitioners to think more carefully about how and why a manualized program, such as PCIT, can benefit all families. At the same time, these new research findings can assist practitioners to better articulate where, when, and why they individualize a service component because they can link it to evidence – specifically, evidence of what practice modifications or adaptations are best for the individual families they work with (also keeping in mind their own skill level and caregiver/child preferences). For example, the emerging research on PCIT for children suspected to be on the autism spectrum or suspected of ADHD has resulted in new materials and manualized elements specific for these families.<sup>92,94,105</sup> In FIP, we have regularly reconsidered our approaches as the proportion of children referred who are suspected of ASD or ADHD has increased over time (which likely reflects increasing recognition but also changes in funding and access to service provision).

As another example, there has been increasing attention on parents' and children's emotion regulation and parents' emotion socialization of their children as integral to children's pathways of social and emotional development.<sup>134,135</sup> This basic science theory and research has led us<sup>36</sup> and others<sup>91–93</sup> to conduct research on the impact of PCIT on emotion regulation and dysregulation with children, parents or both. In the day-to-day clinic work of PCIT in FIP, this has also had an influence. Although we would argue that standard PCIT was designed to change the emotional climate of the family given the foundation in attachment theory,<sup>136</sup> this had been implicit rather than explicit in the training materials and manuals for PCIT. Just as the focus on emotion regulation and the emotional aspects of parenting have increased over recent years, emotion is now more frequently mentioned in PCIT materials and there are more resources available to practitioners to clarify their role in emotion work.<sup>20,79,117,137</sup> Thus, emotion work during PCIT (particularly during coaching sessions) has become more prominent. Regarding work on emotion recognition, there can be coaching of parents' use of emotion words to describe children's play and behavior, and there is frequent reflection on (or conversations with) parents about their own feelings while interacting with their children. For work on emotion regulation, there is frequent modeling of emotion regulation to parents through practitioners' requests for parents to emulate their voice tone, and to use deep breathing or other techniques to self-regulate and model regulation for their children; reinforcement through praises for children when they are staying calm in tough situations; promotion for children to “use their words” when frustrated; and coaching of parents to use techniques to soothe their children's negative emotions (eg, emotional validation and naming emotions) while also helping them to learn to minimize attempts at problem-solving or reasoning with children until the hot situation has subsided. Some of the important questions that have not yet been answered concern the independent and interactive impacts of emotion change and behavior change during PCIT on children's functioning and development and family relationships.

Overall, what some might view as a program that follows a standard protocol, PCIT is now emerging as a parenting management training and support program that can be adapted to meet specific population and individual needs, directly interfacing with what families are seeking, their goals, their history of previous learning and assistance, and their capacity to engage. The availability of so many PCIT modifications and adaptations means the literature was difficult for us to comprehensively describe in this one paper. Yet, finding information on so many effective modifications and adaptations suggests that an EBT like PCIT, when it is established and disseminated widely, can undergo ad-hoc or more systematic changes to produce targeted approaches that are designed to better meet the needs of specific populations, cultures, and individual client needs and preferences. Clinicians and researchers may use their experience and listen to their clients to

test new practice techniques or other modifications while also maintaining core components of PCIT that are known to be critical to its effectiveness. To make the right choices for modification fit, we will increasingly rely on assessments that guide inclusion and exclusion criteria, therapist skill and experience, and attend to modification research to guide an effective research-practitioner model.

When tailoring PCIT to treat families with special and different needs, there is still a need to keep an eye on fidelity by maintaining what is known about the effective core components and key features of PCIT and the underlying behavioral theory, while simultaneously contributing to ecological validity by matching treatment to individual family needs. There is increasing interest in the theoretical and more novel components that might augment, attenuate, limit, strengthen, weaken, and buffer traditional PCIT for children and families that warrant extra attention in certain areas. Current information about the effectiveness of PCIT modifications are still mostly presented as pilot studies, case studies or quasi-experimental studies. However, it is important that modifications are supported by research that can clearly articulate theory to support the change, the specific outcomes that might be improved with the change, and the families that might benefit most from the change. These considerations have numerous implications for study design and measures, which we cannot address here. While modifications are promising, the evidence from the current research on PCIT continues to suggest that they are not always (or even usually) necessary, so more research is needed to understand modifications and adaptation making sure we ask the right questions about the new or better outcomes we want to work with our families and children to achieve.

## Concluding Thoughts

Working with externalizing behaviors across different contexts, presentations, and diagnoses requires the use of an EBP model, where clinical expertise, a solid knowledge of the research evidence, and making the family's needs and preferences central to decision-making are key to best outcomes. In making adaptations to the standard PCIT protocol, PCIT therapists should hold in mind individual characteristics (such as the need for more emotion regulation coaching) that clients present with, as well as the treatment components of PCIT that are essential to driving behavior change. This includes attention as a reinforcing influence, the power of relationship enhancement skills, and setting firm boundaries in a warm and caring way. Research into PCIT should continue to evaluate effectiveness while also identifying treatment components that are most essential to meeting families' goals, using rigorous methodologies to enhance generalizability of results. Future work could also seek to understand secondary benefits to PCIT, including to family relationships and to children's success in other life domains.

## Acknowledgments

We thank the many therapists and clinical psychology trainees who have supported research and services in the Family Interaction Program for the past 20 years. We also thank Bethany Melloy for her assistance with the formatting of this manuscript. This work was partly supported by funding from the Queensland Department of Children, Youth Justice and Multicultural Affairs.

## Disclosure

The first three authors and the last author receive funding to provide parenting support services to families in Queensland Australia, including Parent–Child Interaction Therapy.

---

## References

1. Dishion TJ, Patterson GR. The development and ecology of antisocial behavior. In: Cicchetti D, Cohen DJ, editors. *Developmental Psychopathology: Vol. 3 Risk, Disorder, and Adaptation*. 2nd ed. Wiley; 2006:503–541.
2. Vasileva M, Graf RK, Reinelt T, et al. Research review: a meta-analysis of the international prevalence and comorbidity of mental disorders in children between 1 and 7 years. *J Child Psychol Psychiatry*. 2020;62:372–381. doi:10.1111/jcpp.13261
3. Brody LM, Stewart AL, Thompson CM, et al. Life course offending pathways across gender and race/ethnicity. *J Dev Life Course Criminol*. 2015;1:118–149. doi:10.1007/s40865-015-0008-z
4. Ehrenreich SE, Beron KJ, Underwood MK. Social and physical aggression trajectories from childhood through late adolescence: predictors of psychosocial maladjustment at age 18. *Dev Psychol*. 2016;52:457–462. doi:10.1037/dev0000094

5. Fairchild G, Van Goozen SHM, Calder AJ, et al. Research review: evaluating and reformulating the developmental taxonomic theory of antisocial behavior. *J Child Psychol Psychiatry*. 2013;54:924–940. doi:10.1111/jcpp.12102
6. Piquero AR, Jennings WG, Farrington D. The monetary costs of crime to middle adulthood: findings from the Cambridge study in delinquent development. *J Res Crime Delinq*. 2013;50(1):53–74. doi:10.1177/0022427811424505
7. Jolliffe D, Farrington DP, Piquero AR, et al. Systematic review of early risk factors for life-course-persistent, adolescence-limited, and late-onset offenders in prospective longitudinal studies. *Aggress Violent Behav*. 2017;33:15–23. doi:10.1016/j.avb.2017.01.009
8. Rivenbark JG, Odgers CL, Caspi A, et al. The high societal costs of childhood conduct problems: evidence from administrative records up to age 38 in a longitudinal birth cohort. *J Child Psychol Psychiatry*. 2017;59:703–710. doi:10.1111/jcpp.12850
9. Collins WA, Maccoby EE, Steinberg L, et al. Contemporary research on parenting: the case for nature and nurture. *Am Psychol*. 2000;55:218–232. doi:10.1037/0003-066X.55.2.218
10. Doyle FL, Morawska A, Higgins DJ, et al. Policies are needed to increase the reach and impact of evidence-based parenting supports: a call for a population-based approach to supporting parents, children, and families. *Child Psychiatry Hum Dev*. 2022;20:1–4.
11. Chorpita BF, Daleiden EL. Mapping evidence-based treatments for children and adolescents: application of the distillation and matching model to 615 treatments from 322 randomized trials. *J Consult Clin Psychol*. 2009;77:566–579. doi:10.1037/a0014565
12. Leijten P, Gardner F, Melendez-Torres GJ, et al. Meta-analyses: key parenting program components for disruptive child behavior. *J Am Acad Child Adolesc Psychiatry*. 2019;58:180–190. doi:10.1016/j.jaac.2018.07.900
13. Nuttgens S, Slavish DC, Thornton J, Weiss NH. Of interventive doppelgangers and other barriers to evidence-based practice in psychotherapy. *J Psychother Integr*. 2022;33:102–122. doi:10.1037/int0000292
14. Temcheff CE, Letarte M, Boutin S, et al. Common components of evidence-based parenting programs for preventing maltreatment of school-age children. *Child Abuse Negl*. 2018;80:226–237. doi:10.1016/j.chiabu.2018.02.004
15. Sanders MR, Kirby JN, Tellegen CL, et al. The triple P-positive parenting program: a systematic review and meta-analysis of a multi-level system of parenting support. *Clin Psychol Rev*. 2014;34:337–357. doi:10.1016/j.cpr.2014.04.003
16. Thomas R, Zimmer-Gembeck MJ. Behavioral outcomes of parent-child interaction therapy and triple P—positive parenting program: a review and meta-analysis. *J Abnorm Child Psychol*. 2007;35:475–495. doi:10.1007/s10802-007-9104-9
17. Webster-Stratton CH, Reid MJ. The incredible years program for children from infancy to pre-adolescence: prevention and treatment of behavior problems. In: Murrin RC, Kidman AD, Ollendick TH, editors. *Clinical Handbook of Assessing and Treating Conduct Problems in Youth*. Springer; 2010:117–138.
18. Eyberg SM, Funderburk B. *Parent-Child Interaction Therapy Protocol*. PCIT International, Inc; 2011.
19. McNeil CB, Hembree-Kigin TL. *Parent-Child Interaction Therapy*. 2nd ed. Springer; 2011.
20. Niec L. *Handbook of Parent-Child Interaction Therapy: Innovations and Applications for Research and Practice*. Springer; 2018.
21. Kennedy SC, Kim JS, Tripodi SJ, et al. Does parent-child interaction therapy reduce future physical abuse? A meta-analysis. *Res Soc Work Pract*. 2014;26:1–10.
22. Mingeback T, Kamp-Becker I, Christiansen H, et al. Meta-meta-analysis on the effectiveness of parent-based interventions for the treatment of child externalizing behavior problems. *PLoS One*. 2018;13:e0202855. doi:10.1371/journal.pone.0202855
23. Phillips S, Mychailyszyn M. A review of Parent-Child Interaction Therapy (PCIT): applications for youth anxiety. *Child Youth Serv Rev*. 2021;125:105986. doi:10.1016/j.chilyouth.2021.105986
24. Thomas R, Abell B, Webb HJ, et al. Parent-child interaction therapy: a meta-analysis. *Pediatrics*. 2017;140:e20170352. doi:10.1542/peds.2017-0352
25. Valero-Aguayo L, Rodríguez-Bocanegra M, Ferro-García R, et al. Meta-analysis of the efficacy and effectiveness of Parent-Child Interaction Therapy (PCIT) for child behavior problems. *Psicothema*. 2021;33:544–555. doi:10.7334/psicothema2021.70
26. Wagner SM, McNeil CB. Parent-Child Interaction Therapy for ADHD: a conceptual overview and critical literature review. *Child Fam Behav Ther*. 2008;30:231–256. doi:10.1080/07317100802275546
27. Warren JM, Halpin SA, Hanstock TL, et al. Outcomes of Parent-Child Interaction Therapy (PCIT) for families presenting with child maltreatment: a systematic review. *Child Abuse Negl*. 2022;134:105942. doi:10.1016/j.chiabu.2022.105942
28. Leung C, Tsang S, Sin TC, et al. The efficacy of Parent-Child Interaction Therapy with Chinese families: randomized controlled trial. *Fam Soc*. 2015;25:78.
29. Webb HJ, Thomas R, McGregor L, et al. An evaluation of Parent-Child Interaction Therapy with and without a motivational enhancement to reduce attrition. *J Clin Child Adolesc Psychol*. 2017;46:537–550. doi:10.1080/15374416.2016.1247357
30. Bagner DM, Sheinkopf SJ, Vohr BR, et al. Parenting intervention for externalizing behavior problems in children born premature: an initial examination. *J Dev Behav Pediatr*. 2010;31:2098–2216. doi:10.1097/DBP.0b013e3181d5a294
31. Nixon R, Sweeney L, Erickson D, et al. Parent-child interaction therapy: one- and two-year follow-up of standard and abbreviated treatments for oppositional preschoolers. *J Abnorm Child Psychol*. 2004;32:263–271. doi:10.1023/B:JACP.0000026140.60558.05
32. Thomas R, Zimmer-Gembeck MJ. Accumulating evidence for parent-child interaction therapy in the prevention of child maltreatment. *Child Dev*. 2011;82:177–192. doi:10.1111/j.1467-8624.2010.01548.x
33. Leung C, Tsang S, Heung K, et al. Effectiveness of Parent-Child Interaction Therapy (PCIT) among Chinese families. *Res Soc Work Pract*. 2009;19:304–313. doi:10.1177/1049731508321713
34. Thomas R, Zimmer-Gembeck MJ. Parent-child interaction therapy: an evidence-based treatment for child abuse. *Child Maltreat*. 2012;17:253–266. doi:10.1177/1077559512459555
35. Danko CM, Garbacz LL, Budd KS. Outcomes of parent-child interaction therapy in an urban community clinic: a comparison of treatment completers and dropouts. *Child Youth Serv Rev*. 2016;60:42–51. doi:10.1016/j.chilyouth.2015.11.007
36. Zimmer-Gembeck MJ, Kerin JL, Webb HJ, et al. Improved perceptions of emotion regulation and reflective functioning in parents: two additional positive outcomes of parent-child interaction therapy. *Beh Ther*. 2019;50:340–352. doi:10.1016/j.beth.2018.07.002
37. American Psychological Association, Presidential Task Force on Evidence-Based Practice. Evidence-based practice in psychology. *Am Psychol*. 2006;61:271–285. doi:10.1037/0003-066X.61.4.271
38. Bowlby J. *Attachment and Loss: Vol 1. Basic Books*; 1969.
39. Bandura A. *Social Foundations of Thought and Action: A Social Cognitive Theory*. Prentice-Hall; 1986.

40. Patterson GR. *Coercive Family Process*. Castalia; 1982.
41. Bohart AC. Evidence-based psychotherapy means evidence-informed, not evidence-driven. *J Contemp Psychother*. 2005;35:39–53. doi:10.1007/s10879-005-0802-8
42. Sanchez BE, Klein CC, Corcoran F, et al. A mixed-methods study of clinician adaptations to parent-child interaction therapy: what about culture? *Evid Based Pract Child Adolesc Ment Health*. 2022;8:269–285.
43. Southam-Gerow MA, Rodriguez A, Chorpita BF, et al. Dissemination and implementation of evidence-based treatments for youth: challenges and recommendations. *Prof Psychol Res Pr*. 2012;43:527–534. doi:10.1037/a0029101
44. Comer JS, Busto CD, Dick AS, et al. Adapting PCIT to treat anxiety in young children: the PCIT CALM program. In Niec LN, editor. *Handbook of Parent-Child Interaction Therapy*. Springer; 2018:129–147.
45. McCabe K, Yeh M, Lau A, et al. Parent-child interaction therapy for Mexican Americans: results of a pilot randomized clinical trial at follow-up. *Beh Ther*. 2012;43:606–618. doi:10.1016/j.beth.2011.11.001
46. Ward MA, Theule J, Cheung K. Parent-child interaction therapy for child disruptive behavior disorders: a meta-analysis. *Child Youth Care Forum*. 2016;45:675–690. doi:10.1007/s10566-016-9350-5
47. Barnett AI, Hall W, Fry CL, et al. Drug and alcohol treatment providers' views about the disease model of addiction and its impact on clinical practice: a systematic review. *Drug Alcohol Rev*. 2018;37:697–720. doi:10.1111/dar.12632
48. Lau A, Barnett M, Stadnick N, et al. Therapist report of adaptations to delivery of evidence-based practices within a system-driven reform of publicly funded children's mental health services. *J Consult Clin Psychol*. 2017;85:664–675. doi:10.1037/ccp0000215
49. Meza RD, Jungbluth N, Sedlar G, et al. Clinician-reported modification to a CBT approach in children's mental health. *J Emot Behav Disord*. 2020;28:104–113. doi:10.1177/1063426619828369
50. Shernoff ES, Bearman SK, Kratochwill TR. Training the next generation of school psychologists to deliver evidence-based mental health practices: current challenges and future directions. *School Psych Rev*. 2017;46:219–232. doi:10.17105/SPR-2015-0118.V46-2
51. McNeil CB, Capage LC, Bahl A, et al. Importance of early intervention for disruptive behavior problems: comparison of treatment and waitlist-control groups. *Early Educ Dev*. 1999;10:445–454. doi:10.1207/s15566935eed1004\_2
52. Schuhmann EM, Foote RC, Eyberg SM, et al. Efficacy of parent-child interaction therapy: interim report of a randomized trial with short-term maintenance. *J Clin Child Psychol*. 1998;27:34–45. doi:10.1207/s15374424jccp2701\_4
53. Cooley ME, Veldorale-Griffin A, Petren RE, et al. Parent-child interaction therapy: a meta-analysis of child behavior outcomes and parent stress. *J Fam Soc Work*. 2014;17:191–208. doi:10.1080/10522158.2014.888696
54. Fernandez MA, Butler AM, Eyberg SM. Treatment outcome for low socioeconomic status African American families in parent-child interaction therapy: a pilot study. *Child Fam Behav Ther*. 2011;33:32–48. doi:10.1080/07317107.2011.545011
55. Lyon AR, Budd KS. A community mental health implementation of Parent-Child Interaction Therapy (PCIT). *J Child Fam Stud*. 2010;19:654–668. doi:10.1007/s10826-010-9353-z
56. McCabe K, Yeh M. Parent-child interaction therapy for Mexican Americans: a randomized clinical trial. *J Clin Child Adolesc Psychol*. 2009;38:753–759. doi:10.1080/15374410903103544
57. Fernandez MA, Eyberg SM. Predicting treatment and follow-up attrition in parent-child interaction therapy. *J Abnorm Child Psychol*. 2009;37:431–441. doi:10.1007/s10802-008-9281-1
58. Chaffin M, Silovsky JF, Funderburk B, et al. Parent-child interaction therapy with physically abusive parents: efficacy for reducing future abuse reports. *J Consult Clin Psychol*. 2004;72:500–510. doi:10.1037/0022-006X.72.3.500
59. Vetter JA. Parent-child interaction therapy for autism spectrum and attention-deficit/hyperactivity disorders: a review of the literature. *Child Fam Behav Ther*. 2018;40:204–232. doi:10.1080/07317107.2018.1487740
60. Allen K, Harrington J, Quetsch LB, et al. Parent-child interaction therapy for children with disruptive behaviors and autism: a randomized clinical trial. *J Autism Dev Disord*. 2023;53:390–404. doi:10.1007/s10803-022-05428-y
61. Scudder A, Wong C, Ober N, et al. Parent-Child Interaction Therapy (PCIT) in young children with autism spectrum disorder. *Child Fam Behav Ther*. 2019;41:201–220. doi:10.1080/07317107.2019.1659542
62. Parladé MV, Weinstein A, Garcia D, et al. Parent-child interaction therapy for children with autism spectrum disorder and a matched case-control sample. *Autism*. 2020;24:160–176. doi:10.1177/1362361319855851
63. Zlomke KR, Jeter K. Comparative effectiveness of parent-child interaction therapy for children with and without autism spectrum disorder. *J Autism Dev Disord*. 2020;50:2041–2052. doi:10.1007/s10803-019-03960-y
64. Han RC, Naguib S, Owen CK. An effectiveness trial of PCIT for children with and without autism spectrum disorder in a private practice setting. *Evid Based Pract Child Adolesc Ment Health*. 2022;7:124–141.
65. Zlomke KR, Jeter K, Murphy J. Open-trial of parent-child interaction therapy for children with autism spectrum disorder. *Child Fam Behav Ther*. 2017;39:1–18. doi:10.1080/07317107.2016.1267999
66. Azhdari Z, Alizadeh M, Homaei R. The role of parent-child interaction therapy and mindfulness-based therapy on the behavioral problems of students with attention-deficit/hyperactivity disorder. *Int J School Hlth*. 2022;9:18–25.
67. Leung C, Tsang S, Ng GSH, Choi SY. Efficacy of parent-child interaction therapy with Chinese ADHD children: randomized controlled trial. *Res Soc Work Pract*. 2017;27:36–47. doi:10.1177/1049731516643837
68. Visser SN, Danielson ML, Bitsko RH, et al. Trends in the parent-report of health care provider-diagnosed and medicated attention-deficit/hyperactivity disorder: United States, 2003–2011. *J Am Acad Child Adolesc Psychiatry*. 2014;53:34–46. doi:10.1016/j.jaac.2013.09.001
69. Poulton A. Recognising attention deficit hyperactivity disorder across the lifespan. *Aust J Gen Pract*. 2021;50:110–113. doi:10.31128/AJGP-09-20-5623
70. Caye A, Swanson JM, Coghill D, et al. Treatment strategies for ADHD: an evidence-based guide to select optimal treatment. *Mol Psychiatry*. 2019;24:390–408. doi:10.1038/s41380-018-0116-3
71. Rothenberg WA, Weinstein A, Dandes EA, et al. Improving child emotion regulation: effects of parent-child interaction-therapy and emotion socialization strategies. *J Child Fam Stud*. 2019;28:720–731. doi:10.1007/s10826-018-1302-2
72. Skowron EA, Nekkanti AK, Skoranski A, et al. PCIT improves child-welfare parents' behavior, self-regulation, & self-perceptions. *PsyArXiv preprints*. 2021. doi:10.31234/osf.io/8dsug



73. Lieneman C, Giard EI, Quetsch L, et al. Emotion regulation and attrition in parent-child interaction therapy. *J Child Fam Stud*. 2020;29:978–996. doi:10.1007/s10826-019-01674-4
74. Agazzi H, Tan SY, Ogg J, et al. Does parent-child interaction therapy reduce maternal stress, anxiety, and depression among mothers of children with autism spectrum disorder? *Child Fam Behav Ther*. 2017;39:283–303. doi:10.1080/07317107.2017.1375622
75. Park AL, Chorpita BF, Regan J, et al. Integrity of evidence-based practice: are providers modifying practice content or practice sequencing? *Adm Policy Ment Health*. 2015;42:186–196. doi:10.1007/s10488-014-0559-z
76. Wampold BE, Ulvenes PG. Integration of common factors and specific ingredients. In: Norcross JC, Goldfried MR, editors. *Handbook of Psychotherapy Integration*. Oxford University Press; 2019:69–87.
77. Solomon M, Ono M, Timmer S, et al. The effectiveness of parent-child interaction therapy for families of children on the autism spectrum. *J Autism Dev Disord*. 2008;38:1767–1776. doi:10.1007/s10803-008-0567-5
78. Brereton AV, Tonge BJ, Einfeld SL. Psychopathology in children and adolescents with autism compared to young people with intellectual disability. *J Autism Dev Disord*. 2006;36:863–870. doi:10.1007/s10803-006-0125-y
79. McNeil C, Quetsch L, Anderson C. *Handbook of Parent-Child Interaction Therapy for Children on the Autism Spectrum*. Springer; 2018.
80. Hansen B, Shillingsburg MA. Using a modified parent-child interaction therapy to increase vocalizations in children with autism. *Child Fam Behav Ther*. 2016;38:318–330. doi:10.1080/07317107.2016.1238692
81. Lesack R, Bearss K, Celano M, et al. Parent-child interaction therapy and autism spectrum disorder: adaptations with a child with severe developmental delays. *Clin Pract Pediatr Psychol*. 2014;2:68–82.
82. Masse JJ, McNeil CB, Wagner S, et al. Examining the efficacy of parent-child interaction therapy with children on the autism spectrum. *J Child Fam Stud*. 2016;25:2508–2525. doi:10.1007/s10826-016-0424-7
83. Ginn NC, Clionsky LN, Eyberg SM, et al. Child-directed interaction training for young children with autism spectrum disorders: parent and child outcomes. *J Clin Child Adolesc Psychol*. 2017;46:101–109. doi:10.1080/15374416.2015.1015135
84. Armstrong K, DeLoatch KJ, Preece KK, et al. Combining parent-child interaction therapy and visual supports for the treatment of challenging behavior in a child with autism and intellectual disabilities and comorbid epilepsy. *Clin Case Stud*. 2015;14:3–14. doi:10.1177/1534650114531451
85. Agazzi H, Tan R, Tan SY. A case study of parent-child interaction therapy for the treatment of autism spectrum disorder. *Clin Case Stud*. 2013;2:428–442. doi:10.1177/1534650113500067
86. Lieneman CC, Ruckle MM, McNeil CB. Parent-child interaction therapy for a child with autism spectrum disorder: a case study examining effects on ASD symptoms, social engagement, pretend play, and disruptive behavior. In: McNeil CB, Quetsch L, Anderson C, editors. *Handbook of Parent-Child Interaction Therapy for Children on the Autism Spectrum*. Springer; 2018.
87. Ros R, Graziano PA. Group PCIT for preschoolers with autism spectrum disorder and externalizing behavior problems. *J Child Fam Stud*. 2019;28:1294–1303. doi:10.1007/s10826-019-01358-z
88. Budd KS, Hella B, Bae H, et al. Delivering parent-child interaction therapy in an urban community clinic. *Cogn Behav Pract*. 2011;18:502–514. doi:10.1016/j.cbpra.2010.12.002
89. Egger HL, Kondo D, Angold A. The epidemiology and diagnostic issues in preschool attention-deficit/hyperactivity disorder: a review. *Infants Young Child*. 2006;19:109–122. doi:10.1097/00001163-200604000-00004
90. Lenze SN, Pautsch J, Luby J. Parent-child interaction therapy emotion development: a novel treatment for depression in preschool children. *Depress Anxiety*. 2011;28:153–159. doi:10.1002/da.20770
91. Luby JL, Barch DM, Whalen D, et al. A randomized controlled trial of parent-child psychotherapy targeting emotion development for early childhood depression. *Am J Psychiatry*. 2018;175:1102–1110. doi:10.1176/appi.ajp.2018.18030321
92. Chronis-Tuscano A, Lewis-Morrarty E, Woods KE, et al. Parent-child interaction therapy with emotion coaching for preschoolers with attention-deficit/hyperactivity disorder. *Cogn Behav Pract*. 2016;23:62–78. doi:10.1016/j.cbpra.2014.11.001
93. Comer JS, Puliafico AC, Aschenbrand SG. A pilot feasibility evaluation of the CALM program for anxiety disorders in early childhood. *J Anxiety Disord*. 2012;26:40–49. doi:10.1016/j.janxdis.2011.08.011
94. Matos M, Bauermeister JJ, Bernal G. Parent-child interaction therapy for Puerto Rican preschool children with ADHD and behavior problems: a pilot efficacy study. *Fam Process*. 2009;48:232–252. doi:10.1111/j.1545-5300.2009.01279.x
95. Chase RM, Eyberg SM. Clinical presentation and treatment outcome for children with comorbid externalizing and internalizing symptoms. *J Anxiety Disord*. 2008;22:273–282. doi:10.1016/j.janxdis.2007.03.006
96. Eisenstadt T, Eyberg S, McNeil C, et al. Parent-child interaction therapy with behavior problem children: relative effectiveness of two stages and overall treatment outcome. *J Clin Child Psychol*. 1993;22:42–51. doi:10.1207/s15374424jccp2201\_4
97. Puliafico AC, Comer JS, Albano AM. Coaching approach behavior and leading by modeling: rationale, principles, and a session-by-session description of the CALM program for early childhood anxiety. *Cogn Behav Pract*. 2013;20:517–528. doi:10.1016/j.cbpra.2012.05.002
98. Pincus DB, Santucci LC, Ehrenreich JT, et al. The implementation of modified parent-child interaction therapy for youth with separation anxiety disorder. *Cogn Behav Pract*. 2008;15:118–125. doi:10.1016/j.cbpra.2007.08.002
99. Cotter A, Todd M, Brestan-Knight E. Parent-child interaction therapy for children with selective mutism (PCIT-SM). In: Niec LN, editor. *Handbook of Parent-Child Interaction Therapy*. Springer; 2018:113–128.
100. Carpenter AL, Puliafico A, Kirtz SM, et al. Extending parent-child interaction therapy for early childhood internalizing problems: new advances for an overlooked population. *Clin Child Fam Psychol Rev*. 2014;17:340–356. doi:10.1007/s10567-014-0172-4
101. Kimonis ER, Fleming G, Briggs N, et al. Parent-child interaction therapy adapted for preschoolers with callous-unemotional traits: an open trial pilot study. *J Clin Child Adolesc Psychol*. 2019;48:1–16. doi:10.1080/15374416.2018.1479966
102. Donohue MR, Hoyniak CP, Hillman R, et al. Callous-unemotional traits as an intervention target and moderator of parent-child interaction therapy-emotion development treatment for preschool depression and conduct problems. *J Am Acad Child Adolesc Psychiatry*. 2021;60:1394–1403. doi:10.1016/j.jaac.2021.03.018
103. Fleming GE, Neo B, Briggs NE, et al. Parent training adapted to the needs of children with callous-unemotional traits: a randomized controlled trial. *Beh Ther*. 2022;53:1265–1281. doi:10.1016/j.beth.2022.07.001
104. Bagner D, Eyberg SM. Parent-child interaction therapy for disruptive behavior in children with mental retardation: a randomized controlled trial. *J Clin Child Adolesc Psychol*. 2007;36:418–429. doi:10.1080/15374410701448448

105. Borrego J, Anhalt K, Terao SY, et al. Parent-child interaction therapy with a Spanish-speaking family. *Cogn Behav Pract.* 2006;13:121–133. doi:10.1016/j.cbpra.2005.09.001
106. Yeh M, Zerr AA, McCabe KM. Personalizing PCIT for culturally diverse families: outcomes from a pilot trial utilizing the PersIn framework. *Beh Res Ther.* 2022;159:104204. doi:10.1016/j.brat.2022.104204
107. McCabe KM, Yeh M, Zerr AA. Personalizing behavioral parent training interventions to improve treatment engagement and outcomes for culturally diverse families. *Psychol Res Behav Manag.* 2020;13:41–53. doi:10.2147/PRBM.S230005
108. N'zi AM, Lucash RE, Clionsky LN, et al. Enhancing parent-child interaction therapy with motivational interviewing techniques. *Cogn Behav Pract.* 2016;24:131–141. doi:10.1016/j.cbpra.2016.03.002
109. Chaffin M, Valle LA, Funderburk B, et al. A motivational intervention can improve retention in PCIT for low-motivation child welfare clients. *Child Maltreat.* 2009;14:356–368. doi:10.1177/1077559509332263
110. Chaffin M, Funderburk B, Bard D, et al. A combined motivation and parent-child interaction therapy package reduces child welfare recidivism in a randomized dismantling field trial. *J Consult Clin Psychol.* 2011;79:84–95. doi:10.1037/a0021227
111. Gurwitsch RH, Warner-Metzger CM. Trauma-directed interaction (TDI): an adaptation to parent-child interaction therapy for families with a history of trauma. *Int J Environ Res Public Health.* 2022;19:6089. doi:10.3390/ijerph19106089
112. Bono MH. Telehealth provision of Parent-Child Interaction Therapy during the COVID-19 pandemic: a case report. *Clin Pract Pediatr Psychol.* 2022;10:307–313.
113. Gurwitsch RH, Salem H, Nelson MM, et al. Leveraging parent-child interaction therapy and telehealth capacities to address the unique needs of young children during the COVID-19 public health crisis. *Psychol Trauma.* 2020;12:S82–S84. doi:10.1037/tra0000863
114. Comer JS, Furr JM, Miguel EM, et al. Remotely delivering real-time parent training to the home: an initial randomized trial of Internet-delivered Parent-Child Interaction Therapy (I-PCIT). *J Consult Clin Psychol.* 2017;85:909–917. doi:10.1037/ccp0000230
115. Ufford A, Wigod T, Shen J, et al. A qualitative analysis of attrition in parent-child interaction therapy. *Int J Environ Res Public Health.* 2022;19:14341. doi:10.3390/ijerph192114341
116. Graziano PA, Ros-Demare R, Hare MM. Condensing parent training: a randomized trial comparing the efficacy of a briefer, more intensive version of Parent-Child Interaction Therapy (I-PCIT). *J Consult Clin Psychol.* 2020;88:669–679. doi:10.1037/ccp0000504
117. Timmer SG, Hawk BN, Lundquist K, et al. *PC-CARE Course of Treatment Manual.* Davis: University of California; 2016.
118. Timmer ST, Hawk BN, Forte LN, et al. An open trial of Parent-Child Care (PC-CARE): a 6-week dyadic parenting intervention for children with externalizing behavior problems. *Child Psychiatry Hum Dev.* 2019;50:1–12. doi:10.1007/s10578-018-0814-8
119. Timmer SG, Hawk B, Usacheva M, Armendariz L, Boys DK, Urquiza AJ. The long and the short of it: a comparison of the effectiveness of Parent-Child Care (PC-CARE) and Parent-Child Interaction Therapy (PCIT). *Child Psychiatry Hum Dev.* 2023;54:255–265. doi:10.1007/s10578-021-01257-9
120. Blair K, Topitzes J, Mersky JP. Do parents' adverse childhood experiences influence treatment responses to parent-child interaction therapy? An exploratory study with a child welfare sample. *Child Fam Behav Ther.* 2019;41:1–11. doi:10.1080/07317107.2019.1599255
121. Foley K, McNeil CB, Norman M, et al. Effectiveness of group format parent-child interaction therapy compared to treatment as usual in a community outreach organization. *Child Fam Behav Ther.* 2016;38:279–298. doi:10.1080/07317107.2016.1238688
122. Nieter L, Thornberry T, Brestan-Knight E. The effectiveness of group parent-child interaction therapy with community families. *J Child Fam Stud.* 2012;22:654–668.
123. Jent JF, Rothenberg WA, Weinstein A, et al. Comparing traditional and ebook-augmented Parent-Child Interaction Therapy (PCIT): a randomized control trial of Pocket PCIT. *Beh Ther.* 2021;52:1311–1324. doi:10.1016/j.beth.2021.02.013
124. Scherpbier ICA, Abrahamse ME, Belleman RG, et al. Implementation of virtual reality to parent-child interaction therapy for enhancement of positive parenting skills: study protocol for single-case experimental design with multiple baselines. *JMIR Res Protoc.* 2022;11:e34120. doi:10.2196/34120
125. Bridgett DJ, Burt NM, Edwards ES, Deater-Deckard K. Intergenerational transmission of self-regulation: a multidisciplinary review and integrative conceptual framework. *Psych Bull.* 2015;141:602–654. doi:10.1037/a0038662
126. Crandall A, Deater-Deckard K, Riley AW. Maternal emotion and cognitive control capacities and parenting: a conceptual framework. *Dev Review.* 2015;36:105–126. doi:10.1016/j.dr.2015.01.004
127. Dix T. The affective organization of parenting: adaptive and maladaptive processes. *Psych Bull.* 1991;110:3–25. doi:10.1037/0033-2909.110.1.3
128. Eisenberg N, Hernández MM, Spinrad TL. The relation of self-regulation to children's externalizing and internalizing problems. In: Essau CA, LeBlanc S, Ollendick TH, editors. *Emotion Regulation and Psychopathology in Children and Adolescents.* Oxford University Press; 2017:18–42.
129. Leerkes EM. Augustine ME Parenting and emotions. In: Bornstein MH, editor. *Handbook of Parenting: Being and Becoming a Parent.* Routledge; 2019:620–653.
130. Morris AS, Criss MM, Silk JS, et al. The impact of parenting on emotion regulation during childhood and adolescence. *Child Dev Perspect.* 2017;11:233–238. doi:10.1111/cdep.12238
131. Rutherford HJ, Wallace NS, Laurent HK, et al. Emotion regulation in parenthood. *Dev Review.* 2015;36:1–14. doi:10.1016/j.dr.2014.12.008
132. Rueger SY, Katz RL, Risser HJ, et al. Relations between parental affect and parenting behaviors: a meta-analytic review. *Parent Sci Pract.* 2011;11:1–33. doi:10.1080/15295192.2011.539503
133. Zimmer-Gembeck MJ, Rudolph J, Kerin J, et al. Parent emotional regulation: a meta-analytic review of its association with parenting and child adjustment. *Int J Behav Dev.* 2022;46:63–82. doi:10.1177/01650254211051086
134. Hajjal NJ, Paley B. Parental emotion and emotion regulation: a critical target of study for research and intervention to promote child emotion socialization. *Dev Psych.* 2020;56:403–417. doi:10.1037/dev0000864
135. Havighurst A, Kehoe C. The role of parental emotion regulation in parent emotion socialization: implications for intervention. In: Deater-Deckard K, Panneton R, editors. *Parental Stress and Early Child Development: Adaptive and Maladaptive Outcomes.* Springer; 2017:285–307.
136. Sroufe LA. *Emotional Development: The Organization of Emotional Life in the Early Years.* Cambridge University Press; 1996.
137. Girard EI, Wallace NM, Kohlhoff JR, et al. *Parent-Child Interaction Therapy with Toddlers: Improving Attachment and Emotion Regulation.* Springer; 2018.

Psychology Research and Behavior Management

Dovepress

### Publish your work in this journal

Psychology Research and Behavior Management is an international, peer-reviewed, open access journal focusing on the science of psychology and its application in behavior management to develop improved outcomes in the clinical, educational, sports and business arenas. Specific topics covered in the journal include: Neuroscience, memory and decision making; Behavior modification and management; Clinical applications; Business and sports performance management; Social and developmental studies; Animal studies. The manuscript management system is completely online and includes a very quick and fair peer-review system, which is all easy to use. Visit <http://www.dovepress.com/testimonials.php> to read real quotes from published authors.

Submit your manuscript here: <https://www.dovepress.com/psychology-research-and-behavior-management-journal>