Larissa N. Niec *Editor*

Handbook of Parent-Child Interaction Therapy

Innovations and Applications for Research and Practice

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To the little ones and their parents who are hoping.
And to Sheila, whose lifetime of work will help
generations of families.

Foreword

I was amazed when reading this handbook on parent-child interaction therapy to discover the progress of clinical innovation in PCIT. As the founder of PCIT, I found the extent of research examining new and previously untested innovations truly gratifying. Even 10 years ago, adaptations to PCIT were largely untested clinical hunches, with potential to water down PCIT or even rescind its evidence-based status.

Things have certainly changed! This timely handbook comprehensively presents promising new and inventive applications of PCIT together with the supporting research for each application—within diverse diagnostic and population samples and within new settings for treatment delivery as well as large-scale applications of PCIT. As a researcher, I particularly appreciated the succinct but inclusive literature reviews of the innovative applications of PCIT. As a clinician, I was excited to read the step-by-step descriptions of the adaptations for new populations and settings. Chapters describe the specific changes made to the standard PCIT protocol and the rationale for the change. Each chapter concludes with a case study illustrating the actual use of the PCIT adaptation in practice. This handbook also presents updated and new measures in PCIT as well as issues in current training and dissemination. As an added bonus, the chapters all contain tidbits of clinical wisdom. The authors in this volume were carefully selected and are recognized experts in PCIT and in the applications of PCIT that they describe.

Edited by Dr. Larissa Niec, the organization and composition of this handbook is not surprising. In the PCIT world, Dr. Niec stands out as a researcher, clinician, trainer, and scholar. Her expertise is nationally and internationally recognized through her federally funded clinical research and writing on PCIT and her standing as a master trainer and member of the Board of Directors of PCIT International. There could hardly be a more perfect editor for this volume.

As might be expected in a handbook emphasizing innovations in PCIT, fidelity to the standard PCIT protocol is a noteworthy theme throughout this book. When we conduct PCIT to treat children with disruptive behavior or to improve parenting skills, we are committed to maintaining fidelity to the standard model while at the same time, tailoring treatment to match the needs of the family. Examples of tailoring when delivering standard PCIT would include changing the introductory content of psychoeducation to be relevant to the particular disorder being treated or using words or language that more closely matches the family's values or understanding. Chapter "Parent-Child

Interaction Therapy for Families with a History of Child Maltreatment"
provides excellent examples of tailoring treatment for a family referred
because of child maltreatment. Chapter "Cultural Enhancement of PCIT for
American Indian Families: Honoring Children, Making Relatives" illustrates
an exceptionally perceptive approach to tailoring PCIT when treating fami-
lies from culturally diverse populations. Tailoring neither changes the funda-
mental characteristics of PCIT nor does it alter the underlying behavioral
theory. Treatment tailoring would not be expected to improve behavioral
outcomes significantly when compared to standard PCIT, but it augments the
ecological validity of the treatment.

   In contrast to tailoring, adaptations of PCIT are evidence-based changes in
fundamental procedures in the protocol. Adaptations are intended for use
with all members of a specific population or group. For example, chapter
"Parent-Child Interaction Therapy for Children with Selective Mutism"
describes an adapted model of PCIT for treating children with early anxiety
disorders. In this adaptation, deletions from the protocol, such as removing
the PDI phase of PCIT, and additions, such as incorporating exposure tasks
into the CDI, are made to improve the outcomes of treatment for child anxiety
disorders, while otherwise following closely the steps of the standard PCIT
model. Adaptations may also change the venues in which treatment is deliv-
ered, such as in-home coaching (chapter "Group PCIT: Increasing Access
and Leveraging Positive Parent Pressure") or video-conference-based deliv-
ery of PCIT (chapter "Using Technology to Expand the Reach of PCIT"),
to broaden the reach and scope of PCIT. It is essential that adaptations be
supported by well-conducted research. Adaptations should not be recom-
mended or disseminated to others until they have received convincing
scientific evidence showing that the adapted treatment is at least as effective
as the standard protocol in measuring the child's targeted symptoms.

   Adaptations to the measures used in PCIT are also addressed in this hand-
book. The treatments adapted from PCIT may require that PCIT measures
also be adapted to monitor their progress or demonstrate their effectiveness.
For standard PCIT, the DPICS is an essential system for measuring treatment
progress and outcomes. For many interventions adapted from PCIT, the
DPICS will not require changes. Effective parenting and child compliance
are, in particular, almost universal targets of adapted treatments for young
children. For treatments with meaningfully different target goals, adaptations
of the DPICS are easily incorporated into the system. Chapter "Dyadic
Parent-Child Interaction Coding System: An Adaptable Measure of Parent and
Child Behavior During Dyadic Interactions" describes in detail the DPICS
system and the strong evidence of its intercoder reliability, discriminative
validity, and sensitivity to changes resulting from treatment. The flexibility of
the DPICS allows changes that can provide observational assessment of dyadic
interactions in many contexts.

   The other measure used to guide PCIT is the ECBI, a measure standardized
in numerous cultures. Many studies have demonstrated the psychometric prop-
erties of the ECBI, including its sensitivity to behavioral changes over quite
short time intervals and its stability, both of which permit repeated weekly
assessments to monitor child behaviors throughout treatment. The items of the

ECBI also permit assessments of behavior change in both clinical and nonclinical populations, making it applicable for assessing outcomes in prevention as well as intervention studies. In chapter "Building Resilience through PCIT: Assessing Child Adaptive Functioning and Parent-Child Relationship Quality," the authors describe new rating scales they have developed to measure child strengths rather than problem behaviors. They suggest that the new strength-based measures are important to foster a better understanding of children's abilities and that they may play a meaningful role in the evaluation and tailoring of prevention and intervention programs. These hypotheses will be important to study.

A second not-surprising theme running through this handbook on PCIT is the importance of measurement to guide not just treatment progress but also therapist training in PCIT. PCIT is not an easy treatment to learn. To help assure fidelity as training moves on from the second- and third-generation trainers and from individual agencies to large-scale dissemination, the assessment of therapist competence at each step throughout the initial training year is an ongoing process. Chapter "Assessing Therapist Competence Within the Context of PCIT Training" describes our current approach to therapist competence assessment and includes a few preliminary checklists and quizzes with tested reliability. However, assessment of therapist skill acquisition in many aspects of PCIT is a subjective judgment by the trainer. One notable exception is the therapist-parent interaction coding system (TPICS). Published studies of the TPICS have shown its reliability and preliminary but convincing evidence of predictive validity (chapter "Therapist-Parent Interactions in PCIT: The Importance of Coach Coding"). PCIT trainers have needed an objective way to assess therapists' coaching for many years. It is my opinion that the quality of coaching in large part determines the outcomes of PCIT. With the publication of the TPICS, that hypothesis now can be tested. Of note, the TPICS was developed in the laboratory of the handbook editor Dr. Larissa Niec. Just as that measure of coaching is likely to move PCIT research forward considerably, so too is this handbook itself. It concludes with a chapter in which Dr. Niec considers the important next steps for research in PCIT in order to advance the science of children's mental health interventions. It is an essential handbook for clinicians, researchers, instructors, administrators, and graduate students in mental health broadly. It is certainly will be the go-to reference for those of us in PCIT.

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About the Editor

Larissa N. Niec, Ph.D. is the director of the Center for Children, Families, and Communities and professor of psychology at Central Michigan University. Dr. Niec publishes extensively on PCIT, with a focus on developing and evaluating adaptations to PCIT that have the potential to reduce mental health disparities among underserved populations. She has trained doctoral students and community clinicians in PCIT for more than 20 years and is 1 of 20 master trainers in the world who have been certified by PCIT International to disseminate PCIT nationally and internationally. Dr. Niec has trained PCIT therapists throughout the Midwestern United States, Canada, Australia, and Europe.

Part I

Introduction

Parent–Child Interaction Therapy: A Transdiagnostic Intervention to Enhance Family Functioning

Larissa N. Niec

Abstract

With more than 40 years of research supporting it, parent–child interaction therapy (PCIT) is a best-practice model for the treatment of conduct problems in children from 2 years and 6 months of age to 6 years and 11 months. PCIT contains the core therapeutic elements associated with larger effect sizes in the improvement of parenting practices and the reduction of children's disruptive behaviors. Since the 1970s, however, our understanding of how PCIT works and the ways in which it can improve the well-being of children and families has expanded well beyond the treatment of child conduct problems. Through decades of rigorous evaluation, it has become clear that PCIT changes the negative patterns of interaction between parents and children—including the toxic interactions of abusive parents—and creates new patterns that are healthy, warm, and supportive. Strengthening parent–child relationships is associated with lower risk for child abuse and recently has even been shown to help buffer the negative effects of poverty on child brain development. Consistent with this developmental literature, PCIT and adaptations of PCIT have increasing support for their efficacy in the reduction of childhood anxiety, depression, and other forms of affect dysregulation. PCIT has also been shown to be an appropriate and effective intervention for children who have experienced trauma. This chapter provides an overview of the standard, evidence-based model of PCIT, including the key components of the approach, the foundational research that supports it, and the process of training for PCIT therapists.

When Dr. Sheila Eyberg, developer of parent–child interaction therapy (PCIT), began her work to create an effective parenting intervention for the families of young children, it was 1973. The science of intervention development at the time was moving away from treatments that addressed multiple problems of children's behavioral and social-emotional functioning and toward treatments designed to address specific diagnoses. The question of the day was the now landmark inquiry by Paul (1967): "What treatment, by whom, is most effective for *this* individual with *that* specific problem, and under which set of circumstances?" In conceptualizing PCIT as an intervention to strengthen the parent–child relationship, a foundational element of healthy child development, Dr. Eyberg suspected PCIT might address a number of child mental health issues.

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Her research focus, however, was childhood conduct problems. Thus, PCIT was originally developed and evaluated for the treatment of conduct disorder and other disruptive behavior disorders (S. Eyberg, personal communication, April 2, 2018). It was an important focus: childhood conduct problems were, and continue to be, one of the most common reasons for which children are brought to mental health providers (Tempel, Herschell, & Kolko, 2015). Left untreated, conduct problems in early childhood are related to persistent and devastating issues such as delinquency, substance abuse, depression, and suicide that impact individuals, families, and communities (Dodge, Greenberg, & Malone, 2008; Fergusson, Horwood, & Ridder, 2005; Obradović, Burt, & Masten, 2010). In the 1970s and early 1980s, treatment models that conceptualized conduct problems by considering both behavioral and attachment theories were lacking. Based on the integration of concepts from child-centered play therapy, attachment theory, and social learning theory, PCIT offered a rare perspective on the treatment of childhood conduct problems. To conceptualize healthy parenting, PCIT also drew from developmental science, paralleling the work of Baumrind, who demonstrated the importance of two dimensions key to positive child development (1) warm, responsive, nurturing parenting, and (2) safe, consistent limits (Baumrind, 1967).

PCIT now has 40 years of research supporting it (Eyberg & Ross, 1978). It is a best-practice model for the treatment of conduct problems in children from 2½ years of age to 6 years-11 months and contains the core elements associated with larger effect sizes in the improvement of parenting practices and the reduction of children's disruptive behaviors (Kaminski, Valle, Filene, & Boyle, 2008). Since the 1970s, however, our understanding of how PCIT works and the ways in which it can improve the well-being of children and families has expanded well beyond the treatment of child conduct problems. Through decades of rigorous evaluation, it has become clear that Dr. Eyberg was correct in her original suspicions: the efficacy of PCIT extends well beyond child conduct. PCIT *changes the negative patterns of interaction* between parents and children—including the toxic interactions of abusive parents—and creates new patterns that are healthy, warm, and supportive (Chaffin et al., 2004; Niec, Barnett, Prewett, & Chatham, 2016; Schuhmann, Foote, Eyberg, Boggs, & Algina, 1998; Thomas & Zimmer-Gembeck, 2011). Strengthening parent–child relationships is associated with lower risk for child abuse (Thomas & Zimmer-Gembeck, 2011) and recently has even been shown to help buffer the negative effects of poverty on child brain development (Brody et al., 2017). Consistent with this developmental literature, PCIT and adaptations of PCIT have increasing support for their efficacy in the reduction of childhood anxiety, depression, and other forms of affect dysregulation (Carpenter, Puliafico, Kurtz, Pincus, & Comer, 2014; Chronis-Tuscano et al., 2015). PCIT has also been shown to be an appropriate and effective intervention for children who have experienced trauma (Chaffin et al., 2004; Urquiza & McNeil, 1996).

This chapter provides an overview of the standard, evidence-based model of PCIT (Eyberg & Funderburk, 2011), including the key components of the approach, the foundational research that supports it, and the process of training for PCIT therapists. Subsequent chapters are grouped within five sections, each exploring a novel direction in the adaptation or implementation of PCIT: (1) alternative diagnoses and presenting problems (e.g., anxiety disorders, developmental delays, obesity risk); (2) innovative settings and formats (e.g., in-home, school-based, prevention); (3) diverse populations (e.g., Native American, Latina/o families); (4) assessment in clinical, training, and research settings (e.g., therapist competence, assessment of coaching techniques); and (5) strategies for dissemination (e.g., use of technology, getting to scale).

One note regarding terminology: the PCIT model encourages the participation of any caregivers who have a primary role in a child's life (e.g., biological parents, grandparents, adult siblings, foster parents, nannies). To reduce redundancy, however, throughout this book, we use the term "parents" to include all of these caregivers.

Overview of the PCIT Model

Family Assessment

Reliable and valid methods of assessment are a necessary component of any evidence-based intervention. Reliable assessment allows clinicians to determine the specific needs of a family, to guide the family during treatment, and to determine when treatment is successfully completed. PCIT is an assessment-driven intervention, meaning that although the structure and core components are manualized, the treatment is tailored to meet the needs of each individual parent and child (Eyberg, 2005). Assessment in PCIT occurs at multiple time-points: (1) intake, prior to a family beginning treatment, (2) weekly throughout treatment, and (3) at a family's graduation from treatment. Consistent with best-practice, the assessment process in PCIT includes multiple methods (e.g., rating scales, behavior observation) and multiple sources (e.g., caregivers, therapist observation; Whitcomb, 2017; see Table 1).

All individuals who intend to participate in treatment should be included in the assessment process. By including parents' reports and standardized observations of actual parent and child behaviors, PCIT therapists develop an understanding of caregivers' perceptions of their children's problems, while avoiding the disadvantages inherent in relying only on parent report.

The primary constructs measured in PCIT are directly linked to the goals of the program: strengthening the parent–child bond, increasing parents' use of positive parenting skills, and reducing child conduct problems. Two standardized and well-validated measures capture these constructs, the Dyadic Parent–Child Interaction Coding System-Fourth Edition (DPICS-IV; Eyberg, Chase, Fernandez, & Nelson, 2014) and the Eyberg Child Behavior Inventory (ECBI; Eyberg & Pincus, 1999). The DPICS-IV includes a set of three standardized parent–child interaction situations and a coding system to interpret the interactions. When administered together, the three situations begin with a 5-min warm-up period, then move to 5 min each of (1) child-led free-play (CLP), (2) parent-led play (PLP), and (3) clean-up (CU). All three situations are administered at intake (prior to a family beginning treatment) and at graduation. During weekly treatment sessions, individual DPICS-IV situations are administered, depending on the treatment phase (see chapter "Dyadic Parent–Child Interaction Coding System: An Adaptable Measure of Parent and Child Behavior During Dyadic Interactions" for an in-depth exploration of the DPICS-IV).

The ECBI is a 36-item parent rating scale that measures the frequency of children's disruptive behaviors and parents' tolerance of the problems. Behaviors measured by the ECBI are related to children's attention deficits, oppositionality, and

Table 1 Assessment in PCIT

Measure/ method	Assessment point	Information source/measure type	Required/ recommended
Clinical interview	Pre	Caregivers	Required
ECBI	Pre, Weekly, Grad	Parent rating scale of child conduct problems	Required
DPICS-IV	Pre, Weekly, Grad	Parent–child behavior observation	Required
BASC/CBCL	Pre, Grad	Parent rating scale, child behavioral and socioemotional functioning	Recommended
PSI-SF-IV	Pre, Grad	Parent rating scale, parenting stress	Recommended
SESBI	Pre, Grad	Teacher rating scale, child conduct problems	Recommended

Pre pretreatment, *Grad* graduation, *ECBI* Eyberg Child Behavior Inventory, *DPICS-IV* Dyadic Parent–Child Interaction Coding System, *BASC* Behavioral Assessment System for Children, *CBCL* Child Behavior Checklist, *PSI-SF-IV* Parent Stress Inventory Short Form fourth Edition, *SESBI* Sutter-Eyberg Student Behavior Inventory

conduct (Eyberg & Pincus, 1999). Administering the ECBI at the start of weekly therapy sessions allows clinicians to monitor progress and parents to see the connection between the changes in their parenting behaviors and the changes in their children's disruptive behaviors. As with the DPICS-IV, the ECBI scores also provide therapists with key information to tailor the session to the specific needs of the parent and child.

The DPICS-IV and ECBI are both required in order to tailor treatment for each family, to know when families are meeting their treatment goals, and to determine when they are ready to graduate. Several other measures are often useful, and though not required, are recommended. These measures (listed in Table 1), allow therapists to track issues often experienced by families who present with problems of parent–child conflict or child conduct. These issues include parenting stress, child internalizing symptoms (e.g., anxiety, depression), and school behavior problems, among others.

Treatment Phase I: Child-Directed Interaction (CDI)

After completion of the intake assessment, families begin the Child-Directed Interaction phase of treatment (See Table 2). The primary goals of CDI are to strengthen/repair the parent–child relationship, increase parents' positive parenting skills, and begin to build children's abilities to regulate their behavior and affect (Eyberg & Funderburk, 2011). Attachment theory and social learning theory are two of the foundational pillars upon which

Table 2 Structure of PCIT

Session	Content
Intake/Pretreatment Assessment	• Clinical interview including history of discipline and use of time-out. • DPICS-IV behavior assessment of parent–child interactions. • Parent-report of behavior problems.
CDI Teach	• Didactic introduction of child-centered skills and differential attention. • Role-play demonstration and practice of child-centered skills.
CDI Coach 1 to Mastery	• DPICS-IV behavior assessment of child-centered-skills. • In vivo coaching practice of child-centered skills and differential attention.
PDI Teach	• Didactic introduction in effective, consistent, developmentally appropriate limit-setting. • Role-play limit-setting procedure.
PDI Coach 1	• Demonstrate limit-setting procedure to child using Mr. Bear. • In vivo coaching practice of effective, consistent, developmentally appropriate limit-setting.
PDI Coach 2	• DPICS-IV behavior assessment of child-centered-skills. • In vivo coaching practice of effective, consistent, developmentally appropriate limit-setting.
PDI Coach 3	• DPICS-IV behavior assessment of child-centered and limit-setting skills. • In vivo coaching practice of effective, consistent, developmentally appropriate limit-setting.
PDI Coach 4	• In vivo coaching practice of child-centered skills, differential attention, and effective, consistent, developmentally appropriate limit-setting with in vivo coaching. • Introduce house rules.
PDI Coach 5	• In vivo coaching practice of child-centered skills. • DPICS-IV behavior assessment of limit-setting skills. • In vivo coaching practice of effective, consistent, developmentally appropriate limit-setting. • Introduce public behavior outing.
PDI Coach 6	• DPICS-IV behavior assessment of child-centered and limit-setting skills. • In-clinic in vivo coaching practice of public behavior.
PDI Coach 7+	• DPICS-IV behavior assessment of child-centered and limit-setting skills. • In vivo coaching practice of child-centered and limit-setting skills. • If applicable, include siblings in session.
Graduation/ Posttreatment Assessment	• DPICS-IV behavior assessment of parent–child interactions. • Parent-report of child behavior.

the CDI phase was developed. Attachment theory articulates *why* the parent–child relationship is important to child development (e.g., Lewis, Feiring, McGuffog, & Jaskir, 1984; Sroufe, 2000; Urban, Carlson, Egeland, & Sroufe, 1991; Bowlby, 1969/1982), and social learning theory explains *how* to help parents improve their bond with their children (e.g., Bandura, 1977; Dishion & Patterson, 2016; Eyberg & Funderburk, 2011). To say that John Bowlby, father of attachment theory, was a behaviorist is an exaggeration; however, it is no exaggeration to say that attachment theory describes the parent–child bond as a construct that develops over time after repeated interactions between parent and child in which the child *learns* what to expect from others in times of need or distress (Bowlby, 1969/1982). Parent responsiveness is one important factor in this learning process (e.g., Raval et al., 2001). The parent–child relationship impacts children's functioning across the developmental span (e.g., Masten & Cicchetti, 2010). For this reason, the focus of PCIT is on strengthening the parent–child bond (i.e., the long-term bond) rather than the therapist–child bond (i.e., short-term bond). Using skills derived from child-centered play therapy, the CDI phase of PCIT teaches parents to interact with their children in child-centered ways. That is, PCIT increases parents' responsiveness. Through repeated parent–child interactions, parents develop new, healthy interaction patterns and children learn new expectations about interactions with their parents.

The first session of the CDI phase of treatment is the CDI Teach session. During the teach session, therapists introduce parents to the child-centered interaction skills (e.g., reflecting children's appropriate verbalizations, describing children's appropriate behavior, providing specific social reinforcement), discuss types of interaction patterns that are counter to child-centered interaction (e.g., criticism, commands, questions), and provide parents with a nonconfrontational and powerful technique based on the concept of differential attention to increase children's behavior regulation (selective ignoring). The format of the teach session is primarily didactic and includes discussion with parents about how their family's needs will be

addressed with the new skills. Role-play of the skills in the teach session helps to prepare parents to practice in 5-min play interactions with their children at home.

In Vivo Feedback: A Powerful Mechanism of Change

Subsequent to the CDI Teach session, each session in the CDI phase focuses on therapists' in vivo coaching of parents during interactions with their children. That is, parents practice using positive interaction skills and receive immediate feedback from the therapist. In vivo coaching is a powerful mechanism of behavior change that can help parents to develop new parent–child interaction patterns even without an extensive didactic session (Shanley & Niec, 2010). PCIT therapists use behavioral principles such as modeling, social reinforcement, and differential attention to guide their coaching strategies and increase parents' skill acquisition (Barnett, Niec, & Acevedo-Polakovich, 2014). The tone of a therapist's coaching is always supportive, and the focus remains positive. Thus, in coaching the parent, the therapist models a similar nurturing and responsive style that parents are being taught to use with their children. In addition to being an effective learning technique, this positive approach can engage parents and may reduce the defensiveness of caregivers who feel embarrassed by their children's behaviors or feel a sense of blame or shame for the parent–child conflict (Barnett et al., 2014, 2015).

The coaching situation is optimally set up so that parents and children can interact in a room by themselves, while the therapist coaches the parent by observing the interaction through a two-way mirror and communicating through a microphone and bug-in-the-ear device. This situation empowers the parent to enjoy an intensive, therapeutic time with their child and reduces distractions. When necessary, coaching can also be conducted effectively with the therapist in the room and speaking softly in the parent's ear (Briegel, Walter, Schimek, Knapp, & Bussing, 2015); however, this arrangement offers some

additional challenges, particularly in the second phase of treatment.

Parenting interventions, such as PCIT, that include live coaching have larger effects than interventions that do not include coaching (Kaminski et al., 2008). Therapist coaching builds parents' skills from session to session, influences parents' speed of treatment completion, and impacts parents' engagement in treatment (Barnett et al., 2014, 2015). The research on coaching is consistent with what parents report anecdotally: that is, it is easier to learn new ways of interacting with their children when practice occurs in a real-life situation (e.g., parent–child play) and when feedback occurs in-the-moment. New interaction patterns are learned more quickly through active practice, rather than through discussion or role-play. Imagine, for a moment, learning how to play a musical instrument without ever actually picking up the instrument and practicing, only discussing with an instructor how to play it or pretending to play it without the instrument in the room.

Effective in vivo coaching helps prepare a parent to move from one phase of treatment to another. In the CDI phase, as in the rest of the PCIT model, families are empowered to be in control of the pace of their own treatment, as progress from one phase of treatment to another depends on the parents' skill acquisition. When parents have demonstrated mastery of the child-centered skills, as measured with the DPICS-IV child-led play situation, they move to the second phase of treatment, the Parent-directed Interaction phase (PDI).

Treatment Phase II: Parent-Directed Interaction

By the time parents begin the PDI phase of PCIT, they have learned many positive parenting skills that not only have strengthened the parent–child relationship but have also started to increase children's psychosocial competencies and decrease problem behaviors. For children with conduct problems, however, the CDI phase of treatment is typically insufficient to return behavior to within-normal limits (Eisenstadt, Eyberg,

McNeil, Newcomb, & Funderburk, 1993). Thus, the goal of PDI is to teach parents how to set consistent, predictable, and developmentally appropriate limits for their children. Developmentally appropriate limits and safe, effective consequences foster healthy child development (e.g., Baumrind, 1967; Masten & Cicchetti, 2010). Permissive parenting has been associated not only with early childhood conduct problems (e.g., Baumrind, 1967; Patterson, DeBaryshe, & Ramsey, 1990), but also with a greater risk for childhood anxiety (Williams et al., 2009). For children who have experienced maltreatment or other types of trauma, it is particularly important for parenting to include consistent and predictable limits (Cohen, Mannarino, & Deblinger, 2017).

Similar to the start of the CDI phase, the first session of PDI is the PDI Teach session. During this session, parents are introduced to the primary factors that make directions (sometimes called "commands") more effective and facilitate child compliance. For instance, children are more likely to follow directions when they are positively stated, specific not vague, and are given one at a time (Eyberg & Funderburk, 2011). Emphasis is placed on parents' continued use of the child-centered skills to continue the development of a positive parent–child relationship, and parents are taught only to give directions to their children when necessary. Within that context, parents are introduced to an effective consequence for children when they break limits, time-out.

Time-Out in PCIT

"Time-out" is a behavioral construct so named because it involves the removal of a child from all reinforcing activities (e.g., television, toys, active parental attention) for a brief period of time subsequent to the child's breaking a developmentally appropriate limit (Donaldson & Vollmer, 2011). When implemented correctly, time-out is a safe, effective consequence for child misbehavior that has been endorsed by the American Academy of Pediatrics (AAP, 1998) and the Centers for Disease Control and Prevention (CDC, 2009). The positive impact of teaching parents how to use time-out

goes beyond merely teaching children healthy limits, as described by the CDC below.

> Teaching parents disciplinary skills such as the correct use of time-out and consistent responses is helpful not only for the current interactions with their children but for the future as well. When parents learn to use time-out correctly, they allow themselves and the child a moment to calm down. In addition to calming down, children learn what is desirable and undesirable behavior. Similarly, consistent responding eventually takes strain off of the parent because they no longer have to negotiate each infraction with the child. (Centers for Disease Control and Prevention, 2009, p. 6).

Parenting interventions that include a time-out protocol are more effective than interventions that do not, and are more effective than interventions that provide parents information about child development without including live practice of parenting skills or the effective use of time-out (Kaminski et al., 2008). The time-out protocol in PCIT contains the components determined to be key to effectiveness (Everett, Hupp, & Olmi, 2010). Time-out is 3 min long; it ends after 3 min plus 5 sec when the child is quiet. Ending time-out when a child is quiet prevents superstitious learning from occurring in which the child believes his or her disruptive behaviors (e.g., yelling while on the time-out chair) caused the end of time-out, and it helps children to learn to regulate themselves during the process. Time-out is not a method through which children can escape from compliance: after successfully completing the 3 min and 5 sec of quiet, children are guided to complete the original task.

As in the CDI phase, in each session subsequent to the PDI Teach session, parents are coached in their use of the new skills. Coaching by therapists in the PDI phase differs from the CDI phase in that it includes a greater proportion of directive techniques (Schoonover & Niec, 2016). Directive techniques such as modeling (i.e., telling parents what to say to their children) are important to help parents and children to have successful experiences when learning the new procedure. Coding of parents' interactions with their children also continues during the PDI phase. In PDI, the coding scenario changes across sessions based in part on the parents' skill devel-

opment (e.g., some PDI coach sessions do not include coding, some include CLP and PLP coding). During PDI coding, therapists assess the parents' use of the discipline procedure. As in the CDI phase, measuring parents' actual behavior (rather than relying only on parent report) allows therapists to determine which skills parents are mastering and for which skills they still require coaching and practice.

An overarching aim of PCIT is for parents to generalize the therapeutic relationship-building and behavior management skills to their everyday interactions with their children, so that the new skills become routine and natural. Multiple steps are built into both phases of treatment in order to accomplish this aim. At each step, parents start with practicing the skills in the session and during brief (e.g., 5 min) special time interactions with their children at home, and then gradually begin to implement the skills at other times of the day. PCIT therapists facilitate generalization of skills by prompting and reinforcing parents in their skill use not only during the therapeutic coaching time but also before and after coaching, throughout the clinic, and eventually in public settings.

When parents demonstrate mastery of the CDI and PDI parenting skills (through standardized DPICS observations), report their children's behaviors are within normal limits (ECBI Intensity Scale raw score < 114), and express feeling confident about their ability to manage their children's behaviors, families are prepared to graduate from PCIT. Graduation includes a celebration of the gains made by the family, a conversation about how to address problems if they arise in the future, and completion of a post-treatment assessment.

Treatment Outcomes for Children and Families

One of the goals of this book is to provide a review of the most recent evaluations of PCIT as it has been adapted to address novel problems in alternative formats. In this section, therefore, we provide a summary of the foundational research

that supports the PCIT model. The research base supporting the efficacy of PCIT is substantial and includes a range of studies from individual case studies (e.g., Armstrong, David, & Goldberg, 2013; Gordon & Cooper, 2016; Stokes, Scudder, Costello, & McNeil, 2017) to rigorous, well-controlled, randomized trials (e.g., Niec et al., 2016; Schuhmann et al., 1998).

Empirical studies demonstrate that parents who complete PCIT show significant and meaningful increases in their nurturing, responsive interactions with their children (Niec et al., 2016; Schuhmann et al., 1998). Not only does PCIT help parents to develop healthier interactions with their children, it also reduces parent stress (Eyberg, Boggs, & Jaccard, 2014; Hood & Eyberg, 2003; Niec et al., 2016; Schuhmann et al., 1998) and symptoms of depression (Gardner, Hutchings, Bywater, & Whitaker. 2010; Hood & Eyberg, 2003; Timmer et al., 2011). Further, PCIT increases parents' sense of self-efficacy (Hood & Eyberg, 2003).

Because the original studies of the PCIT model targeted the reduction of child conduct problems, the foundational evaluations of efficacy primarily included samples of children who were manifesting severe levels of disruptive behaviors or who met criteria for a disruptive behavior disorder. However, even relatively early in the development of PCIT, because of the strong focus on the parent–child relationship, clinicians and researchers recognized the potential value of the intervention to treat families in which abuse had occurred (Urquiza & McNeil, 1996). Shortly after, PCIT was evaluated in a rigorous randomized controlled trial for the treatment of parents who were referred to PCIT subsequent to physically abusing their children. Physically abusive parents who completed PCIT were significantly less likely to re-abuse their children than parents who received treatment as usual (Chaffin et al., 2004).

Evaluations of the treatment outcomes for children find that children who complete PCIT with their primary caregivers demonstrate fewer conduct problems and have better behavior regulation (Niec et al., 2016; Schuhmann et al., 1998; Thomas, Abell, Webb, Avdagic, & Zimmer-Gembeck, 2017; Thomas & Zimmer-Gembeck, 2012). Participating in PCIT also leads to the reduction of children's internalizing symptoms, such as symptoms related to anxiety and depression (e.g., Chase & Eyberg, 2008; Schuhmann et al., 1998). The reduction of children's problem behaviors generalizes not only from the clinic to home but also to the school setting (McNeil, Eyberg, Eisenstadt, Newcomb, & Funderburk, 1991). Further, the siblings of children who participate in PCIT also show positive effects (Brestan, Eyberg, Boggs, & Algina, 1997).

Treatment gains in PCIT have good long-term maintenance (Eyberg et al., 2001; Hood & Eyberg, 2003). Among families who completed PCIT 3–6 years prior, child behavior on average, remained within the range of typically developing children (Hood & Eyberg, 2003). Positive treatment outcomes for parents and children in PCIT have been demonstrated across cultures within the US and internationally (e.g., Abrahamse, Junger, van Wouwe, Boer, & Lindauer, 2016; BigFoot & Funderburk, 2011; McCabe, Yeh, Garland, Lau, & Chavez, 2005).

Taken as a whole, PCIT demonstrates robust effects that generalize across settings and demonstrate good maintenance over time (Eyberg, Boggs, & Jaccard, 2014). Meta-analyses, which evaluate the outcomes of PCIT across multiple studies, show that the positive treatment gains for parents and children are moderate to large in magnitude. When compared in a meta-analysis to another evidence-based parenting intervention (Triple P-Positive Parenting Program; Sanders, Cann, & Markie-Dadds, 2003), the effect sizes of PCIT were found to be larger (Rae & Zimmer-Gembeck, 2007).

Sustaining Programs and Maintaining Fidelity: PCIT Training

No matter how large the effects of a treatment model may be, if the training process for therapists is not effective or is not feasible to implement, then families will be unable to benefit from the model. Although it is true of parenting interventions in general that the evaluation of dissemi-

nation and implementation outcomes (e.g., training effectiveness, program maintenance) has lagged behind the evaluation of treatment outcomes (Baumann et al., 2015), increasingly researchers are exploring questions important to PCIT training such as, "What components make training more efficient?"; "What barriers do therapists experience throughout training?"; "How can agencies best sustain their PCIT programs?" (Herschell, Reed, Person Mecca, & Kolko, 2014; Christian, Niec, Acevedo-Polakovich, & Kassab, 2014; Niec, Abrahamse, Egan, Coelman, & Heiner, 2018; see chapters "Training and Supervision Around the World" and "Getting Parent–Child Interaction Therapy to Scale").

As is increasingly the case for evidence-based interventions, a professional organization headed by the developer of the treatment model is responsible for promoting the fidelity of PCIT. PCIT International, Inc. is a global organization that accomplishes its mission by (1) developing and promoting PCIT training requirements, (2) overseeing therapist and trainer certification, (3) providing continuing education, and (4) promoting quality PCIT research.

The requirements for training PCIT therapists were developed by a task force of expert PCIT trainers and were based both on the existing training literature and trainers' experiences. An early, small-scale study on PCIT training found that therapists who participated in self-directed learning (e.g., reading the treatment manual without receiving guidance from a trainer) did not learn to use the PCIT skills at the level set as mastery for parents (Herschell, 2004). A subsequent review of training formats for therapists found that even participation in a workshop—without ongoing support or consultation—does not typically result in changes in therapists' skills or the techniques used in treatment (Herschell, Kolko, Baumann, & Davis, 2010). Regarding the training modalities preferred by therapists, when experienced cognitive behavioral therapists were asked about their perceptions of the effectiveness of various training techniques, they reported that although didactic formats (e.g., lecture) were useful for acquiring factual knowledge, to acquire or improve thera-peutic skills, active/experiential learning was best (Bennett-Levy, McManus, Westling, & Fennell, 2009). Community-based therapists also expressed a preference for experiential rather than didactic training formats (Herschell et al., 2014) and for ongoing consultation and supervision (Christian et al., 2014). PCIT training for therapists, therefore, includes a range of training techniques (e.g., lecture, modeling, roleplay, active practice), with an emphasis on experiential learning. The details of the training process are discussed in depth in chapter "Training and Supervision Around the World". In brief, PCIT therapist training is an approximately year-long process that includes face-to-face workshops as well as ongoing consultation with review of recorded therapy sessions. Fidelity monitoring during training and after certification is embedded within the PCIT protocol. That is, detailed fidelity checklists exist for each treatment session. Self-monitoring of fidelity is ongoing as therapists complete the checklists for each session. External review of fidelity can be completed by trainers, supervisors, or program evaluators who use the checklists to evaluate recorded treatment sessions. The overarching goals of PCIT therapist training are both to develop therapists' ability to deliver the model effectively and to sustain their fidelity over time.

Conclusions: PCIT as a Transdiagnostic Intervention

From early in the development of PCIT, Dr. Eyberg considered the model to have the potential to address multiple childhood problems (personal communication, April 2, 2018). Many of the investigations described in this volume support the conceptualization of PCIT as a transdiagnostic intervention. The mechanisms through which the model may be transdiagnostic are related to the construct of developmental cascades. Developmental cascades refer to the links by which certain risk factors (e.g., early childhood conduct problems) or buffering factors (e.g., positive parent–child relationships) make more likely a series of negative or positive developmental out-

comes (Gonzalez & Jones, 2016; Masten & Cicchetti, 2010; van Lier & Koot, 2010). The manifestation of conduct problems in early childhood is one risk factor related to negative developmental cascades (Masten & Cicchetti, 2010). That is, when children manifest clinical levels of problem behaviors prior to beginning school, they are significantly more likely to experience a host of other adjustment problems throughout development (Fig. 1). Imagine, for example, the 5-year-old child who is oppositional and noncompliant with adults and aggressive with peers. This child is more likely to develop poor peer relationships and experience conflict with teachers. In the context of such conflict, a child may begin to disengage from school and thereby demonstrate problems with school achievement. Rejection by prosocial peers may lead to associating with deviant peers, which may then lead to delinquent behavior and involvement in the court system (Frick, 2012; Patterson et al., 1990). Individuals who manifest conduct disorder are also at greater risk for experiencing depression, substance abuse, and suicidal ideation (Dodge et al., 2008; Sourander et al., 2009).

By definition, developmental cascades are linked to multiple child outcomes, either positive or negative. Review of the links between ineffective parenting and child functioning supports the influence of parent behavior, not only on children's externalizing symptoms but also on internalizing symptoms (McKee, Colletti, Rakow, Jones, & Forehand, 2008). Thus, preventing or ameliorating the manifestation of risk factors related to negative developmental cascades has the potential to prevent children from experiencing multiple negative developmental outcomes, including the serious dysfunction associated with diagnoses such as conduct disorder, depression, and anxiety. By addressing two core factors related to developmental cascades (i.e., parent–child relationship, child behavior), theory suggests that PCIT is inherently a transdiagnostic intervention with the potential to prevent or ameliorate a range of diagnoses. In the following

Fig. 1 Developmental cascades related to early childhood conduct problems (e.g., Frick, 2006; Masten & Cicchetti, 2010; van Lier & Koot, 2010)
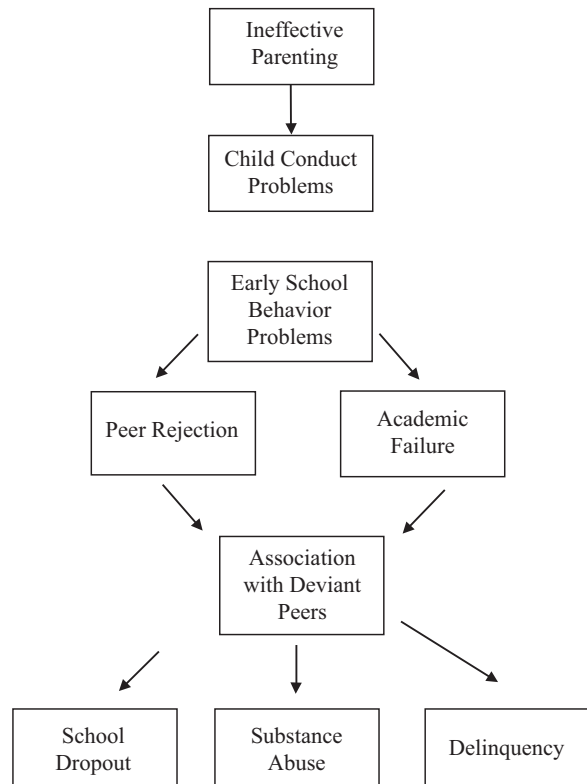
chapters, research is reviewed that supports this proposition and demonstrates the efficacy of PCIT in addressing multiple, serious childhood behavioral and emotional problems.

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Part II

Adaptations for New Target Problems

PCIT for Children with Callous-Unemotional Traits

Georgette E. Fleming and Eva R. Kimonis

Abstract

The risk factors for childhood conduct problems vary considerably across individuals, and effective intervention requires individualizing treatment to the unique needs of children on etiologically distinct developmental pathways. The importance of this causal heterogeneity is recognized in the fifth edition of the *Diagnostic and Statistical Manual of Mental Disorders*, which includes for the first time a specifier for the diagnosis of callous-unemotional (CU)-type conduct disorder (i.e., CD with limited prosocial emotions). This change was informed by decades of research supporting that CU traits designate a distinct subgroup of children with early starting, severe, and aggressive conduct problems that are not only associated with significantly increased risk of negative outcomes as adolescents and adults but are also less responsive to traditional interventions. This attenuated treatment response has been attributed to the failure of traditional interventions to adequately target the distinct risk factors involved in the development of CU-type conduct problems. Accordingly, an adaptation of parent–child interaction therapy (PCIT) was developed that addresses these unique risk factors. PCIT-CU, as it is known, differs from standard PCIT in three key ways: it (a) trains parents to engage in warm, emotionally responsive parenting to improve conscience development among temperamentally fearless children, (b) systematically supplements punishment-based parenting strategies with reward-based techniques, and (c) delivers emotional skill-building to target the distinct core emotional deficits of these children. Given there are currently few guidelines regarding best practice for the 20–50% of children with conduct problems that show elevated CU traits, this line of research is critical to improving their outcomes.

Childhood Callous-Unemotional Traits: A Need for Treatment

Research on childhood conduct problems (CP) consistently demonstrates that the risk factors for these problems can vary considerably across individuals, and that effective intervention requires individualizing treatment to the unique needs of children on different developmental pathways (see Frick, Ray, Thornton, & Kahn, 2014 for a review). The importance of this causal heterogeneity is recognized in the most recent edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5; APA, 2013), which

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for the first time includes a specifier for the diagnosis of conduct disorder (CD) called "with limited prosocial emotions" (LPE). This change was informed by decades of research showing that "callous-unemotional" (CU) traits designate a distinct subgroup of antisocial youth (Frick et al., 2014). Children meeting diagnostic criteria for CD are given the specifier if they persistently (≥12 months) show ≥2 LPE criteria across multiple relationships/settings: (1) lack of remorse or guilt, (2) callous—lack of empathy, (3) lack of concern about performance (at school, work, in other important activities), and (4) shallow/deficient affect (APA, 2013). Although DSM-5 only includes the LPE specifier for the diagnosis of CD, findings suggest that the distinction is a marker for more severe conduct problems among children with oppositional defiant disorder (ODD) as well (Longman, Hawes, & Kohlhoff, 2016).

There is robust evidence that children with co-occurring conduct problems and elevated callous-unemotional traits (henceforth called "CP + CU") present with earlier-starting, more severe, stable, and aggressive conduct problems than children with conduct problems and normative levels of CU traits (henceforth called "CP-alone") (Frick et al., 2014). For example, children with CP + CU displayed a greater number and variety of antisocial behaviors, greater proactive aggression (i.e., planned, for instrumental gain), and higher self-reported general and violent delinquency relative to children with CP-alone (Frick, Cornell, Barry, Bodin, & Dane, 2003; Frick, Stickle, Dandreaux, Farrell, & Kimonis, 2005). This CP + CU group also accounted for over half of all police contacts across four yearly assessments (Frick et al., 2005). Longitudinal research finds that CP + CU in childhood predicted antisocial/criminal behavior and psychopathy in early adulthood (Hawes, Byrd, Waller, Lynam, & Pardini, 2017; McMahon, Witkiewitz, Kotler, & Conduct Problems Prevention Research Group, 2010).

In addition to more severe conduct problem presentations, youth with co-occurring CU traits respond more poorly to traditional, family-based interventions for conduct problems than those with CP-alone (Hawes, Price, & Dadds, 2014). For example, among a sample of young children with or at risk for developmental delay (Mean age = 3.87 years, N = 63), those with CP + CU had more severe conduct problems after receiving standard parent–child interaction therapy (PCIT) than those with CP-alone, even after accounting for their more severe pretreatment levels (Kimonis, Bagner, Linares, Blake, & Rodriguez, 2014). Some attribute the reduced efficacy of parent training to the lesser role of dysfunctional parenting practices, which are targeted by these interventions, in the development of antisocial and aggressive behavior for children with CP + CU relative to those with CP-alone (e.g., Wootton, Frick, Shelton, & Silverthorn, 1997).

These and other findings contributed to clinical pessimism regarding treatment and psychosocial outcomes of children with CP + CU, and this subgroup was accordingly dubbed treatment-resistant (Salekin, Worley, & Grimes, 2010). The intransigence of this perspective was exacerbated by the significant genetic influence on conduct problems contributed by elevated CU traits (Viding, Blair, Moffitt, & Plomin, 2005); however, more recent perspectives emphasize that children with CP + CU *are* responsive to and benefit significantly from standard interventions, although they are likely to enter and finish treatment with more pronounced behavioral and social difficulties (e.g., Kimonis et al., 2014; for a review see Waller, Gardner, & Hyde, 2013). However, treatment effectiveness may be improved by targeting the unique risk factors hypothesized to contribute to the development and maintenance of conduct problems in children with CP + CU (Frick et al., 2014). Accordingly, existing treatments have been adapted to address the distinct causal processes leading to the behavioral and emotional difficulties exhibited by children with CP + CU, relative to CP-alone. In this chapter, we describe an adaptation of PCIT for children with CU traits, called PCIT-CU, designed to address three empirically derived risk factors associated with CP + CU: low parental warmth/responsivity; a child temperamental style characterized by

insensitivity to punishment and reward dominance; and child emotional insensitivity, most notably to others' distress cues.

Research Related to PCIT-CU

Parental Warmth/Responsivity

Although harsh, inconsistent, and coercive discipline is less associated with the conduct problems of children with CU traits than it is for those with CP alone (Oxford, Cavell, & Hughes, 2003), low warmth in parenting is particularly important to the development of conduct problems in children with elevated CU traits (Pasalich, Dadds, Hawes, & Brennan, 2012). On the other hand, dysfunctional parenting practices are related directly to CU traits themselves; harsh and negative parenting is associated with higher levels of CU traits, while warm, sensitive, and responsive parenting is associated with lower levels (reviewed in Waller et al., 2013). Conversely, in a sample of high-risk 2-year-olds ($N = 731$), low levels of observed and expressed parental warmth predicted behaviors consistent with CU traits at age 3, after controlling for conduct problems (Waller et al., 2014).

Taken together, these findings suggest that improving the affective quality of the parent–child relationship by increasing parental warmth, sensitivity, and responsiveness may lower child CP and CU traits. Longitudinal studies suggest that positive parenting reduces CU traits across time (e.g., Pardini, Lochman, & Powell, 2007). Specifically, parenting styles promoting greater attachment security (i.e., sensitive responding to child emotion, parental warmth) are believed to be critical to socializing and fostering conscience development among children with the fearless temperament found to underlie CU traits (see below), and also reducing the risk of further development of these traits (Kochanska, 1997). A randomized controlled trial (RCT) of Israeli children (2.6–5 years) with significant conduct problems that incorporated strategies for improving aspects of the parent–child relationship (e.g., warmth, communication skills), within a parent management training (PMT) program mandating participation by both parents and addressing co-parenting issues, found that CU traits improved post-treatment compared with controls (Somech & Elizur, 2012). Other studies have demonstrated that exposing antisocial children to warm parenting reduced CU traits *and* antisocial behaviors in later development (Pasalich et al., 2012). Thus, fostering greater warmth and sensitivity in parenting is likely to represent an important component of treatments tailored to meet the specific needs of children with elevated CU traits.

Fearless Temperament and Insensitivity to Punishment Cues

The second set of risk factors unique to the development and maintenance of conduct problems in children with co-occurring CU traits relates to fearlessness and abnormalities in the processing of punishment and reward cues (Fischer & Blair, 1998). Infants and children who display a fearless temperament and lack of fearful or anxious arousal are known to show atypical development of empathy and guilt (Fowles & Kochanska, 2000). In line with this, child fearless temperament at age 2 predicted CU traits at age 13 (Barker, Oliver, Viding, Salekin, & Maughan, 2011). Thus, fearlessness appears to be an early temperamental factor that predicts the later development of CU traits. It could also lead a child to be relatively insensitive to the prohibitions and sanctions of parents and other socializing agents, thus increasing the likelihood of developing conduct problems (Kochanska, 1993). Accordingly, children with CP + CU show a decreased sensitivity to punishment cues in laboratory and social settings (e.g., Blair, Peschardt, Budhani, Mitchell, & Pine, 2006).

Within treatment contexts, Hawes and Dadds (2005) found that parents of boys (M age = 6.29 years) with ODD and CU traits were more likely to rate the discipline component (i.e., time-out) of a manualized PMT program as ineffective than for children with CP-alone, whereas rewards were effective irrespective of CU traits. Also, relative to children (7–12 years) with

CP-alone, those with CP + CU received more daily time-outs and exhibited more negative behaviors during time-out used during a "Summer Treatment Program" for children with attention-deficit/hyperactivity disorder (ADHD) (Haas et al., 2011). Thus, the differential response of children with CP + CU to traditional interventions is partly a function of the emphasis these programs place on discipline strategies. In particular, a primary treatment goal of PMT for young children with conduct problems is to improve parents' ability to implement consistent, effective discipline following misbehavior (Forehand, Lafko, Parent, & Burt, 2014); however, given that children with elevated CU traits fail to respond appropriately to punishment cues, they are unlikely to benefit from punishment-based discipline strategies, even when these strategies are used consistently and effectively. In contrast, interventions that emphasize reward-based parenting strategies (e.g., descriptive praise, use of token economies) might be particularly effective in reducing conduct problems in children with CU traits.

Emotional Insensitivity

Finally, in addition to low fearfulness and insensitivity to punishment, children with elevated CU traits also demonstrate low emotional reactivity to aversive stimuli, characterized by deficits in their cognitive-behavioral, physiological, and neurological responses (Frick et al., 2014). These deficits constitute the third and arguably most important risk factor to consider in relation to the development and maintenance of conduct problems in children with CP + CU. With respect to cognitive-behavioral responses, youth with CP + CU are less accurate in recognizing sad and fearful expressions (Blair, Colledge, Murray, & Mitchell, 2001), less attentively engaged by others' distress cues (Kimonis, Frick, Fazekas, & Loney, 2006), less distressed by the negative effects of their behavior on others (Pardini, Lochman, & Frick, 2003), and more impaired in their moral reasoning and empathic concern towards others (Pardini et al., 2003) than youth

with CP-alone. Physiologically, youth with CP + CU show less heart rate change to emotionally evocative films (de Wied, van Boxtel, Matthys, & Meeus, 2012), and less skin conductance reactivity when responding to peer provocation (Kimonis, Frick, Munoz, & Aucoin, 2008), compared to youth with CP-alone. Neurologically, children with elevated CU traits show deficits in activity in brain areas associated with emotional, reward, and empathic processing. For example, studies using functional magnetic resonance imaging (fMRI) report reduced amygdala activity to fearful faces in children with CP + CU when compared with typically developing children, children with ADHD, and children with CP-alone (e.g., Viding et al., 2012). In contrast, presentations of CP-alone are associated with exaggerated, rather than reduced amygdala activity to emotional stimuli (Viding et al., 2012), in line with what was previously observed using self-report (e.g., Pardini et al., 2003) and laboratory emotion tasks (e.g., Kimonis et al., 2006, 2008). Thus, deficits in responding to emotional stimuli, in particular others' distress cues, constitutes a critical intervention target for the children with CP + CU.

Despite the centrality of emotional deficits to developmental theory for CU traits and associated antisocial behaviors, few studies have examined techniques to improve emotional function in children with CP + CU. In one notable exception, Dadds, Cauchi, Wimalaweera, Hawes, and Brennan (2012) found that a computerized emotional training program originally developed for populations with autism spectrum disorders (ASD; Baron-Cohen, Golan, Wheelwright, & Hill, 2004) improved empathy and reduced conduct problems among 6- to 16-year-old (*M* age = 10.52 years) children with CP + CU. Thus, emotional training may be a valuable adjunctive treatment for children with CP + CU to remediate their core emotional and empathic deficits. However, emotional training may be more effective if delivered earlier in life when important milestones in moral development and emotion recognition occur (Decety & Svetlova, 2012), such as at age 3 when CU traits can be reliably and validly measured (Kimonis et al., 2016).

While PMT is the current gold standard approach for treating conduct problems in preschool-age children (Eyberg, Nelson, & Boggs, 2008), these programs (1) do not tend to emphasize or measure increases in parenting warmth as a treatment outcome, (2) rely heavily on punishment to produce behavior change, and (3) do not emphasize improvements in children's emotional skills as a treatment outcome. In this way, PMT programs fail to target those areas of difficulty that are unique to the conduct problems of individuals with CU traits. Thus, the PCIT-CU adaptation for children with CU traits was designed to address the fundamental necessity for treatments that accommodate the needs of this important subgroup by targeting their distinct risk factors; low parental warmth and responsivity, punishment insensitivity and reward dominance, and insensitivity to distress cues; with the aim of increasing treatment efficacy for this particularly severe subpopulation of children.

PCIT-CU

In its standard form, PCIT represents a compelling intervention for children with CP + CU given evidence that optimal socialization for children with fearless temperament involves fostering mutual responsivity within the parent–child dyad by increasing reward-oriented parenting, emotional warmth, and other positive qualities of the parent–child attachment, rather than relying on punishment-related arousal for the internalization of parental norms (Kochanska & Thompson, 1997). That is, PCIT's emphasis on strengthening the parent–child relationship via positive parenting strategies during the Child-Directed Interaction (CDI) treatment phase is theoretically consistent with findings supporting the association of improvement in parenting warmth and reduction in CP and CU traits for children with CP + CU. Indeed, standard PCIT (without adaptation) was effective at reducing conduct problems to subclinical levels for very young children (*M* age = 3.87 years) with CU traits, albeit not to the same levels as children with CP-alone

(Kimonis et al., 2014).[1] Despite these promising results, PCIT requires adaptation to be of greatest benefit for children with CP + CU, especially with respect to shifting emphasis from punishment to reward to achieve effective discipline in the Parent-Directed Interaction (PDI) phase. Additionally, supplementary material is required to address the core emotional deficits seen in children with CP + CU. The following section provides a detailed description of the ways in which standard PCIT has been adapted to meet the unique needs of children with CP + CU.

Parental Warmth and Responsivity

As mentioned, PCIT seems particularly well suited for use with the CP + CU subgroup given the emphasis placed on strengthening the parent–child relationship or attachment bond. To facilitate a more secure parent–child attachment bond in standard PCIT, parents are taught a set of positive parenting practices, including use of descriptive praise, speech reflections, behavior imitation and description, and expressions of enjoyment. Known as the PRIDE or CDI "Do" skills, parents are coached to use these strategies to increase the sensitivity and responsiveness with which they interact with their child(ren); however, given the association of low parental warmth, in particular, with the development and maintenance of CU traits and conduct problems in children with CP + CU, the PCIT-CU adaptation replaces the "Enjoy" PRIDE skill with "Emotional Expression."

Emotional expression emphasizes enhancing parental warmth via the use of verbal and physical expressions of affection. First, during the CDI teach session, parents are provided psychoeducation on the importance of warm and affectionate parenting for children with CP + CU, even when the child appears unresponsive or to find it aversive. The therapist also models the

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[1]These findings require replication in a sample of non-delayed children with conduct problems since those in this study were either developmentally delayed or at risk for developmental delay due to premature birth.

difference between delivering the PRIDE skills with and without warmth. For example, the therapist demonstrates delivery of the labeled praise "great job using your inside voice" with a flat tone of voice, no eye contact, and without physical proximity to the recipient "child" (in this case, the parent). To demonstrate the importance of the emotional expression skill, the therapist then delivers the same labeled praise, but this time accompanied by facial and vocal animation and sustained eye contact, as well as simultaneous physical affection (e.g., close physical proximity, gentle pat on the back). Second, parents are explicitly coached to express affection for their child during play and at other times using a variety of strategies including positive and warm tone of voice, positive facial expressions (e.g., smiling), laughter, words of endearment and encouragement (e.g., "I missed you," "darling"), and physical contact (e.g., kisses, hugs, tickles). Importantly, the parent is coached to increase eye contact with their child during these exchanges, as well as to reinforce child eye contact with labeled praise (e.g., "I love it when you look me in the eyes," "good looking!"). Parents are instructed only to use emotional expression in response to positive child behavior, and to demonstrate neither warmth nor negative emotional expressions (e.g., yelling, aggressive physical contact) when delivering discipline (i.e., during the PDI sequence). As in standard PCIT, in CDI, parents are taught either to use planned ignoring or terminate the play in response to negative child behavior, depending on the severity of the behavior. The PCIT-CU protocol includes adapted CDI homework sheets via which parents rate the warmth of their daily play, and coding sheets for therapists to record instances of warm parent behaviors. Third, in the second CDI coach session, parents are provided a social story on expressing warmth to read with their child for homework. Social stories describe a situation, skill, or concept using a storyline that highlights social cues, perspectives, and common responses (Gray, 2000). Finally, parents are engaged in a discussion regarding the impact of stress on parenting, the implementation of stress management strategies, and the importance of modeling appropriate emotion regulation to their children.

Punishment Insensitivity and Reward Dominance

In standard PCIT, the PDI phase involves coaching the parent(s) in implementing a consistent, predictable time-out procedure, used in response to child noncompliance and/or disobedience with House Rules. In PCIT-CU, this procedure has been adapted to address the punishment insensitivity displayed by children with elevated CU traits, who tend to respond to punishment by escalating levels of frustration-based anger, reactive aggression, and vindictive behavior (Dadds & Salmon, 2003). More specifically, PCIT-CU supplements the punishment component of the PDI procedure with an intensive reward-based behavior modification system involving the use of an individualized token economy system to motivate and reinforce positive behaviors, including compliance with commands and rules.

During the PDI-CU Teach session, the therapist educates the parent(s) on the use of token economies, explaining that tokens (e.g., stickers, chips) can be used to motivate target child behaviors in a sustainable way because the tokens can be exchanged for a variety of rewards or privileges. The benefits of using a token economy are emphasized to parents, including its effectiveness across time and situations, convenience and subtlety (i.e., can be taken anywhere and delivered without interrupting the activity or behavior), and immediacy of reward. The therapist then helps the parent set up the token economy, including selecting a token, creating a list of rewards, and deciding how much each rewards "costs." As part of their homework before the next session, the parent is asked to generate a list of exceptional rewards (e.g., trip to the cinema) and everyday privileges (e.g., 15 min of tablet time), organizing them hierarchically, such that the former "cost" more tokens than the latter and thus take longer to earn. Therapists work with the parent(s) to ensure the rewards are acceptable and manageable within the family's financial and time constraints,

while also sufficiently motivating to the child. In the following coaching session, the token economy is explained to the child, during which time the parent(s) presents the reward list and describes the behaviors for which tokens and rewards are given (e.g., compliance, prosocial behaviors).

During the PDI-CU Teach session, the therapist also explains to the parent(s) how the token economy is incorporated into the PDI procedure. Specifically, compliance with effective commands (i.e., "listening and minding the first time") becomes the first target behavior for which children receive a token. The therapist emphasizes that distribution of tokens for compliance must be immediate and paired with labeled praise (i.e., "Great listening! You get a sticker because you listened the first time I asked!"). As in standard PCIT, in the case of noncompliance, the parent is coached to provide a time-out warning following 5 s of dawdling time. However, the PCIT-CU time-out warning emphasizes that the child risks forgoing a token should noncompliance continue (i.e., "If you don't [command], you won't get a sticker for listening and you'll have to sit on the time-out chair"). For compliance following the warning, the child receives labeled praise and a token. For noncompliance, the parent implements the time-out procedure outlined in the standard PCIT protocol, informing the child that he or she does not get a token and has to sit on the time-out chair. It should be noted that the child *does not* receive a token for compliance with the original command, but does receive a token for compliance with the secondary, follow-up command. This highlights to the child that reward is contingent on *immediate* compliance, thus motivating this behavior in future. As per standard PCIT, this procedure is explained and/or modeled to the child in the first PDI Coach session. The parent is also given an adapted PDI homework sheet that includes a column for tallying tokens given throughout the day. In the fourth PDI Coach session, during which House Rules are introduced (e.g., "no hitting"), the parent is coached to provide tokens for instances of the positive opposite behavior (e.g., "gentle hands"). In the fifth and sixth PDI Coach sessions, during which time-out in public is introduced and prac-

ticed, the parent is coached to provide tokens for compliance with commands and rules during public outings. Finally, during the graduation session, the therapist explains to the parent(s) when and how the token economy can be phased out. Throughout PDI, it is emphasized to the parent(s) that tokens are never removed for misbehavior as this is likely to affect the child's motivation to engage with the system, and is inconsistent with findings that punishment has limited effectiveness for behavior change in children with CP + CU.

Emotional Insensitivity

The final component of the PCIT-CU adaptation is a seven-session adjunctive module called Coaching and Rewarding Emotional Skills (CARES) that targets the specific deficits of children with CP + CU in recognizing and responding to distress cues (i.e., sadness, fear). CARES was created through translation of basic science findings for CU traits, and drawing from evidence-based practices known to be effective for improving socioemotional competence and emotional literacy in young typically developing children, adults, and youth with ASD who share similar deficits to children with CP + CU in empathy and emotion recognition, thought to originate from amygdala dysfunction (Blair, 2008). For example, brief interventions to teach ASD children to recognize and respond to others' emotional states and attribute them to a cause produce improvements in social-emotional outcomes (e.g., aggression, prosocial behaviors) over several months (Ospina et al., 2008).

Since the CARES module focuses on improving the child's skills using various activities, it is delivered immediately following the PDI phase to ensure that the child is at his or her most compliant. The key treatment objectives of CARES are to: (1) enhance attention to critical facial cues (i.e., micro-expressions) signaling distress in the self and others to improve emotion recognition and labeling; (2) improve emotional understanding by linking emotion to context, and identify-

ing situations that trigger anger and frustration in the child; (3) teach prosocial and empathic behavior through therapist and parent modeling, role play, and social stories; (4) increase emotional labeling and prosocial behavior through positive reinforcement; and (5) increase child's frustration tolerance through modeling, role-play, and reinforcing the child's use of learned cognitive-behavioral strategies to decrease the incidence of aggressive behaviors.

CARES focuses on redirecting children's attention to relevant facial cues when processing emotion, given findings that directing gaze to the eye region of face stimuli normalized fear recognition in youth with CU traits (Dadds et al., 2006), and that increasing the salience of others' distress cues reduced severe conduct problems in children with CP + CU (van Baardewijk, Stegge, Bushman, & Vermeiren, 2009). Strategies adapted from Ekman's microexpression training for adults (Ekman, 2002) were incorporated into the program to refocus attention to the salient eye and mouth regions, and improve recognition of distressed facial cues. Strategies were drawn from the Mind Reading program (Baron-Cohen et al., 2004) designed for children with ASD, and from the Vanderbilt Center on the Social and Emotional Foundations for Early Learning Preschool Training Module 2 (2013) to teach the link between emotions and context. Social stories were also incorporated to teach prosocial and reparative behaviors and to model strategies to children for coping with frustration, given they have shown promise as an intervention for teaching social skills and improving distress sensitivity in children with ASD (Ospina et al., 2008). Parents are provided electronic copies of the stories and encouraged to personalize them with the child's name and photographs. Cognitive-behavioral strategies drawn from the preschool version of the Providing Alternative Thinking Strategies (PATHS) curriculum (Domitrovich, Greenberg, Cortes, & Kusché, 2005) were incorporated to teach children how to manage frustration-based anger to prevent reactive aggression. Finally, a token economy system linked with an in-session prize box was integrated into CARES to motivate child compliance with learning activities.

Like the CDI and PDI phases, the CARES phase of the PCIT-CU protocol begins with a parent-only Teach session. During this session, the therapist educates the parent(s) on the importance of emotional literacy for children with CU traits, as well as the role of parents in socializing children to emotion recognition through strategies such as role-playing and modeling. In the subsequent six CARES sessions, the therapist works with the parent–child dyad to improve emotional understanding and expression, and help the parent effectively model and reinforce appropriate emotional skills. Table 1 outlines a session-by-session description of the CARES module.

Some Advantages and Challenges of Implementing PCIT-CU

Advantages

Targeting Unique Deficits

There is ample evidence supporting the efficacy of PCIT, and PMT more broadly, for reducing conduct problems in young children. However, a significant proportion of children with severe conduct problems fail to respond positively to these interventions and, even for those who do respond positively, their behavior difficulties often do not reduce to a normal level. Accordingly, contemporary research has focused on improving current treatments by integrating knowledge about the *causes* of conduct problems with the development of innovative intervention approaches (Frick, 2012). PMT approaches target specific processes that research has shown to be important in the development of conduct problems (i.e., parent–child attachment insecurity, inconsistent parenting, and coercive processes). However, the specificity of PMT neglects the fact that severe conduct problems are generally caused by many different and interacting processes. As a result, any single intervention is unlikely to be effective for all children with conduct problems. Thus, individualizing treatment by addressing alternative or addi-

Table 1 Session-by-session outline of the CARES module

Session	Goal	Content	Activity
1	Provide an overview of CARES program	Psychoeducation on the importance of emotional literacy; How parent(s) can use emotion labeling and modeling in everyday interactions to increase the child's emotion word vocabulary	Parent and therapist discussion and role-play (child not present)
2	Teach to recognize others' emotions	How to look for and interpret muscle changes (i.e., micro-expressions) when identifying emotions using facial expression images	Guess emotions from facial expressions of children on a computer, and then discuss salient facial cues (e.g., sad: inner corners of eyebrows raised, corners of lips down)
3	Teach to recognize parent–child emotions	How to look for emotional muscle changes when parent and child make emotional facial expressions	Make facial expression configurations (e.g., sad face) by arranging cut-outs of eyes, mouths, noses on a blank page Flash card game involving taking turns making facial expressions, and guessing each other's expression
4	Teach to link emotions to context	How to predict others' emotions based on the situation	Look at pictures of situations that cause an emotion (eg, fear). Discuss how the protagonist felt and why Make and guess each other's emotional facial expression, and then describe a time when you felt that emotion Parent and child read social stories about prosocial behavior and making amends following transgressions
5	Teach to cope with frustration	How to calm down when angry	Read a social story about using "Stop Breathe Think" (SBT) technique when angry Role-play using SBT in a common frustrating scenario Discuss pictures where SBT needs to be used (e.g., frustrating situations), and where SBT is not needed (e.g., happy situations)
6	Teach to cope with frustration (continued)	How to recognize and respond to physiological and mental signs of anger and frustration	Discuss analogy of anger as a volcano Discuss child's physiological signs of anger Draw signs on blank picture of a human body Brainstorm strategies for emotional regulation to be used following SBT. Draw strategies and put into in a "cool down tool box" Role-play using emotion regulation strategies in a common frustrating scenario
7	Graduation	Review of skills learned	Review of activities from previous sessions

tional causal processes is likely to increase the number of children and families for whom treatment is effective (Frick, 2012). Accordingly, the PCIT-CU protocol represents an attempt to translate research findings into clinical practice by incorporating procedures that specifically target the underlying mechanisms leading to conduct problems in children with elevated CU traits.

While the RCT comparing treatment outcomes for PCIT-CU relative to standard PCIT for children with CP + CU is ongoing, prelimi-

nary findings regarding the efficacy of PCIT-CU are promising. In an open pilot trial of 23 Australian families, children with CP + CU treated with PCIT-CU showed a significant reduction in the intensity of parent-reported conduct problems on the Eyberg Child Behavior Inventory (ECBI; Eyberg & Pincus, 1999) and in level of CU traits on the Inventory of Callous-Unemotional Traits (ICU; Frick, 2004), with large effect sizes (Kimonis et al., 2018). By 3 months post-treatment, 75% of treatment-com-

pleting families reported child conduct problems below clinically significant levels according to ECBI Intensity *T*-scores, relative to 25% of dropouts. Parents also perceived the PCIT-CU intervention as highly acceptable, with a mean Therapy Attitude Inventory (TAI; Brestan, Jacobs, Rayfield, & Eyberg, 2000) score of 4.69 out of 5, corresponding to the highest level of satisfaction with the process and outcome of therapy. These pilot findings support the preliminary efficacy and acceptability of the adapted PCIT-CU intervention for children with CP + CU. The specificity of the PCIT-CU protocol in targeting the unique risk and maintaining factors for children with CP + CU is a major advantage of this adaptation since the changes described above are likely to enhance treatment efficacy for a population that has historically demonstrated limited treatment responsivity.

Reduction in Attrition Rate

In their study, Kimonis et al. (2014) found that families were more likely to drop out of standard PCIT when their child scored high on CU traits. Improvements in treatment efficacy and responsivity are expected to be associated with fewer treatment dropouts for the families of children with CP + CU. That is, adapting PCIT specifically to meet the needs of this subpopulation is expected to improve family engagement and retention in treatment, as a function of improving treatment efficacy. Accordingly, the dropout rate in the open trial was 26%. This requires further study but represents a major advantage of the adapted PCIT-CU protocol since attrition rates for standard PCIT have ranged from 34% to 77% (Danko, Garbacz, & Budd, 2016; McGoron & Ondersma, 2015). The relatively high PCIT attrition rate is problematic, as evidence indicates that families who drop out of PCIT have worse outcomes 1–3 years later, compared to treatment completers (Boggs et al., 2005). Thus, improving treatment acceptability and reducing attrition is of fundamental importance for long-term gains.

Disadvantages

Despite these advantages, implementing the PCIT-CU protocol is not without its challenges. First and foremost, children with CP + CU tend to present with conduct problems that are more severe, longstanding, and aggressive than children with CP-alone, which is often reflected in their in-clinic behavior. This greater severity is often associated with other risk factors, both dispositionally in the child and in his or her immediate environment. As a result, this is a difficult population with which to work clinically, as illustrated in the case example below.

Proneness to Boredom

The fearless temperamental style of children with CU traits is associated with a preference for novelty and frequent novelty-seeking behavior (Frick & White, 2008). In the clinic, this may manifest as proneness to boredom, especially with respect to the toys and activities used during sessions. This presents a particular challenge during the CARES module as the child must remain seated at a table while completing the various activities. Thus, CARES was carefully designed to ensure activities were interactive, engaging, and personally relevant to the child (e.g., utilizing technologies such as tablets, framing skill development activities as "games," personalizing social stories). Child motivation to remain on task was also enhanced via frequent reference to the in-session token economy system, such that reinforcers are provided for target behaviors such as good listening and remaining seated, which could then be "traded in" for a reward from the clinic prize box at the end of the session.

Reward Learning

A related challenge concerns the way in which children with CP + CU learn to exploit the reward-integrated discipline system. During PCIT-CU sessions, it was observed that some children who received labeled praise (e.g., "thank you for listening, you get a sticker for listening so quickly") and a token for complying with a par-

ent's command (e.g., "please use your gentle hands") aimed at stopping a misbehavior (e.g., rough play), almost immediately afterwards repeated the transgression in order to earn additional tokens, leading to multiple instances of "manufactured" reinforcement experiences. This required modification to the discipline sequence such that the child did not earn tokens for compliance to parent commands given for repeat transgressions. These observations are consistent with those reported by Miller et al. (2014), who described a pattern of behavior in which children with CP + CU engaged in high rates of negative behavior to obtain a reward for compliance with counselors' commands to cease the behavior.

Parental Psychopathology

A major challenge to delivering PCIT-CU effectively relates to the influence of parental personality disorder symptoms on parents' capacity to engage in and learn from the program. Although maternal psychopathology is associated with reduced parent training efficacy across externalizing disorders (Reyno & McGrath, 2006), this effect may be more pronounced in treatments targeting children with elevated CU traits given the high heritability of these traits (Viding et al., 2005); however, this hypothesis has not been subjected to empirical investigation. Not only does the mechanism underpinning the intergenerational transmission of CU traits remain elusive, with bidirectional evidence for both genetic (e.g., Robinson, Azores-Gococo, Brennan, & Lilienfeld, 2016) and environmental (e.g., Auty, Farrington, & Coid, 2015) influences, but the question of whether personality disorders—including but not limited to psychopathy and antisocial personality disorder (APD)—are more common in the parents of children with elevated CU traits remains unanswered. Whether or not psychopathology is present, some parents may find it particularly challenging to increase their levels of warmth with the child due to family of origin or other issues. It can be helpful to make time for parents to share their experiences to gain a better understanding of why they are struggling with

the skill in order to use the information during coaching.

Bidirectional Parent–Child Effects

The mutually *un*responsive and "cold" pattern of interaction observed between parent and child with CP + CU may have developed early in life such that it is entrenched by the age of 3 when PCIT-CU can first be delivered, thus requiring intensive and sustained intervention. In the first 6 months of life, reduced mother-directed gaze and a preference for objects over faces predicted greater CU traits in later development, with higher levels when maternal sensitivity was also low (Bedford et al., 2017); however, the direction of influence between parenting and child characteristics is not clear. That is, longitudinal studies testing the potential bidirectional effects have found that child CU traits drive changes in parenting over time to a greater extent than parenting predicts changes in CU traits over time (Hawes, Dadds, Frost, & Hasking, 2011; Muñoz, Pakalniskiene, & Frick, 2011). It is unclear, however, how early these influences take effect as neither study examined the infant developmental period. Given the malleability of very young children, future research is needed to examine whether PCIT adapted for use with infants (12–15 months old; Bagner, Rodríguez, Blake, & Rosa-Olivares, 2013), and further adapted in a similar way to PCIT-CU to enhance parental warmth and responsivity, reduces later CU traits for those with early risk factors (i.e., fearlessness, reduced mother-directed gaze).

Use of Diagnostic Labels

The final challenge to be discussed relates to therapists' use of the diagnostic label of "callous-unemotional traits" or "limited prosocial emotions" when communicating with parents and others involved (i.e., educators, medical professionals), such as when providing a treatment rationale. The primary concern is that these labels will have a stigmatizing effect by negatively influencing others' perceptions and decision-making about the child and/or family. To date, this question has only been

examined as it relates to justice-involved juveniles and with mixed findings. While one study found that assigning a CD + LPE label led jurors to hold more negative perceptions relative to a CD-alone diagnosis (Edens, Mowle, Clark, & Magyar, 2017), another study found that a diagnosis of CD + LPE was no more stigmatizing than a diagnosis of CD (Prasad & Kimonis, 2018). Somewhat paradoxically, one of the concerns driving the introduction of the LPE label was the pejorative connotation associated with the term "callous-unemotional"; however, some argue that any term used to describe individuals with antisocial behavior or traits will acquire negative connotations (Frick & Nigg, 2012). Further research is certainly needed to understand how using labels such as LPE and CU influences attitudes and decision-making with younger children and in educational and clinical settings. Until then, there is little to inform clinician guidelines regarding use of the labels in clinical settings. It is recommended that the PCIT-CU therapist draw on research regarding the stigmatizing effects of diagnostic labeling for alternative childhood mental health disorders. For example, in a review of studies examining the stigmatizing effects of the diagnostic label of ADHD, Lebowitz (2016) reported that teachers and parents were more likely to hold negative perceptions of students' academic ability in the presence of an ADHD diagnosis than in its absence, even when controlling for actual academic performance. However, it is also recommended that the therapist consider any additional benefits to informing the parent(s) of the child's diagnostic status. For example, using the diagnostic label may serve to normalize parents' experiences and thoughts and feelings toward their child. Moreover, describing the diagnosis and its associated features (e.g., reward dominance and punishment insensitivity) may be important for helping parents and teachers "buy into" the strategies used in PCIT-CU (e.g., greater emphasis on reward system than punishment). In this case, the diagnostic label may play an important role in the psychoeducational component of treatment.

Case Example

Case Introduction

At intake, "Joel" was a 4-year, 10-month-old Caucasian boy referred to treatment by his parents due to severe behavioral and emotional problems. Joel lived with his mother, father, and 6-month-old brother, who was described as having significant health difficulties since birth. Joel presented with significant conduct problems in both home and preschool environments, including physical and verbal aggression toward family members, educators, and peers; extreme defiance with commands and rules and argumentativeness; emotion dysregulation characterized by frequent angry moods and temper tantrums; blaming others for his misbehavior; and lying and stealing. His parents also described him as lacking in empathy and in remorse or guilt following misbehavior, noting that he often "taunted" peers, took joy in their distress, and rarely took responsibility or apologized for his actions. Many of these difficulties had been present since infancy, but had worsened significantly with the birth of Joel's younger brother.

Assessment

A comprehensive assessment of Joel's behavioral and emotional symptoms was conducted utilizing a multi-informant and multimodal approach that assessed symptoms across settings. Joel met diagnostic criteria for childhood-onset CD, with mild severity according to the *Diagnostic Interview Schedule for Children, fourth edition* (DISC-IV; Shaffer, Fisher, Lucas, Dulcan, & Schwab-Stone, 2000) completed with his mother. Joel's mother, father, and teacher rated the intensity and problematic nature of his conduct problems as at or above the clinical cut-off *T*-score of 60 on the ECBI and *Sutter-Eyberg Student Behavior Inventory-Revised* (SESBI-R; Eyberg & Pincus, 1999; Intensity *T*-scores of 62, 66, and 64, respectively; Problem *T*-scores of 61, 62, and 60 respectively). Two instruments were used to assess Joel's level of CU traits, the *Inventory of Callous-Unemotional Traits*

(ICU; Frick, 2004) and the *Clinical Assessment of Prosocial Emotions: Version 1.1* (CAPE 1.1; Frick, 2013), a clinician-administered interview and structured professional judgment tool. On the preschool version of the ICU completed by his mother, father, and teacher, Joel demonstrated elevated levels of CU traits with scores of 27, 31, and 35 respectively. These scores correspond to an average informant response of *somewhat true* as rated by Joel's parents and *very true* as rated by his teacher across ICU items. On the CAPE 1.1, administered to his mother, Joel met diagnostic criteria for the LPE specifier with three out of the four diagnostic criteria endorsed: lack of remorse/guilt, callous-lack of empathy, and shallow or deficient affect. Thus, Joel was assessed as meeting criteria for childhood-onset CD with LPE. Finally, parent–child interactions observed and coded using the DPICS-IV indicated that his mother and father used several ineffective commands to which Joel displayed a high level of noncompliance.

Treatment

Given quantitative and qualitative evidence supporting the role of elevated CU traits in the development and maintenance of Joel's conduct problems, the PCIT-CU protocol was implemented. The family completed 21 treatment sessions in total, including 7 sessions each of CDI-CU, PDI-CU, and CARES, with assessments conducted at pretreatment, post-CDI, post-PDI, post-CARES, and 3-month follow-up. Joel's mother participated in all sessions, while his father attended eight sessions due to work commitments.

Outcomes

At post-treatment, Joel no longer met diagnostic criteria for conduct disorder according to the DISC-IV completed with his mother. Joel's mother, father, and teacher rated the frequency of

his disruptive behavior on the ECBI and SESBI-R Intensity scale as below the clinical cut-off (T-scores of 46, 44, and 50, respectively). They also reported greater tolerance for and less distress over his behaviors, as reflected by Problem T-scores below the clinical cut-off (T-scores of 41, 42, and 46, respectively). Qualitatively, Joel's mother reported that planned ignoring was effective for reducing Joel's sassing, and that he was extremely motivated by the token economy system as evidenced by reductions in his aggressive behavior and covert conduct problems (e.g., stealing, lying). On the CAPE 1.1, Joel's mother reported significant improvement in his ability to accept responsibility for his misbehavior, and was able to generate several examples of times when Joel appeared to feel bad about hurting someone (e.g., younger brother); however, she reported that his refusal to apologize for his actions remained challenging. In contrast, Joel's mother reported a marked improvement in his ability to empathize, especially with her own expressed emotions, and she reported that she would no longer describe Joel as being "mean" or "cruel." She reported several instances of spontaneous "nice" behavior; for example, wanting to take banana bread to a neighbor and expressing affection for an animal for the "first time." She also noted some improvement in his ability and willingness to express emotions, although he preferred to do so "in secret" to her. Thus, though Joel's emotional functioning still appeared to be below developmental expectations, he no longer met diagnostic criteria for the LPE specifier. ICU scores did not reflect as much positive change as parent ratings were stable and teacher ratings showed only a slight reduction, although it is possible that its restricted four-point scale was less effective at capturing treatment-related change. Finally, both parents demonstrated an improved ability to implement effective commands, follow-through calmly with the discipline procedure for noncompliance or with labeled praise for compliance, according to the DPICS-IV observation. Treatment gains were maintained to 3-month follow-up.

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PCIT-Health: An Innovative Intervention for Childhood Obesity Prevention

Sarah E. Domoff and Larissa N. Niec

Abstract

Childhood obesity remains a major public health issue both in the United States and globally. Obesity is associated with numerous health risks; children with obesity are more likely to experience cardiometabolic problems and remain obese into adolescence and adulthood. Given the prevalence of childhood obesity and the serious health risks associated with it, the development of effective prevention programs for obesity in early childhood is crucial. In this chapter, we describe the theoretical rationale for, and development of PCIT-Health, an innovative child obesity prevention program. PCIT-Health is an adaptation of a selective prevention model of PCIT. The PCIT-Health model maintains the core components of PCIT (behavioral assessment, in vivo coaching, parent–child relationship focus) and includes the addition of a health module (Health-directed Interaction, HDI). Parents and children progress to the HDI phase after completing CDI and PDI. The primary goal of HDI is for parents to generalize the skills they learned in the first two phases to contexts that are relevant to a child's obesity risk: mealtime and screen time. Like the CDI and PDI phases, the HDI phase begins with a teach session, during which parents receive information about positive (or risk-reducing) parenting around feeding style and feeding practices and parenting around screen time (i.e., media parenting). PCIT-Health has the potential to enhance parenting effectiveness, not only around children's general conduct problems, but also specifically around interactions during feeding and screen time.

The Scope of the Problem

Obesity is one of the largest public health issues facing children today. Approximately one in three school-age children (age 6–11 years), and one in four preschool-age children (2–5 years) are overweight or obese in the United States (Skinner, Perrin, & Skelton, 2016). For research and screening purposes, obesity risk is often determined by calculation of a child's body mass index (BMI), which is the ratio of an individual's weight (in kilograms) to the square of an individual's height (in meters; Centers for Disease Control and Prevention [CDC], 2018). For children, BMI percentile, based on the child's age and gender, is used to classify obesity risk. That is, children whose BMI falls at or above the 95th percentile

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for their age and gender are considered obese (CDC, 2018). Recent simulation models predict that, if the rates of obesity continue unabated, more than 50% of children today will experience obesity by age 35 years (Ward et al., 2017).

Obesity is associated with numerous health risks; children with obesity are more likely to experience cardiometabolic problems such as hypertension, glucose intolerance, and hyperlipidemia (e.g., Dietz, 1998; Rao et al., 2016). They are also more likely to experience asthma and sleep apnea (Halfon, Larson, & Slusser, 2013). Beyond the clear risks to physical health, children with obesity are also at risk for psychological stressors arising from social stigma (Van Geel, Vedder, & Tanilon, 2014). The risks associated with childhood obesity can become chronic, as obesity in childhood frequently leads to obesity in adolescence and adulthood (Freedman et al., 2005). Further, approximately 80% of obese adolescents will remain obese as adults (Lifshitz, 2008). Given the drastically increasing prevalence of childhood obesity and the serious health risks associated with it, the development of effective prevention programs for obesity in early childhood is crucial.

Two major risk factors for childhood obesity are child eating behaviors and screen time, both of which are influenced by parental feeding practices and media parenting practices. Parents who use coercive (i.e., encourage overeating past satiety or "cleaning one's plate") or restrictive feeding practices (i.e., prevent children from eating certain foods) are more likely to have children who are obese (Fisher & Birch, 1999; Hoerr et al., 2009; Patrick, Nicklas, Hughes, & Morales, 2005), potentially due to children not establishing their own appetite self-regulation. Another obesogenic feeding practice consists of instrumental feeding, or using food as a reward (Rodgers et al., 2013), which may heighten a child's responsiveness to food. An additional risk factor for childhood obesity is the amount of time children spend on screen-based sedentary behaviors, such as watching television (TV; American Academy of Pediatrics [AAP], 2011). Across numerous cross-sectional and longitudinal samples, TV screen time ("screen time") is consistently associated with childhood obesity.

Hours of TV watched on both week days and weekends during childhood predicts obesity in adulthood (Hancox, Milne, & Poulton, 2004; Viner & Cole, 2005). As such, children whose parents set limits on their amount of screen time are less likely to be obese (Gentile, Reimer, Nathanson, Walsh, & Eisenmann, 2014). Taken together, children's eating behaviors and physical activity are often the focus of public health campaigns to reduce child obesity.

Much of the early work on the treatment and prevention of obesity focused primarily on children's nutrition and physical activity levels, often in isolation from the family system. However, increasingly parents have been recognized as instrumental in initiating and maintaining healthy eating and physical activity practices in their children. As a result, parent–child interactions, the quality of the parent–child relationship, and specific parenting practices (i.e., parental feeding practices and media parenting) have been a recent focus of child obesity etiology and treatment research. For instance, accumulating evidence has demonstrated that secure attachment between children and their parents, as well as responsive, consistent, and warm parenting practices relate to lower child obesity risk (Anderson, Gooze, Lemeshow, & Whitaker, 2012; Connell & Francis, 2014; Rhee, Lumeng, Appugliese, Kaciroti, & Bradley, 2006; Wu, Dixon, Dalton, Tudiver, & Liu, 2011).

Three mechanisms have been hypothesized to link the parent–child relationship and obesity risk (see Fig. 1). First, it has been posited that secure attachment is influential in building positive parent–child interactions, which in turn leads to the development of self-regulation in children (Morris et al., 2017). This is especially important for children who experience ongoing stress, such as children living in poverty. In accord, Morris et al. (2017) theorize that strong parent–child relationships may buffer such high-risk children from health risks, such as obesity, through the establishment of adaptive biobehavioral responses to stress. Second, a secure attachment between the parent and child may influence a child's obesity risk through a specific type of self-regulation: appetite self-regulation (Saltzman, Fiese, Bost, & McBride, 2017). In their "Pathways to Appetite Self-Regulation

Fig. 1 PCIT-health conceptual model
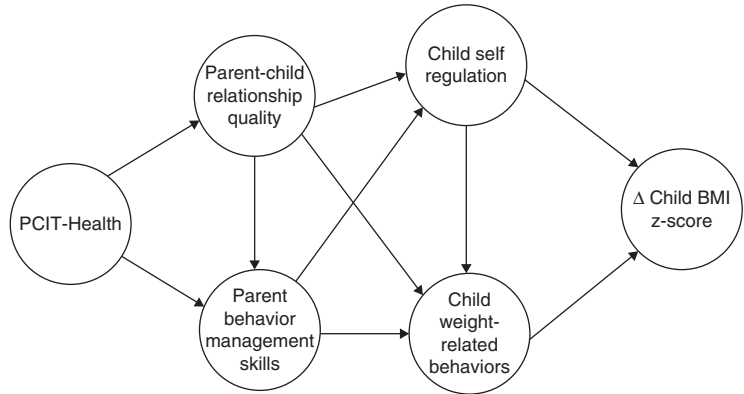
Model," Saltzman and authors propose that secure attachment yields responsive feeding-specific parenting practices (which are critical to establishing appetite self-regulation). Taken together, these two mechanisms highlight the importance of secure attachment in bringing forth positive parent–child interactions in general and feeding-specific contexts—a predictor of self-regulation and lower obesity risk.

A third mechanism by which the parent–child relationship may be protective against obesity is via enhanced parenting effectiveness. When parents set limits on a child's sedentary activities (e.g., watching TV or other forms of screen time), or on a child's behaviors during mealtime or bedtime (contexts important to obesity risk), children may be less compliant with a parent who has a history of lax or harsh parenting (Zeller, Boles, & Reiter-Purtill, 2008). In other words, positive parenting practices may promote greater compliance from children, which may lead to healthier parent–child interactions in contexts that are relevant to obesity risk, such as feeding practices or media-specific practices. In sum, enhancing the parent–child relationship and increasing positive parent–child interactions show great promise in reducing child obesity risk.

Obesity Prevention Efforts To Date

Numerous prevention programs have attempted to reduce obesity risk across childhood. However, most prevention programs lack evidence for long-term effectiveness. Although recent obesity prevention programs have recognized the importance of including both parents and children, none has targeted the parent–child relationship and parent–child interactions as key mechanisms of obesity risk. A few *treatment* programs for obesity have pursued targeting the family relationships of children who already meet criteria for obesity. Stark et al. (2011) evaluated the Learning About Activity and Understanding Nutrition for Child Health (LAUNCH) program. LAUNCH includes six sessions of parent group treatment, with a focus on enhancing child behavior management skills. Children in the LAUNCH intervention had greater decreases in BMI *z*-scores and percentiles, compared to children in the control condition whose parents met with a pediatrician for 45 min to discuss the child's BMI as well as dietary and physical activity recommendations.

Only one obesity treatment program to date includes coaching parents in a manner that shares similarities with PCIT, the Family Mealtime Coaching (FMC) program (Shinn, Timmer, & Sandoz, 2017). In a sample of parent–child dyads (mean child BMI percentile = 97.3), Shinn et al. (2017) coached parents to engage in responsive feeding practices during mealtime. They found that children with baseline BMI percentiles greater than 97th percentile had the greatest change in BMI from pre- to post-program. Based on these treatment programs, and the evidence that strong parent–child relationships may reduce risk for obesity in childhood, it makes sense to focus on parent–child interactions as part of obesity *prevention* programs.

PCIT-Health

Given the compelling evidence that a positive parent–child relationship and effective parenting may prevent obesity in young children, PCIT has great promise as an obesity prevention program. Based on our conceptualization of the model as prevention, we considered existing formats of PCIT that were adapted from the treatment model (see chapter "Teacher-Child Interaction Training"). Upon review, we chose to adapt a selective prevention model of PCIT (PCIT-Selective Prevention PCIT-SP/Family Camp; Niec et al., 2014). As is true of the Family Camp model, the PCIT-Health model maintains the core components of PCIT (behavioral assessment, in vivo coaching, parent–child relationship focus). The primary adaptation includes the addition of a health module (Health-Directed Interaction, HDI) in which parents are introduced to health-related concepts and are coached with their children in obesity-relevant contexts (Domoff & Niec, 2018). Our decision was guided by theory—particularly the aforementioned mechanisms by which secure attachment is theorized to reduce obesity risk via child self-regulation and

enhancement of parenting effectiveness in health-specific contexts.

Although coaching parents in health-salient contexts (e.g., mealtime; akin to Shinn et al., 2017) is an important component of our adaptation, the existing research provides evidence that both the CDI phase of PCIT (strengthening the parent–child relationship) and the PDI phase (facilitating parents' developmentally appropriate limit setting) are also important in non-obesity related contexts to reduce children's obesity risk. Changes to the CDI and PDI phases of the PCIT-Health model include tailoring in order to provide opportunities to coach parents to reinforce their children's healthy behaviors. For example, toys in PCIT-Health include a range of toy food items. During food play, parents learn to reinforce children for healthy food choices. Parents are also coached to observe and reinforce healthy physical activity as modeled by human or animal figures. It is important to note that during CDI and PDI, play remains consistent with the PCIT treatment model (e.g., children and parents play calmly in a small, indoor space) in order to ensure that the intervention focus remains on practicing the parenting skills and strengthening the parent–child relationship (Table 1).

Table 1 Overview of the PCIT-health model

Intervention phase	Sessions	Primary target	Behavioral objectives
Assessment	1. Assessment 2. Assessment	Understanding of parent–child relationship quality, child conduct problems, and family-related risks for obesity	Obtain measures of parent and child functioning and child obesity risk
CDI	3. CDI Teach 4. CDI Coach Session 5. CDI Coach Session 6. CDI Coach Session	Parent–child relationship quality	Parents acquire skills in child-centered interaction and differential attention
PDI	7. PDI Teach 8. PDI Coach Session 9. PDI Coach Session 10. PDI Coach Session	Parents' healthy limit-setting	Parents acquire developmentally appropriate, consistent, and effective discipline skills
HDI	11. HDI Teach 12. HDI Coach Session 13. HDI Coach Session 14. HDI Coach Session	Generalization of parents' child-centered and behavior management skills to obesity-risk contexts	Parents consolidate skills and apply them to contexts salient to obesity risk (e.g., meal times, media use)
	15. Graduation	Review of treatment gains, discussion of approaches to future behavior problems, celebration of successes	Prepare parents for future behavioral challenges

Adapted from Domoff and Niec (2018)

CDI child-directed interaction, *PDI* parent-directed interaction, *HDI* health-directed interaction

After completing CDI and PDI, parents and children progress to the Health-Directed Interaction phase. The primary goal of HDI is for parents to generalize the skills they learned in the first two phases to contexts that are relevant to a child's obesity risk: mealtime and screen time. Like the CDI and PDI phases, the HDI phase begins with a teach session, during which parents receive information about positive (or risk-reducing) parenting around feeding style and feeding practices and parenting around screen time (i.e., media parenting).

Parental feeding styles have been defined in parallel to general parenting styles (i.e., authoritarian, authoritative, and permissive, Baumrind, 1967). An authoritative style of feeding has been found to be protective against child obesity risk (Vollmer & Mobley, 2013), whereas authoritarian and permissive feeding styles have been linked to child obesity (Fisher & Birch, 1999; Hoerr et al., 2009). Parents with an authoritative feeding style are balanced in their approach to child feeding: though they encourage their children to consume healthy foods (e.g., fruits, vegetables), parents with an authoritative feeding style also allow the child to make choices and decisions about food (within reason). On the other hand, an authoritarian feeding style consists of high levels of restrictive, coercive feeding practices and little, if any, regard for a child's food preferences (Patrick et al., 2005). Finally, parents with a permissive feeding style allow their children free choice of foods and provide little structure to the food environment. During the HDI teach session, therapists introduce parents to the concept of an authoritative feeding style and discourage permissive/indulgent and restrictive feeding styles. Parents are instructed to make modifications to the home environment to reduce the risks of being indulgent or harsh in their parental feeding practices: for example, placing healthy snack options (e.g., apple slices, oranges, carrots) in arms-reach of children and calorie-dense, nutrient-deficient foods (e.g., cookies, chips) in nonviewable and unreachable locations in the home.

Also during the HDI Teach session, clinicians address another critical set of parenting practices relevant to obesity risk reduction: parenting around screen time. Numerous studies have supported the role of parental communication about media and media parenting practices in reducing the harmful effects of screen time on child obesity risk (Gentile et al., 2014). There is a specific cluster of media parenting practices, known as "parental mediation of television" (Nathanson, 2001), that has received the most empirical support as effective media parenting practices. Parental mediation consists of two types of parenting behaviors germane to obesity prevention: active mediation and restrictive mediation (Nathanson, 2001). Active mediation refers to parents processing the content of what children are exposed to by labeling behaviors of media characters they would like their child to emulate, explaining motivations or reasons behind the actions of characters seen on shows or movies, and scaffolding children in their understanding and processing of content seen in screen media. Regarding prosocial behaviors, active mediation of Daniel Tiger's Neighborhood was found to predict greater internalization of prosocial messages and positive behaviors in children 2–6 years old, compared to children whose parents do not actively mediate content (Rasmussen et al., 2016). With older children, parent's active mediation of commercials fosters a child's ability to take a critical stance towards commercials, and reduces the likelihood for children to request products advertised on television (Buijzen & Valkenburg, 2005). Promoting a child's resistance to the influence of commercials (which advertise food and beverages that are high calorie and nutrient deficient; Powell, Schermbeck, Szczypka, Chaloupka, & Braunschweig, 2011), is critical in our media-saturated society and necessary for obesity prevention. As such, the HDI Teach session explains the concept of active mediation of media to parents and outlines ways that parents can scaffold children's learning of healthy media content and promote a child's resistance to unhealthy content.

In addition to active mediation, the HDI Teach session also provides psychoeducation about restrictive mediation, which has also been found

to reduce risk for obesity in children (Gentile et al., 2014). Restrictive mediation has been studied in three domains: restriction of content, restriction of duration, and restriction of viewing context. In the HDI Teach session, we provide psychoeducation to parents on the importance of limit setting on: (1) what children see (i.e., reduce exposure to commercial television or advertisement-embedded content, such as "adver-games"); (2) how much children watch screen media (e.g., encouraging moderation and avoiding using screen time as an incentive for appropriate behavior); (3) and when they view screen media (i.e., having screen-free zones, such as at the dinner table or during mealtime and in the bedroom). Addressing these media parenting components in HDI Teach is critical given that parents who struggle to implement consistent and effective parenting strategies are more likely to have TV on during mealtime (Domoff, Lumeng, Kaciroti, & Miller, 2017), and that stressed parents also report utilizing TV to manage child behavior during mealtime and bedtime (Domoff, Miller, et al., 2017).

Following the HDI Teach session, families participate in three HDI Coaching sessions. These sessions focus on coaching parents in the parenting skills and practices they learned in the HDI Teach session in two contexts: (1) family mealtime and (2) unstructured child play/free time (Domoff & Niec, 2018). During the family mealtime context coaching session, parents are coached to praise desired mealtime behaviors (e.g., remaining seated, staying at the table) and eating behaviors (e.g., selecting vegetables, trying new foods), and ignore disruptive, non-harmful behaviors (e.g., tapping silverware, playing with food, getting up from table). During the unstructured child play context, parents are coached to engage in active mediation and restrictive mediation. For example, parents are provided with a tablet on which to choose a TV show (via streaming app) or YouTube clip that is developmentally appropriate and prosocial (preferably without commercials). For the restrictive mediation of content skill development, parents are coached to choose shows that are age-appropriate for their child and mute or turn away

the tablet if commercials occur in any segment of the viewing. While watching the show with their child, parents are coached to actively mediate the content by labeling behaviors in the TV characters that they would like their child to repeat and processing the sequence of events in the show so that the child acquires knowledge.

After the segment of the TV show ends, parents are coached to end the screen time successfully (i.e., without extending the amount of time the child can watch TV or promising more screen time later). Parents are then coached to transition from screen time to play time with toys of the child's choosing (e.g., blocks, coloring or other creative activities). Developing skills to end screen time is crucial as parents often report struggling to transition children away from screens to other daily events or tasks, such as sitting down for dinner and getting ready for bed. Finally, in the last HDI session, parents are coached in the community (e.g., restaurant) to use their newly acquired HDI skills. In that session, parents are coached to put away screens at the table in the restaurant and to use the authoritative feeding practices they acquired during HDI coaching as well as their CDI and PDI skills.

Advantages and Challenges of the PCIT-Health Model

PCIT-Health has the potential to enhance parenting effectiveness, not only around children's general conduct problems, but also specifically around interactions during feeding and screen time. The two contexts that we address, mealtime and screen time, are notoriously difficult for parents to manage, especially with children who are temperamentally challenging. Parents of children who are "picky eaters" report that mealtime can be conflictual (Fulkerson, Story, Neumark-Sztainer, & Rydell, 2008). Furthermore, children who are prone to negative affect and behavior dysregulation are more likely to be given food to calm the child down (McMeekin et al., 2013), and are more likely to be given screen time to regulate their behavior (Domoff, Lumeng, et al., 2017; Radesky, Peacock-Chambers, Zuckerman,

& Silverstein, 2016). Given that consistent, screen-free family mealtimes may be protective against obesity (Hammons & Fiese, 2011), facilitating effective parenting around mealtime could prove beneficial to a child and family.

In our current digital age, successful media parenting practices are needed, as children at younger ages (i.e., during infancy and toddlerhood) are gaining access to technology and are "owning" their own mobile devices, such as tablets and cell phones (Kabali et al., 2015). Parents report frequently experiencing conflict over child mobile technology use. For example, parents express various tensions, such as wanting to use mobile technology to manage a child's behavior, but fearing that such use could displace family time (Radesky, Eisenberg, et al., 2016). Particularly concerning is that parents of children with self-regulatory problems are more likely to use technology to calm their children (Radesky, Peacock-Chambers, et al., 2016), especially if these parents feel low levels of control over the child's behavior. Given that nearly 50% of parents in the US are concerned that their children are "addicted" to their mobile devices (Common Sense Media, 2018), facilitating effective media parenting skills will be another advantage of the PCIT-Health model. Despite these compelling advantages, there are two primary challenges that clinicians may face when implementing PCIT-Health. First, food and screen time are highly reinforcing to children, and parents may not yet see the detrimental effects of using food and screens as rewards early in childhood. In families experiencing poverty, TV use during mealtime is perceived by mothers as helping them achieve child feeding and behavior management goals (Domoff, Miller, et al., 2017). Thus, highly stressed families may experience TV and other screen media (e.g., tablets) as instrumental in making sure that the child is occupied, calm, and well-fed. However, by completing the CDI and PDI sessions prior to HDI, parents will be experiencing more efficacy around parenting and will be more ready to make changes to parenting around feeding and media parenting by the HDI Teach session.

An additional challenge that clinicians may encounter is the struggle that some parents may have in modeling their own healthy food consumption and screen media use. Although the emphasis in the HDI Teach session is the child feeding practices, it would undoubtedly be beneficial if parents also model healthy food choices for their children. Similarly, just as screens pull children away from interactions with parents, so do screens influence parents' interactions with their children. Parents experience tensions between wanting to be present and engaged but also feeling the pull of work emails and social media notifications on their mobile devices (Radesky, Eisenberg, et al., 2016). Relatedly, children of mothers who experience technology interference during parent–child interactions are more likely to display externalizing behaviors (McDaniel & Radesky, 2018). Assisting parents with their own digital "addictions" may be necessary for some families receiving PCIT-Health.

Conclusions and Next Steps

Childhood obesity is a serious public health concern. Once developed, obesity is notoriously difficult to treat. Prevention of obesity, thus, is a major public health priority. Most childhood obesity prevention programs, however, do not evidence long-term effectiveness. A potential reason for this is that most programs target children's eating behaviors and physical activity, as well as certain parenting practices, but not the parent–child relationship. Given the links between attachment and child obesity risk, PCIT-Health is uniquely designed to target both parent–child attachment and obesogenic parenting practices. Thus, clinicians working with children who are overweight or whose parents endorse challenges in healthy feeding practices may consider PCIT-Health as a potentially valuable intervention.

In addition to enhancing parent–child interactions to reduce obesity risk, PCIT-Health addresses parenting around screen time. Beyond addressing the risk for obesity with excessive screen time, PCIT-Health may yield other

positive outcomes related to media parenting. In our digital age, PCIT clinicians will increasingly encounter families struggling with excessive screen media use. With most children "owning" their own mobile devices by age 4 years (Kabali et al., 2015), and the relative ease of accessing smartphones and tablets, parents are increasingly experiencing challenges to reducing children's screen time. Parents seeking help for their children's externalizing symptoms may also be struggling with the child's screen media use. That is, children with behavior dysregulation are more likely to be given screen media to calm down, which interferes with their development of emotional and behavior self-regulation (Radesky, Peacock-Chambers, et al., 2016). As such, PCIT clinicians will be positioned not only to facilitate behavior management around nonscreen media activities, but also around reducing excess screen time in children who may be especially susceptible to media effects.

Relatedly, clinicians implementing PCIT may work with parents who temporarily seek reprieve from their children's misbehaviors or other life stressors by escaping into their own digital worlds. Although taking time out for one's own well-being is important, too often adults experience the pull of mobile devices away from family interactions. As adults become more immersed in screen-based activities, parent–child interactions may decline. To effectively reach these families, it is recommended that PCIT clinicians assess whether children exhibit problematic use of screen media (e.g., via the Problematic Media Use Measure; Domoff, Harrison, et al., 2017) and integrate questions about how screen media are consumed in the household (by both the parents and children). With PCIT-Health, clinicians will have a window of opportunity to address not only the child's engagement with screens, but also how parents can model healthy (limited) use of screen media during family time.

The next step in the evaluation of the PCIT-Health model currently ongoing includes a randomized controlled trial to assess the impact of the intervention on children's change in body mass index and to investigate hypothesized mechanisms of change (e.g., parent–child relationship quality, effective parenting practices, child affect regulation). The ongoing study will also assess the incremental utility of the Health-Directed Interaction phase to determine whether it adds significantly to benefits found in the PCIT prevention model alone. Subsequent to the controlled trial, we will investigate the feasibility and effectiveness of implementing PCIT-Health in primary care settings, where children may first be identified as at-risk for obesity.

PCIT-Health offers an innovative and promising option to address a serious public health issue. Given the rapid spread of childhood obesity nationally, we must act promptly to assess the effectiveness of the model and investigate novel methods of reaching the families most in need.

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Parent–Child Interaction Therapy for Families with a History of Child Maltreatment

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Abstract

Child maltreatment involves actions or omissions resulting in actual harm or the potential for harm to a child's health, survival, and development that is perpetrated by a person with power or responsibility, such as a child's caregiver, family member, or teacher. Child maltreatment has been linked to numerous adverse outcomes in childhood and adulthood, including mental health problems. Given that parent–child interaction therapy (PCIT) has been offered as a possible treatment for young children who have experienced maltreatment, the current chapter provides updated information about the use of PCIT with this population. Specifically, this book chapter reviews common characteristics of maltreating families as they apply to the treatment model along with appropriate assessment techniques. It also provides a brief overview of case studies and research using PCIT to highlight support for its use within this population along with findings relevant for clinical application. Tailoring techniques and clinical adaptations for the PCIT treatment protocol are described.

A case study is also presented to illustrate the assessment procedures, course of treatment, and challenges associated with conducting PCIT with a maltreated child. Finally, recommendations for future areas of research are offered.

Parent–child interaction therapy (PCIT) was originally developed to address disruptive behavior problems among young children by altering coercive parent–child interactions and providing effective discipline strategies for parents (Eyberg, Nelson, & Boggs, 2008; Foote, Schuhmann, Jones, & Eyberg, 1998). However, as highlighted in other chapters in this book, the use of PCIT has expanded to more diverse clinical populations, including children with selective mutism, anxiety, and autism spectrum disorder (Carpenter, Puliafico, Kurtz, Pincus, & Comer, 2014; Masse, McNeil, Wagner, & Quetsch, 2016; Puliafico, Comer, & Pincus, 2012). One major area of development has been the adaptation and implementation of PCIT with families of young children who have experienced maltreatment (Chaffin et al., 2004; Urquiza & Timmer, 2014). PCIT has been shown to produce statistically and clinically significant changes in child welfare outcomes (e.g., future abuse and neglect) as well as to have greater economic benefits compared to program costs (Lee, Aos, & Miller, 2008). PCIT

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is a trauma-informed intervention that aims to develop warm parent–child relations and uses play to create a safe environment in which children learn emotional and behavioral regulation within a context of parental support, warmth, and structure (Ryan, Lane, & Powers, 2017).

Child maltreatment (CM) involves actions or omissions resulting in actual harm or the potential for harm to a child's health, survival, and development that is perpetrated by a person with power or responsibility, such as a child's caregiver, family member, or teacher (Bentovim, 2014; World Health Organization, 2006). CM is a broad term that encompasses situations including physical abuse (nonaccidental bodily injury), sexual abuse (sexual contact, including threats or attempts), psychological and emotional abuse (verbal abuse, isolation, exposure to violence), and neglect (failure to provide essential care, such as food, shelter, protection; Bentovim, 2014). Prevalence estimates for CM vary widely depending on the type of maltreatment and method of assessment, but infants and preschool children are at the greatest risk for fatal CM due to their physical vulnerability and greater needs for care and supervision (e.g., Jud, Fegert, & Finkelhor, 2016; Stoltenborgh, Bakermans-Kranenburg, IJzendoorn, & Alink, 2013; Stoltenborgh, Bakermans-Kranenburg, & van IJzendoorn, 2013; World Health Organization, 2006). CM has been linked to numerous adverse outcomes in childhood and adulthood, including mental health problems (e.g., anxiety, depression, conduct problems, substance use), educational and cognitive deficits, criminal and violent acts, and physical health concerns (e.g., cancer, obesity, heart disease; Bentovim, 2014; Cicchetti & Toth, 2005; Fergusson, Boden, & Horwood, 2008; Gilbert et al., 2009). It also poses a serious economic burden on society due to losses in productivity, health care costs, and other expenses (Barth, Bermetz, Heim, Trelle, & Tonia, 2013; Bentovim, 2014; Fang, Brown, Florence, & Mercy, 2012). Overall, CM affects the children, families, and neighborhoods in which it occurs and has a widespread influence on society.

Although PCIT has been used with maltreating families since early in its development, the research on PCIT with maltreating families began in the early 1990s, as the need for evidence-based interventions to treat and prevent future CM became evident. This increased emphasis was prompted by the understanding that CM did not occur by chance or accident but rather developed within broad relational systems, including communities, families, and daily parent–child interactions. Most perpetrators of child maltreatment are the parent of the abused child (i.e., not an individual outside the immediate family; US Department of Health and Human Services, 2017). In addition, greater recognition that current problems may be influenced by unknown past trauma prompted a shift in focus towards more trauma-informed interventions. Since then, several theoretical articles have discussed the rationale for and application of PCIT within maltreating populations (Herschell & McNeil, 2005; Urquiza & McNeil, 1996; Ware, Fortson, & McNeil, 2003). In addition, case studies and PCIT research with maltreating families have investigated PCIT implementation and effectiveness across a wide range of family settings and maltreatment types. This chapter will begin by reviewing common characteristics of maltreating families as they apply to PCIT along with appropriate assessment techniques. Then, a brief review of PCIT case studies and research will highlight support for the use of PCIT within this population as well as findings relevant for clinical application. An overview of tailoring techniques and clinical adaptations of PCIT for child maltreatment will be presented. Finally, a case study will be described to illustrate the assessment procedures, course of PCIT, and treatment challenges associated with conducting PCIT with a maltreated child.

Characteristics of Maltreating Families

Given that CM describes a variety of situations ranging from severe physical or sexual abuse to severe neglect and abandonment, it is unlikely that every family with a maltreatment history will exhibit the same characteristics; however, there

are common behavioral patterns and familial characteristics that can affect PCIT and should be considered in treatment. The following section will present some common features as described in the CM literature.

Caregiver Characteristics

Ineffective Parenting Behaviors

Maltreating parents often have insufficient parenting knowledge, which contributes to their use of inappropriate and inconsistent discipline strategies to manage child behavior. Compared to normative parents, abusive parents report using more controlling discipline strategies (e.g., authoritarian control, guilt, and anxiety-induction) and less rational guidance (Susman, Trickett, Iannotti, Hollenbeck, & Zahn-Waxler, 1985). For example, a caregiver may believe that a child should not be rewarded for behaving as "expected," meaning the child only receives attention when he misbehaves. Abusive parents also tend to use discipline practices more inconsistently and to provide noncontingent responses to child behaviors, such as prosocial responses to negative child behavior or punitive responses to prosocial child behavior (e.g., Borrego, Timmer, Urquiza, & Follette, 2004; Lorber, Felton, & Reid, 1984; Reid, Taplin, & Lorber, 1981; Rodriguez, 2015; Susman et al., 1985). This pattern of parenting makes it unclear to children which behaviors they should exhibit. For instance, a child who sasses her parents may be ignored at times and verbally reprimanded at others, providing inconsistent attention for the negative behavior. Overall, abusive incidents are likely to develop in the context of discipline. As such, previous discipline strategies, consistency in implementation, and parenting beliefs are important to assess during a PCIT intake assessment as well as throughout treatment with maltreating families.

Psychopathology and Well-Being

Parents who engage in child maltreatment often suffer from their own problems, including mental health issues, high levels of stress and anger, and previous traumatic experiences. Substance abuse, depression, anxiety, and posttraumatic stress symptoms are prevalent among maltreating caregivers (e.g., Bentovim, 2014; Stith et al., 2009) and often contribute to their inability to parent effectively. Caregivers may have their own maltreatment history and may lack models of appropriate parenting. Though it is important to note that not every maltreating parent has a history of maltreatment, this experience is a risk factor for CM and has been associated with negative parenting practices and the use of spanking (Hughes & Cossar, 2016). Parents who have been abused or neglected as a child are also more likely to exhibit these parenting behaviors than those without this experience (Kim, 2009). History of abuse may contribute to parents' lower stress tolerance and poorer emotion-regulation strategies, which make managing their children's behaviors more challenging. Some of these issues related to parent psychopathology or stress may require treatment either before PCIT or after graduation to maximize treatment gains and increase caregiver maintenance of skills.

Family Characteristics

Poor Parent–Child Relationships

Families with a maltreatment history are often observed to have poor parent–child relationships. These parents tend to be less positive and sensitive towards their child, while also displaying more criticism, hostility, and irritability when interacting with their child (Lau, Valeri, McCarty, & Weisz, 2006; Wilson, Rack, Shi, & Norris, 2008). Maltreating families engage in coercive parent–child interactions that contribute to the development and maintenance of both parent and child maladaptive behaviors (Patterson, 1982; Sansbury & Wahler, 1992). During these interactions, children attempt to evade parental demands by engaging in disruptive behaviors (e.g., yelling, whining, physical aggression), which can persist and escalate in intensity, especially when parents are inconsistent and sometimes "give in" to child conduct problems. Parents may also respond by increasing their use of coercive parenting techniques (e.g., yelling, threatening)

or physical discipline. These discipline strategies may be reinforced through short-term child compliance but ultimately develop into a coercive cycle of escalating parent and child negative behavior, serving as one etiological path for CM (Patterson, 1982; Sansbury & Wahler, 1992; Urquiza & McNeil, 1996). These negative interactions may be observed during the pretreatment DPICS observation. Clinicians should monitor the frequency of negative caregiver verbalizations, such as negative talk or commands, and provide coaching to increase the parent's PRIDE skill development in an effort to prevent future CM incidents.

Complex Family Environment

Several family characteristics have been shown to be risk factors for CM, including poverty, single parenthood, family cohesion, and family conflict (Bentovim, 2014; Stith et al., 2009). Maltreating families tend to lack financial resources and social support, which reduces their ability to cope with stress. In addition, these families may encounter intimate partner violence and poor quality neighborhoods, further isolating family members from support. Caregivers in stressful environments are likely focused on their own emotional needs and may be less able to attend to the changing emotional and developmental needs of their children (Bentovim, 2014). These factors can be exacerbated by the caregiver's own mental health (e.g., substance use, depression) as well as legal or custody issues. Caregivers may be involved in custody disputes that necessitate treatment services, or children may be in foster care for lengthy periods of time awaiting termination of parental rights. These factors contribute to a chaotic living environment and unstable family relationships, increasing stress and tension. Because these stressors are likely to affect treatment attendance and attrition, it is important to provide support for families while maintaining fidelity to the PCIT treatment protocol. A thorough assessment at intake will provide clinicians with a clear picture of the family environment and specific challenges. Clinicians may also need to discuss these family stressors

during the PCIT session "check in" as a way to tailor the PCIT protocol to families with a history of CM.

Assessment Procedures

Although the PCIT assessment procedures are outlined in the treatment manual and will likely depend on the requirements of clinical facilities (for recommended assessment procedures, see Eyberg & Funderburk, 2011, pp. 9–16), there are some additional areas that are important to assess in maltreating families. Beyond the standard PCIT assessment instruments, such as the Eyberg Child Behavior Inventory (ECBI) and the Dyadic Parent–Child Interaction Coding System (DPICS), instruments may be included to assess factors associated with CM, including parental motivation for change and readiness for treatment, parental abuse potential, child trauma symptoms, current discipline strategies, attitudes and expectations about the child and the role of parent, and additional parent characteristics (e.g., substance use, stress, marital conflict). In maltreating families, assessment procedures may place more emphasis on the parent compared to standard PCIT, as the parent may be viewed as the main target for behavioral change. Table 1 describes the psychometric properties of the measures presented below.

As will be described later in this chapter, parental motivation for treatment may be different for maltreating families given that caregivers may be mandated or coerced into seeking treatment services to maintain custody of their children. Whether or not additional emphasis is placed on improving parental motivation prior to PCIT should depend on initial levels of parental readiness. The Readiness, Efficacy, Attributions, Defensiveness, and Importance Scale—Short Form (READI-SF) is a 17-item measure that assesses parents' readiness for and perceived importance of treatment (Proctor, 2016). Parents rate how much they agree with 17 statements using a 5-point scale, producing a total score as well as two subscale scores. The two subscales assess parents' openness to changing their par-

Table 1 Psychometric properties of assessment measures for maltreating families

Measure	Features	Administration	Reliability	Factor structure	Convergent validity	Predictive validity	Treatment sensitivity
Readiness, Efficacy, Attributions, Defensiveness, Importance—Short Form (READI-SF)	17-items 5-point rating scale Available by request	5–10 min Parent and adolescent version available	Internal consistency: 0.83–0.91 Item-to-total correlation: 0.85 or higher	Support for two- and three-factor structure	Moderate with PMI ($r = 0.33$) ECBI scores predicted READI total score	Total score predicted attendance at parenting group	N/A
Child Abuse Potential Inventory (CAPI)	160 items Respond with agree or disagree Purchase	12–20 min Third-grade reading level Age range: 18–99	Internal consistency: 0.92–0.95 Test-retest (1 day–3 month) 0.75–0.91	3 validity indices Physical abuse scale (6 subscales)	Associated with negative affect, alcohol use, stress, DV, family conflict, and parenting	Predictive of current and future CM reports; 80–90% correct classification	Scores decrease after treatment for abusive and neglectful parents
Parent–Child Conflict Tactics Scale (CTSPC)	22-items 8-point rating scale	10–15 min Two optional subscales (neglect and sexual abuse)	Internal consistency: 0.58–0.72	Three- and five-factor structure has been suggested	No information available	Differentiates between maltreating and nonmaltreating parents	No information available
Trauma Symptoms Checklist for Young Children (TSCYC)	90-items 4-point rating scale Purchase	15–20 min Age range: 3–12 years	Internal consistency: 0.73–0.93	Total score, 8 clinical scales, and 2 validity scales	Related to sexual and physical abuse exposure and witnessing DV	96% specificity, 73% sensitivity	No information available

Notes: Psychometric information collected from: Briere, 2005; Milner, 2006; Nock & Photos, 2006; Pollio, Glover-Orr, & Wherry, 2008; Proctor, 2016; Straus, Hamby, Finkelhor, Moore, & Runyan, 1998

CM child maltreatment, *DV* domestic violence, *ECBI* Eyberg Child Behavior Inventory, *PMI* Parent Motivation Inventory

enting behavior as well as the importance placed on the current problems. The READI-SF can inform clinicians about parents' readiness for change and treatment, indicating whether the initial session should focus on improving parental motivation as some research has suggested (Chaffin et al., 2009). The full version of the READI, which includes five additional subscales, has also been investigated among non-maltreating caregivers seeking behavioral parent training, with growing psychometric support for its use (Niec, Barnett, Gering, Triemstra, & Solomon, 2015)

Beyond readiness for treatment, families who enter PCIT with a maltreatment history should be assessed for their current discipline practices and potential for abuse. Though several measures are available to capture these areas, the two presented in this chapter are the Child Abuse Potential Inventory (CAPI; Milner, 1986) and the Parent–Child Conflict Tactics Scale (CTSPC; Straus et al., 1998). First, the CAPI is a 160-item measure that assesses several attributes associated with risk for physical abuse, including distress, rigidity, unhappiness, problems with child and self, problems with families, and problems with others. Parents endorse either "agree" or "disagree" for each item, and the measure includes validity scales to assess for lying, inconsistency, and random responding. Second, the CTSPC is a 22-item parent-report measure that assesses the frequency of certain discipline techniques, ranging from nonviolent discipline (e.g., rational guidance, time-out) to severe assault (e.g., slapped, hit). Parents report the frequency of use for each item, with an optional neglect scale that can be incorporated as needed. Although this may not be appropriate for all families (e.g., foster families), it is particularly important to monitor discipline and abuse potential for families in which the caregiver was the perpetrator of a substantiated CM incident and to note that not all parents will respond honestly on these measures.

In addition to conduct problems, children with a history of maltreatment may also exhibit trauma symptoms that will be important to con-sider in PCIT. The Trauma Symptom Checklist for Young Children (TSCYC; Briere, 2005) is a 90-item parent-report measure of posttraumatic stress and related psychological symptomology for children ages 3–12 who have experienced traumatic events (e.g., child abuse, peer assault, community violence). Caregivers rate how frequently symptoms occur using a 4-point rating scale. The TSCYC has eight clinical scales, including anxiety, depression, anger/aggression, posttraumatic stress-intrusion, posttraumatic stress-avoidance, posttraumatic stress-arousal, dissociation, and sexual concerns, as well as a total score. Although not every child who experiences maltreatment will exhibit posttraumatic stress symptoms, it can be useful to assess this area to provide more trauma-informed procedures. Additionally, the clinical features that emerge for the child based on this measure can be used during PCIT coaching. For example, parents can be coached to praise "brave" child behaviors and talking in a "big girl voice" for a child with anxiety, or parents can praise calm play for a child with a history of emotional dysregulation.

Finally, parent functioning, including parent psychopathology, parental stress, familial conflict, and parents' attitudes and expectations for children, could be assessed depending on parents' endorsement of problems as their well-being will likely affect PCIT outcomes. Although measures may be available to formally assess some of these areas, such as the Parenting Stress Index, Fourth Edition (PSI-4; Abidin, 2012) and the Beck Depression Inventory Second Edition (BDI-II; Beck, Steer, & Brown, 1996), others may be incorporated into the intake interview as needed. For example, parents may be asked questions, such as "What do you believe to be the cause of your child's behavior problems?" "What are your expectations for your child's behavior?" "How do you believe children should be parented?" and "Do you feel comfortable praising your child?" The answers to these questions will help to determine parents' beliefs and attitudes towards their child and may reveal the need for psychoeducation in certain areas.

Available Research on PCIT Among Maltreating Families

Research on PCIT with families who experienced CM has developed greatly over the past two decades. Although a comprehensive review of all studies is beyond the scope of this chapter, we will highlight relevant findings from research and case studies that serve to inform clinical practice. These studies detail the process of implementing PCIT with different presenting problems, treatment goals, and family environments, providing a helpful resource for clinicians.

Case Studies of PCIT with CM

Looking across six case studies of PCIT with CM populations, children receiving treatment ranged in age from 3 to 7 and presented with a variety of behavior problems, including non-compliance, hyperactivity, temper tantrums, physical aggression, inappropriate reactions to adults (e.g., unsuitable contact with strangers, overly affectionate behavior), irritability, and self-injurious behaviors (e.g., head butting, head banging). Some of the children had substantiated CM incidents, including neglect, physical abuse, and sexual abuse; while others were believed to be at risk for CM based on their exposure to drug and alcohol use, homelessness, domestic violence, and inappropriate physical discipline. The presence of child psychopathology was documented in some cases, with commonly diagnosed problems being Oppositional Defiant Disorder (ODD), Attention-Deficit/Hyperactivity Disorder (ADHD), Reactive Attachment Disorder (RAD), and fetal alcohol effects. Caregivers typically involved in PCIT treatment included the child's biological parent, the child's grandparent, and foster parents (Borrego, Urquiza, Rasmussen, & Zebell, 1999; Fricker-Elhai, Ruggiero, & Smith, 2005; N'zi & Eyberg, 2013; Thomas & Herschell, 2013; Timmer, Urquiza, Herschell, et al., 2006; Urquiza & Timmer, 2014).

Families documented in these case studies participated in 5–11 CDI sessions and 6–24 PDI sessions, with an average of 19.8 total sessions (range: 11–36). One family only engaged in the CDI portion of PCIT due to their needs as the child was still developing an attachment relationship to his caregiver (N'zi & Eyberg, 2013). A wide range of treatment effects were reported in these studies. Overall, parents showed increased use of positive skills (e.g., labeled praise, descriptions, reflections) and decreased use of negative skills (e.g., questions, commands). In addition, child behavior problems as reported by parents and teachers decreased following treatment completion, with scores falling below clinical cutoffs (Borrego et al., 1999; Fricker-Elhai et al., 2005; Timmer, Urquiza, Herschell, et al., 2006; Urquiza & Timmer, 2014). Improvement in self-reported parental functioning, including decreased stress and depression, was also observed (Timmer, Urquiza, Herschell, et al., 2006; Urquiza & Timmer, 2014).

Anecdotally, authors noted that caregivers were able to use positive skills to attend to appropriate child behavior while ignoring inappropriate behaviors during play (e.g., banging toys, sassing; Thomas & Herschell, 2013) and that dyadic warmth, closeness, and engagement in the play increased during PCIT (N'zi & Eyberg, 2013). Treatment gains were found to persist from 5 to 16 months following completion (Borrego et al., 1999). Several challenges were also noted in working with these families, including financial difficulties, inconsistent social support, parental misconceptions about abuse, and uncertainty in living situations. Overall, these case studies provide preliminary evidence for the efficacy of PCIT among maltreated children presenting with a range of clinical problems and past maltreatment exposure (Borrego et al., 1999; Fricker-Elhai et al., 2005; N'zi & Eyberg, 2013; Thomas & Herschell, 2013; Timmer, Urquiza, Herschell, et al., 2006; Urquiza & Timmer, 2014). Table 2 provides additional details about the cited case studies of PCIT with maltreated children.

Table 2 Description of available case studies of PCIT involving CM

Citation	CM type	Parent demographics	Child demographics	Assessment measures	Presenting problems	Treatment length	Notes
Borrego et al. (1999)	High risk for physical abuse	35-year-old, single mother of two children	3-year-old male with fetal alcohol effects	DPICS, ECBI, CBCL-P, CAPI, PSI	Self-injury, physical aggression, temper tantrums	CDI: 5 coach sessions PDI: 6 coach sessions	Sibling with developmental delay; wore helmet due to head butting
Fricker-Elhai et al. (2005)	Neglect, Sexual abuse, physical abuse	Foster parents	7-year-old female and 6-year-old male, Caucasian siblings	CBCL Parent and Teacher, ECBI, DPICS, TAI	Noncompliance, whining, lying, breaking toys, sexual and overly affectionate	12 sessions with PCIT as primary focus	Longer treatment sessions; problems with adoption
N'zi and Eyberg (2013)	Neglect, witnessed physical abuse	Grandmother	4-year-old African American male	DPICS, PSI-SF, BASC-2	Unresponsive to affection, angry, defiant, bossy	CDI: 7 coach sessions No PDI	Reactive attachment disorder
Thomas and Herschell (2013)	Inappropriate discipline, exposure to DV	Single mother of three children	3-year-old male	DPICS	Temper tantrums, physically and verbally aggressive	CDI: 6 coach sessions PDI: 7 coach sessions	Focused on emotional reaction of mother
Timmer, Urquiza, Herschell, et al. (2006)	Exposure to drugs, possible physical abuse	41-year-old married foster-adoptive mother	4-year-old male with ADHD	ECBI, CAPI, PSI, DPICS, CBCL	Kicking, hitting, spitting, self-injurious and sexualized behaviors	CDI: 6 coach sessions PDI: 24 coach sessions	Frequent foster placements; previous PCIT with birth mother
Urquiza and Timmer (2014)	High risk due to DV, drug exposure, and homelessness	30-year-old Latino father of two children	7-year-old male with ADHD and ODD	CBCL 1.5–5, ECBI, BSI, TSCYC, PSI, DPICS	Irritable, angry, defiant, bossy, aggressive, hyperactive	CDI: 11 sessions PDI: 10 sessions	Swoop & Go; sibling session; involvement of mother

DPICS Dyadic Parent–Child Interaction Therapy, *ECBI* Eyberg Child Behavior Inventory, *CBCL* Child Behavior Checklist, *CAPI* Child Abuse Potential Inventory, *PSI* Parenting Stress Index, *TAI* Therapist Attitude Inventory, *TSCYC* Trauma Symptom Checklist for Young Children, *DV* domestic violence, *CDI* child-directed interaction, *PDI* parent-directed interaction

Research Evaluating PCIT Among Maltreating Families

Chaffin et al. (2004) were the first to examine PCIT in a large sample of abusive families. In the study, 110 families who had a substantiated physical abuse report were randomly assigned to one of three treatments: an established community group (treatment as usual, TAU), a time-limited PCIT condition, and an enhanced PCIT condition (EPCIT). Following completion of treatment, 34% of the families had another physical abuse report, but the time-limited PCIT had a better survival rate than the treatment as usual group. Also, those who received either time-limited PCIT or EPCIT exhibited greater reductions in observed negative parent behaviors (e.g., criticism, sarcasm, physical negative) compared to community group families (Chaffin et al., 2004). These findings show the effectiveness of PCIT among abusive families in reducing the likelihood of CM re-offense compared to an established community treatment program. Moreover, the EPCIT group, which included additional clinical services (e.g., marital counseling, individual parent treatment, medication), did not perform better than the PCIT-only group, suggesting that using the PCIT protocol alone is sufficient to produce positive effects. Although this study included some features that diverged from standard PCIT (e.g., a motivational enhancement orientation group, wider child age range, a time-limited protocol), the authors demonstrated that PCIT is an efficacious treatment program for abusive families and that other mental health services added to PCIT do not necessarily translate into greater positive gains (Chaffin et al., 2004).

Follow-up studies have been conducted to examine the use of motivational enhancement with maltreating families and to compare the effects of standard and time-limited PCIT (Chaffin et al., 2009; Chaffin, Funderburk, Bard, Valle, & Gurwitch, 2011; Thomas & Zimmer-Gembeck, 2012). Research has shown that families who receive both a motivational orientation and PCIT are more likely to complete treatment compared to families in other treatment combinations (e.g., PCIT without motivational enhancement; Chaffin et al., 2009). Families who receive a motivational orientation prior to PCIT also have the lowest rates of recidivism and longer periods of time before another CM report is filed compared to other treatment options (Chaffin et al., 2011). As will be discussed further in this chapter, the inclusion of a component focused on improving parental motivation for change appears to be beneficial for some maltreating families although not for those who were already motivated at the beginning of treatment. Time-limited PCIT (TL-PCIT) has also been compared to standard PCIT (S-PCIT) among families at risk for or with a history of CM. When comparing the two versions of PCIT, parents in the TL-PCIT had greater improvement in observed skills (e.g., praise, reflections and descriptions, questions) compared to those in S-PCIT. Also, fewer families in the TL-PCIT dropped out of treatment than in S-PCIT (Thomas & Zimmer-Gembeck, 2012). Still, families who completed either version of PCIT had more improvements in child behavior, parent skills, and parent stress than families who did not receive treatment. These findings indicate the efficacy of using PCIT with maltreating or high risk families and suggest that a time-limited version of the treatment may provide additional benefits (e.g., decreased drop out) when used with this population (Thomas & Zimmer-Gembeck, 2011, 2012).

Overall, research has shown the effectiveness of PCIT in reducing child mental health symptoms, child abuse potential, parental stress, and negative parenting behavior as well as in improving parental sensitivity and positive skills within maltreating families. These benefits have been observed in comparison to families not yet receiving treatment, with different versions of PCIT, and across both maltreating and nonmaltreating families (Thomas & Zimmer-Gembeck, 2011, 2012; Timmer, Urquiza, & Zebell, 2006; Timmer, Urquiza, Zebell, & McGrath, 2005). In particular, the way that abusive parents respond to their child has been shown to change dramatically during PCIT, with most behavior change observed within the first three CDI sessions (Hakman, Chaffin,

Funderburk, & Silovsky, 2009). When parents first enter PCIT, they tend to give attention to their child's inappropriate behaviors (e.g., whining, hitting) and to respond inconsistently to positive behaviors. Throughout PCIT, parents learn how to use appropriate responses (e.g., labeled praise, reflections) for their child's prosocial behavior (e.g., playing quietly with toys, compliance), thus altering the coercive cycle between the dyad and decreasing caregiver use of ineffective strategies that perpetuate aversive child behaviors (Cerezo, D'Ocon, & Dolz, 1996; Hakman et al., 2009; Lorber et al., 1984).

Adapting PCIT for Maltreating Populations

The expansion of PCIT to maltreating populations reflects the strong evidence base for the intervention as well as the theoretical relevance of parenting in child psychopathology and family mental health issues; however, it is still necessary to investigate whether alterations need to be made to ensure that PCIT is appropriate for new populations (Eyberg, 2005). Specifically, three possible types of alterations can be made to treatment protocols in this process: tailoring, adapting, and modifying. Tailoring refers to changes that are made in the delivery of certain treatment elements to address the specific needs of individual clients (Eyberg, 2005). For example, PCIT clinicians may tailor the content of the PRIDE skills based on parent-reported problems that the child exhibits (e.g., for a hyperactive child, praising calm or quiet behavior; for a reserved child, praising brave and "big kid" actions) or based on the child's developmental level (Eyberg, 2005). Although treatment may be manualized, tailoring is an important strategy utilized by clinicians to address unique client needs while maintaining adherence to treatment procedures (Herman-Smith, Pearson, Cordiano, & Aguirre-McLaughlin, 2008; N'zi & Eyberg, 2013). Notably, tailoring does not alter any of the core treatment components of PCIT, such as live

coaching, involvement of parents and children together, or the use of a mastery-based format.

By contrast, adapting the PCIT protocol entails changing the structure or content of the established program, such as providing "in room" coaching when observation facilities are not available (Eyberg, 2005). Adaptations are likely to occur when treatments are implemented with new populations to address treatment barriers or to make the procedures more applicable to that population. For example, several adaptations have been made in applying PCIT to children with internalizing disorders given the differences in presenting problems, such as the assessment of other symptoms, the inclusion of an additional module (Bravery-Directed Interaction, BDI), and the incorporation of exposure-based activities (Carpenter et al., 2014). Still, it is important to balance fidelity to the PCIT treatment protocol with adaptations to fully address client needs. Consideration of whether adaptations provide benefits beyond the effects of standard PCIT, which have been shown to be robust (Chaffin et al., 2004; McCabe, Yeh, Lau, & Argote, 2012), is needed to justify altering treatment elements. Finally, treatment modifications refer to changes in the treatment components for all families based on research to improve utility or efficacy, usually conducted by the treatment developer (Eyberg, 2005). For PCIT, modifications to the protocol have included the addition of extra support for parental stressors beyond the child (Eyberg & Funderburk, 2011; Harwood & Eyberg, 2004).

To date, no treatment modifications have been supported for the expansion of PCIT to maltreating families. When working with a family having a history of CM, we recommend that implementation of standard PCIT with appropriate tailoring to address specific family needs should be considered as the first treatment option. In our clinical experience, many families with a history of CM have benefitted from the standard PCIT protocol with appropriate tailoring. However, clinicians may find that some families require the inclusion of relevant adaptations during the course of treatment due to some concerns already outlined in this chapter

(e.g., child developmental issues). Several helpful methods for tailoring PCIT and adapting treatment for families with a history of CM will be provided and discussed in the following section.

Tailoring Techniques for Maltreating Families

When applying PCIT to maltreating populations, tailoring is a helpful approach to address the specific needs of these families as they arise in treatment. Case studies, empirical research, and clinical experience provide insight into possible tailoring techniques that could be used when implementing the PCIT protocol with particular maltreating families. First, as suggested for all PCIT clients, expression of the PRIDE skills should depend on the child's presenting problems and developmental level as well as the parent's treatment goals. For example, a child who talks in a "whiny" voice may be praised for using a "big boy" voice, while a parent whose treatment goal is to improve the child's play with peers may focus the PRIDE skills on sharing and gentle use of the toys (Borrego et al., 1999; Thomas & Herschell, 2013). Additionally, the child's reaction to PRIDE skills may influence their use (Urquiza & Timmer, 2014). For instance, older children are often more perceptive of the skills and may express discontent with the changed parent interaction (e.g., "Why are you talking that way?" "Stop copying me," "How about if we just play and don't talk?"). This reaction may require decreasing the frequency of skill use, targeting the skills to certain aspects of play, or attempting to make the skills appear "more natural." Given that PCIT has been used with older, maltreated children, these developmental considerations are important.

Another potential area for tailoring may be the family members included in treatment and the selection of the target parent when multiple caregivers present for treatment. Children who have experienced maltreatment are more likely to be involved in complicated custody arrangements. At the time of treatment initiation, children may

be removed from their homes due to safety concerns or they may be placed in foster care while custody situations are evaluated. Given that PCIT requires frequent contact with the child and is suggested for families who are in semi-permanent living situations, custody arrangements are important to consider for maltreating families. For example, in the case of a 5-year-old female, "Amy," who had been neglected and removed from her biological mother's care, the two caregivers selected to participate in PCIT were the biological grandmother and stepmother (biological father's wife). Although Amy was originally placed in her biological father's care, she exhibited inappropriate sexual behaviors towards other children and adult males, prompting her removal and temporary placement with her grandmother. Amy's stepmother was originally identified as the "target" parent given that she was the primary caregiver for her prospective permanent custody arrangement. However, at the time of treatment, Amy's grandmother was primarily involved in her day-to-day care and behavior management, with limited contact between Amy and her stepmother. Given the demands placed on parents during PCIT (e.g., CDI and PDI homework), Amy's grandmother was ultimately selected as the "target" parent as she was the current primary caregiver.

This case illustrates the complexity seen in families with CM and its effect on the application of the PCIT protocol. It has been recommended that caregivers have contact with the child at least three times a week (outside of PCIT) for the treatment to be appropriate. This case also highlights that the best approach when making treatment decisions (e.g., who will be involved in PCIT?) is to take each living situation on a case-by-case basis. Beyond the CM population, research with foster parents has provided support for the use of PCIT in decreasing child externalizing and internalizing symptoms as well as improving parental behavior and stress (Mersky, Topitzes, Grant-Savela, Brondino, & McNeil, 2016; Mersky, Topitzes, Janczewski, & McNeil, 2015). Suggestions for adaptations and implementation of PCIT with foster parents are available elsewhere (e.g., Topitzes, Mersky, &

McNeil, 2015), but this line of research may be of interest for clinicians given that children with a CM history are likely to be placed in foster care.

Another tailoring technique that may be relevant for maltreating families is the use of "swoop and go" as a backup discipline procedure instead of the standard time-out room back-up to the time-out chair (see page 169 in the PCIT Protocol; Eyberg & Funderburk, 2011). This procedure is typically used by facilities that lack a separate time-out room; however, it may be useful for families with CM as it provides a more "hands-off" discipline procedure. Thus, parents are not required to physically move their child to the time-out room but rather remove themselves and all toys from the playroom. Given that certain types of CM, such as physical abuse, tend to occur during discipline situations when parents may have difficulty regulating their emotions (Rodriguez, 2015; Urquiza & McNeil, 1996), the "swoop and go" procedure helps to prevent escalation in conflict during discipline and has been used successfully in previous studies (Urquiza & Timmer, 2014). Still, the "swoop and go" technique may not be necessary for all types of CM and is difficult for parents to realistically implement at home (e.g., cannot remove the TV from the living room). Another "hands-off" technique that has been implemented with maltreating families is the removal of privileges when a child gets off the time-out chair, which has been recommended as a technique best suited for older children in PCIT (Chaffin et al., 2004; McNeil & Hembree-Kigin, 2010). It should be noted that although these techniques have been used successfully in various clinic settings, more research evidence is needed to support both the "swoop and go" technique and the removal of privileges as a time-out back-up.

Finally, it may be necessary to address broader problems within this population that arise during PCIT and may affect treatment progress. Risk factors for CM include poverty, single parenthood, and ethnic minority status; and maltreating families seeking treatment tend to be characterized by complex social and environmental issues (Bentovim, 2014; Gilbert et al., 2009; Stith et al., 2009). Even though the protocol allows for a very brief discussion of parents' problems at the beginning of each session, emphasis may be placed on providing support for additional family stressors, such as financial problems, family conflict, and environmental stressors (e.g., substance use, custody disputes). For example, one PCIT case study noted that the return of the child's biological mother to the home after drug and alcohol rehabilitation resulted in a drop in the father's CDI skills during the next session (Urquiza & Timmer, 2014). In another instance, a foster family with two children undergoing PCIT treatment reported distress about the uncertainty of the children's adoption status, resulting in emotional and behavioral problems for the parents and children (Fricker-Elhai et al., 2005). Although it is important to have time for coding and coaching during sessions, these external factors can influence child behavior and parents' performance and should be sufficiently addressed in PCIT. It is also possible that families may need referrals to a social worker or individual therapy following the completion of PCIT to help address the multifaceted problems that often accompany CM. Given the findings of Chaffin et al. (2004) that extra services provided concurrently with PCIT are not necessarily helpful, we caution that families should be referred only for one or two selected services after successful completion of PCIT and monitored by clinicians during booster sessions to provide continued support.

Adaptations for PCIT with Maltreating Families

Beyond treatment tailoring, which should occur with every family receiving services, certain adaptations may be necessary to improve the utility and effectiveness of PCIT within maltreating populations. The alterations discussed in this chapter are either based on those used in previous research or guided by relevant characteristics of maltreating families. It should be noted that most adaptations presented have not been effectively evaluated through research (e.g., compared to standard PCIT) and, thus, should be applied with caution. Additionally, given the

diversity of maltreatment experiences among families presenting for PCIT (e.g., caregivers in treatment may be the perpetrator of abuse, foster/adoptive parents, or other relatives), these adaptations may not be universally appropriate for all CM types.

Motivation Enhancement

The inclusion of a motivational orientation program prior to initiation of PCIT services has been shown to improve treatment retention and to reduce the likelihood of re-offense (Chaffin et al., 2004, 2009, 2011). For example, Chaffin et al. (2004) required physically abusive parents entering PCIT treatment to "pass" a six-session motivational enhancement program that targeted parenting beliefs. This program utilized motivational interviewing techniques, with activities such as viewing testimonials from PCIT program graduates, completing decisional balance activities (e.g., discussing the pros/cons of changing their parenting strategies vs. continuing to use physical discipline), investigating the potentially negative consequences of excessive physical punishment, and completing exercises to promote motivational self-talk and self-efficacy expectations. At the end of the program, parents were required to make a statement about the effect of their parenting behaviors on themselves and others as well as their current beliefs about parenting and goals for change in their family (Chaffin et al., 2004).

For maltreating parents, the addition of an initial motivational component is relevant—although not always required—because many families are not voluntarily seeking treatment, which can affect parents' motivation for behavior change (Chaffin et al., 2004). Parent "buy-in" is an important treatment component that can affect parents' level of engagement during PCIT, whether parents choose to continue services to PCIT graduation, and their rate of treatment progress. In particular, compared to more passive treatment programs (e.g., didactic group interventions), PCIT requires parents to actively participate during session through live-coaching and to complete homework activities outside of treatment for optimal treatment gains (Eyberg &

Funderburk, 2011). Given that parents who abuse their children often hold unrealistic expectations for child behavior (Bentovim, 2014), this population may require initial services that target motivation and knowledge to fully engage in PCIT.

Still, more research suggests that the positive effects of this adaption may depend on the initial level of motivation. Specifically, only families who report low to moderate pretreatment motivation for change had less treatment dropout when a motivational component was added prior to PCIT services. Parents who reported high motivation at the beginning of PCIT had more dropouts if they received this same motivational orientation, suggesting that families who are initially motivated for treatment may be discouraged by these activities (Chaffin et al., 2009). Thus, although working to improve parental motivation may influence treatment retention and future re-offense status, these positive effects may depend on parents' prior level of motivation for change, illustrating the complexity in determining appropriate adaptations for PCIT. Assessment of parents' level of motivation and parenting beliefs during intake procedures is important to determine whether families would benefit from motivation enhancement prior to PCIT. More details for activities to increase parent motivation are provided in Table 3.

PCIT with Older Children

Several research studies have also utilized PCIT within a wider child age range. Although PCIT was originally developed for children ages 2–7 (Eyberg & Funderburk, 2011), the protocol has been used with maltreated children up to 12 years of age (Chaffin et al., 2004, 2009, 2011; Lanier, Kohl, Benz, Swinger, & Drake, 2014). Using this broader age range, these studies still found that PCIT was an effective treatment for decreasing parent negative behaviors and reducing risk for CM re-offense (Chaffin et al., 2004, 2009, 2011; Lanier et al., 2014). The child's age may be less relevant for maltreating families seeking PCIT than for other families because parents are often the primary target for behavior change, and children from this population may not exhibit clinically significant behavior problems (Chaffin

Table 3 Potential activities to increase parent motivation during PCIT

Objective	Activities	Skills to utilize
Identify areas that parents want to change (Develop discrepancy)	• Discuss discipline and parenting methods that parents would like to keep. • Discuss discipline and parenting methods that parents would like to change. • Create "pro/con" list for the use of alternative forms of discipline. • Create a mutual goal between the parent and therapist.	Empathy Open-ended questions
Address beliefs about physical discipline	• Create "pro/con" list for the use of physical discipline. • Display empathy for the parent's beliefs and reflect an understanding of their view point. • Ask parents to describe how they feel after using physical discipline.	Reflections Summary statements
Provide psychoeducation as needed	• Provide information about actions parents can use to support child's development. • If medical problems are involved, describe how health problems can influence child behavior.	Statements Open-ended questions Summary statements
Improve parental self-efficacy	• Ask parents to describe a time when they succeeded when no one thought it was possible. • Discuss areas of life that parents are proud of. • Emphasize the strengths that the parent is bringing into treatment.	Open-ended questions Reflections Validation
Discuss barriers to treatment	• Ask parents what barriers they imagine would interfere with treatment. • Brainstorm realistic solutions to address these barriers.	Open-ended questions Affirmation

Notes: For additional examples of motivational interviewing techniques, readers are referred to N'zi, Lucash, Clionsky, and Eyberg (2017)

et al., 2004; Wilsie, Campbell, Chaffin, & Funderburk, 2017). In general, adaptations for using PCIT with older children have been proposed, which aim to make the treatment procedures more age-appropriate (Chaffin et al., 2004; McNeil & Hembree-Kigin, 2010). Table 4 provides a list of adaptations for CDI and PDI that have been suggested when using PCIT with older children.

For families with CM, alterations have included the incorporation of other discipline strategies (e.g., behavior chart, modified time-out, logical consequences, school report card) and modification of the PRIDE skills (e.g., using fewer, more complex statements). For example, parents of older children can be coached to provide fewer verbalizations during CDI, with greater emphasis placed on the quality of their statements. Older children may be more likely to find the PRIDE skills annoying or to express displeasure with their repetitive nature, requiring parents to adjust the quantity or quality of skill use. Rather than directly

repeating the child's statements (e.g., child: "I am going to make a necklace for grandma," parent: "You are making a necklace for grandma"), parents can be encouraged to use shorter reflections (e.g., parent: "Oh, for grandma") or to paraphrase larger chunks of the child's speech. As a result, parents of older children may need alternate mastery criteria compared to the standard 10 labeled praise, 10 reflections, and 10 behavioral descriptions as described in Table 4. In addition, activities used during CDI may be altered to reflect older child interests, with activities such as jewelry making and model building. Although these adaptations align with the theoretical basis of PCIT and are consistent with other treatment paradigms for school-age children (Barkley, 1997), the efficacy of using PCIT with or without adaptations among older children has yet to be evaluated thoroughly. If a child is much older than the typical 2–7 age range and has severe behavior problems, we recommend that clinicians utilize a treatment protocol other than PCIT.

Table 4 Adaptations for using PCIT with older children

Child-directed interaction		Parent-directed interaction	
Adaptation	Description	Adaptations	Description
Reducing the frequency of PRIDE skills	Different mastery criteria for DO skills: *7 praises* (at least 4 labeled), *7 reflections*, *7 descriptions* (at least 4 behavioral)	Command Training	Focus only on commands and follow through in teach; give more complex, multistep commands; more genuine praise
Adapting each of the PRIDE skills	**Praise**: greater emphasis on unlabeled praise; support use of nonverbal praise (e.g., wink, thumbs up, dance, pat, bump knuckles); ignore child's verbal dismissal of praise **Reflection**: use summarizing/paraphrasing for child's statements; summarize meaning of child's speech, use nonverbal signs of attending (leaning in, eye contact, nodding) **Imitation**: engage in similar activity as opposed to directly imitating behavior; show interest and approval of activity by joining in; avoid trying to "out do" child **Description**: incorporation of informational description (e.g., parents' own thoughts, activity); include descriptions of problem-solving, parents' opinions, and interests **Enjoyment**: show more subtle enjoyment rather than effusive gestures as they may appear fake to child; use genuine emotion	Time-out with incentive chart	Hands-off backup procedure: incentive-based procedure where children are given rewards to comply during PDI and for complying with the time-out procedure; reward children for not needing time-out or for not resisting time-out Remove privileges (e.g., computer time, IPad, TV) if child does not walk to the time-out chair or remain on the time-out chair Spend more time explaining the procedure to the child in session May incorporate emotion-regulation skills
Use more developmentally appropriate activities	Sophisticated art toys (charcoal, gel pens, paint, glitter); crafts (modeling clay, bead sets, card making); advanced construction toys; noncompetitive video games	Time-out with suspension of privileges	When child resists time-out, restrict privileges in session (e.g., toys, activities) and at home (e.g., TV, videogames); need to finish time-out to get back privileges
Increase length of play time	Extend CDI homework to 10 min	School Behavior Chart	Use incentive chart to promote compliance at school or homework completion

Notes: Adaptations drawn from the Chaffin et al. (2004) intervention description and from McNeil and Hembree-Kigin (2010)

Psychoeducation

One potential adaptation for maltreating families is the inclusion of more extensive psychoeducation regarding CM and associated outcomes as well as normative developmental processes. Parents who engage in abusive behaviors tend to hold unrealistically high developmental expectations for their child and to have more negative attributions for child misbehavior compared to nonabusive parents (Azar, Robinson, Hekimian, & Twentyman, 1984; Azar & Wolfe, 1998;

Bentovim, 2014). Low educational achievement and parental perceptions of the child as a "problem" are also risk factors for CM (Gilbert et al., 2009; Stith et al., 2009). Given that treatment for maltreating families places greater emphasis on the parent's behavioral change, additional psychoeducation during the PCIT Teach sessions may prime parents to notice positive and age-appropriate child behaviors. For example, a physically abusive mother may say that her 5-year-old daughter "knows" the rules and is intentionally

breaking them. This belief may cause added frustration during discipline and make the mother reluctant to utilize positive skills. In this situation, it may be helpful to explain the motivation behind child behaviors and the expected level of behavioral and emotional regulation based on the child's age.

Alternatively, caregivers may hold inaccurate assumptions about CM and its effect on the child. For example, one PCIT case study noted that a foster parent receiving treatment for two foster children with sexual abuse histories held misconceptions about child sexual abuse, such as the abused child being "scarred for life" and potentially abusing others. These beliefs interfered with his ability to consistently apply PCIT skills in session and at home, requiring additional education and clarification to continue treatment progress (Fricker-Elhai et al., 2005). Caregivers of children who have experienced maltreatment may adhere to false ideas or assumptions about CM, affecting their interactions. It is important to provide parents with realistic information about the causes and outcomes of CM. Overall, incorporating appropriate psychoeducational components and reframing statements throughout PCIT (e.g., during Teach sessions, during coaching, and during check-outs) may help address parental misconceptions about CM and prevent their interference with progress in skill acquisition and application.

Emotion-Regulation Techniques

Maltreating parents tend to experience more problems with emotion-regulation, higher parental stress, and greater emotional reactivity than nonmaltreating parents (Maguire-Jack & Negash, 2016; Reijman et al., 2016; Stith et al., 2009; Timmer, Borrego, & Urquiza, 2002). As a result, even though PCIT teaches behavioral management strategies to address child problem behavior, maltreating parents may have particular difficulty in applying them when faced with child misbehavior (e.g., ignoring attention-seeking behaviors, remaining calm and neutral during time-out). Difficulties in parent emotion-

regulation have been noted in several case studies of PCIT, and tailoring procedures have been utilized to address some of these issues (e.g., monitoring emotions, taking a step back if needed; Thomas & Herschell, 2013; Urquiza & Timmer, 2014).

It may be beneficial to teach parents coping strategies in advance so that clinicians are prepared to provide in vivo (i.e., coaching) assistance with emotion-regulation in response to challenging child behaviors. For example, clinicians could teach parents relaxation techniques at the beginning of PCIT, such as abdominal breathing, progressive muscle relaxation, and guided imagery. Parents may be asked to practice these techniques as part of their homework and may be prompted to use them during session, especially during lengthy clinic time-out sequences. Additionally, it may be helpful to teach parents emotion identification and self-monitoring skills, so they can recognize when they are becoming upset. The use of a rating scale (e.g., 1–10, 10–100) may allow clinicians to check-in with parents about their level of emotional distress. By implementing these techniques in CDI, parents would be equipped to monitor and manage their stress during PDI, increasing the likelihood that parents will be able to effectively and consistently apply discipline procedures in session and at home. It should be noted that this adaptation is most applicable when the caregiver in treatment is the perpetrator of abuse and may not be necessary for all families with CM.

It is our hope that this section on tailoring techniques and adaptations to PCIT can be helpful to clinicians working with families from the CM population. As noted previously, implementation of standard PCIT with trauma-informed protocol tailoring is often the best and most viable PCIT treatment option for families presenting with a history of CM. The following section provides a detailed case study involving a young boy and his foster family who recently completed standard PCIT. Please note that the identifying information for this case has been altered to protect the confidentiality of the family.

Case Study

Presenting Problem

"Jack," a 6-year-old Caucasian male, was referred by his child welfare caseworker to a mental health center for psychological evaluation and possible PCIT services. Accompanied by his aunt and foster parent, Mrs. Smith, Jack presented for assessment with behavior and attention problems related to his abuse and neglect history. During the intake, Mrs. Smith reported that Jack "acts hyper," is "wiry," and does not listen or clean his room when asked. In school, Jack exhibited behavior problems, including disrupting class, destroying school property (e.g., the boys' bathroom, the cafeteria), bullying other children, and staying out of his seat. Mr. and Mrs. Smith had "tried everything" at home to discipline Jack, including time-out and removal of privileges (i.e., taking toys away); but his disruptive behavior persisted both at school and home.

Background Information

Jack and his three older sisters were removed from their parents' home due to neglect 2 years prior to the evaluation and were placed in the custody of foster parents, Mr. and Mrs. Smith. Mr. Smith was Jack's biological paternal uncle, and the couple had taken care of Jack and his siblings sporadically throughout their lives (e.g., purchasing food and clothing). While living with their biological parents, the children lived without electricity at times, and there were holes in the floor and walls of their house. Child welfare workers found needles in the home and reported that it smelled like urine, feces, and marijuana. There was evidence of child sexual abuse perpetrated by their father, and the children had observed their mother engaging in sexual acts with others. In addition, Jack reported that his sisters had touched and looked at his private parts as they were often left alone by their parents. At the time of referral, Jack's biological parents were hiding from authorities and resisting arrest for drug charges.

When the children came to live with the Smith family, Mrs. Smith taught them how to brush their teeth, use toilet paper, and eat appropriate portion sizes. The children often fought, threw feces, and used "ear-piercing screams." At the time of removal, Jack's toileting regressed, and he urinated on things in his room including his mattress and clothes hamper. Although he regained appropriate bathroom behavior, he occasionally regressed when reminded of his father. Jack and his siblings had received individual therapy in the home through child welfare for behavior problems, which had not occurred for the last 6 months due to scheduling difficulty.

Assessment

Parent-Report Measures

Mrs. Smith completed the Behavior Assessment System for Children, Second Edition (BASC-2) parent-report form, the Vanderbilt Assessment Scale, the TSCYC, and the ECBI. On the BASC-2, Mrs. Smith reported significant externalizing problems (e.g., conduct problems, hyperactivity, aggression), adaptive skill deficits (e.g., activities of daily living, social skills), attention problems, and atypicality. Her scores for the ECBI Intensity and Problem Scales were above the clinical cut-off, indicating that Jack displayed frequent and problematic behaviors. On the Vanderbilt Assessment Scale, Mrs. Smith endorsed a significant number of symptoms for Jack in the areas of ADHD, ODD, and Conduct Disorder (CD). Finally, Mrs. Smith endorsed that Jack displayed significant trauma symptoms in the areas of avoidance, intrusions, anger, and arousal on the TSCYC.

Teacher-Report Measures

Mrs. Jones, Jack's Kindergarten teacher, completed the BASC-2 teacher-report form and the Vanderbilt Assessment Scale teacher version. Mrs. Jones reported Jack to be in the clinically significant range on the BASC-2 for externalizing problems (e.g., aggression, conduct problems), atypicality, hyperactivity, and adaptive skills (adaptability, poor functional communication).

Other areas were rated as "at-risk," including school problems, attention problems, and learning problems. In addition, Mrs. Jones endorsed a significant number of symptoms for Jack in the areas of ADHD and ODD on the Vanderbilt Assessment Scale.

Diagnosis

Based on parent and teacher reports of Jack's behaviors, Jack was diagnosed with ADHD, Combined Type, and ODD. Following completion of the assessment, Jack and Mrs. Smith were referred for PCIT services.

Dyadic Parent-Child Interaction Coding System (DPICS)

Jack and Mrs. Smith returned after the intake for another assessment session, which focused on the parent–child interaction. They participated by engaging in play with one another, while the therapist stood behind a one-way mirror. The therapist communicated with Mrs. Smith through a bug-in-ear device, providing instructions for a low demand play situation (child-led play; CLP), moderate demand play situation (parent-led play; PLP), and high demand play situation (clean up; CU). The dyad was coded for 5 min in each situation with a 5-min initial warm up period. Mrs. Smith's verbal statements were coded using the clinical manual for the Dyadic Parent–Child Interaction Coding System-Fourth Edition (DPICS-IV), which are presented in Table 5.

PCIT Treatment

CDI Sessions

Jack and Mrs. Smith completed seven CDI coaching sessions. They were very compliant with special time homework between sessions as they practiced six to seven times each week (see Fig. 4). The only exception was for 1 week when Mrs. Smith was sick and was only able to complete 4 days of special time. Jack increasingly enjoyed the sessions in the clinic and vocalized that he liked special time. He started sitting closer in proximity to Mrs. Smith, making more eye

Table 5 Pretreatment DPICS coding

| Codes	CLP	PLP	CU
Neutral Talk (TA)	32	33	24
Behavior Description (BD)	0	2	0
Reflection (RF)	2	1	2
Labeled Praise (LP)	1	0	0
Unlabeled Praise (UP)	2	0	2
Questions (Q)	13	8	6
Commands (CM)	DC-CO: 10 DC-NC: 2 DC-NOC: 1	DC-CO: 6 DC-NC: 2 DC-NOC: 3	DC-CO: 4 DC-NC: 0 DC-NOC:1
	IC-CO: 1 IC-NC: 0 IC-NOC: 3	IC-CO: 3 IC-NC: 0 IC-NOC: 1	IC-CO: 3 IC-NC: 2 IC-NOC: 1
Negative Talk (NTA)	0	1	1

contact with her, and smiling more during sessions.

Jack's behavior at home reportedly improved during CDI. His ECBI scores, as endorsed by Mrs. Smith, dropped from a 231 at intake to 114 at the final CDI session. His teacher, Mrs. Jones, reported that he was still struggling at school to stay in his seat and listen to her directions. He also had two incidents of property destruction in the classroom. Mrs. Smith reported that Jack was still struggling at home to comply with commands but that other behaviors had improved (i.e., hyperactivity and cleaning his room). Figures 1 and 2 depict the progression of Mrs. Smith's acquisition of Behavior Descriptions, Reflections, and Labeled Praises as well as the reduction of her use of Questions, Commands, and Critical Statements. Mrs. Smith met CDI mastery during the seventh CDI session, and the dyad subsequently started PDI.
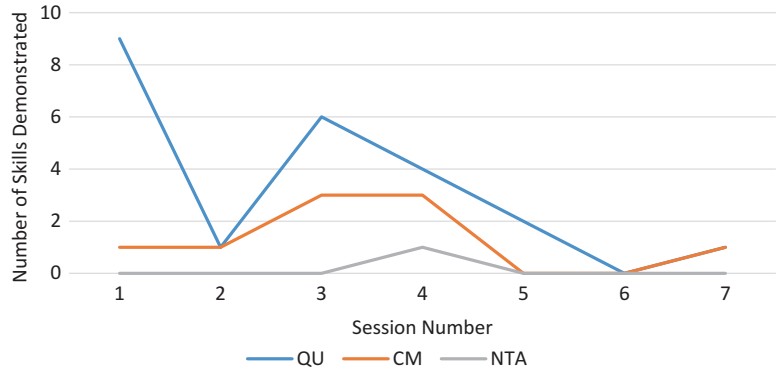
PDI Sessions

During the first four PDI coaching sessions, Jack responded well to PDI. His compliance to commands progressively increased throughout these sessions (see Fig. 5). The backup for the time-out chair—the time-out room—was only used during the first two sessions. His ECBI
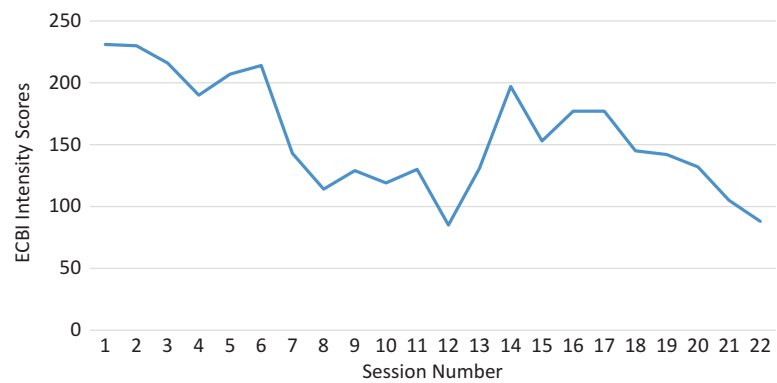
Fig. 1 Progression of "Do" skills during CDI
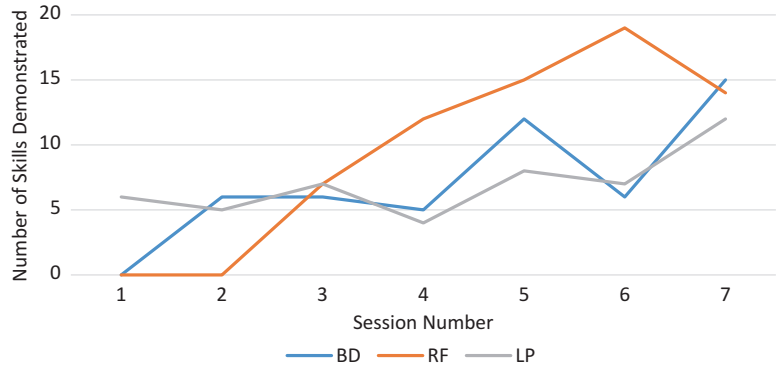
Fig. 2 Progression of "Don't" skills during CDI


Fig. 3 ECBI intensity graph

score also dropped from 114 at the start of PDI to 85 after four PDI sessions (see Fig. 3). Mrs. Smith maintained five to seven special time practices (including compliance practice) per week at home (see Fig. 4).

After four PDI sessions, Jack's case was presented in court. Jack's biological parents had not responded to authorities' request for them to appear in the court hearing to establish their Individualized Service Plan, which would enable them to regain the legal custody rights of their children. Thus, after having continued the case for the allotted amount of time, the judicial system terminated their parental rights. This information was shared with Jack and his sisters in a developmentally appropriate way by Mr. and Mrs. Smith and their child welfare caseworker. Jack's symptoms of disruptive behavior, difficulty

Fig. 4 Homework days per week
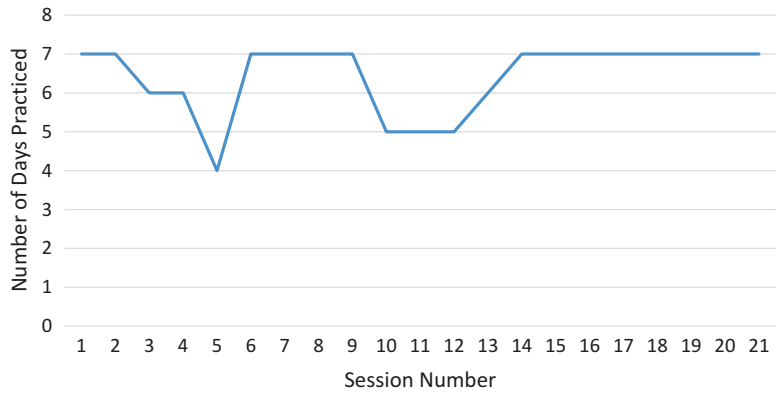
Fig. 5 Compliance demonstrated during PDI sessions
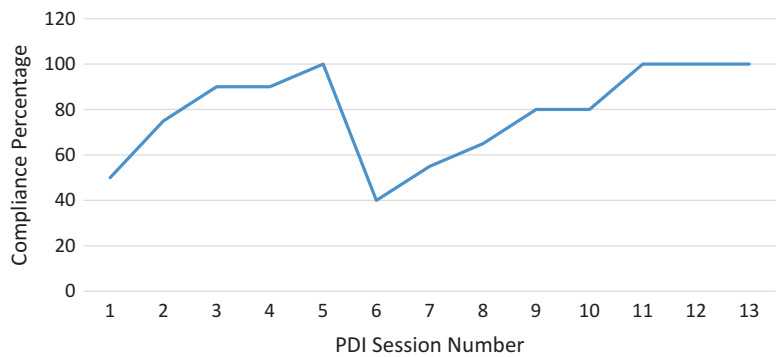
concentrating, and hyperactivity increased again both at home and school during this time. His ECBI score rose to a clinically significant level of 197 (see Fig. 3), and his compliance in the sixth PDI coaching session dropped to 40%.

The therapist helped Mrs. Smith brainstorm ways to support Jack during this time. Their collaboration resulted in a renewed perception of the importance of continuing special time (although Mrs. Smith already had a high rate of practice) and moving slower through the progression of homework for PDI. Although the homework had included running commands throughout the day after the fourth PDI coaching session, they decided to back up briefly to commands provided only during play and for clean up after special time to help support Jack. After 2 weeks of practicing mostly during special time and clean up, Jack's symptoms of disruptive behavior began to drop again as evidenced by his ECBI scores (see Fig. 3). He also became increasingly more compliant (see Fig. 5). Given

this progress, the therapist and mother decided it was time for them to resume the running commands throughout the day for homework. Jack resumed where they had left off in treatment, and his compliance and disruptive behavior continued to reflect progress.

As a House Rule, they selected "No Hurting," to which Jack responded well. By the end of the first week of House Rules homework, he rarely had time-outs in the clinic and at home. By the session appointed for Public Behavior, Jack's behaviors were so under control that he did not need a time-out during their first public practice outing.

Termination

At the time of termination, Mrs. Smith completed the ECBI and endorsed an Intensity Scale raw score of 88 for Jack. She maintained CDI mastery criteria during posttreatment DPICS coding for CLP (see Table 6). Jack demonstrated compliance during all three observation periods in

Table 6 Posttreatment DPICS coding

Codes	CLP	PLP	CU
Neutral Talk (TA)	15	11	13
Behavior Description (BD)	15	1	0
Reflection (RF)	14	3	0
Labeled Praise (LP)	10	3	3
Unlabeled Praise (UP)	0	2	3
Questions (Q)	23	0	0
Commands (CM)	DC-CO: 0 DC-NC: 0 DC-NOC: 0 IC-CO: 0 IC-NC: 0 IC-NOC:0	DC-CO: 5 DC-NC: 0 DC-NOC: 2 IC-CO: 1 IC-NC: 0 IC-NOC:0	DC-CO: 4 DC-NC: 0 DC-NOC: 0 IC-CO: 1 IC-NC: 0 IC-NOC:0
Negative Talk (NTA)	0	0	1

posttreatment DPICS coding. His behaviors had improved at home and school. He was able to comply with the House Rules and rarely needed time-outs in public. His grades were starting to improve at school, and he was talking more about his peers at school. Since Jack's biological parents' rights were terminated, Mr. and Mrs. Smith began the process of adopting Jack and his three sisters. Jack was excited about this prospect.

Challenges

Jack and Mrs. Smith both responded well to PCIT; however, this case was not without its challenges. While the challenges of working with biological parents following an incident of child maltreatment did not apply to this case example, other difficulties arose. First, Jack and his siblings were brought into foster care due to neglect, which included being left alone often and without supervision. Further, Mr. Smith was not able to be involved in PCIT sessions because he had to stay home to provide adequate supervision for Jack's sisters, who struggled when any other caregivers were in charge. Mr. Smith was in contact with the therapist over the phone and attended a separate CDI and PDI Teach session. In addition, Mrs. Smith was a helpful ear for Mr. Smith while he was completing special time.

Jack's experience with neglect also informed the PDI procedure. As mentioned above, "swoop and go" is a good consideration for children with histories of CM. However, in Jack's case, Mrs. Smith felt that her taking the toys and waiting outside the room could cause more anxiety than taking Jack to a room where he could still hear her. It was decided to use the time-out room but to watch Jack's reaction to determine if a "swoop-and-go" technique would garner more positive results. In this case, Jack responded well to the time-out room as a backup.

As mentioned above, the addition of psycho-education relevant to Jack's history was utilized for Mr. and Mrs. Smith. Basic information about CM and disruptive behaviors were presented as well as trauma symptoms to recognize, including re-experiencing of trauma symptoms. Mr. and Mrs. Smith were informed that when the relationship is built up during CDI, children may become more comfortable sharing about their past experiences. The therapist explained how Mr. and Mrs. Smith should handle the situation if Jack reenacted a scene from his past in his play and how they should respond (e.g., acknowledge the child's feelings, reassure the child, and return to play). Beginning and ending special time was also discussed as forming new attachments may cause a child to become more distressed when ending special time.

The main challenge that presented during Jack's PCIT course of treatment was the court intervention in terminating his biological parents' rights. As is often the case for children with a history of CM, disruptions in permanence can result in challenging behaviors. In addition, the disruption in Jack's case came at a critical time in PDI. His disruptive behaviors, as evidenced by Mrs. Smith's endorsement on the ECBI and DPICS observed child compliance, were within normal limits following CDI and a few sessions into PDI. However, these rates greatly increased after the court proceedings. The therapist observed where they were in treatment and had several options to consider: they could return to CDI only until behaviors decreased, they could continue with running commands and risk an increased number of time-outs throughout the

day, or they could find a comfortable place in PDI to pause. Following discussion with Mrs. Smith, it was determined that Jack was responding well to structure and limits, so they would briefly pause with timeouts for play and clean-up situations only. With Jack's increase in challenging behaviors, it would have been difficult to continue using running commands throughout the day. The clinician feared that Jack's timeouts would have increased dramatically in number, which may have affected Mrs. Smith's ability to follow through consistently.

Finally, while Jack's ECBI score dropped significantly over the course of treatment (falling to half a standard deviation below average), the items which remained high on the ECBI were items related to hyperactivity, inattention, and impulsivity. Upon discharge from PCIT services, it was recommended that Mr. and Mrs. Smith follow up with Jack's pediatrician about medication management as psychotropic medications can be a good compliment to behavior management treatment in the reduction of hyperactivity, inattention, and impulsivity symptoms.

Future Research for PCIT with Maltreating Families

The application of PCIT with maltreating families has expanded greatly over recent decades, providing support for its use as well as potential adaptions to better fit the population. However, there are still areas in which PCIT research with maltreated children could progress to better inform clinical practice. First, it is important to investigate PCIT with families who have a substantiated CM report as well as those who are believed to be at risk for CM. The reliance on substantiated reports is believed to underrepresent the percentage of children who actually experience CM (Gilbert et al., 2012), indicating that families in need of treatment may be missed depending on the criteria for inclusion. Still, there may be differences between families with or without a substantiated CM report (e.g., being mandated to treatment) that should be explored with respect to best practices for assessment and treatment.

Second, research should examine whether or not treatment outcomes differ based on the maltreatment type experienced. Current research has either utilized one type of CM (e.g., physical abuse) or has not investigated differences across exposure types. However, research suggests that certain risk factors, outcomes, and parenting practices are linked to particular types of CM (Stith et al., 2009; Wilson et al., 2008). For example, aversive parent behavior better discriminates between physically abusive and nonabusive parents, while parental involvement better discriminates between neglectful and nonneglectful parents (Wilson et al., 2008). Thus, certain aspects of PCIT may be differentially important depending on the type of maltreatment families have experienced (e.g., neglect vs. physical abuse). For instance, it may be more difficult to engage neglectful parents in regular treatment sessions given that they struggle to meet their child's basic needs and likely have a diminished acceptance of their parenting role, requiring additional motivational efforts. Finally, the optimal time-out back-up method to use with older children who have a history of CM is still in need of evaluation and clinical refinement.

Conclusion

Child and family interventions are increasingly emphasizing the value of trauma-informed procedures, which acknowledge and account for the influence of trauma on key areas of child development (Ryan et al., 2017). This advancement requires additional training for providers in all aspects of the child welfare system, including social workers, health care providers, and mental health providers. PCIT provides an evidence-based treatment that incorporates many trauma-relevant factors, including the use of play as a medium for symptom relief, the focus on creating warmth and safety, and the involvement of the caregiver to promote attachment (Milot, St-Laurent, & Éthier, 2015; Ryan et al., 2017). Yet, families with child maltreatment histories present with unique challenges that require brainstorming, consultation, tailoring, and adaptation

to ensure successful PCIT treatment completion and maintenance of skills. Research should continue to investigate PCIT as a trauma-informed intervention in an effort to support clinical practice with these families, and ultimately, to improve long-term child outcomes.

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Parent–Child Interaction Therapy for Military Families: Improving Relationships

Robin H. Gurwitch and Erica Pearl Messer

Abstract

The wars in Iraq and Afghanistan have been fought for more than a decade. During this time, approximately two million children have been impacted by parental deployment(s). The majority of these children are under 8 years of age. Stressors are present during all phases of deployment, with effects seen in all members of the family. Young children often display more challenging behaviors across multiple settings. When parents return home, reconnecting with their children may be difficult and stress in the marital relationship is common. An increase in child maltreatment has been reported in military families. Many of the challenges facing military families are similar to those successfully addressed in civilian families with parent–child interaction
therapy (PCIT). The adaptation of PCIT for military families includes a review of the literature related to families with young children coping with deployment, PCIT Teach sessions, which incorporate military examples and experiences, and coaching with statements and relevance to military families. This PCIT adaptation is being implemented successfully on several bases in the United States.

Why PCIT Is Needed for Military Families

The wars in Iraq and Afghanistan have been fought for more than a decade. Our All Volunteer Force (AVF) is significantly different than those serving at the time of the Vietnam War. Whereas only about 15% of active duty service members (SM) in Vietnam were parents, in today's AVF, close to 47% of active duty service members are parents with an average of two children (Department of Defense, 2010, 2012). Thus far, nearly two million children have been impacted by a service member's deployment(s) (Cozza, 2011). Approximately 42% of military family children are between birth and 5 years with almost half being between the ages of 3 and 5 years and the average number of children is two (Department of Defense, 2015).

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Stressors at All Phases of Deployment

Deployment is defined here as beginning when a service member departs for an overseas combat mission and ending at the service member's stateside return. Reintegration is defined as beginning when the service member has rejoined the family, and extends well beyond the weeks and months following reunification (Creech, Hadley, & Borsari, 2014; deVoe & Ross, 2012). However, throughout all phases of deployment—pre-deployment, deployment, and reintegration (post-deployment)—families experience unique stressors (American Red Cross, 2008; Conforte et al., 2017).

Pre-deployment. Service members may receive orders for deployment weeks before they actually leave. This time is marked by preparations, taking the SM away from their families and from usual family activities and responsibilities. During this time, parents must determine how the responsibilities will be managed during the actual deployment. For example, if the SM was responsible for taking the children to preschool/school, this responsibility will soon be completed by the other parent or another designated adult. Shared parenting will fall to only one parent; for a single SM, the responsibilities will fall to another caregiver. The nondeployed parent may also return to work for the first time, changing time available for the child. Nondeployed spouses may experience a range of emotional reactions, including anxiety, depression, anger, or a family may relocate for the duration of the deployment (Mansfield et al., 2010). While moving closer to other family supports (e.g., grandparents) may be seen as a positive by the nondeployed spouse, this creates a change not only in primary caregivers, but also in childcare programs, schools, peers, and daily activities for the child. Concern over the service member's well-being is heightened. This increases stress as the nondeployed parent adjusts to single parenthood and new responsibilities and challenges. With the change in family dynamics, young children must also adjust to these many changes. Again, reactions to stress may be in the form of behaviors: separation issues, increased irritability, increased externalizing behavior problems, regressive behaviors, and problems with attention and concentration (Baker & Berry, 2009; Chandra, Lara-Cinisomo, et al., 2010; Chandra, Martin, Hawkins, & Richardson, 2010; Chartrand, Frank, White, & Shope, 2008; Flake, Davis, Johnson, & Middleton, 2009; Huebner & Mancini, 2005). Young children, not fully understanding why the SM had to leave, may feel forgotten, abandoned, angry, and distressed. Furthermore, children may sense parental stress and react to this, too. The nondeployed parents may be ill-equipped to understanding and responding to these reactions which can impact relationships.

Reintegration (post-deployment). While there is great joy and relief when a SM returns to the family, there is also a period of readjustment. Readjustments take many forms: adjustments to being together again, adjustments to new routines, and adjustments to growth that has occurred since deployment. For example, a SM may have deployed when his child was 18 months of age. Returning 10 months later, his child is now close to 3 years. There are significant developmental changes that have occurred; the child the SM left is not "the same child" upon his return. SMs are also changed. The SM may return with possible physical injuries, including hidden injuries like Traumatic Brain Injury, and mental health/emotional injuries. SMs may have difficulty transitioning back to family life after being with the unit. Overall, expectations about reintegration may not match the reality of being together after a deployment. Relationships between all family dyads may be strained, making reestablishing connections difficult (Dayton, Walsh, Muzik, Erwin, & Rosenblum, 2014; Lester & Flake, 2013). Finally, as concerns about a re-deployment loom, concerns about the cycle starting again are present.

Impact of Deployment Stressors on Families

Given the numbers of families impacted by deployment and the many stressors associated with all phases of deployment, understanding the

findings associated with these stressors is essential to any quality prevention and treatment services, which are paramount (Obama and The White House, 2011). Deployment takes a toll on all members of the military family. Service members deployed after the 9/11 terrorist attacks are 26% more likely to have stress reactions and psychiatric symptoms or disorders, including Posttraumatic Stress, than those deployed prior to the attacks (Wells et al., 2012). Indeed, mental health issues are the most common complaint among veterans of Operation Enduring Freedom/Operation Iraqi Freedom/Operation New Dawn (Trautmann, Alhusen, & Gross, 2015). The longer the deployment, the greater the likelihood of mental health problems impacting their children (Negrusa, Negrusa, & Hosek, 2014). Stress is also associated with an increase in maltreatment, particularly by the nondeployed spouse (Flake et al., 2009). Overall, the risk for child maltreatment is nearly three-times greater when the service member is deployed (Paris, DeVoe, Ross, & Acker, 2010). This risk further increases with length and number of deployments (Fullerton et al., 2011; Gibbs, Martin, Kupper, & Johnson, 2007). Upon return, the quality of the marital relationship is decreased (Murphy & Fairbank, 2013) and the risk for domestic violence rises (Savitsky, Illingworth, & DuLaney, 2009).

When a parent is deployed, there are significant changes and challenges for the parent/caregiver on the home front. Military parents report parenting stress at a significantly higher level than the national norm (Flake et al., 2009). How well the parent copes with these challenges may signal how well the child will cope. For example, if the nondeployed parent is depressed, there is a high likelihood that this will be mirrored in the child (Lester et al., 2010). Unfortunately, if the adult is struggling with stress of deployment, they may be unaware or less supportive of their child's concerns (Murphey, 2013). The number of behavioral or mental health problems and diagnoses in children of all ages is higher among military children than civilian children (Creech et al., 2014) and higher for children whose SM parent is deployed than the number of diagnoses among children whose SM parent is at home

(Gorman, Eide, & Hisle-Gorman, 2010; Mansfield, Kaufman, Engel, & Gaynes, 2011). Acute stress/adjustment disorders, depressive disorders, and pediatric behavior problems show the sharpest increases during periods of deployment (Mansfield et al., 2011).

When the service member returns home, new challenges await. Marital relationships appear to be negatively impacted by deployment with reports of reduced marital quality and increased intent for separation and divorce (Riviere, Merrill, Thomas, Wilk, & Bliese, 2012). One in four SM are coping with a Traumatic Brain Injury (Savitsky et al., 2009). Increases in PTSD and other psychiatric diagnoses are also greater than the general population (Wells et al., 2012). When PTSD and/or TBI are present, the parent–child relationship is adversely impacted with children showing an increase in negative behavioral outcomes (National Scientific Council on the Developing Child, 2007; Savitsky et al., 2009). Children's reactions seem to be attuned to those of the adults around them with increased strain associated with increased behavior problems (Allen, Rhoades, Stanley, & Markman, 2011). Because deployment(s) affects *every* family member, the Obama administration made the commitment to high-quality services to military families a top national priority (Obama and The White House, 2011).

While children of all ages are impacted by the stressors surrounding the deployment cycle, the youngest children may be particularly vulnerable to a parent's deployment, as attachment issues are a primary issue of development (Lieberman & Van Horn, 2013; Murphey, 2013). It is estimated that over 500,000 military children are less than 6 years of age (Department of Defense, 2012) with the percentage of preschool-aged children being highest for Marine Corps families (Clever & Segal, 2013). During parental deployment, the rate of mental and behavioral health visits for children 3–8 years of age shows an increase compared to the rate of visits when a service member parent is at home (Hisle-Gorman et al., 2015). Hisle-Gorman, Eide, Coll, and Gorman (2014) found that children already diagnosed with Attention Deficit Hyperactivity

Disorder had a 13% increase in mental and behavioral health visits during periods of deployment. Preschool children with a deployed parent are reported to have a greater number of externalizing behavior problems than those who do not have a deployed parent (Chartrand et al., 2008). This age group's well-being may be even more closely tied to parent's well-being than at other times of development (Lieberman & Van Horn, 2013). Should a parent have difficulties with depression, anxiety, or other mental health challenges, the child is more likely to express his or her stress through negative behaviors (Paris et al., 2010). Cassidy and Shaver (1999) suggest that the parent–child relationship for the young child is the lens through which the world is understood. With reunification, problems are seen in the relationship between the SM and the child. Returning parents may be met with confusion, distress, fear, and avoidance in their young child (Baker & Berry, 2009; Blow et al., 2013). Problems with managing tempers and being nurturing toward their children have also been reported (Walsh et al., 2014). Despite these troubling findings, the majority of intervention programs and research efforts that include children have focused on school-aged children and adolescents (Clever & Segal, 2013).

PCIT: Tailoring and Adapting for Military Families

Parent–child interaction therapy (Eyberg, 1988) is an evidence-based treatment that has been found to address many of the issues faced by military families. Studies have consistently found improvements in child behaviors reported by caregivers on standardized measures (Chase & Eyberg, 2008), reductions in parenting stress (Harwood & Eyberg, 2006) and depression (Ho, 2004), and generalization to school settings (Funderburk et al., 1998). PCIT has also shown improvements in the behaviors of untreated siblings (Brestan, Eyberg, Boggs, & Algina, 1997). Recent data suggests PCIT can be effective in reducing some forms of childhood anxiety (e.g., separation anxiety disorder; Choate,

Pincus, Eyberg, & Barlow, 2005). The Kaufman Report (2004) lists PCIT as one of the three best practices for working with children with a history of maltreatment, with recidivism rates of child physical abuse at 2 years post-treatment at less than 20%, which is significantly less than the norm (Chaffin et al., 2004).

Given the research findings related to military children and families, the outcomes of PCIT as seen in Table 1, and the format of the treatment, the PCIT model seemed to be a good match with the needs of military families. Further, PCIT is an inherently flexible intervention that allows for tailoring of the protocol (e.g., changing language to reflect a family's culture and values, using metaphors consistent with a family's world view) in order to meet the specific challenges faced by a particular family or culture without requiring changes in the intervention's structure or core content (Eyberg, 2005). Thus, we tailored PCIT to address the needs of military families who were coping with deployment (Gurwitch, Fernandez, Pearl, & Chung, 2013a, 2013b; Gurwitch & Pearl, 2010).

Table 1 Support for the fit of PCIT with the needs of military families

Issues for military families	Research findings for PCIT
Almost 48% of children 3–5 years	Studies with children 2–7 years
Average number of children is 2	Improvements in untreated siblings
Increased child behavior problems	Improvements in child behavior
Increased behavior problems in school	Improvements in school behaviors
Decreased parent–child closeness	Improved parent–child relationship
Increased parenting stress	Decreased parenting stress
Increased child maltreatment	Reduction in child maltreatment recidivism
Increased TBI	Successful with families with cognitive deficits
Increased depression	Decreased maternal depression
Increased rates of mental health problems	Reductions in child internalizing and externalizing behaviors

Upon deciding to tailor PCIT to best address the needs of military families, we determined to learn more about military life and culture and the specific issues faced before, during, and after deployment. We spoke with military mental health services providers and military experts/researchers on outcomes associated with military families. These discussions included qualitative and quantitative information about issues significantly impacting military families who were referred to behavioral health services or to the Family Advocacy Program (program for military families involved in reports of child maltreatment and/or domestic violence or at risk for same) and issues related to deployment. Based on these discussions and a review of the relevant literature, we considered how we might develop training for PCIT therapists who were working with military families.

Tailoring the Training of PCIT Therapists Working with Military Families

Our next step in training therapists working with military families was to develop a presentation summarizing information about (a) military culture and demographics; (b) stressors during each phase of deployment; and (c) outcome findings with military families. This 90-min presentation was incorporated into a PCIT "Basic Training" workshop for therapists who were working with military families. For example, in military culture, punctuality is extremely important. Therefore, a discussion with therapists serving military families about how they will manage time in order to be as punctual as possible with families and how they would speak with families about treatment sessions that might run late. The intention of the presentation was to provide therapists with information (e.g., about deployment stressors and likely challenges) that would make session check-in times more meaningful and allow for progress and child behaviors to be framed in a culturally sensitive way.

Next, we considered tailoring for the CDI and PDI Teach sessions, including video Teach ses-

sions previously created for work with civilian families (Gurwitch, Funderburk, & Nelson, 2012). In our development of videos for therapists working with military families (Gurwitch, Funderburk, & Nelson, 2012), we included all the core components of the teach session in PCIT protocol (Eyberg & Funderburk, 2011); however, the "father" in the video is identified as a military member and the examples provided describing the parenting skills are specific to military families. For example, in discussing Reflections, the therapist observes that cadences employ the same technique: a line is given and the entire platoon repeats it. Or, using humor when discussing praise, "Labeled Praises work to change behaviors with anyone: your child, your spouse, your mother-in-law and even your dog. OK, it may not work with Drill Instructors or your Sergeant Major." In discussing use of PRIDE skills, we encourage therapists to equate the feeling of these skills feeling "unnatural" with how they felt with basic training or settling into base culture for the first time. Many of the expectations were new and different, but with repeated practice and trying new activities (e.g., attending Family Readiness Groups), they became more comfortable and natural. Using ignoring (e.g., waiting to give attention to a child's behavior until it is positive) is likened to the importance of not being distracted by anything that "takes your eye from the prize" on a mission, but moving quickly when you see the desired result. With PDI, the concept of parents overlearning the skills so they can be used quickly and calmly is similar to overlearning many tasks in the military, from cleaning weapons to rehearsing a mission to learning steps to prepare for deployment. Success comes from consistency and the ability to remain focused even in situations where one may not feel focused or calm. Routine and structure are part of every branch of the military and incorporated into military family life. These principles are very much reiterated throughout PCIT treatment.

The delivery of PCIT also seems ideally suited for military families. The in vivo coaching sessions are designed to help meet mastery goals. PCIT is an extremely transparent treatment, with feedback about progress shared with the parents

at each session. This is very similar to military life where structure and routine are valued (Alfano, Lau, Balderas, Bunnell, & Beidel, 2016) as specific skills and are taught and trained to help service members achieve specific goals. They are provided immediate feedback regarding performance, with assignments given to improve mission readiness and increase likelihood of achieving mission objectives. As one service member remarked to his therapist, "I take orders to do homework very well—I'm in the military!" Service members who prepare for maintaining parent–child relationships during deployment report decreased parenting stress upon their return (Louie & Cromer, 2014). Toward this end, military families receiving PCIT have reported continuing special time homework with their children via Skype or similar communication platforms during deployments making reconnecting less difficult (Gurwitch et al., 2013a, 2013b). The nonmilitary spouse also receives orientation to base life and activities. They are very much a part of every element of their SM's deployment cycle.

Following the foundation of CDI, PDI includes the three cornerstones of consistency, predictability, and follow-through. This phase of treatment is designed to improve parents' abilities to give effective commands (follow orders given), set appropriate limits (importance of structure); implement contingency management; problem-solve discipline situations (problem-solve similar situations); and decrease remaining negative child behaviors (decrease remaining obstacles). All are trained skills for a successful mission—successful graduation in PCIT.

Research Related to PCIT with Military Families

Therapists serving military families have been trained in several branches: Army, Navy, and Marine Corps. Qualitative data are extremely positive, and limited quantitative data are also showing success in military families (Gurwitch et al., 2013a, 2013b). However, challenges remain for greater dissemination and successful

implementation. Funding, as with any programs, is an issue. Bases continue to request PCIT, but mental health funding for such intervention programs have been limited. Attrition rates are frequently an issue with mental health services (Chaffin et al., 2009); however, military families face particular challenges to attending treatment. The average number of moves for military families is nine (Department of Defense Education Activity, 2018); PCIT therapists are reporting that a permanent change of station (PCS) and deployment are the leading reasons for attrition. If there were greater dissemination of PCIT across bases, families could readily continue PCIT at their new base with little disruption in treatment (Gurwitch, 2017). With so many military children and families impacted by deployment, it is important that PCIT, an evidenced-based treatment that can improve many of the problems families experience, be tailored and integrated into military services. As has often been said, "When one family member serves, the entire family serves." For all military families do for our country, they deserve our best.

Case Example

The following case example demonstrates how PCIT was used with a family adjusting to deployment.

"Ben" was a 5-year-old African American boy whose father had been deployed to Iraq on two different occasions. He and his parents, "Private First Class (PFC) Johnson and Mrs. Johnson," were referred for behavioral health services by the father's base physician. PCIT was recommended after the father reported concerns about Ben's increased defiance, temper tantrums lasting over an hour, and increased separation anxiety with both parents.

Both parents attended a 1-h clinical interview where they reported a family history of maternal depression. Mrs. Johnson also has a history of anxiety problems; there was a family history of anxiety in other members of mother's family. Mother reported Ben had been displaying increased separation anxiety that began after

father's first deployment (approximately 3 years prior) and continued during the most recent deployment (approximately 1 year ago). This behavior improved slightly when PFC Johnson returned 5 months prior, but increased after parents informed him of father's re-deployment in the next couple of months. Parents noted that their marriage had been strained as they found themselves arguing over discipline strategies. PFC Johnson admitted that he had little patience for Ben, especially since receiving orders for another deployment, as he had many tasks to complete before leaving. No major medical problems were noted; Ben had a normal birth history and reached developmental milestones within the normal range. Parents reported that his school has been especially supportive of the family, as it serves primarily military families. No behavioral problems were present in the school setting, although they noted mild difficulties when Ben does not "get his way." Parents reported that time-out has been an ineffective discipline strategy because Ben does not remain in the chair nor does he always apologize for his misbehaviors. Mrs. Johnson believed this strategy tended to increase his anxiety. They also reported that removing privileges was sometimes effective. They admitted to spanking on his bottom with a bare hand when Ben was disrespectful on rare occasions.

At this clinical interview, parents completed the Eyberg Child Behavior Inventory (ECBI), the Parenting Stress Index-Short Form, the Beck Depression Inventory, and the Locke-Wallace Short Marital Adjustment Test-Adapted Version.

The ECBI (Eyberg & Pincus, 1999) is a 36-item parent-report measure based on the most commonly reported behavior problems in young children. It has been shown to be highly effective in measuring changes in behavior with treatment (e.g., Schuhmann, Foote, Eyberg, Boggs, & Algina, 1998). The ECBI is comprised of two scales: the Intensity (frequency of each behavior using 7-point scale, with a range of 36–252) and Problem (reflecting the number of behaviors that are upsetting to them, with a range of 0–36). Children are considered to be rated in the clinical range when they receive Intensity Scores greater

than 131 and/or Problem Scores greater than 15. The measure has been shown to have a range of test-retest values of 0.86–0.88, inter-rater reliability values ranging from 0.79 to 0.86, and internal consistency values ranging from 0.88 to 0.95. (Eyberg & Pincus, 1999). Mother's ECBI Intensity Scale raw score was 156 (T score = 61) with a Problem Scale raw score of 30 and father's ECBI Intensity Scale score was 166 (T score = 62) with a Problem Scale raw score of 22; both parents' scores indicated that Ben's problematic behavior was in the clinically significant range.

The Parenting Stress Index-Short Form (PSI-SF; Abidin, 1990) is a 36-item inventory designed to identify parent–child dyads who are experiencing stress and are at risk of developing dysfunctional parenting and child behavior problems. The PSI-SF is a direct derivative of the Parenting Stress Index (PSI) full-length test. It yields a total stress score from three scales: parental distress, parent–child dysfunctional interaction, and difficult child and contains a measure of defensive responding. The test-retest and internal consistency reliability ranges from 0.68 to 0.84 (Abidin, 1990). For the Parental Distress subscale, a parent scoring above the 90th percentile is likely experiencing distress. For the Parent–Child Dysfunctional Interaction subscale, scores above the 75th percentile suggest the parent is coping with difficult behavior, while scores above the 90th percentile suggest potential for child abuse in the form of neglect, rejection, or physical abuse. For the Difficult Child subscale, if a score is at or above the 90th percentile, the child is considered difficult to manage, and if a score is above the 95th percentile, further diagnostic evaluation may be needed to rule-out the presence of significant child psychopathology. At pretreatment, both parents reported scores on the Parent–Child Dysfunctional Interaction subscale and the Difficult Child Subscale in the clinical range; the overall PSI was also above the clinical cut-off.

The Beck Depression Inventory Second Edition (BDI-II) is a valid and reliable measure of the existence and severity of depression in adolescents and adults (Beck, Steer, & Brown, 1996). It contains 21 items each rated on a scale

of 0–3. The 21 items yield a total depression score. Cut-off scores are adjusted based on sample characteristics. At pretreatment, Mrs. Johnson scored a 17 and PFC Johnson scored an 8 on the BDI-II, indicating mild symptoms of depression for mother and no indication of depression for father. The Locke-Wallace Short Marital Adjustment Test-Adapted (LWSMAT; Locke & Wallace, 1959) is a measure of marital satisfaction. It is a widely used 16-item self-report questionnaire. Respondents are asked to rate the extent to which they and their partners agree or disagree on common subjects (e.g., sexual relations, handling of family finances), with additional questions on topics such as how they handle disagreements and how happy they are overall with their relationship (range: very unhappy to perfectly happy). The measure has good internal reliability, test–retest stability, and discriminant validity (Freeston & Plechaty, 1997). Higher scores reflect greater satisfaction with the marriage. Scores below 100 are considered to be indicative of clinically significant marital distress (Christensen & Heavey, 1999; Gottman, 1994). For this case as part of a larger study (Putnam, 2009), with permission of the developers' proxy, one question was added: "When it comes to disciplining the children, we (a) always agree (b) almost always agree (c) occasionally disagree (d) frequently disagree (e) almost always disagree (f) always disagree" (Gurwitch et al., 2013a, 2013b).

Both parents indicated scores in the maladjusted range (89 and 91, respectively) with both reporting they almost always disagree when it comes to disciplining.

At the second assessment session, parents brought Ben in for the observational assessment of their interactions. The Dyadic Parent–Child Interaction Coding System (DPICS-IV) was used for the observational baseline assessment as well as to assess parent skills and progress throughout treatment (Eyberg, Chase, Fernandez, & Nelson, 2014). The structured observations with Ben and his parents took approximately 45 min as each parent was observed separately. Afterward, the therapist gathered information on how typical parents believed the interactions were with Ben.

Mother noted that Ben was much quieter than he is at home. She believed this was due to anxiety with a new situation. Father noted that he thought Ben's behavior was fairly typical.

At the conclusion of the two assessment sessions, it was determined that Ben met diagnostic criteria for Adjustment Disorder with Mixed Disturbance of Emotions and Conduct. Consistent with the goals of PCIT, the treatment goals were to enhance the parent/child relationship, increase Ben's positive attention-seeking behavior, teach parents strategies to be more consistent in discipline and improve his compliance to directions.

Child-Directed Interaction (CDI) Teach session. One week after attending the DPICS observation session, the parents came back for a 1-h didactic on the CDI skills using the military adaptation. During this session, the therapist described the two phases of PCIT, taught each of the PRIDE skills and avoid skills, described when and how to ignore negative attention-seeking behavior, and how to stop the play for dangerous and/or destructive behavior. The 5 min of structured "special time" for practicing the skills at home was explained. The therapist helped the parents determine appropriate toys as well as a good, consistent time of the day to try this daily practice. The parents noted that one concern was father's upcoming deployment. They problem-solved how father may be able to do this from afar via Skype or another web-based medium. The therapist role-played all of the skills with the parents, provided handouts for review, and encouraged the parents to begin trying special time, giving them homework sheets to record their practice. Parents stated that the structure and routine of special time fit well with their military life.

Child-Directed Interaction (CDI) coaching sessions. Mrs. Johnson and Ben attended nine weekly 1-h CDI coaching sessions. PFC Johnson was able to attend only four coaching sessions before his deployment. The ECBI was completed by each parent prior to beginning the session. As per the PCIT protocol (Eyberg & Funderburk, 2011), the therapist checked in with the family and reviewed homework for about 5–10 min. The parents were consistent with homework, with

mother averaging five times per week and father, four each week. Then, the therapist observed from a one-way mirror as each parent played separately with Ben. For the first 5 min of their play time, the therapist coded CDI skills and then identified a specific coaching goal of the session. The therapist then coached each parent for approximately 15 min each session using a bug-in-ear microphone device as the parent and Ben played together; the other parent observed the session from behind the mirror. After PFC Johnson's deployment, coaching lasted 30 min with the mother. During the last 5–10 min of the session, the therapist would review the PRIDE skill progress, the ECBI score graph, and assign homework for the week. Relevant handouts were given for any skill(s) that needed refining. Mrs. Johnson met mastery criteria for CDI skills at the ninth CDI coaching session. Father did not reach mastery before he was deployed to Iraq. However, he continued to do special time via Skype at least two times per week. Parents reported that Ben seemed pleased by this interaction with his father, preparing toys for their "Special Skype Time." Mrs. Johnson reported that special time seemed to help reduce separation anxiety that she had seen following previous deployments. She also felt that the routine of special time also helped her own anxieties.

Teaching Parent-Directed Interaction (PDI) discipline skills. After mastering the PRIDE skills, Mrs. Johnson attended a 1-h PDI teaching session using the military tailoring to learn about discipline skills. She learned about the rules for giving good commands, determining compliance vs. noncompliance, and how to implement an effective time-out procedure when Ben was non-compliant. Based on parents' poor experience with time out in the past, the therapist was careful to highlight differences between this procedure and how time-out had previously been used. Mrs. Johnson role-played the time-out procedure with the therapist and was instructed to continue doing special time at home. She was also instructed that she should *not* practice the time-out procedure at home until she had an opportunity to practice the sequence during a coaching session with support from the therapist.

Coaching Parent-Directed Interaction (PDI) discipline skills. Mrs. Johnson and Ben attended seven PDI coaching sessions. Commands and minding exercises were integrated into the play at each session and CDI homework (and PDI homework when relevant) was reviewed for about 5–10 min during the first few minutes of each session. Following these discussions, the therapist observed from a one-way mirror as Mrs. Johnson and Ben played. The therapist continued to code CDI skills using the DPICS form for the first 5 min of play at each session. Then the therapist coached Mrs. Johnson for approximately 30 min in parent-directed play. As sessions progressed, they moved from simple play commands to "real-life" commands that mimicked some of the challenges faced outside of the therapy sessions, such as transitions (e.g., preferred to less preferred activities), compliance with academic-type tasks, and commands related to cleaning up after his play. The therapist would give the exact words for Mrs. Johnson to use when time out was needed and provided constant coaching when Ben was in the time-out chair so that she would ignore attention-seeking behavior; by the fifth PDI session, Mrs. Johnson had mastered the words for the PDI sequence.

As PDI sessions progressed, the therapist coded PDI skills to help determine which skills needed refinement. Application of the discipline skills throughout the day was taught and Mrs. Johnson learned how to establish House Rules (i.e., no hurting). Finally, they practiced using PDI skills in public. Corresponding homework assignments were assigned. Mrs. Johnson continued to complete an ECBI at the beginning of each session to assess Ben's remaining behavior concerns.

Posttreatment and Follow-up Assessment. Using the standard PCIT termination criteria, the family graduated from PCIT once it was observed that Mrs. Johnson had achieved mastery criteria on CDI and PDI skills, her ECBI Intensity raw score was below 114, and she reported comfort in applying the skills on her own. Her DPICS skills were tracked at each session based on the structured 5-min observations coded at the beginning of each session (see Fig. 1). The PSI-SF and the
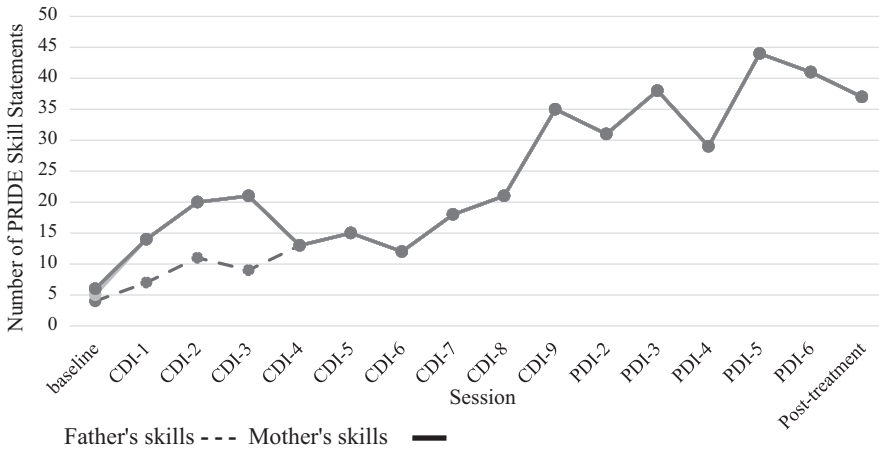
Fig. 1 Total number of praises, reflections, and behavioral descriptions during 5-min coded DPICS observations

BDI-II were also within normal limits at the post-treatment assessment. Mrs. Johnson noted she was pleased with the progress Ben had made and felt more confident in her abilities. She stated that she was excited to have her husband see the changes when he returned from deployment. The therapist advised Mrs. Johnson to continue doing special time daily so that treatment gains would be maintained over time. No further problems were reported. Mrs. Johnson was given a certificate of successful completion of PCIT and Ben was given two matchbox cars as his graduation gift for becoming such a great listener. The therapist and Mrs. Johnson discussed scheduling a booster session for a time after her husband returned from Iraq, with the goal of the booster to strengthen gains made in treatment for the entire family.

PFC Johnson returned from deployment a few months after PCIT had been completed, and the family returned for a booster session 2 months after reunification. PFC Johnson noted that he and Ben had been having special time and that their reunification was "much smoother than after other deployments." Ms. Johnson reported that she had discussed PDI skills with her husband. Although a plan for PFC Johnson to complete PCIT with Ben was discussed, the family learned they would be relocating to another base very soon. At this final session, both parents completed the ECBI, with mother and father reporting Intensity Scale scores within normal limits (112 and 121, respectively). The family was encouraged to maintain the PCIT skills in their next home. Continued special time and PCIT implementation in their new home would likely make this transition easier for the entire family.

Ben's progress was assessed throughout the course of treatment. At initial assessment, the mother's ECBI Intensity Scale score for Ben was 156 (*T*-score of 79), with a Problem Scale score of 30 (*T*-score of 80). These scores reflect significant concerns associated with disruptive behavior, falling in the clinical range. As shown, Ben significantly improved from intake to post-treatment and follow-up on both the intensity and the problem subscales (see Fig. 2).

Changes in child symptoms as reported by PFC Johnson were unable to be assessed due to his deployment. However, mother showed improvement on the BDI-II and the PSI. Although mother's BDI scores were indicating symptoms of mild depression at pretreatment, Mrs. Johnson's BDI score dropped at post-treatment, going from a 17 (pretreatment) to a 19 (mid-treatment) to a 10 at post-treatment. She was not receiving individual therapy during the time of treatment, but indicated she might return to therapy in the future if she felt an increase in depression.
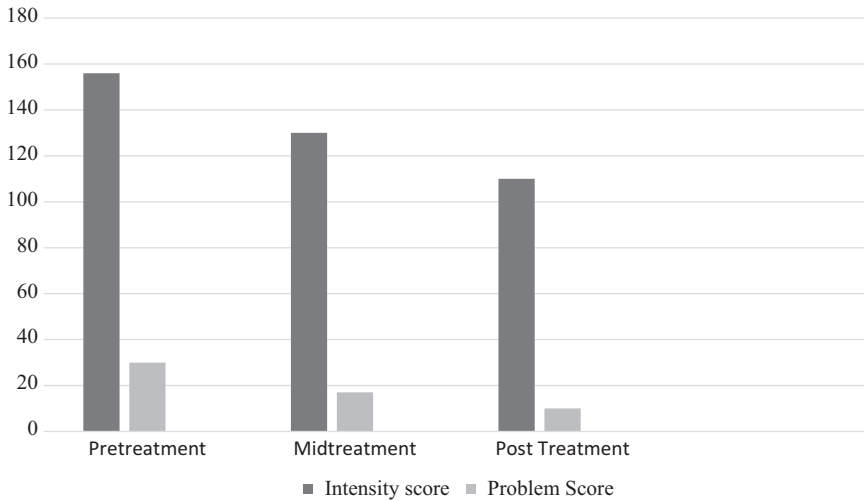
Fig. 2 Changes in mother's Eyberg Child Behavior Inventory (ECBI raw scores)

Table 2 Mother's percentile scores for each subscale of the PSI-SF at Intake and Post-Treatment

Subscale	Intake (%)	Outcome (%)
Total stress	99	60
Parental distress	80	60
Parent–Child Dysfunctional Interaction	99	55
Difficult Child	99	60

On the pretreatment PSI, Mrs. Johnson reported significant stress in all domains, with domains related to the child and overall stress at the 99th percentile. However, at post-treatment, all domains were within normal limits. Mrs. Johnson reported feeling more in control and more positive of her relationship with Ben and for "life in general."

With respect to the Locke-Wallace Short Marital Adjustment Test-Adapted, Mrs. Johnson scored in the maladapted range at pretreatment (89), and she scored in the well-adapted range at mid-treatment (101) and post treatment (106) indicating she and her husband occasionally disagree when it comes to disciplining the children at post-treatment. PFC Johnson reported a score of 104 at the booster session and commented that their marital relationship seemed stronger this time than after past reintegration periods (Table 2).

The Johnson family reported high satisfaction with PCIT. They expressed pride in the changes they observed in Ben and believed that he would be successful in his new school following their move. They noted that PCIT seemed very well-suited for military families as the elements seemed in keeping with the structure, routine, and skills for service members, but "way more positive!" Both expressed a belief that "all families need something like this to help every family member handle deployment better." The therapist thanked the entire family for their continued service to the country and wished them all the best with their next Permanent Change of Station orders.

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The Turtle Program: PCIT for Young Children Displaying Behavioral Inhibition

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Abstract

Stable behavioral inhibition (BI), a temperamental predisposition present in 15–20% of infants and toddlers, is associated with increased risk of developing anxiety disorders in adolescence and adulthood. Within a transactional framework, parent–child interactions and peer relationships have been shown to moderate the developmental progression from elevated, stable BI to social withdrawal to later psychopathology, presenting important targets for prevention and intervention programs. The Turtle Program: PCIT for Young Children Displaying Behavioral Inhibition (Turtle Program) is a multicomponent early intervention program for behaviorally inhibited preschoolers that targets both parent–child and child–peer interactions. The 8-session Turtle Program consists of a group-based adaptation of PCIT and a child social and emotional skills group (Social Skills Facilitated Play). Within the parent PCIT-based component, parents learn skills to increase parental responsiveness and facilitate child approach behaviors within the peer context. In this chapter, the authors describe modifications made to the PCIT protocol to target child BI/anxiety, and provide a case example to illustrate how the intervention works.

Why Adapt PCIT for Children with Behavioral Inhibition?

Behavioral inhibition (BI) is a temperamental predisposition to experience negative affect and/or withdraw in the face of unfamiliar situations, objects, and people. This dispositional phenomenon is present in approximately 15–20% of infants and toddlers (Fox, Henderson, Marshall, Nichols, & Ghera, 2005). Across studies, within the developmental and clinical psychology literatures, the terms "shyness," "anxious withdrawal," and "social reticence" are used almost interchangeably to describe children who appear fearful and wary in the company of unfamiliar others. The temperamental origin of these putatively fearfully motivated behaviors is behavioral inhibition. Children who demonstrate socially wary and reticent withdrawal in the company of others are at an elevated risk for a range of negative social and emotional outcomes across development, including loneliness, low self-esteem, peer rejection, and internalizing problems (Rubin, Coplan, & Bowker, 2009). In particular, high stable BI, social wariness and withdrawal have been found across numerous studies to predict

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the development of anxiety disorders (e.g., Chronis-Tuscano et al., 2009; Hirshfeld-Becker et al., 2007).

Fortunately, not all behaviorally inhibited and anxiously withdrawn children develop anxiety disorders (Degnan & Fox, 2007). For instance, in our longitudinal research, only one-third of children classified as demonstrating stable high BI across infancy and toddlerhood had a current anxiety disorder in adolescence and just over 50% met criteria for a lifetime anxiety disorder (Chronis-Tuscano et al., 2009). And in middle childhood and early adolescence, anxiously withdrawn behavior is known to predict loneliness, negative self-regard, and anxiety in only some youth (e.g., Hymel, Rubin, Rowden, & LeMare, 1990; Rubin, Chen, McDougall, Bowker, & McKinnon, 1995). In an effort to understand *which* children are at greatest risk, researchers have examined moderators that either exacerbate or reduce the strength of the association between BI and later anxiety. Parenting and peer relationships have emerged as key moderators to target in prevention and/or intervention programs to interrupt the developmental progression from disposi-

tionally based BI to psychopathology (Rubin et al., 2009).

The Role of Parents and Peers

Rubin et al.'s (2009) theoretical model of the development of social withdrawal and internalizing problems provides a guiding framework for the transactional relations between BI, parenting, and peer relations (see Fig. 1). Within this model, early childhood BI is reinforced and strengthened by children's reciprocal interactions and relationships with their parents. Children high in BI evoke parental attempts to protect and shield them when they are perceived to be in distress upon encountering unfamiliar situations or people (Hastings, Nuselovici, Rubin, & Cheah, 2010). Over time, parents of inhibited children come to perceive their children as highly vulnerable (Coplan, Reichel, & Rowan, 2009; Mills & Rubin, 1993) and, as a result, respond to them in an overly protective, directive, and controlling manner (Degnan, Henderson, Fox, & Rubin, 2008; Rubin, Nelson, Hastings, & Asendorpf,
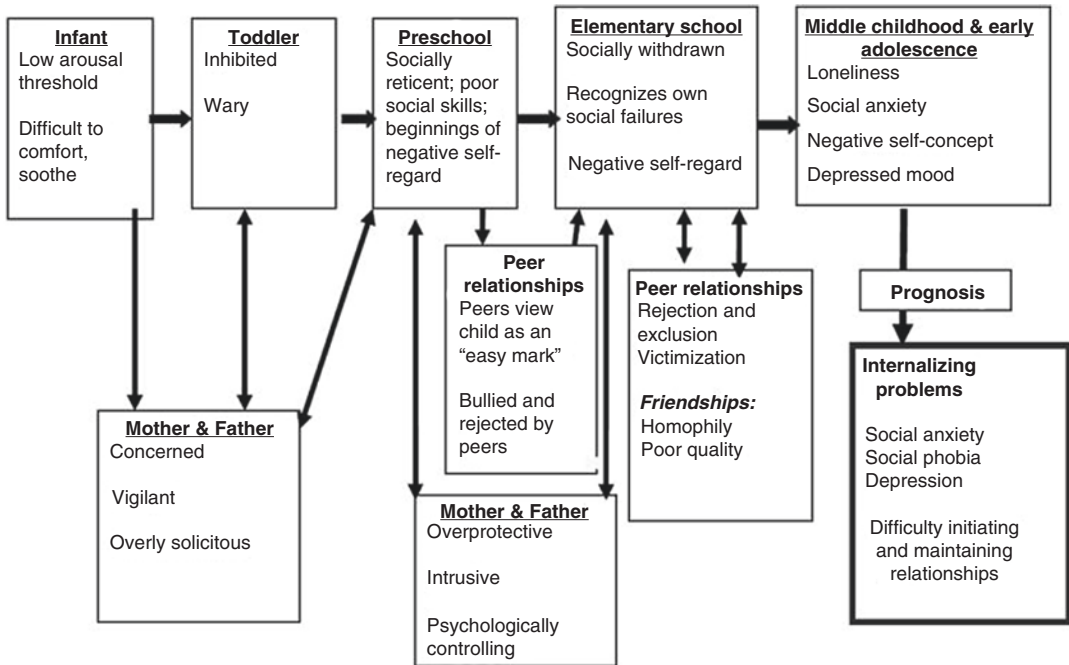

Fig. 1 Social withdrawal: a transactional model. See Rubin et al., 2009, for additional details

1999). For instance, their parents may expect them to become anxious or distressed in certain situations and may either proactively decline putting them in such situations (e.g., gymnastics class, birthday parties) or act for them (e.g., ordering a meal for them) to avoid their anticipated distress. These children thus become overly dependent on their parents and come to believe they are not equipped to deal with such situations on their own (Gazelle & Ladd, 2003). This results in an ongoing cycle of child social wariness and withdrawal and parental overprotection and intrusiveness.

Parenting characterized by low levels of warmth and high levels of control, intrusiveness, and overprotection predicts not only the stability of child BI and anxious withdrawal over time (Booth-LaForce et al., 2012) but also the development of later anxiety (Hudson & Rapee, 2000; McLeod, Wood, & Weisz, 2007). A meta-analysis reported a medium effect ($d = 0.58$) for the association between maternal overcontrol and childhood anxiety, and a larger effect ($d = 0.76$) for social anxiety disorder (SAD) more specifically (Van Der Bruggen, Stams, & Bögels, 2008). Researchers have found that maternal overcontrol moderates the risk for anxiety, such that young children with stable BI who also experience maternal overcontrol were at greatest risk for adolescent social anxiety (Lewis-Morrarty et al., 2012).

Importantly, when parents respond to highly inhibited and socially wary toddlers and preschoolers with appropriate warmth, sensitivity and encouragement to approach new situations and people, their children may be placed on a healthier developmental trajectory (Coplan, Arbeau, & Armer, 2008; Degnan & Fox, 2007; Rubin, Burgess, & Hastings, 2002). This can be particularly difficult for parents with anxiety disorders, who can struggle to engage in effective parenting behaviors in contexts relevant to their anxiety (Murray et al., 2012). For example, Murray et al. (2012) found that parents with social anxiety disorder and generalized anxiety disorder experienced more parenting difficulty when engaged in a disorder-specific parenting task (e.g., child giving a speech)

compared to parents without anxiety. More intensive intervention may thus be needed for these parents to implement adaptive parenting strategies in situations that provoke their own anxiety. Notably, children who are extremely wary and fearful in social company are more likely to have a parent with anxiety and/or mood disorders, with social anxiety disorder being the most common (Rosenbaum et al., 1992).

Rubin et al.'s (2009) model also posits that early childhood BI is a risk factor for social reticence in preschool-aged children. Socially reticent children avoid interacting with peers and therefore do not develop age-appropriate social skills, making them more likely to be rejected, excluded, and victimized than their peers (e.g., Nelson, Rubin, & Fox, 2005). Indeed, increasing trajectories of anxious withdrawal in childhood through early adolescence is predicted by peer rejection, victimization, and the lack of friendship (Oh et al., 2008). Children who are highly anxiously withdrawn have been shown to be less successful in initiating social interactions with peers at a young age and to use less effective interpersonal problem solving skills (e.g., Rubin, 1985; Stewart & Rubin, 1995). These transactional influences of parent, peer, and child behaviors on the development, maintenance, and course of children's BI behavior provide a compelling rationale for intervening with *both* parents and children in treatment to redirect children high in BI off the trajectory to later anxiety disorders (Burgess, Rubin, Cheah, & Nelson, 2005; Hudson & Rapee, 2000; Lewis-Morrarty et al., 2012).

The Value of Early Interventions

Several intervention programs have been developed for young children with anxiety disorders, in line with the developmental psychopathology literature on moderators of risk for anxiety among children. *Being Brave* (Hirshfeld-Becker et al., 2010) is a cognitive-behavioral intervention consisting of up to 20 individual parent-only and parent–child sessions. In a randomized

controlled trial (RCT), children who received *Being Brave* demonstrated a significantly greater decrease in anxiety disorders compared to a waitlist control group, but BI moderated treatment response such that children with BI did not respond as well to the intervention as children without BI. Other intervention programs have adapted *parent–child interaction therapy* (PCIT) for children with anxiety disorders and reported promising results, including PCIT for Separation Anxiety (Pincus, 2005) and *Coaching Approach Behavior & Leading by Modeling* (CALM, Puliafico, Comer, & Pincus, 2012). These PCIT adaptations utilize an individual treatment format, thus there are no peers available for in vivo social anxiety exposures. Moreover, CALM has not yet been examined in a randomized controlled study.

Given that BI is an established risk factor for anxiety disorders, Rapee & Jacobs (2002) developed *Cool Little Kids*, a six session psychoeducation group for parents of young children exhibiting behavioral inhibition, intended to prevent the development of anxiety disorders. This prevention program has been shown to reduce child anxiety disorders in 1- and 3-year follow-up studies compared to a no-treatment control (e.g. Rapee, Kennedy, Ingram, Edwards, & Sweeney, 2010), but no group differences in BI at post-treatment were found.

Another approach is to intervene directly with children with high BI. *Social Skills Facilitated Play* (SSFP) is a child-only group intervention that works with the peer group and not parents (Coplan, Schneider, Matheson, & Graham, 2010). An initial evaluation of SSFP found improved observed social behaviors at preschool compared to a waitlist control group, but teachers reported no differences between the two groups at post-treatment (Coplan et al., 2010).

Given the limits of these programs, namely the limited effects on child BI and limited evidence of generalization to the classroom setting, Chronis-Tuscano, Rubin and colleagues developed the *Turtle Program: PCIT for Young Children Displaying Behavioral Inhibition* (Chronis-Tuscano et al., 2015). Grounded in Rubin's transactional model, the Turtle Program is a developmentally informed, multimodal early intervention program (Chronis-Tuscano et al., 2015) that involves intervening with parents and young children with BI in the peer context. The Turtle Program is a combined adaptation of PCIT and SSFP that simultaneously addresses both parental behavior and peer interactions to reduce risk for anxiety in this population. Since children with high BI often elicit parental overcontrol through their distress and avoidance when entering new situations, which serves to maintain/exacerbate child BI, the Turtle Program intervenes on both the parent and child levels to mitigate risk for later anxiety. This intervention also allows for in vivo therapist coaching while parents practice skills with their young child in the peer context. Research has shown that parenting interventions that require parents to practice skills learned with their children in session are associated with larger effect sizes (Kaminski, Valle, Filene, & Boyle, 2008), thus parenting interventions with a coaching component such as PCIT may provide additional benefits over purely psychoeducational programs.

The Turtle Program is a comprehensive, eight-session, early intervention program composed of concurrent parent and child groups. Treatment groups typically consist of 5–6 families of preschool-aged children, and both parents are encouraged to participate. The parent component is a group-based adaptation of PCIT comprised of three phases; the Child-Directed Interaction (CDI), the Bravery-Directed Interaction (BDI; Pincus, 2005), and the Parent-Directed Interaction (PDI) phases. Sessions consist of psychoeducation and didactic instruction ("Teach" sessions) as well as in vivo coaching of parents practicing skills ("Coach" sessions). The child component is an adaptation of SSFP in which group leaders briefly teach specific social skills each week (e.g., introducing oneself, making friends, expressing emotions) using storytelling and pup-

Table 1 Turtle Program session content

Session	Parent group	Child group	Coaching
1	Psychoeducation	Learning to introduce yourself	Coaching during separation and pick-up
2	CDI Teach	Making eye contact Relaxation (balloon breathing)	Coaching during separation and pick-up
3	CDI Coach	Communicating to keep friends	Individual CDI coaching
4	BDI Teach	Facing your fears (Lizzy the lamb book)	Coaching during separation and pick-up
5	BDI Coach 1	Expressing emotions Group activity: Sharing about oneself game during snack time	Individual BDI coaching: Bravery challenge
6	BDI Coach 2	Dealing with disappointment Group activity: Show and tell	Individual BDI coaching: Show and tell
7	PDI Teach	Working together Group activity: Scavenger hunt	Coaching during separation and pick-up
8	PDI Check-in and Wrap-up	Group activity: Graduation party	Coaching during graduation party

Note. *CDI* child-directed interaction, *BDI* bravery-directed interaction, *PDI* parent-directed interaction. See Chronis-Tuscano et al., 2015, for more details

pets followed by semi-structured play. Group leaders use modeling, reinforcement, and guided participation to scaffold child social interactions with peers. Session content is outlined in Table 1.

The Turtle Program: Research Findings

Chronis-Tuscano et al. (2015) conducted a preliminary randomized controlled trial examining the efficacy of the Turtle Program compared to a waitlist control group in a sample of 41 children aged 42–60 months and their families. Results demonstrated that compared to the waitlist group, children participating in the Turtle Program had a lower likelihood of meeting criteria for a Social Anxiety Disorder (SAD) diagnosis, fewer teacher- and parent-rated anxiety symptoms, lower parent-rated BI scores, and lower Child Behavior Checklist Internalizing scores at posttreatment. Parents of children in the Turtle Program group also had improved observed maternal positive affect/sensitivity at posttreatment compared to the waitlist control group (Chronis-Tuscano et al., 2015). Barstead et al. (2018) further examined the generalization of

treatment effects to the classroom setting. Children participating in the Turtle Program were observed to have an increased frequency of classroom social interactions with, and initiations toward, peers. Teachers also reported a decrease in displays of fear/anxiety, demonstrating generalization of treatment effects to the school setting, despite the fact that no intervention took place at school. Taken together, these findings provide support for the feasibility and preliminary efficacy of the Turtle Program.

We are in the process of evaluating the Turtle Program in a large-scale randomized controlled trial (projected *n* = 150) funded by the National Institute of Mental Health (NIMH). The Turtle Program will be compared to Rapee's *Cool Little Kids*, the "gold standard" but less intensive intervention for young children with high BI, to determine *for whom* multicomponent, intensive intervention is needed.

A multimethod measurement approach is being utilized, including diagnostic assessments of parent and child anxiety disorders, observed parenting and parent–child interactions, parent and child heart rate reactivity and regulation, and observed classroom behaviors. Assessments are conducted at baseline, mid-

treatment, post-treatment, and 1-year follow-up. Importantly, in this trial we will examine factors that moderate (e.g., parent anxiety disorders, child physiology) and mediate (e.g., parenting, child emotion-regulation) treatment effects.

The Turtle Program: PCIT for Young Children with BI

The PCIT manual has been adapted for the Turtle Program parent group in several key ways. First, the Turtle Program has added sessions specifically targeting child BI and anxiety and throughout the intervention includes the application of traditional PCIT skills in situations where children exhibit socially anxious behaviors. Second, although we include a BDI component (as in Pincus, 2005), unlike prior PCIT adaptations targeting anxious children, the Turtle Program incorporates exposure practice with the child peer group during treatment itself so parents can be coached in vivo. Third, the Turtle Program uses a group instead of an individual format and is session-limited (rather than requiring mastery of skills). Fourth, children participate in a concurrent peer group in which they receive training and modeling in social skills, social problem solving, and emotion-regulation strategies. Importantly, the child group also provides the context for social exposures with peers, which is unique to the Turtle Program.

Focus on Child BI and Anxiety

The Turtle Program allows for the therapist to coach parents during separation and dismissal from the child group, a time when parents may be giving attention to anxious behaviors that children may display when they are with unfamiliar child group leaders and peers. Therapist coaching at separation and dismissal involves providing support and encouragement for the parent and assisting the parent in tolerating child distress. In some instances, the therapist may need to be directive and coach the parent in specific

strategies to facilitate separation ("It's time to leave now. Say good-bye and the child group leaders will let us know if they need anything."). At dismissal, parents receive written feedback from the child group leaders about their child's successes in group that day and parents are coached to provide labeled praises for their child's approach (or "brave") behaviors.

The first session in the parent Turtle Program manual is adapted from *Being Brave* (Hirshfeld-Becker et al., 2010) and provides psychoeducation on the etiology and theoretical bases of BI and social anxiety. Therapists provide an overview of the cognitive-behavioral model of anxiety and discuss the behavioral, cognitive, physical, and emotional components in detail. Parents are taught the contributions of temperament, genetics, and parenting behavior to children's anxious behavior. Parents also learn about the negative reinforcement cycle in which avoidance maintains and strengthens anxious behavior. Importantly, therapists normalize parent responses to child anxious behavior and discuss that inhibited children "pull" for parents to protect them and that this is an evolutionary parental response to child distress. This serves two important functions: both to reduce parent guilt and self-blame as well as instill hope that they will learn a new set of parenting strategies to change child anxious behaviors. Therapists encourage parents to start modeling good coping and approach behaviors for their child and assign homework to help parents improve their ability to detect anxiety in their child. This first psychoeducation session provides the rationale for the overall intervention as well as the foundation for later BDI sessions.

In Session 2 (CDI Teach), parents are provided with the rationale for learning CDI skills before focusing on anxious situations in the BDI phase. Therapists discuss the importance of strengthening the positive, supportive parent–child relationship before beginning to change child anxious behavior. A strong, positive relationship will help children accept the limits set during the more challenging BDI phase. Parents learn that the "Do" and "Don't" skills of the CDI result in the parent following the child's lead

rather than taking over, and how being directive can contribute to the child's sense of low self-efficacy and continued child avoidance and anxiety. Children with high BI often pull for their parents to be more directive, and beginning to put the child in the lead during special time shows the child they are capable and supports their autonomy.

During Session 3 (CDI Coach), one therapist coaches parent–child dyads in the CDI skills while the other parent group members observe via a television monitor or one-way mirror. Similar to other group PCIT applications, the other therapist leads the parent group in: coding the CDI skills of the parent–child dyad being observed; a discussion of what they are observing; and in other activities to promote the vicarious learning of group members. Typically, there are some families in which the child has difficulty being in the lead and asks their parent questions to pull for the parent to be more directive (e.g., "What should I draw next?", "Can you build it for me?"). Restructuring parent–child interactions can be disconcerting to inhibited children who are used to their parents taking over the play and parents may express frustration that their child does not enjoy or want to do special time. Therapists discuss that special time can be an exposure activity for some children who do not like change and want parents to be directive, and provide parents with strategies and example verbalizations to keep their child in the lead (e.g., "You are wondering what to draw next."). Parents also learn how to apply CDI strategies in situations when children are anxious (e.g., positive attention for approach behaviors) and are assigned homework to begin generalizing the use of the CDI skills outside of special time when their child is anxious.

Session 4 is the BDI Teach session, in which parents learn the principles of graduated exposure and how to reinforce targeted social behavior. Therapists lead parents in a discussion of how parents' own anxiety can affect their response to child anxiety (e.g., rewarding avoidance). Therapists support parents in developing a hierarchy of feared social situations (i.e., bravery ladders) for their child and provide instruction in

how to reinforce approach behavior and helpful coping skills. Parents are then assigned homework to practice these graduated exposures outside of session with their child and to reinforce successful practice with rewards. The subsequent BDI Coach sessions allow parents to practice the BDI skills during the session and receive therapist coaching in contexts where children experience anxiety.

In Session 5 (BDI Coach 1), parents practice using the BDI skills with their child in an exposure practice ("bravery challenge"). Therapists and parents collaboratively decide on a bravery challenge (e.g., asking another child a question, asking another child to play, saying hello to an unfamiliar adult) and the therapist provides in vivo coaching behind a one-way mirror. The concurrent child group allows for peers to be incorporated in bravery challenges for each child as needed. Children can also practice teacher-oriented bravery challenges with the child group leaders (sharing something about themselves with the "teacher" or giving something to the teacher). While one therapist coaches a parent–child dyad, the other therapist leads the parent group in a discussion of the exposure practice homework, problem solving around any difficulties, and planning the next out-of-session exposure practices according to the fear hierarchy. As parents return to the parent group after the in vivo coaching, the parent group therapist facilitates discussion of how the in-session exposure practice went.

Session 6 (BDI Coach 2) involves a "show and tell" exposure practice. "Show and tell" is a common preschool/kindergarten classroom activity that many children who are socially wary find extremely challenging. Therapists and parents work together to decide on an appropriate goal for each child (e.g., sitting down while showing the item, standing up in front of the group holding the item, saying a few words about the item, saying two sentences about the item). During the in vivo coaching of the parent–child dyads, parents role-play "show and tell" with their child to make sure the goal chosen is the "right level of challenge" and that the child knows what they need to do to earn their reward, and then parents

are instructed to share the bravery goal for "show and tell" with the child group leaders. This provides parents with practice for speaking with their child's teacher about exposure practices within the classroom. In the parent group, the other therapist facilitates discussion of each family's bravery ladder(s), effective rewards, tracking progress, and how the "show and tell" practice went. At the end of the session, the parent group watches the child group's "show and tell" activity via a one-way mirror or television monitor. This session provides a unique opportunity for children to do an exposure practice with their peer group and for parents to observe how their child does after going through the BDI steps of: (1) choosing a bravery challenge goal, (2) role-playing/practicing with their child, and (3) establishing a reward to be given for meeting the goal.

During Session 7 (PDI Teach), therapists lead a discussion on how to differentiate child anxious behavior from oppositional behavior before teaching parents the PDI steps. The parent group manual emphasizes the importance of parents not giving a negative consequence when children refuse to do something because they are anxious. For example, putting a child in time out if they do not say hi to the neighbor is not going to be effective for an anxious child because avoiding saying hi to the neighbor is more rewarding than avoiding timeout. The rules for effective commands and the time-out procedure are explained for parents to use in situations when the child is not avoiding due to anxiety. In addition to the CDI, BDI, and PDI homework assigned at the end of this session, parents are asked to complete a brief questionnaire about their confidence in using the various strategies learned in the group.

In Session 8 (Graduation), therapists lead parents in a discussion of the questionnaire that asks about their confidence in using the skills and help parents to plan for the future. Parents are encouraged to adopt an "anxiety management lifestyle" and to plan ahead for times of transition in which the child's anxiety may escalate. During the latter part of the session, parents join the children in the child group for a "graduation party" consisting of an animal scavenger hunt game that requires talking to peers (exposure practice), a graduation

"ceremony" in which children stand up individually to receive certificates for their bravery, and snacks. Therapists coach parents during the graduation party to use their skills throughout these situations that require children to approach and interact with peers and adults. Parents are also instructed to use the snack time as an opportunity to model good social skills for their children by talking to other parents. Children with elevated BI often have difficulty attending and participating in birthday parties, and the graduation party at the end of the Turtle Program provides an excellent opportunity for exposure practice and reinforcement of approach behaviors in a developmentally relevant social setting.

Intervention Format

The Turtle Program uses a group instead of individual format to allow for parents to practice the skills learned while their children are in a peer context. The availability of the peer group for in vivo social anxiety exposures is unique to the Turtle Program and something that is not available in other early intervention/prevention programs for children with BI or anxiety. Prior research on PCIT provides support for using a group format for parents of preschool-aged children (e.g., Niec, Barnett, Prewett, & Shanley Chatham, 2016). Parents also value the social support they receive from other parents in the group and often express that they appreciate hearing from other parents experiencing similar challenges.

The Turtle Program was designed to be an early intervention/prevention program, and thus has a limited number of sessions. This is in line with other prevention programs for parents of children with BI and/or anxiety disorders (e.g., Rapee et al., 2010). Similar to group PCIT, parents are thus not required to meet mastery before advancing to the next phase of treatment, and coaching time is reduced due to the group format. Sessions are each lengthened to 90 min from the traditional 60 min, which allows time for all families to be coached during the coaching sessions. Parents do not receive in vivo coaching of PDI

skills due to time limitations, but there is time in Session 8 to discuss any challenges that may have arisen during home practice of PDI. Other adaptations of PCIT for children with anxiety have omitted the PDI phase entirely to focus on children's anxiety symptoms (e.g., Puliafico et al., 2012). We decided to include the PDI phase due to the Turtle Program's focus on early intervention and to help address any co-occurring externalizing behavior problems. Oppositional and defiant behaviors are normative in the preschool age group, and providing parents with evidence-based strategies to address behavior problems may prevent children from developing disruptive behavior disorders later and increase parents' confidence in handling a range of challenging behaviors.

Concurrent Child Group

Children receive a modified version of SSFP (Coplan et al., 2010) in the child-only group run concurrently with the Turtle Program parent group. At the beginning of each session, children engage in unstructured free play for 10–15 min while child group leaders observe children's social and non-social activity. Child group leaders use these observations to tailor the program to the individual needs of each child; behaviors are later coded for research purposes. For the next 10 min, children participate in a didactic circle time with group leaders in which social, problem solving and emotion-regulation skills are taught. Didactics are kept brief to be sensitive to the attention span of young children and utilize games and puppets to engage young children in the content. The remainder of the session consists of free play and guided group activities, during which child group leaders systematically reinforce specific social skills (e.g., joining another child's play, asking a question) and facilitate social problem solving. Many children with high BI prefer to interact with adults/teachers than with peers, thus group leaders specifically encourage social interaction with other children. Leaders also use guided participation and systematic modeling during this time, and provide

support when children are exhibiting social anxiety. Group activities, such as show and tell and a scavenger hunt, facilitate exposure to feared situations and children are praised for approach behaviors. Children are also removed from free play during some sessions for PCIT coaching (see Table 1). At the end of each session, parents receive a handout with a brief summary of the session content and one success the child had during group.

Advantages and Challenges in Implementing the Turtle Program

The Turtle Program is a *developmentally grounded, multimodal early intervention* with numerous strengths. During this intervention, young children are placed in the exact social contexts within which they are impaired, such as peer activities regularly done in classrooms like "show and tell" and parties. The Turtle Program provides the opportunity for parents to practice the skills they learn when their children are in these peer contexts and to receive in vivo coaching from the therapists. Children participate in a concurrent child group within which group leaders model and teach social skills, social problem solving, and emotion-regulation strategies. These intervention components are recognized in the research literature to be necessary for an effective intervention for young children at risk of developing an anxiety disorder (see Hirshfeld-Becker & Biederman, 2002).

One challenge of implementing this comprehensive adaptation is that it is quite resource intensive, particularly for a prevention/early intervention program. The Turtle Program involves conducting two concurrent groups (each requiring a group room and each with two therapists/group leaders), as well as the resources needed for group PCIT (television monitor, audio equipment, etc.). Other early interventions for children with elevated BI and anxiety disorders (such as Rapee's *Cool Little Kids*) require fewer resources and less therapist training and therefore could be disseminated more easily. In addition, treatment should not be overly burdensome

beyond what is needed for the population. This challenge is at the heart of an ongoing investigation that our group is conducting, comparing the Turtle Program to Rapee's *Cool Little Kids* to determine *for whom* more intensive treatment is needed.

Case Example

The case example below highlights one family who participated in the Turtle Program in a group with five other families.

"Madeline and her Family"

Madeline was a 45-month-old Caucasian female who had diagnoses of Social Anxiety, Separation Anxiety, and Specific Phobia at pretreatment. Madeline's mother reported that Madeline was shy and anxious around children and adults at her pretreatment assessment. At the last birthday party Madeline attended, it took her 1½ h to warm up and she was "glued" to her mother's side the entire time although she knew all the children in attendance from preschool. Madeline's mother had recently invited an adult friend over to the house, and Madeline hid under the table and cried. At the time of the pre-assessment, Madeline was receiving speech therapy at her preschool for articulation difficulties but was on no medication. Madeline's mother and father both actively participated in the Turtle Program with her and attended eight out of eight sessions.

Madeline clung to her mother and had difficulty separating at the first child group session. The family had been asked to come early to the first session to allow more time to warm up before the group began due to separation difficulties discussed at intake. Madeline, her mother, and a child group leader initially drew pictures and then played with toys while a therapist observed. Then the therapist coached Madeline's mother in separating and a child group leader continued to engage Madeline with toys to help her feel comfortable. It took Madeline's mother several minutes to walk out the door after coaching

began—Madeline's mother gave her hugs and rubbed her back while Madeline clung to her. Madeline cried when her mother left, but quickly recovered and played quietly with the child group leader once her mother left the room. Madeline was also quiet during circle time, but was able to say "hi" as part of the role play with puppets greeting each other.

In the parent group, during the first psychoeducation session, Madeline's father discussed that both he and his wife were shy and that they understood what Madeline was going through. Madeline's father had a current diagnosis of Social Anxiety Disorder, and her mother had a history of Social Anxiety Disorder. Parents both had a high level of verbal participation in the group (often at a quieter volume) despite their own social anxiety symptoms. In CDI, both parents reported that they completed the special time practice with Madeline at home. Madeline's mother appeared nervous before CDI coaching but allowed others to observe her and was able to catch herself asking questions and used several reflections during coaching. By the beginning of the BDI phase, Madeline's mother shared with the group that special time was helping her relationship with Madeline and that Madeline really enjoyed it.

At the second session, Madeline's mother was able to separate more quickly from her at the child group drop off and appeared better able to tolerate Madeline's crying at separation. Madeline stopped crying shortly after mom left. During the group, Madeline asked another girl to play with her, and the little girl played with her throughout the remainder of the group. By Session 3, Madeline exhibited some clinging to her mother but no crying at drop off.

In the BDI phase, Madeline's parents focused her bravery ladder on initiating play and interacting with children. Madeline's parents reported concerns about Madeline's birthday party scheduled toward the end of the group. Madeline's first step on her bravery ladder was walking by her parents' side and not hiding/clinging when new children approached her. Parents had difficulty fitting in regular exposure practice outside of session due to time constraints and they would often

forget to reward Madeline for brave behaviors. Over time Madeline's parents were better able to find regular opportunities to practice during their daily routine, such as practicing standing next to dad instead of hiding behind him when at the dry cleaners.

During the in vivo coaching for BDI in Session 5, Madeline's goal was to wave to another child. Madeline's mother wore the bug-in-the-ear and led the bravery practice for this session (both parents were present). Due to limited coaching time, one parent receives coaching per family in each session, but therapists alternate which parent receives the coaching (e.g., if the mother receives coaching in BDI Coach 1, the father will be coached in BDI Coach 2). Madeline's mother was coached in explaining the bravery challenge to Madeline ("Today your bravery challenge is to wave when another kid comes in the room") and then practicing in a role play with Madeline with the parent acting as the child that Madeline would wave to. Madeline also was told that she could choose a reward from the prize basket after the bravery challenge was completed. The therapist chose a child Madeline did not typically play with for the bravery challenge because the therapists felt she was ready for this. Madeline waved and said "Hi" in both the role play with her mother and during the bravery challenge when the boy entered the room. Madeline's parents gave her several labeled praises for being brave and she danced around the room proudly before selecting her prize from the prize basket.

During the show and tell coaching in Session 6, Madeline's goal was to stand, show, and say one thing about her toy. She was more nervous to do this bravery challenge than her parents predicted, and during the role-play with her parents she insisted on sitting in a chair instead of practicing sitting in a circle on the floor. The therapist coached the parents not to use the chair so that it would be like the classroom set-up, and Madeline refused, whined, and said she could not do it. Madeline's parents were able to stay calm, provide prompts to Madeline and remind her about her reward; eventually, she was able to complete the role play so the goal did not have to be altered. During "show and tell" in the child group,

Madeline raised her hand after the child group leader explained "show and tell" and said she had to use the bathroom. "Show and tell" continued while she went to the bathroom. After she returned, a child group leader modeled "show and tell" and another child volunteered to go again and show his toy. Madeline appeared nervous, playing with her hair while speaking, but she stood up, showed her toy, and said multiple things about her toy. She received several labeled praises from the group leaders and she smiled when she was done.

During PDI Teach, Madeline's parents were quiet but engaged throughout the session. At the end of the session, Madeline's mother expressed concern about following through with each command because Madeline "did not listen" to many commands throughout the day. The therapist explained the importance of following through with every direct command and recommended that parents avoid giving a direct command when possible if they were not able to follow through with a consequence for noncompliance. The therapist related this to how Madeline's mother was consistent with the exposure practices and "following through" with rewards, and Madeline's mother indicated she understood that. Madeline's parents reported no problems practicing the PDI skills at home when discussing homework in Session 8.

In the child group, Madeline remained quiet throughout the groups, but her participation increased as the child group leaders used strategies such as waiting after prompting (instead of moving on and allowing avoidance) and labeled praises for sharing during circle time and playing with other children. As sessions went on, Madeline remained most comfortable with the child that she asked to play with during the second session. Thus, the child group leaders looked for opportunities to facilitate Madeline playing with other group members. In Session 8, Madeline was able to do the animal scavenger hunt during the graduation party and ask other children what their animal was with minimal support from her parents.

At the post-treatment assessment, Madeline no longer met diagnostic criteria for Social

Anxiety, Separation Anxiety, or Specific Phobia, but some sub-threshold symptoms remained. Madeline's mother reported seeing large changes in her daughter socially and stated that her entire family noticed the differences in Madeline's behavior. She also said that Madeline's birthday party went very well and Madeline told her guests "thank you for coming."

At 1 year post-treatment, Madeline's Social Anxiety symptoms remained minimal, Separation Anxiety symptoms decreased further, and no Specific Phobia symptoms remained. Madeline's mother reported that at two recent classmate birthday parties, Madeline needed no warm up time and was running around with the other children throughout the party. Madeline's mother described that Madeline had "really blossomed" since participating in the Turtle Program, making friendships and enjoying socializing.

Discussion

In the case example above, "Madeline" was diagnosed with Social Anxiety, Separation Anxiety, and Specific Phobia disorders at pretreatment, but following treatment, no longer met diagnostic criteria for these disorders and maintained this status at one-year follow up. This family had many strengths: both parents actively participated in Madeline's treatment and completed out of session practice. Although Madeline's parents both had Social Anxiety, they were active during group discussions and also initiated asking the group members for their contact information after the group ended. The peer group context of the intervention allowed Madeline's parents to practice exposures and observe Madeline's success when they implemented the BDI strategies appropriately. The child group afforded Madeline and her mother the opportunity to receive in vivo coaching during separations and for Madeline to have peer interactions scaffolded by child group leaders. The multimodal treatment format of the Turtle Program allowed Madeline to receive intervention on multiple levels, enabling her to make significant progress over a relatively short period of time.

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Parent–Child Interaction Therapy for Children with Developmental Delay and Related Problems

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Abstract

Young children with or at risk for developmental delay have been shown to be at significantly higher risk for behavior problems and other associated problems, including academic problems, peer problems, and parental stress. In recent years, intervention efforts targeting behavior problems have grown exponentially. Parent–child interaction therapy (PCIT) is an early behavioral parenting training intervention that has received increased research and clinical attention as studies have expanded to include children with developmental delay and related problems. In this chapter, we provide an overview of research studies over the past decade examining PCIT for children with developmental delay and related problems, such as intellectual disability, autism spectrum disorder, and conditions that increase risk for disability, such as premature birth and traumatic brain injury. Lastly, we provide a case example using PCIT for a 5-year-old African American female with elevated behavior problems following a moderate traumatic brain

injury, and conclude with a summary of future directions for PCIT for children with or at risk for developmental delay.

The Need for Treatments for Children with Developmental Delay

Developmental delay (DD), defined as a failure to meet developmental milestones (e.g., cognitive, communication, or adaptive), represents a significant public health concern (Rosenberg, Zhang, & Robinson, 2008). Early DD includes disorders such as intellectual disability (ID) and autism spectrum disorder (ASD), and may be associated with conditions that increase risk for disability, such as premature birth and traumatic brain injury (TBI). Young children with DD and associated problems are at significantly higher risk for behavior problems than typically developing children (Feldman, Hancock, Rielly, Minnes, & Cairns, 2000), and their caregivers are equally at risk for experiencing higher levels of parenting stress (Plant & Sanders, 2007). Furthermore, DD and associated problems place children at risk for academic problems (Sonnander & Claesson, 1999) and result in significant economic costs (Baker et al., 2003; Strydom, Romeo, & Perez-Achiaga, 2010). Given these substantial challenges, research on

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the treatment of behavior problems associated to developmental delay by parenting interventions such as parent–child interaction therapy (PCIT, Eyberg & Funderburk, 2011) has expanded. In this chapter, we provide a summary of studies examining PCIT for children with intellectual disabilities and autism spectrum disorder, as well as children born premature and children who experienced a TBI.

PCIT and Intellectual Disability

ID is characterized by significant limitations in cognitive and adaptive functioning, with prevalence estimates of approximately 1% among children ages 2–17 years (NSCH, 2012). Relative to typically developing peers, children with ID are at heightened risk for behavior problems, academic difficulties, peer problems, and difficult parent–child relationships (Eisenhower, Baker, & Blacher, 2005; Pfeiffer & Baker, 1994). In particular, rates of externalizing behavior problems among children with ID are 3–7 times higher than among those without ID (Baker, Blacher, Crnic, & Edelbrock, 2002; Dekker, Koot, Van Der Ende, & Verhulst, 2002; Emerson, 2003), and less than half of children with ID receive adequate mental health care (Dekker & Koot, 2003). These rates are especially concerning given that children with ID have typically been excluded from studies demonstrating the efficacy of parent-training interventions, including PCIT, for child externalizing behavior problems (Bagner & Eyberg, 2007).

PCIT represents an excellent fit for children with ID and their families. Similar to other behavioral parent-training interventions, PCIT is based on the clinical work of Dr. Connie Hanf, who initially conducted parent training for children with DD before expanding her clinical services to typically developing children and their families (Reitman & McMahon, 2013). Additionally, an important theoretical foundation of PCIT is behavioral theory, which is consistent with other intervention approaches demonstrated to be effective for children with ID (e.g., behavioral analysis, incidental teaching, and errorless com-

pliance training; Gavidia-Payne & Hudson, 2002). Despite evidence for the effectiveness of these behavioral interventions for children with ID, PCIT uniquely targets the parent–child interaction as a mechanism to improve child disruptive behavior.

One of the first documented reports of PCIT for children with ID was a case study of a 3-year-old child with moderate ID referred to PCIT for behavior problems and diagnosed with oppositional defiant disorder (ODD; McDiarmid & Bagner, 2005). After 14 sessions of standard PCIT, the child no longer met criteria for ODD, and the child's parent reported significant reductions in externalizing behavior problems and parenting stress, as well as high satisfaction with the intervention. Although no specific adaptations were made to the protocol, the authors described how they tailored PCIT to meet the specific needs of this child with ID. Specifically, the therapists encouraged the parent to use short, concrete, and repetitive verbalizations; to focus on increasing praises and behavior descriptions in the Child-Directed Interaction (CDI) phase of PCIT; to use physical gestures along with verbal praises (e.g., giving a high five) and commands (e.g., pointing) to increase understanding of the desired behavior; and to model correct word use with behavior descriptions to target improvements in vocabulary. Additionally, the therapists emphasized the importance of the child understanding all commands including house rules.

Following the case study, a randomized controlled trial (RCT) documented the initial efficacy of standard PCIT for 30 preschoolers with co-occurring mild or moderate ID and ODD (Bagner & Eyberg, 2007). Based on work in the case study, the authors tailored the mastery criteria for standard PCIT protocol to include reflecting 75% of child verbalizations in the event children with significant language delays did not use at least ten verbalizations during CDI. Findings from this RCT revealed that children who received PCIT displayed fewer and less problematic parent-reported externalizing behavior problems, as well as higher rates of compliance in response to parent commands during parent-directed play and clean-up, compared to

children in a 4-month waitlist control group. Furthermore, parents receiving PCIT used higher levels of positive parenting practices (i.e., do skills: praises, behavior descriptions, and reflections) and lower levels of negative parenting practices (i.e., don't skills: questions, commands, and criticisms) during child-directed play and reported lower levels of parenting stress compared to parents in the waitlist control group. Overall, findings demonstrated the initial efficacy of standard PCIT for children with ID and suggested children with ID respond to PCIT similarly to their nondelayed peers.

In addition to the main outcome findings, a secondary outcome study examined the indirect effect of parenting do skills on the relation between PCIT and language production among children with or at risk for DD and co-occurring clinically elevated externalizing behavior problems (Garcia, Bagner, Pruden, & Nichols-Lopez, 2014). The participants in this study were from the RCT examining PCIT for children with ID (described above) and another RCT examining PCIT for children born premature (described below). Findings demonstrated parent's use of do skills predicted more different-word use in children whose families received PCIT. These findings are especially important considering the high relation between language difficulties and behavior problems (Benner, Nelson, & Epstein, 2002) and suggest that standard PCIT is appropriate for targeting both behavioral and language difficulties in children with or at risk for ID/DD.

In addition to behavioral and language outcomes, a recent study examined the extent to which parental homework completion during PCIT predicted outcomes among children with or at risk for ID/DD and co-occurring clinically elevated externalizing behavior problems (Ros, Hernandez, Graziano, & Bagner, 2016). Findings from this study, which included the same sample as the language study (described above), indicated that higher rates of parent homework completion predicted higher levels of parenting do skills and lower levels of parenting stress, as well as lower levels of parent-reported child externalizing behavior problems. Furthermore, reductions in parenting stress had an indirect effect on

the relation between parental homework completion and child externalizing behavior problems, such that rates of homework completion predicted lower levels of parenting stress, which in turn predicted lower levels of parent-reported child externalizing behavior problems. In summary, studies examining PCIT as a treatment for behavior problems in children with ID have shown promising results with some tailoring of the standard PCIT protocol to meet the family's unique needs and abilities.

PCIT and Autism Spectrum Disorder

Similar to ID, externalizing behavior problems are often comorbid with ASD (Zlomke, Jeter, & Murphy, 2017), a disorder characterized by impairments in social interactions and communication. ASD has increased in prevalence by 30% from 2008 to 2014 (Hansen & Shillingsburg, 2016), with 1 in every 68 children in the United States diagnosed with ASD (Center for Disease Control & Prevention, 2012). In fact, some studies have found that children diagnosed with ASD constitute up to 10% of referrals for disruptive behavior problems (Brookman-Frazee, Taylor, & Garland, 2010).

Behavioral difficulties in children with ASD are often associated with negative outcomes, such as negative parent–child interactions (Solomon, Ono, Timmer, & Goodlin-Jones, 2008), poor social functioning (Sikora et al., 2013), peer problems (Charman, Ricketts, Dockrell, Lindsay, & Palikara, 2015), and increased need for additional services (Durand, 2001). Studies have shown that child disruptive behaviors are bidirectionally related to parenting stress (Baker et al., 2003; Zaidman-Zait et al., 2014). That is, children's disruptive behaviors lead to parenting stress, but parenting stress can also lead to disruptive behaviors. This bidirectionality can contribute to negative parent–child interactions (Solomon et al., 2008) and reduce children's opportunity for social reciprocity and learning appropriate behaviors (Ruble, McDuffie, King, & Lorenz, 2008). Thus, there is a need for interventions to target improvements in parent–

child interactions and reductions in child behavior problems among children with ASD and their families.

Recent studies have shown promise for the use of PCIT for children with ASD and their families. First, a case study series examining the delivery of standard PCIT in an urban community clinic demonstrated improvements in parent-reported child behavior problems and parent–child interactions for a child with ASD and comorbid disruptive behavior disorder—not otherwise specified (Budd, Hella, Bae, Meyerson, & Watkin, 2011). Similarly, findings from a clinical case study by Armstrong and Kimonis (2013) using the standard PCIT protocol for a 5-year-old boy with Asperger's disorder demonstrated decreased parent-reported and teacher-reported child behavior problems, as well as increased parent-reported compliance, following the intervention and at the 3-month follow-up. Most recently, Masse, McNeil, Wagner, and Quetsch (2016), extended research examining PCIT with children with ASD and behavior problems to the home setting using a single-subject design with three participants between the ages of 3 and 4 years. The intervention involved in-room format of parent coaching, where the therapist sat behind the caregiver and quietly provided guidance and feedback with written statements. Consistent with other home-based adaptations of PCIT (Bagner et al., 2015), findings demonstrated moderate to high levels of intervention satisfaction, as well as moderate reduction in general autistic behaviors across assessment points.

Although the clinical applications of PCIT and potential benefits of this intervention for children with ASD are widely documented in the literature (Masse, McNeil, Wagner, & Chorney, 2007), only two RCTs examining PCIT for children with ASD have been published. One study was an examination of PCIT for 5- to 12-year-old males with high functioning autism (Solomon et al., 2008). The inclusionary criterion was adapted to include older children up to 12 years of age because mental age was believed to be more appropriate than chronological age for children with ASD. The PCIT protocol also was tailored to accommodate ASD symptoms. For example, throughout CDI, for children who talked excessively about their limited interests, played in isolation, and/or were excessively controlling, parents were coached to redirect the interaction and praise adaptive social behaviors (Solomon et al., 2008). Findings revealed that PCIT led to decreases in parent report of child behavior problems and atypicality, as well as higher levels of parent report of child adaptability, as compared to a waitlist control group in which children were matched on age, cognitive abilities, and behavioral symptoms. Another RCT conducted by Ginn, Clionsky, Eyberg, Warner-Metzger, and Abner (2015) included an investigation of the efficacy of the CDI phase of standard PCIT for children ages 3–7 years diagnosed with ASD. Results showed statistically significant reductions in child disruptive behavior and improvements in social awareness compared to children in a waitlist control group. Although the intervention was only 8 weeks long, these outcomes were maintained at the 6-week follow-up.

Findings from the previously described open trials and RCTs support the initial efficacy of PCIT in reducing behavior problems in children with ASD while adhering to the core components of the protocol (Ginn et al., 2015; Solomon et al., 2008). However, in order to address the unique challenges associated with ASD (e.g., receptive language delays), studies also have incorporated adaptations to the standard PCIT protocol. For example, Armstrong, DeLoatche, Preece, and Agazzi (2014) reported adapting PCIT using visual supports for a 5-year-old girl with ASD, ID, and epilepsy, whose clinical presentation included limited receptive and expressive communication skills and a history of behavior problems. A visual schedule of the bedtime routine using pictures of the child completing each step was used to help communicate expectations and guidelines for appropriate behavior. Social stories were also used to teach the discipline sequence during the Parent-Directed Interaction (PDI) phase by combining pictures and text to present situations where decisions needed to be made (Gray & Garand, 1993). Parents reported

lower levels of behavior problems post-intervention but higher levels of behavior problems at the 5-month follow-up, although scores remained below the pre-intervention scores.

Similarly, Lesack, Bearss, Celano, and Sharp (2014) reported adapting PCIT for a 5-year-old boy with ASD given the child's severe language delays. Specifically, adaptations included teaching parents in CDI to only reflect vocalizations with appropriate communicative intent, ignore stereotypic vocalizations, and modify reflections to include the emitted vocalizations followed by word(s) associated with the item(s) or action(s). Additionally, parents were taught in PDI to use their child's name as a prompting cue prior to issuing a command and participated in a "teaching phase" for target commands before introducing time-out. The steps of the teaching phase were delivered in succession if the child did not comply within 5 s of each step (i.e., a verbal command combined with a gestural cue, parent modeling the requested action with the verbal command, and a physical prompt with the verbal command). The sit time requirement for time-out was reduced to 60 s (instead of 3 min) with 2 s of quiet and a holding chair was used as the backup time-out procedure instead of a time-out room due to the positive reinforcing nature of being in an isolated room for children with ASD (Lesack et al., 2014; Masse et al., 2007). Results showed increased acquisition of parenting skills and reductions in parent-reported child behavior problems.

Lastly, in a case study by Hansen and Shillingsburg (2016), adaptations were made to both the CDI and PDI phases of the protocol. In CDI, parents were given guidelines and evidence-based strategies for evoking and praising appropriate vocalizations, as well increasing child requests for preferred objects. The mastery criteria for CDI also was modified (i.e., parent was required to meet at least two out of three criteria for positive parent behaviors) due to significant expressive language delays displayed by the children in the study. Similar to the aforementioned study (Lesack et al., 2014), the PDI phase was adapted to include a three-step guided-compliance

sequence, which served as a teaching tool to guide the child to comply.

RCTs and case studies provide evidence of the utility of PCIT in helping reduce behavior problems in children with ASD. However, findings suggest this population may benefit from adaptions to PCIT to address the unique features of the disorder and tailoring to address the heterogeneity of the clinical presentation of ASD (e.g., receptive and/or productive language impairments, circumscribed interests, difficulties with initiating and maintaining social interactions). However, further investigation is necessary in order to establish the need for and efficacy of adaptations of PCIT for children with ASD.

Conditions Associated with DD

In addition to ID and ASD, recent studies have examined the use of PCIT for other conditions associated with DD and with high rates of externalizing behavior problems, including children born prematurely and children who have experienced a traumatic brain injury.

PCIT and Infants Born Prematurely

Premature birth, defined as less than 37 weeks gestational age, affects approximately one in every ten infants born in the United States and represents a significant public health concern (Blencowe et al., 2012). Children born premature are at increased risk for a variety of medical, cognitive, and socioemotional problems, including externalizing behavior problems (Bhutta, Cleves, Casey, Cradock, & Anand, 2002). Early intervention programs for preterm infants typically target associated delays (e.g., language) and include psychosocial support and parent education (Benzies, Magill-Evans, Hayden, & Ballantyne, 2013), but typically do not intervene on externalizing behavior problems (Benzies et al., 2013).

Bagner and colleagues capitalized on the lack of interventions targeting externalizing behavior problems in children born premature and examined preliminary effectiveness of PCIT in a

single-case study with a 23-month-old child (born at 29 weeks gestation and weighing 1020 g), who presented with significant externalizing behavior problems (Bagner et al., 2009). Findings revealed positive changes (i.e., clinical to normative levels) on parent-reported child behavior problems and parenting stress, as well as higher levels of observed parenting skills and child compliance, immediately following 15 weekly sessions of standard PCIT over the course of 4 months and maintained at a 4-month follow-up. In addition to improvements in parent-reported child behavior and observations of the parent–child interaction, the child displayed increased parasympathetic control, suggesting PCIT may help children born preterm improve their own physiological arousal. Although the standard PCIT protocol was used in the case study, the authors described tailoring the intervention similarly to recommendations outlined for children with ID (described above). Specifically, the therapist provided reassurance to the mother about the child's physical well-being and encouraged the child's mother to use gestural cues during PDI (e.g., pointing to a block while saying, "Please give me that block"). As in standard PCIT, mastery criterion for reflections required 75% of the child's verbalizations due to the child's limited expressive language. Also as standard in PCIT, later coaching sessions involved the child's twin brother to provide the mother with support and guidance on how to implement the skills with both children together.

Following the case study, an RCT examined the initial efficacy of standard PCIT (with tailoring described above) for treating behavior problems in 18- to 60-month-old children who were born premature (Bagner, Sheinkopf, Vohr, & Lester, 2010). Findings revealed that mothers of children receiving PCIT reported significant decreases in externalizing, internalizing, and disruptive behavior problems relative to a waitlist control group, and that these improvements were maintained at the 4-month follow-up. Additionally, observations of mother–child interactions during the child-led play suggested mothers who received PCIT interacted more positively with their children, and children who received

PCIT displayed higher rates of compliance compared to mothers and children in a waitlist control group. Lastly, mothers receiving PCIT reported significantly lower levels of lax parenting practices and parenting stress related to their child's challenging behavior compared to mothers in the waitlist control group.

In addition to demonstrating the initial efficacy and feasibility of implementing PCIT for young children born preterm with externalizing behavior problems, two secondary outcome studies examined the relation between a physiological measure of regulation, respiratory sinus arrhythmia (RSA), and treatment response. Specifically, Bagner et al. (2012) found that children with lower levels of baseline RSA demonstrated more improvements in parent-reported externalizing behavior problems than children with higher levels of baseline RSA, suggesting lower levels of emotion regulation were associated with an enhanced treatment response. Similarly, Graziano, Bagner, Sheinkopf, Vohr, and Lester (2012) examined the extent to which changes in parenting skills following PCIT were associated with changes in children's RSA suppression. Specifically, results demonstrated improvements in parenting do skills were associated with improvements in children's post-intervention RSA suppression levels. These findings suggest that parents who use more positive parenting practices have children who show greater improvement in physiological regulation across treatment. Collectively, these studies examining RSA in the context of PCIT are particularly relevant for children born premature given their high risk for displaying regulation difficulties.

Given the well-documented association between prematurity and difficulties with regulatory functions (e.g., physiological, emotional; Lowe, Woodward, & Papile, 2005), another study examined the moderating role of early emotion regulation on intervention efficacy (Rodriguez, Bagner, & Graziano, 2014), as children born preterm with poor emotion regulation are at particular risk for developing and maintaining behavior problems. Specifically, findings revealed an interaction between baseline levels of observed

emotion regulation and group, such that children who displayed poorer capacity for emotion regulation at baseline improved significantly more following PCIT on parent-reported externalizing behavior than children who displayed better emotion regulation at baseline. These findings highlight the importance of assessing children's emotion regulation as results in could help to guide treatment decision-making, particularly for preterm children who exhibit externalizing behavior problems.

PCIT and Pediatric Traumatic Brain Injury

Another condition associated with DD and high rates of externalizing behavior problems in young children is pediatric TBI. TBI is the leading cause of death and disability in children and affects approximately two of every 100 children under age 5 each year (McKinlay et al., 2008). Research has demonstrated increased risk for significant negative consequences, including deficits in behavior, attention, language, cognition, and academic skills, especially for young children (Anderson, Catroppa, Morse, Haritou, & Rosenfeld, 2005). Specifically, adverse effects on behavioral functioning represent one of the most common and persistent consequences (Karver et al., 2012), with as many as 47% of preschool-age children displaying elevated levels of externalizing behavior problems post injury (Chapman et al., 2010).

In addition to the association between injury characteristics (e.g., age at injury) and negative outcomes post-injury, findings suggest that environmental factors, such as family interactions, also have been associated with negative post-injury sequelae. In fact, for young children with TBI, family environment has been found to be one of the strongest predictors of behavioral functioning post-injury (Crowe, Catroppa, Babl, & Anderson, 2012). Despite evidence documenting the important role family environment plays in post-injury child functioning, few interventions have used family-focused approaches to target parent–child interactions and behavior problems in young children with TBI.

In response to the need for interventions for this vulnerable population, Wade and colleagues developed an online parenting skills intervention based largely on PCIT, called Internet-based Interacting Together Every-day, Recovery After Childhood Traumatic Brain Injury (I-InTERACT), to reduce behavior problems following TBI in children between 3 and 8 years of age (Antonini et al., 2014; Wade, Oberjohn, Burkhardt, & Greenberg, 2009). I-InTERACT targets increases in positive parenting skills and consistent discipline techniques and provides parents with training in stress and anger management and information on the cognitive and behavioral sequelae of TBI. To address barriers to care, such as distance to the clinic, time, and access to transportation, InTERACT is administered online and includes a self-guided web session with videos and exercises and synchronous videoconference sessions with the therapist to review progress and provide in vivo coaching during play.

Families have access to ten core sessions and up to four supplemental sessions on the I-InTERACT web site. The core sessions combine training in positive parenting skills and the appropriate use of commands (traditionally taught in PCIT), information about the behavioral and cognitive consequences of pediatric TBI, antecedent behavior management strategies, and training in stress management. I-InTERACT aims to complement consequence-focused strategies with antecedent approaches based on literature to suggest children with TBI, particularly those with damage to the frontal lobes, have difficulty anticipating consequences and learning from their experiences. Furthermore, the intervention includes a focus on stress management to address stress associated with caring for a child with TBI. Similarly, supplemental sessions are available (e.g., marital communication, working with the school, sibling concerns, pain management, and dealing with guilt and grief) to address other difficulties that may be relevant for parents (Wade et al., 2009).

I-InTERACT has been examined via open trial methodology and has been found to be associated with significant improvements in

parenting skills and trends for reductions in the overall number of parent-reported child behavior problems (Wade et al., 2009), as well as high satisfaction with the intervention (Antonini, Raj, Oberjohn, & Wade, 2012). A recent RCT conducted by Antonini et al. (2014) compared the efficacy of I-InTERACT with an Internet resource comparison group (i.e., access to Internet resources on managing brain injury) in increasing positive parenting behaviors and reducing child behavior problems. Findings revealed significantly greater improvements in positive parenting skills (i.e., labeled praises and reflective statements) at post-intervention for families in the I-InTERACT group relative to the Internet resource comparison group. In terms of child behavior, findings did not reveal a significant direct effect of group on child behavior problems. However, income moderated the effect of group on child behavior, such that I-InTERACT predicted significantly lower levels of child behavior problems compared to the Internet resource comparison group but only among lower-income families. Findings for I-InTERACT provide preliminary support for the use of an adapted version of PCIT to target behavioral difficulties and foster a positive parent–child relationships following TBI in young children.

Given promising findings using an adapted version of PCIT with young children with TBI, additional research studies examining PCIT with this population have been conducted. Two case studies examined the use of standard PCIT for improving behavior problems following pediatric TBI. One case study included the examination of standard PCIT for an 11-year-old Caucasian boy with premorbid ADHD following a severe TBI (Cohen, Heaton, Ginn, & Eyberg, 2012). Findings indicated improvements in behavioral outcomes and parental distress associated with the child's behavior. However, it was unclear whether findings would generalize to younger children and children from ethnic and racial minority backgrounds. Thus, another case study (described in detail in the case example below) included the examination of PCIT with a 5-year-old African American girl from an economically disadvantaged family with a moderate TBI and subsequent

clinically significant externalizing behavior problems (Garcia, Barroso, Kuluz, & Bagner, 2016). Tailoring of the standard protocol to meet the unique developmental needs of the child (i.e., limited expressive language by the child) were consistent with research described above (Bagner et al., 2010; Bagner & Eyberg, 2007), such as 75% of child verbalizations meeting mastery criterion for reflections. Additionally, the authors incorporated two school consultations with the child's mother and teacher to develop an individualized behavioral treatment plan with contingent rewards at home and school. Results demonstrated improvements in the parent–child interaction, child inattentive behaviors, and child oppositional behaviors immediately following the intervention, but gains were not maintained at the 6-month follow-up.

To address limitations of previous research (e.g., case study design, limited behavioral changes) and maximize intervention adherence, a recent open trial included the examination of a time-limited and intensive format of PCIT (i.e., delivered twice per week for 5 weeks for a total of ten sessions) for 2- to 5-year-olds with predominantly mild TBI and elevated externalizing behavior problems (Garcia et al., 2018). The authors adapted the PCIT protocol based on evidence to suggest the use of abbreviated (Nixon & Sweeney, 2003) and intensive (Graziano et al., 2015) formats of PCIT may be effective at improving externalizing behavior problems without making changes to the protocol content. The authors proposed that a brief and more intensive format of PCIT would be consistent with other rehabilitation therapies commonly implemented for children with TBI, such as speech, occupational, and physical therapy (Bailes, Reder, & Burch, 2008; Dumas, Haley, Carey, & Ni, 2004; Jones, Drummond, & Vella, 2007). Additionally, the brief and more intensive format may be more appealing to parents who report a sudden worsening in their child's behavioral functioning following the injury with a desire to improve the behavior problems quickly.

Results from the open trial suggested that children receiving the brief and more intensive version of PCIT demonstrated significantly lower

rates of parent-reported externalizing and internalizing behavior problems, as well as higher rates of observed compliance, and that improvements were maintained at the 2-month follow-up assessment (Garcia et al., 2018). In addition to child behavioral changes, findings revealed significant improvements in child performance on working memory tasks and parent report of child executive functioning immediately following PCIT and at the 2-month follow-up assessment. Findings also yielded improvements in observed parenting practices. Following the intervention and at the 2-month follow-up, parents utilized a higher percentage of do skills and a lower percentage of don't skills. These findings provide preliminary evidence that a brief and intensive format of PCIT may be an effective approach to target deficits common and persistent in children with TBI. Although this study is an important first step, further research is needed to replicate and expand these findings in an RCT to determine whether adaptations to the length and intensity of standard PCIT effectively intervene on the unique and complex cognitive and behavioral problems in young children with TBI.

Case Example

"Victoria Miller" was a 5-year-old African American girl who lived with her 4-year-old brother and her biological grandmother and mother. Victoria experienced a moderate traumatic brain injury at 5 years-3 months as the result of a motor vehicle crash. She was referred for a comprehensive psychological assessment by the attending physician at a pediatric TBI and neurorehabilitation clinic 11 months post injury due to ongoing behavioral difficulties. Victoria's mother reported an increase in her daughter's aggression, hyperactivity, and inattention at home and school shortly after the injury. Prior to the TBI, Victoria had never received a psychiatric diagnosis, and her mother denied any previous child behavior problems.

Baseline assessment results revealed clinically significant attentional, oppositional, aggressive, and hyperactive symptoms consistent with attention-deficit/hyperactivity disorder (ADHD), combined presentation, and ODD. She also demonstrated low-average performance on cognitive functioning tasks, with significant impairment in verbal comprehension and visual spatial abilities. Victoria's mother's scores at baseline revealed clinically significant levels of parenting stress, as well as clinically significant levels of depressive symptoms.

Victoria's mother was referred to a psychology clinic to receive PCIT in order to learn effective skills to manage Victoria's externalizing behavior problems and improve her relationship and interactions with Victoria. The family completed 11 sessions of PCIT (i.e., one CDI teach and four CDI coaching sessions, and one PDI teach and five PDI coaching sessions) over 7 months. Although the treatment plan was for the family to attend weekly PCIT sessions, there was a considerable amount of time in between sessions (i.e., ranging from 7 days to 4 weeks) due to reported changes in residence, work schedule changes, and transportation difficulties. In addition, the therapist conducted two school consultations with Victoria's mother and teacher to develop an individualized behavioral treatment program (i.e., Daily Report Card), including behavioral goals (e.g., staying on task) and contingent rewards at school and home. The standard PCIT protocol was tailored as described above and included motivational interviewing to improve parental engagement given Victoria's mother's self-reported depressive symptoms and external stressors.

Immediately following the intervention, Victoria demonstrated clinically significant decreases in parent-reported externalizing behaviors and attention problems at home and school. Victoria's mother demonstrated an increase in her use of child-centered skills and a decrease in her use of commands, criticisms, and questions. She also reported lower levels of parenting stress and depressive symptoms, although depressive symptoms remained in the clinically significant range. At a 6-month follow-up, parent-reported aggressive behaviors and attention problems were in the subclinical range relative to the clinically significant range

at the baseline assessment. Victoria's mother also reported that her daughter had made significant academic improvements by the 6-month follow-up, including improved grades and success in consistently meeting her daily report card goals. At this follow-up, Victoria's mother demonstrated an increase in her use of do skills and decrease in her use of don't skills since the baseline and post-intervention assessments. Finally, the results of the DISC-IV suggested that Victoria continued to meet diagnostic criteria for ADHD, combined presentation, but no longer met criteria for ODD.

Ultimately, standard PCIT for this child with TBI appeared to be an effective approach for improving family functioning and reducing post-injury behavior problems, though further examination is warranted to assess session attendance and maintenance of intervention gains. Families of children with TBI are often considered high risk due to the behavioral, cognitive, and environmental sequela associated with TBI and have unique barriers to successful treatment. As noted above, Garcia et al. (2018) demonstrated promise with a brief and more intensive format of PCIT to address these limitations and target children with TBI and their families.

Conclusions

In summary, DD and associated conditions represent a major concern for families, healthcare providers, and policy makers. With the increasing number of studies documenting biological and environmental factors that are associated with DD and the high rates of associated difficulties (e.g., behavior problems, academic problems, peer problems, and parental stress), the focus on early intervention programs, particularly those targeting behavior problems, has grown in recent years. PCIT is an example of an early behavioral parenting training intervention that has received attention and shown promise as an effective treatment for children with DD and related problems.

Although PCIT studies have generally demonstrated positive findings and highlight a potential avenue for preventing and/or minimizing negative outcomes associated with DD, further research needs to examine whether adaptations are needed for some children, such as those with ASD. Furthermore, it is important for research studies to explore innovative ways to expand the reach of PCIT for children with DD and related problems. For example, the authors are currently conducting an NICHD-funded RCT (R01HD084497) to examine an Internet-delivered version of PCIT for young children with DD who are aging out of early intervention services. Findings from these types of research studies that aim to overcome traditional barriers to effective mental health care can have a significant public health impact on the underserved population of young children with DD and related problems and their families.

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Parent–Child Interaction Therapy for Children with Selective Mutism (PCIT-SM)

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Abstract

Selective mutism is a psychological disorder in which children do not speak to others in certain social settings (e.g., school, daycare) even though they are able to speak in other settings, such as at home with family. Treatment options are often limited for children with this disorder due to the young age of onset, low prevalence rate, and type of problematic behavior displayed by the child (e.g., non-disruptive, lack of speech to clinicians). Parent-child interaction therapy (PCIT) has been adapted to fill this gap and to provide appropriate treatment for children with selective mutism. The current chapter includes a description of the clinical presentation of selective mutism as well as the etiology and maintenance of this disorder. Following a discussion of the need for a lateral extension of the original protocol for this population, the chapter describes the adapted PCIT model, including the altered assessment procedures and treatment phases. Information is also provided about medication use for selective mutism. Finally, future areas for research and clinical development regarding the adapted treatment model are discussed.

Sarah's mother was baffled when she received news from the daycare worker that her daughter had not spoken to anyone in the center since her arrival. It was difficult to imagine how her goofy and chatty girl at home became stone-faced and reserved in daycare. Even though Sarah had always been a bit slow-to-warm-up when introduced to new people, she was open and expressive with her parents and siblings at home. Having experienced her own anxiety, Sarah's mother could understand her daughter's hesitation in new social situations. Still, she hoped that this behavior would change as Sarah grew more accustomed to the new setting and that her daughter would eventually "outgrow" her shyness. Unfortunately, Sarah's silence persisted despite attempts and accommodations made by staff at the center, continuing even as she began Kindergarten. Feeling frustrated and powerless to help her daughter speak at school, Sarah's mother was referred by the teacher to a local psychology clinic. Following a comprehensive evaluation, Sarah was diagnosed with selective mutism (SM)

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and recommended for treatment services to address her lack of speech.

The Need for a Parent–Child Intervention to Treat SM

SM is a psychological disorder in which children do not speak to others in certain social settings (e.g., school or daycare) even though they are able to speak in other settings, such as at home with family. It was originally known as "voluntary aphasia" or "elective mutism" based on the false assumption that defiance or choice motivated the child's refusal to speak in the required social situations (Kussmaul, 1887; Muris & Ollendick, 2015; Tramer, 1934). However, more recent conceptualizations have recognized the lack of motive or agency among children with SM, rebranding the disorder as "selective" and reclassifying it under the anxiety disorders in the recently released fifth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5; American Psychological Association [APA], 2013). Although estimated prevalence rates of less than 1% suggest the rarity of SM (e.g., Bergman, Piacentini, & McCracken, 2002; Viana, Beidel, & Rabian, 2009), this disorder has the potential to cause great impairment in academic achievement, social relations, and mental health functioning (Busse & Downey, 2011; Muris & Ollendick, 2015; Steinhausen, Wachter, Laimböck, & Metzke, 2006). Moreover, without appropriate knowledge of the disorder, parents and teachers often feel helpless in the face of a child's refusal to speak and may unintentionally reinforce these behaviors, which can exacerbate and maintain the lack of speech. As such, treatment for SM is vital to restore the child's communicative abilities and to break the maintaining cycle of avoidance.

In response to this need, parent–child interaction therapy (PCIT) was adapted to treat children with SM (Carpenter, Puliafico, Kurtz, Pincus, & Comer, 2014; Kurtz, 2015). This adapted version of PCIT for selectively mute children (PCIT-SM) utilizes behavioral techniques in exposure situations to decrease avoidance and to promote the child's speech, beginning in the clinic and expand-

ing to other social settings. Although PCIT-SM has yet to be empirically tested using randomized and controlled methods, it has shown initial success for increasing children's verbal responses, such as spontaneous speech (Mele & Kurtz, 2013). This chapter will begin by describing the clinical presentation of SM as well as the etiology and maintenance of the disorder. Following a justification for the lateral extension of PCIT into this population, we will describe PCIT-SM, including the adapted assessment procedures and treatment phases. Finally, future areas for research and clinical development will be discussed.

Clinical Presentation of Selective Mutism

Diagnostic Criteria

The *DSM-5* diagnostic criteria for SM include a "consistent failure to speak in specific social situations… despite speaking in other situations," with the lack of speech not attributable to knowledge or comfort with spoken language (APA, 2013). Although children with SM often speak to their close family members (e.g., parents, siblings) in the home, they do not initiate or reciprocate speech with others (e.g., teachers, classmates, extended family members, strangers) in public settings, such as school or a restaurant. Given that it is normative and developmentally appropriate for children to experience shyness and behavioral inhibition, such as limited speech, when facing new situations, a diagnosis of SM cannot be made during the first month of a new school year (APA, 2013). Children are likely to display increased anxiety and worry when beginning a new school year, but this behavior typically dissipates over time. Additionally, the *DSM-5* specifies that the child's behavior must interfere with "educational or occupational achievement or with social communication" and cannot be better explained by another disorder (e.g., communication disorder, psychotic disorder, autism spectrum disorder; APA, 2013).

Typically, parents report that children with SM interact verbally (e.g., talking, reading, singing)

at home but are unable to speak to their teachers and classmates in school, relying on nonverbal communication of needs. Still, the severity of SM symptoms varies on a case by case basis and may include differing levels of nonverbal communication (e.g., facial expressions, gestures, nodding). Across the continuum, some children may appear "frozen" with limited body movement and facial expressions, while others may utilize nonverbal gestures to communicate needs and even make noises, such as clicking or whistling (Perednik, 2011). For example, one mother reported that her daughter made noises and appeared jittery and energetic in settings where she failed to speak as if the pressure to speak was building and "trying to burst out of her."

Development and Course of SM

The age of onset for SM is most commonly between 2 and 5 years; however, symptoms are often not apparent until children enter the school setting. As such, referral for services and subsequent diagnosis of SM tends to occur later, creating a gap between onset and treatment (APA, 2013; Viana et al., 2009). Although not consistently found, some research suggests that SM is more prevalent in females than males (Leonard & Dow, 1995; Standart & Le Couteur, 2003). Relatively little is known about the persistence and developmental outcomes of SM without treatment. One long-term study suggests that the symptoms of SM either "disappear quite suddenly" in adolescence or slowly improve over time (Steinhausen et al., 2006). Reported complete remission rates for the diagnosis range from 39% to 100%, with more recent, controlled findings of 58% remission in SM symptoms by age 22 (Remschmidt, Poller, Herpertz-Dahlmann, Hennighausen, & Gutenbrunner, 2001; Steinhausen et al., 2006). However, individuals with prior history of SM may suffer from higher rates of psychiatric disorders, even into adulthood, as well as social and academic deficiencies (Remschmidt et al., 2001; Steinhausen et al., 2006).

Comorbidity

Children with SM may exhibit additional internalizing and externalizing problems. High rates of comorbidity have been shown between SM and other anxiety disorders, including social anxiety disorder, separation anxiety disorder, and specific phobia (e.g., APA, 2013; Muris & Ollendick, 2015; Viana et al., 2009). For example, a mother of a 6-year-old girl with SM stated that her daughter exhibited anxiety in other situations, such as eating in public, walking into school, and being near insects. In addition, some children with SM have been found to display controlling, oppositional, and aggressive behaviors although this is less common and consistent (APA, 2013; Viana et al., 2009). However, these internalizing and externalizing symptoms may be difficult to distinguish among children with SM. For instance, a child with SM who refuses to sit on the mat for circle time because of an insect (i.e., specific phobia) is likely unable to articulate his or her concerns to others. As such, the teacher may be unable to figure out the true reason for the child's behavior (i.e., a fear of bugs), inaccurately perceiving the behavior as defiance or opposition. It has also been suggested that children with SM do not exhibit defiance across all settings but, rather, mainly in situations that require speech (Viana et al., 2009).

Etiology and Maintenance of SM

Etiology

As with many psychological disorders, there are multiple factors that are believed to contribute to the development of SM, including genetic, temperamental, environmental, and neurodevelopmental factors (APA, 2013; Muris & Ollendick, 2015; Viana et al., 2009). These features predispose children to be at higher risk for developing SM. First, a family history of SM or other anxiety disorders appears to contribute a genetic predisposition as well as possible environmental effects through behavioral modeling of anx-

ious behavior. Certain parenting behaviors, such as more negativity and control, overinvolvement, and less warmth and autonomy-granting, have been associated with anxiety in children (McLeod, Wood, & Weisz, 2007; Van der Bruggen, Stams, & Bögels, 2008). Moreover, parents of children with SM have been shown to be more protective and controlling than parents of normative children (Edison et al., 2011).

Second, children who later develop SM tend to display certain temperamental features at an early age. They are more likely to be clingy, shy, or behaviorally inhibited with persistent fearfulness and avoidance when confronted with new situations, objects, and people (e.g., Ford, Sladeczek, Carlson, & Kratochwill, 1998; Steinhausen & Juzi, 1996). In addition, the presence of speech problems, such as delayed language development or a communication disorder, as well as neurodevelopmental disorders (e.g., developmental delay, motor difficulties, auditory processing deficits) have been associated with SM (APA, 2013; Muris & Ollendick, 2015). Finally, the prevalence of SM has been found to be higher among immigrant children, which may be due to problems related to acculturation, learning another language, peer rejection, or discrimination (Muris & Ollendick, 2015; Perednik, 2011; Viana et al., 2009).

Maintenance

While it is important to note features that may predispose children for the development of SM, the maintenance of the disorder is especially relevant for treatment. Young children with SM tend to avoid situations that increase their anxiety and distress, specifically those that require speech (Muris & Ollendick, 2015). Their avoidance is often aided by parents and other family members who "rescue" them from these anxiety-provoking situations by either speaking for them or by enabling their reluctance to speak. Ultimately, this avoidance and interference creates a negatively reinforcing cycle in which the child's anxiety is alleviated in the moment, increasing the likelihood that they will not speak in future situations (Kurtz, 2015). One possible scenario of this cycle is exhibited in Fig. 1. Moreover, parents often experience anxiety themselves when their child is placed in an anxiety-provoking situation. This parental anxiety then decreases only when they "rescue" their child. As such, both the child's avoidant behaviors and the parent's rescuing behaviors are negatively reinforced by reducing their anxiety in these encounters (Kurtz, 2015). Even within a classroom, peers of a child with SM may begin to "speak for them" or may explain to others that the child does not talk,

Fig. 1 Example of cycle of Selective Mutism maintenance, based on Kurtz Psychology Consulting PC (2015)
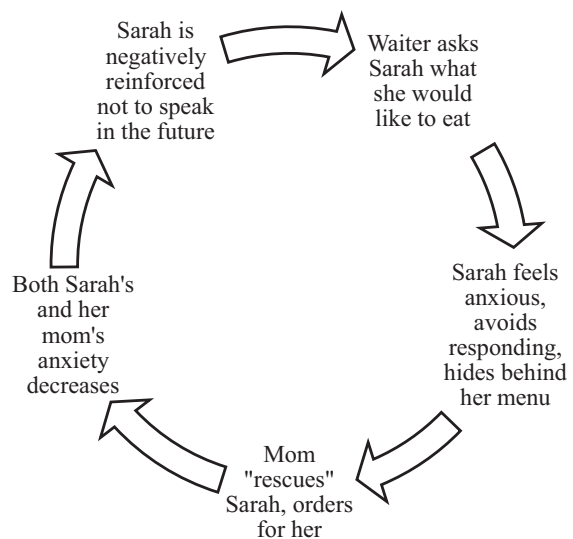
allowing the child to escape speaking demands. In treatment, this cycle of avoidance must be disrupted and substituted with reinforcement for approach behavior to promote speech. Depending on a child's severity of SM, any action that is similar or closer to verbalizing (e.g., whispering, one-word responses) may be considered an "approach" behavior to be rewarded with praise or a small prize.

Why PCIT to Treat SM?

Given the level of social and academic impairment as well as the maintaining cycle associated with SM, treatment is vital to restore speech and help children manage their anxiety. However, treatment options are currently limited for children with SM due to the young age of onset, low prevalence rate, and type of problematic behavior displayed by the child (e.g., nondisruptive, lack of speech to clinicians; Zakszeski & DuPaul, 2017). The absence of targeted treatments for SM highlights the need to extend other intervention models to fill this gap. Traditionally, downward and lateral extensions of efficacious treatments have been performed to apply them to new populations. Downward extensions use interventions originally designed for older individuals (e.g., adults, adolescents) with younger populations by altering the delivery of information to be more developmentally appropriate for the child target audience (Carpenter et al., 2014). For example, more hands-on activities may be integrated to teach concepts, treatment vocabulary may be altered to be more easily understood, and parental involvement may be increased based on the specific needs of younger children. Although downward extension of treatments for anxiety, such as cognitive-behavioral therapy (CBT), have been suggested, they may not be appropriate for children with SM due to the young age of onset. CBT relies on some cognitive tasks (e.g., perspective taking, cognitive restructuring) that children below the age of seven may not be able to perform (Carpenter et al., 2014; Kingery et al., 2006). Moreover, children with SM often will not talk to their clinician at the beginning of treat-

ment, making it even more difficult to conduct CBT activities (Kurtz, 2015).

By contrast, lateral extensions involve the application of interventions designed for similarly aged populations to treat a different disorder than originally intended. The adaptations suggested for PCIT to treat children with SM represent a lateral extension of an efficacious treatment originally targeted for young children with externalizing problems (Carpenter et al., 2014). As a treatment model, PCIT utilizes behavioral principles that are taught to parents and are practiced within the parent–child interaction, which makes it suitable for interrupting the negatively reinforcing cycle that often maintains SM (Kurtz, 2015). However, the standard application of PCIT to children with SM is less appropriate given that the protocol focuses on different behaviors (i.e., promoting compliance), which are not as applicable for this population. As a result, the structure and content of the PCIT protocol have been adapted to address the specific target behavior for children with SM (i.e., speech), while maintaining fidelity to the treatment model as suggested by Eyberg (2005). Table 1 outlines the major similarities and differences between the standard PCIT protocol and the adaptation made for PCIT-SM.

PCIT-SM

Assessment Procedures

One of the major components of the standard PCIT protocol reflected in the adaptation for SM is the reliance on assessment to guide treatment (Kurtz, 2015). Parents of children with SM seeking treatment undergo initial assessment procedures that incorporate semi-structured interviews as well as parent report measures. Other relevant information may include speech and language tests, developmental history, and teacher input. This pretreatment evaluation allows clinicians to confirm a diagnosis of SM and to check for comorbid problems, thus obtaining a full picture of the child's current level of functioning (Kurtz Psychology Consulting PC, 2015). Still, compared

Table 1 PCIT and PCIT-SM similarities and differences comparison

Components	PCIT	PCIT-SM
Agents of change in therapy	Parents	Parents
Use of mastery criteria to move forward in treatment	Yes	Yes
Use of contingency management	Yes	Yes
Coding of parent–child interactions to inform coaching	Yes	Yes
Assessments used through treatment	Eyberg Child Behavior Inventory Dyadic Parent–Child Interaction Coding System	Selective Mutism Questionnaire Selective Mutism Interaction Coding System-Revised
CDI Mastery Criteria	10 Labeled Praises, Reflections, Behavior Descriptions <3 Questions, Commands, Criticisms	10 Labeled Praises, Behavior Descriptions <3 Questions, Commands, Criticisms 80% effective follow-through of CDI Verbalization sequence
CDI "Do's"	Labeled Praises, Reflections, Imitation, Behavior Descriptions, Enjoyment	Labeled Praises, Reflections, Imitation, Behavior Descriptions, Enjoyment, Question End-Arounds, Playing to Child's Strengths
CDI "Don'ts"	Questions, Commands, Criticisms	Questions, Commands, Criticisms, Mind Reading
Second treatment component	Parent-Directed Interaction (PDI)	Verbal-Directed Interaction (VDI)
Inclusion of other individuals	Minimal (e.g., siblings)	Yes (e.g., therapist, graduate/ undergraduate students, teacher, peers, other confederates)
Use of exposure in session	No	Yes
Use of token economy	No	Yes
Practice frequency/intensity	Spaced practice (weekly)	Massed practice (intensive treatments)
Default treatment modality	Individual parent–child	Group
Use of parental questions	Discouraged in CDI and PDI	Discouraged in CDI Required in VDI
Use of therapist modeling of skills for parent in session	Minimal	Extensive

Note: Based on Kurtz Psychology Consulting PC (2015) and Kurtz (2015)

to other psychological disorders, standardized measures of SM are limited.

The Anxiety Disorders Interview Schedule for DSM-IV: Child and Parent Versions (ADIS-IV:C/P; Albano & Silverman, 1996) is a semi-structured interview that assesses a range of child internalizing problems using the *DSM-IV* criteria. The ADIS-IV includes a brief screener module for SM, which takes 5–10 min to administer to parents (Albano & Silverman, 1996). In addition, the Selective Mutism Questionnaire (SMQ; Bergman, Keller, Piacentini, & Bergman, 2008) is a 17-item parent-report measure of child speech across three domains (home, school, public) that has preliminary normative data for children with SM and those without the disorder.

Finally, a related 8-item teacher-report measure of child speech in school is available called the School Speech Questionnaire (SSQ; Bergman et al., 2002). Parent and teacher ratings on these measures should be integrated with the child's developmental history (e.g., age of onset, family history) when confirming a diagnosis at pretreatment. Additionally, the SMQ could be used to track the child's progress throughout PCIT-SM, similar to the use of the Eyberg Child Behavior Inventory (ECBI; Eyberg & Pincus, 1999) in PCIT (Kurtz, 2015). Information about the psychometric evidence for these measures is provided in Table 2.

A behavioral observation task and coding system have also been designed for children with SM

Table 2 Psychometric properties for available measures of SM

Measure	Features	Administration	Reliability	Convergent validity	Treatment sensitivity	Publishers information
The Anxiety Disorders Interview Schedule for DSM-IV: Child and Parent Versions (ADIS-IV:C/P)	Semi-structured interview Symptoms either present or absent	Child and parent reported symptoms	κ coefficient of diagnosis: 0.63–0.80 ICC of symptom severity: 0.78–0.95	Association between ADIS-IV: C/P diagnoses and MASC anxiety factors	No information available	Oxford University Press
Selective Mutism Questionnaire (SMQ)	17-item 4-point scale assessing frequency and distress	Parent-reported symptoms	Internal consistency: 0.65–0.91 3-factor structure	Association with ADIS-IV SM CSR Association with SASC-R total and MASC social anxiety scales	Associated with therapist reports of changes in child speech	Oxford University Press
School Speech Questionnaire (SSQ)	8-item 4-point scale	Teacher report	Internal Consistency: 0.94–0.96	No information available	No information available	Oxford University Press
Selective Mutism Behavioral Observation Task (SM-BOT)	Standardized, unobtrusive behavioral observation	Three 5-minute segments; increasing degree of parental control	No information available	No information available	Associated with increased child verbalizations after brief treatment	Kurtz Psychology Consulting PC

Note: Psychometric information collected from Bergman et al. (2002); Bergman et al. (2008); Carpenter et al. (2014); Letamendi et al. (2008); Mele and Kurtz (2013); Silverman, Saavedra, and Pina (2001); Wood, Piacentini, Bergman, McCracken, and Barrios (2002).
ICC interclass correlation, *MASC* Multidimensional Anxiety Scale for Children, *ADIS-IV SM CSR* The Anxiety Disorders Schedule for DSM-IV: Child and Parent Versions, Selective Mutism module, clinician severity rating, SASC-R Social Anxiety Scale for Children-Revised

based on the Dyadic Parent–Child Interaction Coding System (DPICS; Eyberg, Chase, Fernandez, & Nelson, 2014), which was developed for PCIT. The SM Behavioral Observation Task (SM-BOT; Kurtz, 2008) is a baseline parent–child task that includes five segments (see Table 2). During the first phase, the parent and child play alone in a clinic room while being observed by the clinician through a one-way mirror, similar to the Child-Led Play (CLP) portion of the DPICS. Next, a stranger enters the clinic room and engages with the parent and child using the PCIT-SM "Do" skills, asking one forced choice question to the child at the end of the segment. These two situations are repeated in an A-B-A-B design, with the final segment being a "faux testing" situation that simulates oral and

reading tests in school (Carpenter et al., 2014; Kurtz, 2008, 2015; Kurtz Psychology Consulting PC, 2015). The SM-BOT allows the clinician to observe the child's natural speech pattern with the parent, to observe the parent's role in maintaining SM, and to assess the child's willingness to speak to an unfamiliar person, serving as baseline data for the family (Carpenter et al., 2014). Preliminary data on the SM-BOT suggest that children with SM talk significantly more in the presence of just their parent (i.e., the first segment), but their likelihood of responding to a stranger increases over time (e.g., from the first to the second forced choice question; Kurtz, 2015).

In PCIT-SM, parent and child behaviors are coded at this pretreatment observation and throughout treatment as parents work towards

reaching the mastery criteria. Adapted from the DPICS, the Selective Mutism Interaction Coding System-Revised (SMICS-R; Kurtz, Comer, & Masty, 2007) is used to classify adult and child verbalizations into categories. Although some of the codes overlap with the DPICS scheme (e.g., reflection, labeled praise, behavior description), the SMICS-R differentiates questions based on type and focuses more on the child's verbal response to the adult during an interaction (Kurtz, 2015). As such, the SMICS-R focuses more on the child's verbal responses to prompts rather than their compliance to commands, which is the emphasis of the DPICS scheme and the original PCIT protocol. For example, if a parent were to ask the child "Do you want to play with Legos or dolls?" this would be coded as a forced choice question (Q-FC). The child's response to this question could range from a verbal response (CV), a verbal attempt (VA), noncompliance to the prompt (NCV), or pointing (PT). Initial research suggests that anxious children are more likely to respond to some prompts (e.g., direct command to speak, forced choice and open-ended questions) than others (e.g., indirect commands, neutral talk; Kurtz, Comer, Gallagher, Hudson, & Kendall, 2013; Masty, Kurtz, Tryon, & Gallagher, 2009). Table 3 presents an overview of the major codes in the SMICS-R.

Child-Directed Interaction (CDI)

Mastery Criteria

Consistent with the original PCIT protocol, the first phase of PCIT-SM is CDI, during which parents are working towards mastery of the PRIDE skills. Given that children with SM often do not talk at the beginning of treatment, parents are only required to have ten labeled praises and ten behavior descriptions along with fewer than three questions, commands, and criticisms. An additional mastery requirement for parents in PCIT-SM is 80% effective follow through of a "CDI sequence," which is defined as parents using either a labeled praise or a reflection after

Table 3 Major codes of the Selective Mutism Interaction Coding System-Revised (SMICS-R)

Person	Code	Description	Example
Parent	YNQ	Yes/no question	"Do you want the blue block?"
	FC	Forced choice question	"Do you want the blue block or the red block?"
	QEM	Question about emotions, motivations, or thinking of the child	"How does that make you feel?"
	QUK	Question with unknowable answer	"How does that make John feel?"
	RFQ	Reflective question	CHILD: "My favorite color is green" PARENT: "Your favorite color is green?"
	PNG	Pointing question	"Where should I put that puzzle piece?"
	BD	Behavior description	"You're drawing the ocean blue"
	RF	Reflection	CHILD: "My favorite color is green" PARENT: "Your favorite color is green"
	ACK	Acknowledgement of child's verbal or nonverbal communication	CHILD: "My favorite color is green" PARENT: "Okay"
	UP	Unlabeled praise	"Great job"
	LPV	Labeled praise for verbal behavior	"Great job using your words"
	LPNV	Labeled praise for non-verbal behavior	"Great job coloring your picture"
	DC	Direct command	"Please hand me the blue block."
	DCV	Direct command to verbalize	"Please tell me where the blue block is."
	IC	Indirect command	"Hand me the blue block, okay?"
	ICV	Indirect command to verbalize	"Tell me where the blue block is, okay?"
	NT	Negative talk	"Don't climb on the table."
	NTV	Negative talk—verbal	"Don't talk right now."

Table 3 (continued)

Person	Code	Description	Example
Child	CV	Child verbal answer	PARENT: "Do you want the blue block or the red block?" CHILD: "The red block."
	YN	Verbal yes/no	PARENT: "Do you want the blue block?" CHILD: "Yes."
	VA	Verbal attempt	PARENT: "Do you want the blue block?" CHILD: "Spff." PARENT: "What?" CHILD: "Sure."
	NS	Nonspeech verbalization	PARENT: "Do you want the blue block?" CHILD: "Ruff-ruff."
	SS	Spontaneous speech	"Where does this puzzle piece go?"
	SVA	Spontaneous verbal attempt	CHILD: "Buba." PARENT: "What?" CHILD: "Blue block."
	SNS	Spontaneous nonspeech verbalization	"Bow-wow!"
	HD	Head gesture	PARENT: "Do you want the blue block?" CHILD: (nods)
	CO	Compliance	PARENT: "Please take the blue block." CHILD: (takes the blue block)
	NC	Noncompliance	PARENT: "Please take the blue block." CHILD: (take the red block)
	NCV	Noncompliance to a prompt for verbalization	PARENT: "Do you want the blue block?" CHILD: (does not respond after five seconds)

Note: Based on Kurtz et al. (2007) and Kurtz Psychology Consulting PC (2018)

every time the child speaks (Kurtz, 2015). For this sequence, using a labeled praise or a reflection is considered appropriate as these skills are believed to be equally reinforcing for the child in PCIT-SM, diverging from the original PCIT protocol (Kurtz, 2015). These mastery requirements ensure that parents "overlearn" the PRIDE skills to assist generalization to other settings and that children begin to receive positive reinforcement for speaking.

PRIDE Skills

The CDI phase uses similar "Do" and "Don't" skills compared to the standard PCIT protocol, but the skills focus on the child's speech (e.g., labeled praise for talking) rather than the child's compliant or appropriate behavior (e.g., labeled praise for using gentle hands; Kurtz, 2015). This change is reflected in the SMICS-R as different codes are assigned to labeled praises of verbal and nonverbal behavior (LPV and LPNV, respectively; Kurtz et al., 2007). PCIT-SM has additional "Do" skills during CDI: (1) the use of "question end-arounds" to find ways to avoid asking questions and (2) focus on playing to a child's strengths by including activities that he or she enjoys. For example, to avoid asking a question, the parent may say "point to your favorite color," which allows the child to respond without speaking. In standard PCIT, this phrase would be coded as a command and would be discouraged during CDI; however, PCIT-SM focuses less on compliance and more on reinforcing approach behaviors. Avoiding "mind reading" or anticipating what the child wants is a new "Don't" skill that has been added for PCIT-SM, as this behavior tends to reduce the demand for the child to verbally communicate (Kurtz, 2015; Kurtz Psychology Consulting PC, 2015). These PRIDE skills are utilized in PCIT-SM to increase warmth in the parent–child interaction and, most importantly, to provide positive attention for every verbalization or approach behavior a child makes in session.

Verbal-Directed Interaction (VDI)

In PCIT-SM, CDI continues until children appear ready to be prompted to speak or to use their "brave voice" at which point treatment enters the second phase, known as Verbal-Directed Interaction (VDI; Kurtz Psychology Consulting PC, 2015). For example, therapists and other staff may ask the child "probe" questions across sessions to see if he or she will respond. Once a child verbally responds to these prompts, he or she may begin the second phase of PCIT-SM. This phase is analogous to the parent-directed interaction (PDI) phase in the standard PCIT protocol; however, VDI focuses more on generalization of speech to new environments and people using exposure tasks. In VDI, questions or commands are provided to prompt children to verbalize, increasing the opportunity for them to receive positive reinforcement for talking (Kurtz Psychology Consulting PC, 2015). Similar to PDI, VDI includes specific "Do" and "Don't" skills as well as an effective sequence to prompt the child's speech.

VDI Dos and Don'ts
In addition to the three CDI skills (i.e., labeled praise, reflection, behavior description), parents and other adults are encouraged to use either forced choice or open-ended questions with the child, to provide direct prompts to talk, and to wait 5 s for the child's response (Kurtz Psychology Consulting PC, 2015). In PCIT-SM and SMICS-R, questions are divided into three types based on the child's response options: yes/no, forced choice, and open-ended. For example, a parent who asks a child "Do you want any candy?" is using a "yes/no" question as these are the two main response options. For children with SM, yes/no questions typically provide an opportunity for them to avoid speaking by using nonverbal gestures (e.g., head nod, shaking head) to respond. By contrast, forced choice questions provide the child with two or more response options (e.g., parent: "Do you want M&Ms or Twizzlers?"), and open-ended questions require the child to provide a unique response (e.g., parent: "What candy do you want?"). During VDI,

parents are encouraged to use either forced choice or open-ended questions, a new "Do" skill, and to avoid using yes/no questions with the child, a new "Don't" skill. Additionally, parents are instructed to prompt children to speak using a direct command (e.g., "Tell me what candy you want.") as opposed to an indirect command (e.g., "Will you tell me what candy you want?"). Following either commands or questions, parents are expected to wait 5 s as part of the VDI sequence. VDI "Don't" skills include mind reading, yes/no questions, indirect commands, negative talk, and enabling the child's avoidance (Kurtz, 2015; Kurtz Psychology Consulting PC, 2015). These behaviors often allow children to avoid speaking by using nonverbal gestures or may remove an opportunity for them to talk.

VDI Sequence
Similar to the PDI time out sequence, there is a specified VDI sequence for prompting children to speak in PCIT-SM (Kurtz, 2015). A valid VDI sequence begins with either a forced choice or open-ended question to the child. After asking a question, the adult must wait 5 s for a response. If the child responds verbally to the prompt, the adult should use a labeled praise for talking or a reflection of the child's speech, ending the sequence. If the child either responds nonverbally (e.g., pointing, shaking head) or does not respond at all, the adult acknowledges any nonverbal behavior (e.g., "I see you are nodding."), repeats or reformats the question, and waits 5 s for the child to respond. Again, a verbal response should be followed by a labeled praise or reflection. If the child does not respond or responds nonverbally after 5 s for this second prompt, the adult should either let the child know that the dyad will practice talking more later and shift back into CDI or move to the most recent activity or environment in which the child responded to a verbal prompt and continue practicing there. This sequence allows the child and adult to develop distress tolerance and provides the child with an opportunity to practice what he or she can do with small steps forward (Kurtz Psychology Consulting PC, 2015). Figure 2 provides a visual representation of the VDI prompting sequence.
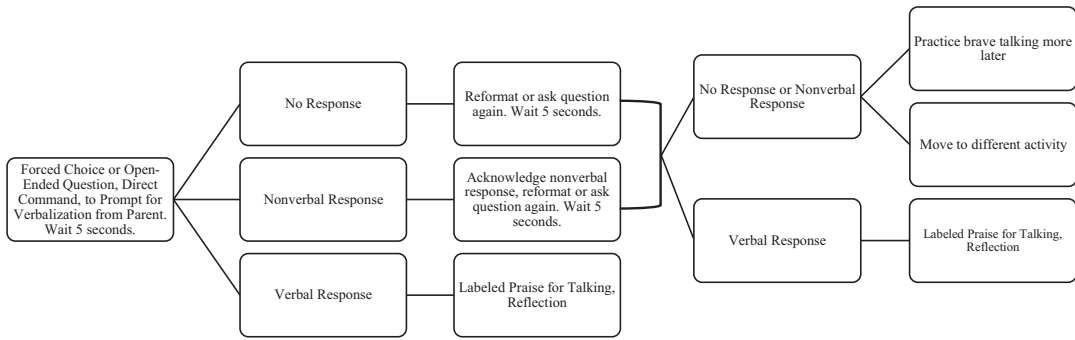
Fig. 2 Effective VDI sequence, based on Kurtz Psychology Consulting PC (2015)

Exposure in VDI

The main focus of VDI is to generalize the child's speech across different settings and different individuals, which often requires exposure activities outside of the clinic therapy room. In this way, the therapist aims to support successive approximations of brave talking and to fade different individuals in and out of the setting. To be successful in this task, it is recommended that therapists limit changes made in session to one variable (setting, individual, or activity) at a time (Kurtz Psychology Consulting PC, 2015). For example, if a therapist and a child with SM have practiced playing "Go Fish" in the therapy room, options for future sessions include: moving to another location (e.g., the waiting room) while maintaining the same people and activity, adding another person while keeping the location and activity constant, or playing a different game with the therapist in the therapy room. If too many aspects are changed at once, this may drastically increase the child's anxiety and result in their inability to maintain therapy gains. Moreover, the therapist and child can practice an exposure situation in the therapy room before progressing to the novel environment to increase the child's chance of success. Thus, just as parents begin PDI by giving easy-to-complete, play commands to increase the likelihood of child compliance in the original PCIT protocol, PCIT-SM attempts to set children up for success by utilizing situations in which they have already experienced success to progress forward in treatment (Kurtz Psychology Consulting PC, 2015). Although the

definition of progress is dependent on each child's symptom severity, therapists and parents should observe small yet noticeable changes with each exposure session.

Other recommendations to help improve the execution of VDI exposure activities include having available supplies such as a dry erase board or paper, dry erase markers or pencils, a "brave points" tracker, 3–5 familiar games, prizes, and a small bag for mobility (Kurtz Psychology Consulting PC, 2015). Some therapists may include pre-rehearsed questions on cards to help unfamiliar adults prompt children using the same language that is used in the therapy room. This scripted language is "a starting point, not an ending" and should be viewed as an aid for children in new situations to promote success (Kurtz Psychology Consulting PC, 2015). In this kit, it is important to include games with which the child is familiar and enjoys. Possible talking games include "Go Fish," "Battleship," "Guess Who," "Spot It," and "Hangman." Therapists may allow the child to choose several prizes at the beginning of the session, so they can have physical reminders of their incentives during exposure (Kurtz Psychology Consulting PC, 2015).

Unique Features of PCIT–SM

Several core components of the standard PCIT protocol are maintained in PCIT-SM, but some changes were made to meet the unique needs of

children with SM (see Table 1). First, though PCIT does not utilize token economy or physical rewards (Eyberg & Funderburk, 2011), PCIT-SM does incorporate such behavioral methods. For example, the use of "brave points" for talking has been introduced as a token economy for which children receive prizes and privileges at the end of session (Kurtz Psychology Consulting PC, 2015). Children may also have school behavior charts that stipulate how many tokens are needed before a child receives a reward for talking. These tangible rewards are typically used more heavily at the beginning of treatment and may be faded or reduced as the child becomes more comfortable speaking. As such, these rewards provide added motivation for children to overcome the high level of anxiety that they experience in situations that require talking, creating initial momentum that propels treatment forward (Kurtz, 2015). Second, games are used in PCIT-SM as a rewarding activity meant to encourage speech. The use of games is traditionally discouraged in PCIT as it may create a negative interaction (e.g., when a child loses, if a child cheats); however, games serve a dual purpose in PCIT-SM to prompt and reward speech.

A third major difference between standard PCIT and PCIT-SM is the inclusion of other individuals (e.g., therapist, graduate students, undergraduate students) in the treatment sessions. In PCIT, primary caregivers (e.g., parents, grandparents) are viewed as the main agents of change for their child's behavior, and therapists often have limited interaction with the child directly (Eyberg & Funderburk, 2011). By contrast, the parent is eventually faded out of PCIT-SM and replaced by the therapist. Given that children with SM have difficulty talking to unfamiliar individuals, exposure to others is vital to provide opportunities for the child to speak and receive reinforcement. Thus, the unfamiliar therapist is faded into treatment until the child appears comfortable talking at which point another person may be introduced, passing on the "talking baton" (Kurtz Psychology Consulting PC, 2015). This fading of the therapist may follow a general pattern in which the therapist enters the room and gradually moves closer and interacts more with

the child. As this occurs, they should attend to the amount of child verbalizations, how quickly the child responds, and the child's volume, ensuring that they do not change dramatically throughout the fading process. Using this system, the "talking baton" will continue to be passed to others through exposure, slowly increasing the number of people with whom the child is able to talk (Kurtz Psychology Consulting PC, 2015). As a result, PCIT-SM utilizes more clinical assistants or bystanders, such as graduate and undergraduate students. Still, parents are considered very important to the treatment process and receive coaching as well as live demonstration of skills. Notably, parents receive coaching throughout treatment to help promote skill acquisition and observe others (e.g., clinical assistants) being coached while interacting with the child.

Medication for Children with SM

Although behavioral interventions are the most highly recommended form of treatment for SM (Viana et al., 2009; Zakszeski & DuPaul, 2017), the value of incorporating psychotropic medication, such as selective serotonin reuptake inhibitors (SSRIs) or monoamine oxidase inhibitors (MAOIs), to reduce symptoms has been recognized for certain SM cases (Carlson, Mitchell, & Segool, 2008; Manassis, Oerbeck, & Overgaard, 2016). However, empirical support for the efficacy of medication is currently limited as few studies include sufficient sample sizes, appropriate comparison groups, and other methodological characteristics (e.g., double-blind conditions, controls for confounding variables; Manassis et al., 2016). As a result, clinicians are recommended to conduct a detailed cost-benefit analysis to determine if a referral for medication is necessary on a client-by-client basis (Manassis et al., 2016). Psychosocial treatment programs should be viewed as the first option for children with SM given their associated positive outcomes (Zakszeski & DuPaul, 2017). Medication may be considered for children who demonstrate resistance to behavioral interventions, such as PCIT-SM, or who do not experience symptom

Table 4 Anecdotal PCIT-SM treatment trajectory

Number of sessions	Progression
1–2	Child should not appear frightened or agitated when starting sessions
2–3	Child should be talking to parent(s) and therapist both in the room
4–6	Child should be talking to therapist without parent(s) in the room
6–8	Child should be talking to another adult without parent(s) in the room Sessions may be conducted in child's school
8–12	Child should be talking to multiple teachers and/or peers without parent(s) in the room
12+	Child should no longer be nervous or agitated in talking across settings with different people

Note: Based on Kurtz Psychology Consulting PC (2015)

relief (Carlson et al., 2008; Manassis et al., 2016). Children likely to receive medication are those who exhibit more severe impairment and comorbid disorders, who have poor response to prior psychological treatment, and who are not meeting expected treatment benchmarks (Kurtz Psychology Consulting PC, 2015).

Children with SM should demonstrate progress within the first few sessions of PCIT-SM even if it is slow, such as maintaining speech in front of the clinician or answering a clinician's question (Kurtz Psychology Consulting PC, 2015). After 4–6 sessions, children are typically able to talk to the therapist without their parents in the room, and children should begin talking to multiple individuals in school by 8–12 sessions (See Table 4 for full outline; Kurtz Psychology Consulting PC, 2015). Although this expected symptom trajectory for children participating in PCIT-SM has not been empirically tested, it can be used as a general guide for clinicians to evaluate their treatment progress and to determine when medication may be needed to aid symptom relief. Each child's recovery will be unique based on factors, such as parent skill practice, developmental history, child age, and consistency of application; however, behavior change should be observed across therapy sessions even if it appears to be minor. As in standard PCIT, clinicians

should discuss a child's lack of progress with parents and assess their consistent implementation of the PCIT-SM skills and sequences before recommending medication.

Future Directions

Even though symptoms of SM have been recognized since the beginning of the twentieth century, the research literature, assessment measures, and treatment options currently available are limited (Muris & Ollendick, 2015; Zakszeski & DuPaul, 2017). Thus, PCIT-SM represents a promising lateral extension of an efficacious, well-established treatment, adapted for children with SM. Still, there are some areas in which the adaptation could be further investigated. First, though PCIT-SM has been implemented clinically, it has not been evaluated using control or comparison groups within a large sample of children. Other adaptions of PCIT have undergone rigorous empirical validation to guide changes made in the protocol, to support the need for alterations, and to demonstrate their effectiveness compared to other treatment models (e.g., Comer et al., 2012; Fernandez, Gold, Hirsch, & Miller, 2015; McCabe & Yeh, 2009; Niec, Barnett, Prewett, & Chatham, 2016). Overall, more evidence for the efficacy and effectiveness of PCIT-SM in reducing symptomology is required before the treatment should be widely disseminated.

Second, the assessment measures associated with PCIT-SM have also not been fully evaluated and require more research attention. Studies of the DPICS suggest that children with anxiety exhibit different behaviors during the observation compared to normative or oppositional children (Cotter, 2016). Given that the SMICS-R and SM-BOT were adapted from the DPICS, it will be important for future research to provide normative data, interrater reliability, convergent validity, and other psychometric support to guide the use and interpretation of these assessments. Finally, more explicit implementation guidelines and formal standardization should be given for the elements of PCIT-SM that differ from the standard PCIT protocol. For example, clinicians

who provide standard PCIT may not have much experience implementing a token economy or conducting exposure tasks that target anxiety. An explanation of appropriate play-room/exposure setup, training for clinical assistants, and coaching considerations unique to PCIT-SM should be developed to guide these clinical techniques. Moreover, clinicians would likely need support on how to address a child's regression when speaking in high anxiety contexts or how to involve teachers and school staff in treatment.

Conclusion

SM is an anxiety-related psychological disorder that is maintained through avoidance and that can result in both short- and long-term impairments in social, academic, and psychological functioning. PCIT-SM is an adapted treatment program that utilizes behavioral principles and exposure activities to target a child's failure to speak. Clinical use of PCIT-SM has demonstrated promising symptom relief, yet more research is needed to support its widespread dissemination. For Sarah's mother, treatment provided a new-found sense of hope and effective tools to help her daughter become more confident when using her "brave voice" in previously anxiety-provoking settings. Throughout the course of treatment, Sarah slowly progressed from nonverbal responses, to whispering, to finally talking with peers, teachers, and strangers. Being able to order her own food at a busy restaurant was the ultimate PCIT-SM graduation session for Sarah and her mother.

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Adapting PCIT to Treat Anxiety in Young Children: The PCIT CALM Program

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Abstract

Despite tremendous progress and success in the development of well-established treatments for anxiety presenting in middle childhood and adolescence, advances in the development of supported practices for treating early childhood anxiety has lagged. Fortunately, in more recent years, the field has begun to witness a number of very important advances in the development of interventions designed specifically to treat early childhood anxiety and behavioral inhibition. One of the most promising advances in this area has been the adaptation of parent–child interaction therapy to address early childhood anxiety problems. As in traditional PCIT for early externalizing problems, PCIT adaptations for early-onset anxiety target child symptoms indirectly by reshaping the primary context of child development. This chapter reviews the research support for the PCIT CALM program and describes the program in

detail. The chapter concludes with a case example of the program.

Anxiety disorders are collectively the most prevalent category of mental health problems affecting children and adolescents (Comer & Olfson, 2010; Kessler et al., 2012). These disorders are characterized by marked and persistent fear or worry, and are typically accompanied by considerable behavioral avoidance and life interference. For example, child anxiety disorders are associated with serious family dysfunction, peer problems, reduced academic performance, sleep disturbance, irritability, and the development of other mental health problems such as depression, substance use, and suicidality (e.g., Cornacchio, Crum, Coxe, Pincus, & Comer, 2016; Cummings, Caporino, & Kendall, 2013; Green et al., 2016; Swan & Kendall, 2016; Thompson-Hollands, Kerns, Pincus, & Comer, 2014; Weiner, Elkins, Pincus, & Comer, 2015; Wu, Goodwin, Comer, Hoven, & Cohen, 2010). When left untreated child anxiety problems often persist into adulthood, during which time they are associated with a number of other mental and physical comorbidities, life impairments, and overall reduced quality of life (e.g., Comer et al., 2011; Lever-van Milligen, Lamers, Smit, & Penninx, 2017).

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The precursors of anxiety disorders (e.g., behavioral inhibition) as well as formal diagnosable anxiety disorders commonly onset in *early* childhood. It is estimated that between 2% and 9% of preschoolers already suffer from an anxiety disorder (Egger & Angold, 2006; Wichstrom et al., 2012), and the impact of preschool anxiety disorders on family functioning is comparable to the impact of attention-deficit/hyperactivity disorder or disruptive behavior disorders (Towe-Goodman, Franz, Copeland, Angold, & Egger, 2014). Typically, early-onset anxiety disorders do not remit on their own, and can show particularly pernicious symptom trajectories across time. Accordingly, effective early intervention for preschool anxiety problems is critical.

Despite tremendous progress and success in the development of well-established treatments for anxiety presenting in middle childhood and adolescence (Higa-McMillan, Francis, Rith-Najarian, & Chorpita, 2016), advances in the development of supported practices for treating early childhood anxiety has lagged (Carpenter, Puliafico, Kurtz, Pincus, & Comer, 2014). Fortunately, in more recent years, the field has begun to witness a number of very important advances in the development of interventions designed specifically to treat early childhood anxiety and behavioral inhibition (e.g., Carpenter et al., 2014; Cartwright-Hatton et al., 2011; Comer et al., 2012; Hirshfeld-Becker et al., 2010; Rapee, 2013). These programs are specifically tailored for compatibility with preschool children, they draw on conceptual models that emphasize how parents can inadvertently encourage and maintain problematic patterns of early child anxiety, and position parents as the primary agents of change for improving their child's anxiety.

One of the most promising advances in this area has been the adaptation of parent–child interaction therapy (PCIT; Eyberg & Funderburk, 2011) to address early childhood anxiety problems. As in traditional PCIT for early externalizing problems, PCIT adaptations for early-onset anxiety target child symptoms indirectly by reshaping the primary context of child development (i.e., parent–child interactions; Elkins, Mian, Comer, & Pincus, 2017). Further, as in traditional PCIT, the majority of sessions are spent with the therapist coaching parents in real time from behind a one-way mirror through a parent-worn earpiece device. As in traditional PCIT, parents learn Child-Directed Interaction (CDI) skills, which serve to strengthen mutually rewarding and positive parent–child relationships, and which encourage the practice of selectively attending to specific positive child behaviors to increase the frequency of those behaviors. However, unlike traditional PCIT, adaptations of PCIT for child anxiety place less emphasis on effective discipline and parent-directed interactions (PDI), and instead devote at least half of the treatment course to coaching parents to effectively guide their children through exposures to anxiety-provoking situations and to minimize avoidance.

There have now been several iterations of adapted PCIT for early-onset anxiety, and a current version receiving empirical investigation is the *PCIT Coaching Approach behavior and Leading by Modeling* (CALM) Program (Carpenter et al., 2014; Elkins et al., 2017). The PCIT CALM Program targets the full range of early-onset anxiety disorders, emphasizes in-session parent-led exposures and parental modeling of brave behavior, and incorporates live bug-in-the-ear parent coaching during in vivo exposure tasks (Puliafico, Comer, & Albano, 2013). In this chapter, we consider the rationale for modifying PCIT to treat early-onset anxiety problems and we review the research-to-date on such PCIT adaptations. We then turn our attention to a more in-depth presentation of the PCIT CALM Program, and to bring the material to life we present a brief case example of a young child treated with the PCIT CALM protocol. We conclude with some thoughts about future directions in the adaptation of PCIT to treat early child anxiety problems.

Why Adapt PCIT to Treat Early–Onset Anxiety?

To understand the underlying rationale for modifying PCIT to treat early-onset anxiety problems, it is important to first consider two factors that

have somewhat slowed progress in our field's understanding of how to best treat early-onset anxiety problems. First, there exists a commonly held belief that preschool anxiety is developmentally normal and naturally dissipates with time. Studies in developmental epidemiology have dispelled these misconceptions (Egger & Angold, 2006; Wichstrom et al., 2012). Whereas low-to-moderate levels of anxiety in the preschool years are normative, severe anxiety presentations do not remit on their own and in fact get worse with time.

Second, the well-supported cognitive-behavioral methods for treating anxiety in older children and adolescents (see Higa-McMillan et al., 2016) draw heavily on clinical methods that are often beyond the developmental capacities of younger children, making their simple extension to early childhood misguided (see Carpenter et al., 2014; Cornacchio, Sanchez, Chou, & Comer, 2017). For example, presenting the basic cognitive-behavioral model of anxiety to children requires them to comprehend sophisticated notions of psychological causality and to appreciate complex relationships among thoughts, feelings, and behaviors (Cornacchio et al., 2017). Such abilities are often poorly developed in the preschool years. In addition, the more limited receptive and expressive language abilities and metacognitive capacities that characterize early childhood may preclude younger children from effectively engaging in such cognitive treatment elements as thought monitoring and restructuring maladaptive cognitions. Similarly, advanced theory of mind and perspective-taking skills, which may not be present at earlier developmental stages, are necessary for clinical approaches that encourage children to reflect on how other people might perceive the same situations differently (see Cornacchio et al., 2017).

Fortunately, across the past decade or so, the field has come to accept that very young children can indeed suffer clinical anxiety, that such anxiety in very young children warrants treatment, and that when working with very young children it is misguided to apply the same clinical techniques and formats successfully used to treat anxiety in older children and adolescents. Broadly speaking, the modern treatment adapta-tions that have been used to treat early-onset anxiety can be divided into two types: *Downward Extensions* and *Developmentally Lateral Extensions* (Carpenter et al., 2014).

Downward extensions typically retain all of the core content of supported treatments for anxiety in older children—including recognizing anxiety and other emotion states, generating coping thoughts, and relaxation training—but adjust some of the format and specific methods of treatment delivery. For example, downward extensions for early child anxiety will cover the same material covered in treatment for older anxious children, but will increase use of concrete language and imagery, offer more tangible learning opportunities and interactive games, use puppets to help explain treatment material to children, and place a stronger emphasis on a reward system. Essentially, a downward extended treatment starts with the content found to work with older children, and then adjusts the delivery of this content to improve communication to younger children.

In contrast, PCIT adaptations for early child anxiety offer *developmentally lateral extensions* of methods found to work with other diagnostic conditions (e.g., externalizing disorders) in the same age group. Here the first emphasis is on identifying a successful format for the treatment of children in the preschool age range, and then on making content adjustments to specifically address anxiety problems. Unlike downward extension treatments for child anxiety, PCIT adaptations for child anxiety focus on parents as the primary agents of change, and these programs do not require metacognitive, perspective-taking, or abstract problem-solving skills of the young child. PCIT adaptations implement the live bug-in-the-ear parent-coaching format from behind a one-way mirror during naturalistic parent–child interactions that has been shown to work so well in optimizing the ecological validity of treatment for early child populations. Rather than directly engaging young children in treatment tasks and content that may be incompatible with their cognitive development, PCIT adaptations for early child anxiety work to reshape parenting practices and patterns of parent–child interactions in order

to adjust the immediate antecedents and consequences of targeted behavior patterns. Whereas traditional PCIT targets externalizing and disruptive behavior problems, PCIT adaptations for early-onset anxiety target anxious and avoidant child behavior patterns.

The PCIT CALM Program is based on the rationale that positive parental attention to and modeling of "brave" behavior can function to increase the frequency of such behavior in young children, while withdrawal of parental attention from anxiety-related and avoidant behaviors (e.g., whining, reassurance-seeking, refusal to engage in feared activities) can function to extinguish these behaviors (Puliafico et al., 2013). Indeed, research shows that intrusive, overprotective, controlling, and overly accommodating parenting, particularly in anxiety-provoking situations, is associated with child anxiety (Hudson, Comer, & Kendall, 2008; McLeod, Wood, & Weisz, 2007; Thompson-Hollands et al., 2014). Parents of anxious children often grant less autonomy and take over tasks that children should be able to normatively perform independently (McLeod et al., 2007). Parents of anxious children can "rescue" children from distress sooner than parents of nonanxious children, sometimes as a means of regulating their own anxiety (Kerns, Pincus, McLaughlin, & Comer, 2017). This, in turn, can serve to deny children important opportunities to learn to effectively cope with anxiety and to develop a repertoire of emotion regulation skills that prepare them to successfully and independently navigate age-appropriate situations.

Research Supporting PCIT as a Treatment for Anxiety

Initial support for the adaptation of PCIT to treat early-onset anxiety began with the pioneering studies of Pincus and colleagues and their research with young children diagnosed with separation anxiety disorder (Pincus, Eyberg, & Choate, 2005; Pincus, Santucci, Ehrenreich, & Eyberg, 2008). After determining that unmodified standard PCIT by itself was not sufficient to reduce early child separation anxiety, Pincus and colleagues developed and introduced a complementary three-session adjunctive PCIT treatment phase that specifically promoted brave behavior (i.e., "Bravery-Directed Interactions, or BDI; Pincus et al., 2008). Their initial PCIT adaptation was a fixed nine-session protocol, and included three CDI sessions followed by three BDI sessions, and finally three PDI sessions. The BDI phase did not incorporate bug-in-the-ear in vivo coaching and was instead more consistent with traditional CBT for child anxiety. In BDI, parents and children were taught the importance of nonavoidance and how to conduct separation practices outside of session. An initial pilot trial found that the majority of children treated with this nine-session protocol no longer met diagnostic criteria for separation anxiety disorder following treatment, whereas all children in a waitlist comparison condition retained their separation anxiety disorder diagnosis (see Carpenter et al., 2014).

Building on these promising findings, Comer and Puliafico developed the PCIT CALM Program to target the full range of anxiety disorders affecting young children (beyond a sole focus on separation anxiety disorder), placing greater emphasis on in-session, parent-led exposures and parental modeling, weaving in CDI skills more directly into the anxiety-focused aspects of treatment, and incorporating live, bug-in-the-ear coaching during *in vivo* exposure tasks (Comer et al., 2012; Puliafico et al., 2013). A detailed overview of the PCIT CALM Program is provided in the next section of this chapter.

An initial small pilot trial examining the PCIT CALM Program found that, in a mixed sample of young children presenting with social anxiety disorder, generalized anxiety disorder, separation anxiety disorder, and/or specific phobia, roughly two-thirds showed full diagnostic response following treatment (meaning they no longer met diagnostic criteria for any anxiety disorders at posttreatment). These children also exhibited significant functional improvements. Research examining the effectiveness of the PCIT CALM Program

is ongoing, with current studies examining tele-mental health formats that offer opportunities to meaningfully extend the reach and scope of treatment. Over the last couple of years, case studies have been published examining videoconference-based delivery of the PCIT CALM Program for early child anxiety (e.g., Cooper-Vince, Chou, Furr, Puliafico, & Comer, 2016), and Comer and colleagues are currently conducting a waitlist-controlled randomized trial evaluating Internet-delivered PCIT CALM (I-CALM) in the treatment of early child anxiety.

The PCIT CALM Program

The PCIT CALM Program is a family-focused treatment developed for the treatment of children ages 8 and below suffering from excessive anxiety. Flexibility should be applied when making age-related decisions about whether the PCIT CALM Program is appropriate for a given child. For example, cognitively advanced 7- and 8-year-old children may benefit more from individual cognitive-behavioral treatment, which directly teaches children anxiety management skills. Likewise, 9-year-olds showing less cognitive maturity may benefit from the PCIT CALM Program's strictly behavioral approach and emphasis on reshaping parenting practices and parent–child interactions.

Table 1 provides a session-by-session overview of the 12-session PCIT CALM Program, adapted from Comer et al. (2012). For research purposes, the PCIT CALM protocol was initially developed as a 12-session protocol, although it is certainly possible to implement it as mastery-oriented treatment that is not fixed in length. The PCIT CALM Program includes eight exposure sessions (whereas the original Pincus adaptation included just two). To optimize the number of sessions devoted to exposures, and noting that few of the separation-anxious children in the Pincus trial showed significant externalizing problems, PDI is not included in the PCIT CALM Program. For some children with co-occurring disruptive behavior problems, it will be useful to augment PCIT CALM treatment with a traditional course of PDI.

The first phase of PCIT CALM is comparable to the first phase of traditional PCIT and focuses on strengthening a positive and mutually rewarding parent–child relationship through the teaching and coaching of CDI skills. Because positive attending is a foundational skill in the reinforcement of brave (e.g., approach) behavior, the use of CDI skills by parents (including active ignoring of anxious and avoidant behavior) is heavily emphasized early in PCIT CALM (see Puliafico et al., 2013). As in traditional PCIT, PCIT CALM introduces CDI skills to parents during an initial parent-only session, but in PCIT CALM this parent-only session also incorporates psychoeducation about the nature of child anxiety, and includes the collaborative development of an individualized fear hierarchy. This fear hierarchy provides a guide for the subsequent engagement in graduated exposure tasks. Early sessions also coach parents in the use of CDI skills during low-level exposure tasks. Exposures are introduced during the CDI portion of treatment to begin reinforcing a child's approach behavior in mildly anxiety-provoking situations, and to build parents' confidence in applying CDI skills when their children encounter anxiety-provoking situations.

The second phase of PCIT CALM more directly focuses on providing instruction and coaching in a specific set of directive parent skills (abbreviated in a four-step acronym—the DADS steps—which we describe below) to use in anxiety-provoking situations for their child. The DADS steps constitute a specific behavioral sequence for parents to follow in exposure situations. They incorporate positive attending and active ignoring from the CDI phase of treatment, but also include the use of direct commands to more actively prompt child exposure to feared situations. Brief session-by-session descriptions of the PCIT CALM protocol, adapted from Puliafico et al. (2013), are provided below.

Table 1 Session-by-session overview of the PCIT CALM Program for early childhood anxiety problems (adapted from Comer et al., 2012)

Session	Attendees	Content
1	Parent(s) only	*CDI teach + exposure hierarchy building*: (1) Orient parents to program; (2) Psychoeducation about anxiety and the family; (3) Introduce exposure therapy and develop individualized fear hierarchy; (4) Teach parents CDI skills (Praise, Reflection, Imitation, Description, Enthusiasm); (4) Role play CDI skills; (5) Assign at-home CDI
2	Parent and child	*CDI coach 1*: (1) Orient child to program; (2) Review child's anxiety, child's behavior, and at-home CDI from previous week; (3) Orient family to bug-in-the-ear coaching format; (4) Code parent CDI skills; (5) Live-coach parents in CDI; (6) Provide parent feedback; (7) Assign at-home CDI
3	Parent and child	*CDI coach 2 ± exposure preparation*: (1) Review child's anxiety, child's behavior, and at-home CDI from previous week; (2) Code parent CDI skills; (3) Live-coach parents in CDI; (4) Provide parent feedback; (5) Prepare family for upcoming low-level in-session exposure; (6) Assign at-home CDI
4	Parent and child	*CDI coach 3 ± exposure session 1*: (1) Review child's anxiety, child's behavior, and at-home CDI from previous week; (2) Code parent CDI skills; (3) Live-coach parents in CDI; (4) Live-coach parents in low-level exposure task; (5) Provide parent feedback; (6) Prepare family for upcoming low-level in-session exposure; (7) Assign at-home CDI
5	Parent and child	*CDI coach 4 ± exposure session 2*: (1) Review child's anxiety, child's behavior, and at-home CDI from previous week; (2) Code parent CDI skills; (3) Live-coach parents in CDI; (4) Live-coach parents in low-level exposure task; (5) Provide parent feedback; (6) Prepare family for upcoming parent-only didactic session regarding the promotion of brave child behaviors in moderate-to-high level exposure tasks; (7) Assign at-home CDI
6	Parent(s) only	*DADS teach session*: (1) Review child's anxiety, child's behavior, and at-home CDI from previous week; (2) Introduce and teach parents DADS steps for the promotion of brave child behaviors (*D*escribe situation, *A*pproach situation, give *D*irect Command for child to join situation, provide *S*elective attention based on child's performance); (3) Role-play DADS steps; (4) Prepare family for upcoming moderate-level exposure task; (5) Assign at-home CDI and at-home DADS practice in out-of-session exposure tasks
7	Parent and child	*DADS coach 1 ± exposure session 3*: (1) Review child's anxiety, child's behavior, and at-home DADS practice from previous week; (2) Code parent CDI skills; (3) Brief live-coach of CDI; (4) Live-coach parents in moderate-level exposure task using DADS steps; (5) Provide parent feedback; (6) Prepare family for upcoming moderate-level in-session exposure; (7) Assign at-home CDI and at-home DADS practice in out-of-session exposure tasks
8	Parent and child	*DADS coach 2 ± exposure session 4*: (1) Review child's anxiety, child's behavior, and at-home DADS practice from previous week; (2) Code parent CDI skills; (3) Brief live-coach of CDI; (4) Live-coach parents in moderate-level exposure task using DADS steps; (5) Provide parent feedback; (6) Prepare family for upcoming high-level in-session exposure; (7) Assign at-home CDI and at-home DADS practice in out-of-session exposure tasks
9	Parent and child	*DADS coach 3 ± exposure session 5*: (1) Review child's anxiety, child's behavior, and at-home DADS practice from previous week; (2) Code parent CDI skills; (3) Brief live-coach of CDI; (4) Live-coach parents in high-level exposure task using DADS steps; (5) Provide parent feedback; (6) Prepare family for upcoming high-level in-session exposure; (7) Assign at-home CDI and at-home DADS practice in out-of-session exposure tasks
10	Parent and child	*DADS coach 4 ± exposure session 6*: (1) Review child's anxiety, child's behavior, and at-home DADS practice from previous week; (2) Code parent CDI skills; (3) Brief live-coach of CDI; (4) Live-coach parents in high-level exposure task using DADS steps; (5) Provide parent feedback; (6) Prepare family for upcoming high-level in-session exposure; (7) Assign at-home CDI and at-home DADS practice in out-of-session exposure tasks
11	Parent and child	*DADS coach 5 ± exposure session 7*: (1) Review child's anxiety, child's behavior, and at-home DADS practice from previous week; (2) Code parent CDI skills; (3) Brief live-coach of CDI; (4) Live-coach parents in high-level exposure task using DADS steps; (5) Provide parent feedback; (6) Prepare family for upcoming high-level in-session exposure; (7) Prepare family for upcoming final session; (7) Assign at-home CDI and at-home DADS practice in out-of-session exposure tasks
12	Parent and child	*DADS coach 6 ± exposure session 8*: (1) Review child's anxiety, child's behavior, and at-home DADS practice from previous week; (2) Code parent CDI skills; (3) Brief live-coach of CDI; (4) Live-coach parents in high-level exposure task using DADS steps; (5) Provide parent feedback; (6) Review child's progress in treatment; (7) Encourage continued practice of skills learned in treatment; (8) Graduation ceremony for family

Note: CALM = *C*oaching *A*pproach behavior and *L*eading by *M*odeling; CDI = child-directed interactions; DADS steps = *D*escribe situation, *A*pproach situation, give *D*irect Command for child to join situation, provide *S*elective attention based on child's performance

Session 1: Psychoeducation/CDI Teach Session

After an initial intake evaluation, the first PCIT CALM session includes just the therapist and parents in order to: (1) present the rationale for focusing on parenting and parent–child interactions in the treatment of child anxiety symptoms; (2) provide psychoeducation about child anxiety; (3) describe factors that could maintain child anxiety, including parenting behaviors; (4) teach parents skills in positive attention and active ignoring that will be practiced in later sessions; and (5) initiate a hierarchy of the child's feared and avoided situations. Typically, session 1 lasts approximately 90–120 min, or can be broken across two parent-only sessions.

When providing a rationale for parent-based treatment, the therapist first explains how individual therapies for older child anxiety are ill-suited for young children who may lack the developmental capacities to properly utilize cognitive coping skills taught in such treatments. Therapists inform parents that the PCIT CALM Program indirectly targets child anxiety by working to reshape parenting practices and parent–child interactions that can inadvertently maintain child anxiety symptoms. During this session, the therapist also emphasizes that the development and maintenance of child anxiety is influenced by both genetic and environmental factors, and that parents can potentially lessen child anxiety symptoms by modifying their behavior toward their child. Parents are informed that certain behaviors intended to reduce their child's distress (e.g., allowing their child to avoid feared situations, or attending to reassurance seeking, whining or crying), can serve an immediate goal of making the child more comfortable in the moment. They are also informed, however, that in the long-term, these behaviors reinforce anxiety-driven behaviors. The PCIT CALM therapist further communicates that, as parents learn to attend more positively and saliently to their child's brave behaviors and to ignore anxiety-driven behaviors, the brave behaviors will be reinforced and anxiety-driven behaviors may begin to dissipate.

In session 1 of PCIT CALM, the therapist also teaches parents the PRIDE skills that are at the center of CDI in traditional PCIT (Eyberg & Funderburk, 2011). These skills include: Labeled *P*raise (specific praise of child's positive behavior), verbal *R*eflections (echoing a child's statement), *I*mitation, Behavioral *D*escriptions (narration of child's behavior), and *E*nthusiasm. Parents are also told to avoid questions, commands, and criticisms, each of which can interfere with the reinforcement of desired or "brave" behaviors. Therapists teach parents to actively ignore undesired behaviors, rather than providing attention to them. The CDI Teach session of the standard PCIT manual (Eyberg & Funderburk, 2011) provides thorough coverage of how therapists can best teach the PRIDE skills through instruction and role plays. For homework, therapists assign parents to devote 5 min each day to practicing these new positive attending skills during individual playtime with their child (i.e., special time).

Finally, parents work with the therapist to develop a hierarchy of situations that their child fears and/or avoids. This individualized fear hierarchy (or fear ladder) then serves as a roadmap for graded exposure tasks in future sessions. Situations on the fear ladder must be as specific as possible. For example, instead of listing "Being around others," the parents should list all social situations that elicit anxiety (e.g., talking during circle time, meeting new or unfamiliar people, playing in large groups, playing in medium-sized groups, talking to an adult). This will provide a more thorough guide of the child's fears and will more strategically inform exposure planning.

Sessions 2 and 3: CDI Coach Sessions

Parents and their child attend these sessions, which are intended to increase the parent's skills in positive attending and active ignoring. The therapist first orients the child to treatment and then briefly reviews the past week's progress and the parents' daily special time assignment. For the remainder of the session, the parents play with

their child while the therapist codes and coaches parents in CDI skills from behind the one-way mirror. Traditionally, the therapist coaches from behind a one-way mirror. However, real-time coaching can also occur over the Internet using videoconferencing and Bluetooth earpieces with the family at their home and the therapist at his or her office (Comer et al., 2015; Comer et al., 2017). If two parents are attending, the sessions are divided in half so that each parent spends individual time interacting and playing with their child. For each parent, the therapist first codes the parents' use of the PRIDE skills during child-led interactions for 5 min from an adjacent monitoring room. The therapist then uses the data from this coding exercise to inform individualized parent coaching delivered through a bug-in-the-ear device during parent–child interactions. The therapist coaches parents to achieve CDI mastery criteria: ten labeled praises, ten behavioral descriptions, and ten reflections, with no more than three questions, commands, or criticisms during the 5-min coding period. The parents are reminded that these positive attending skills are essential to effectively reinforce their child's brave behavior. Throughout this phase of treatment, parents continue practicing positive attending during special time each day with their child.

Sessions 4 and 5: CDI Coach/Exposure Sessions

During these sessions, CDI coding and coaching continue as described above, but in these sessions the therapist and parents begin presenting the child with low-level in-session exposure situations. These exposures are chosen from the low-end of the child's fear ladder and are intended to provoke only mild anxiety. The therapist coaches the parents to use the CDI skills to reinforce their child when he or she approaches the exposure situations. Parents are also instructed to actively ignore avoidance, as well as any anxiety-based behaviors (e.g., whining, crying, excessive reassurance seeking) in these low-level exposure situations. Low-level exposures are selected for these early sessions to maximize initial success

and so parents can first practice using CDI skills to promote child bravery in relatively manageable situations. For homework, the therapist also encourages the parents to use CDI skills to reinforce brave behaviors in naturally occurring anxiety-provoking situations, while also continuing to practice special time each day.

Session 6: DADS Teach Session

Following the CDI portion of treatment, parents attend the DADS Teach session, in which they learn a behavioral sequence referred to as the DADS steps. The DADS steps are a set of sequential skills that directly model and reinforce brave behaviors. Specifically, when guiding their child in facing an anxiety-provoking situation, parents are taught to: (1) *D*ESCRIBE the situation; (2) *A*PPROACH the situation; (3) give a *D*IRECT COMMAND to the child to approach the situation; and (4) *S*ELECTIVELY ATTEND to the child's behavior to reinforce approach toward the feared situation, and ignore anxiety-related behaviors. The DADS steps are to be applied whenever a child encounters an anxiety-provoking situation, whether naturalistically, or as part of a scheduled exposure. Additional details of each of the four DADS steps are provided below:

Describe: As soon as the exposure begins, the parent makes at least three statements describing the situation. These descriptive statements should be brief and provide factual information to the child about the situation. Importantly, these descriptions should not provide reassurance to the child. For example, in a situation in which a child is afraid of an approaching dog, appropriate descriptive statements could include "It looks like a dog is headed toward us," "That dog is brown," and "He has a long purple leash."

Approach: After describing the situation to the child, the parent now personally approaches the situation so as to model brave behavior for the child and to demonstrate that the situation is safe. For example, in the above situation, the parent might reach out and pet the dog. In a situation

involving talking to a new person, the parent might warmly interact with the unfamiliar individual. In a separation situation, the parent may move toward the door away from the child and display comfort in the situation. Therapists instruct the parent to remain in the Approach step for 1–2 min to provide children the opportunity to begin approaching the anxiety-provoking situation on their own. During the Approach step, parents are encouraged to describe their own approach behavior and positive aspects of the situation for the child to hear. For example, a parent may say, "This dog has smooth fur" or "I'm having fun petting the dog." Sometimes the child might independently approach the anxiety-provoking situation during this step. In such cases, the parent should enthusiastically use the CDI skills to reinforce the child's spontaneous brave behavior.

Direct command: If the child does not spontaneously approach the anxiety-provoking situation during or after the Describe or Approach steps, the parent then provides a direct command to the child to approach the situation. Specifically, the parent must provide a statement that clearly instructs the child to engage in the specific approach behavior. For example, a parent might say "Please pet the dog," "Please say 'hi' to our new friend," or "Please stay at the table while I sit over there." As in the PDI Teach session of standard PCIT (Eyberg & Funderburk, 2011), the DADS Teach session also includes description of direct commands contrasted with indirect commands (e.g., questions and commands that do not clearly state what the child is specifically expected to complete). Examples of indirect commands include: "Why don't you pet the dog?" or "I bet you can stay at the table while I sit over there." In this case the child is explicitly given the option of avoiding compliance, which is why the direct command is preferred. The therapist instructs the parent to wait for 5 s without saying another word to afford an opportunity for the child to comply with the direct command to approach the anxiety-provoking situation.

Selective attention: Following the direct command for the child to engage in approach behav-

ior, parents are instructed to differentially respond to the child's approach behavior versus any avoidance. The therapist instructs the parents to use CDI skills to attend to and reinforce any approach behavior evidenced by the child, no matter how small, and to selectively ignore any anxiety-related behaviors, such as reassurance-seeking, whining, or crying. For example, if a child is crying while also approaching a feared situation (e.g., a dog), an appropriate response would be for the parent to say, "Awesome job walking toward the dog" (labeled praise) while not making any mention of the child's tears.

In scenarios in which the child does not comply with the direct command to approach the feared situation, and there is no semblance of child approach behavior upon which to draw (e.g., the child who backs away from the dog, and won't even look at the dog), the parent concisely informs the child that he or she will continue engaging with the anxiety-provoking situation. The general statement is "I am going to keep on ____ (playing with our new friend, petting the dog, standing in the dark room)." This statement informs the child that the parent intends to remain in the anxiety-provoking situation until the child approaches it as well. After making this statement, the parent is instructed to actively ignore the child's behavior in general, but to overtly praise any signs of approach that the child exhibits. For example, if while the parent continues to engage in the feared situation, the child lifts his head up to briefly watch the parent engaging in the feared situation, the parent would be encouraged to say something like "I see you're looking over here at the dog," (behavioral description) or "I'm really proud you're able to look at the dog" (labeled praise). Importantly, if the child begins to approach the feared situation at *any* point during the DADS steps sequence, the parent should praise this behavior and fully attend to it enthusiastically using CDI skills. Thus, a parent may not need to progress through all of the DADS steps during a given exposure situation.

After teaching parents the DADS steps, the therapist engages the parents in a series of role-plays to further strengthen comprehension. The therapist and parents should role-play scenarios

in which the child begins approaching the featured situation at various points in the DADS sequence, as well as scenarios in which the child does not approach the situation. Parents are not assigned to begin using the DADS skills until their next treatment session to avoid using them incorrectly in the absence of coaching. Parents are assigned to continue practicing CDI skills with their child for 5 min each day.

Sessions 7 Through 12: DADS Coach/ Exposure Sessions

Following the DADS Teach session, the remaining sessions of PCIT CALM are spent coaching parents in their use of the DADS steps with their child. As in CDI coach sessions, DADS coach sessions start with a short meeting between the therapist and the parents to review the prior week and to plan for the session. The therapist then observes parent–child interactions from behind the one-way mirror and coaches parents through the bug-in-the-ear device. The therapist continues CDI observation and coding to ensure the parents maintain CDI proficiency. In earlier DADS Coach sessions, the therapist provides very detailed instructions for parents to introduce exposure situations and to appropriately use the DADS steps in these situations. The therapist coaches the parent through at least one exposure situation, and should remain in that exposure situation until the child achieves the targeted goal. When working with two-parent families, the switch from one parent's coaching session to the other's session should be delayed until the child meets the exposure goal set forth by the first parent.

A Comment About the DADS Sequence

In some exposure situations in which the therapist realizes that the initial task is too fear-provoking after reaching the D_2 Step, it is recommended that the parent restart the DADS steps from the beginning and break down the direct command (D_2 Step) into a smaller and less fear-provoking command. Once the child is able to successfully complete the lower level goal, the therapist can return to the D_2 Step and slowly increase the difficulty of the task until the child is able to complete the initial exposure goal. For example, it may be too difficult for a child to directly ask a question to an unknown person. Instead, the therapist will have the parent break down the initial exposure task to have the child practice asking a question to his/her mom or dad first, ask the same question closer to the target person, and finally have the child ask the question directly to the unfamiliar person. Quality exposure therapy should always be course-correcting in session, and such shaping is critical to help children to reach ultimate exposure goals.

Termination

For research purposes, the PCIT CALM protocol was initially designed as a 12-session protocol, but in clinical practice it should be implemented as a mastery-based treatment, with the actual treatment pacing determined by the parents' progress mastering the skills and by the child's success navigating his or her fear hierarchy across exposure exercises. Therapists should not transition from the CDI phase to the DADS phase until the parents achieve standard CDI mastery criteria: ten labeled praises, ten behavioral descriptions, and ten reflections—with three or fewer questions, commands, or criticisms— within a coded 5 min period. After beginning the DADS phase of treatment, treatment should not terminate until the DADS steps are mastered and the child has engaged in the highest item on the fear hierarchy. A rating scale such as the Preschool Anxiety Scale may also be used as a helpful measure of child anxiety during the course of treatment, and may be used to help inform decisions regarding termination. After termination, many parents will further benefit from periodic booster sessions that provide continued reinforcement of treatment skills.

A Case Example

Case Introduction and History

Connor was a 5-year-old, Latinx male brought by his biological mother for treatment at our clinic in Miami, Florida due to her concerns about his impairing social fears and considerable anxiety in situations in which he had to separate from her. Connor was an only child who lived with his biological mother and father, Mr. and Mrs. G. Regarding developmental history, Mrs. G reported that she did not have any complications during her pregnancy or during his delivery, and that he had no delays in reaching developmental milestones. No medical concerns were reported.

At the time of intake, Connor was enrolled in a pre-kindergarten classroom, with no reported academic or behavioral difficulties. He was performing at grade level and required no school-based accommodations or specialized academic services. Mrs. G. reported that Connor had no difficulties interacting and playing with family members at home, but his social interactions with peers were somewhat limited. Mrs. G. attributed his inhibition to social anxiety. Connor loved playing baseball, although his social concerns interfered with his willingness to play. Prior to his presentation to our clinic, Connor had never received psychosocial or pharmacological treatment for behavioral or mental health difficulties.

Baseline Assessment

Connor's mother was interviewed by a staff clinician using the Anxiety Disorders Interview Schedule for the *DSM-IV*, Parent Version (ADIS-IV-P; Silverman & Albano, 1996), a semi-structured parent-report diagnostic interview for children, with particularly thorough coverage of the anxiety disorders. The ADIS-IV-P collects parent reports of child symptoms that directly inform diagnoses that adhere to DSM-IV. Each diagnosis is also assigned a Clinical Severity Rating (CSR) ranging from 0 to 8 to reflect impairment and severity; CSRs $\geq$ 4 indicate

diagnostic criteria are met for that disorder, whereas CSRs $\leq$ 3 reflect subclinical diagnostic presentations. For children over the age of 7 years, a parallel child ADIS-IV interview is conducted to complement the ADIS-IV-P, but given Connor's age only the parent interview was conducted.

During the ADIS-IV-P interview, Mrs. G. reported that Connor was highly avoidant and apprehensive of participating in group activities with both familiar and unfamiliar peers. Although he had no trouble playing and interacting with his parents, grandparents, aunts, a same-aged cousin, and other family members, Mrs. G. reported that Connor worried at school about answering questions in class, reading aloud, asking for help, working in groups, and initiating or joining group play. Connor also worried about what others might think of him in his extracurricular activities. Although he loved playing baseball with his cousins, and although he was very good at baseball for a 5-year-old, when his mother signed him up for a community baseball team he had a very difficult time playing on this community team and enjoying himself. He would "freeze" when it was his turn to bat or to run and stop a ground ball during baseball practices and games. Mrs. G. recalled that he sometimes shared that he worried that when he was at bat he might swing and miss and others would laugh at him. Connor's coach recognized that he was nervous, and he reportedly stopped having him to come to the plate to bat at practices. At the time of intake, Mrs. G. was seriously considering taking Connor off of the baseball team. She felt it was a "waste" to pay for this activity in which he refused to participate and that he clearly did not enjoy. Connor also detested having his picture taken, and when people would try to take his picture he would typically cry, hide his face, or run away.

Mrs. G. reported that Connor always made full eye contact at home and with all of his relatives, but that he maintained very little eye contact in all other social situations. Whenever his mother took him to a birthday party, he would remain by her side looking down the entire time and he would not interact with any of the other children. Connor's behavior was embarrassing

for Mrs. G., and his clinging prevented her from socializing with other mothers. Before each birthday party, Connor would plead for his mother not to take him, and about 6 months ago, Mrs. G. "gave in" and stopped taking him.

Mrs. G. felt Connor's social anxiety and avoidance were considerably interfering with his ability to maintain normal social interactions, were limiting his ability to form and maintain peer relationships, and were compromising his overall quality of life. She also felt that she and Mr. G. were themselves deeply affected by Connor's social anxiety. Although they were typically very gentle parents, they acknowledged that they would often "lose their cool" with Connor for not playing with other kids or enjoying himself in groups, and they found it exhausting to constantly consider whether he would participate in various activities. Connor received a diagnosis of social anxiety disorder (CSR = 6).

In addition to his social anxiety, Mrs. G. reported that Connor suffered from separation anxiety. In developmentally appropriate separation situations, Connor would commonly cry and beg his mother to stay with him. When at home, he insisted his parents remain in the same room as him, and at night he was unable to fall asleep alone. He required either his mother or father to lie next to him every night while he fell asleep. When his aunts or grandmother (with whom he was typically very comfortable) would babysit, Connor would cry for much of the time and tell them that he missed his parents. Connor received a secondary diagnosis of separation anxiety disorder (CSR = 5).

Course of Treatment

For the first session, Mrs. G. met with the therapist (without Connor) for the parent-only PCIT CALM initial session. The therapist provided an introduction to the treatment program, reviewed the rationale for a parent/family-focused treatment approach, and worked with Mrs. G. to identify treatment goals. The therapist provided psychoeducation about the nature of early child anxiety and the parenting practices that can be

associated with enduring child anxiety (e.g., overprotection, modeling anxious responding). The therapist emphasized how parents' attention can powerfully shape young children's behavior and encouraged Mrs. G. to consider how learning to pay attention to, encourage, and praise Connor's "brave" behavior (e.g., approach behavior), while ignoring his anxious and avoidant behavior could help Connor engage in brave behavior more frequently. The therapist collaborated with Mrs. G. to create a fear hierarchy from which the exposure practices during the second phase of treatment would be selected. Social and separation situations were ranked from lowest to highest, based on how anxious they made Connor and how much he avoided them (see Fig. 1 for Connor's fear ladder).

During this parent-only initial session, the therapist also taught Mrs. G. the child-centered interaction (e.g., PRIDE) skills, with an emphasis on differential attention and the strategic use of praise to promote any small amount of incidental bravery from Connor. To enhance learning, the therapist also engaged Mrs. G. in a number of CDI role-plays and provided feedback as needed. Mrs. G was provided CDI skills and homework handouts and encouraged to practice and track special time in between sessions.

Mrs. G. and Connor both attended the second PCIT CALM session. The therapist introduced herself to Connor and oriented him to the program. She let Connor visit the observation room behind the one-way mirror, and let Connor try on the bug-in-the-ear device that his mother would be using for much of treatment, which he enjoyed. Connor was quite shy and said almost no words, but he was very attentive to what the therapist had to say. When the therapist stepped out and let Connor be alone in the playroom with his mother, Connor enjoyed making silly faces at the mirror.

The therapist then reviewed with Mrs. G. her homework engagement and Connor's anxiety symptoms from the past week. Mrs. G. reported that Connor and she both enjoyed the extra time together each night, but that she had trouble remembering the specific skills. The therapist applauded the mother's commitment to special time each night, and then coded Mrs. G. during

Having conversation with unfamiliar kid at a birthday party

Harder

Joining in group activities

Having conversation with a friend at a birthday party

Swinging bat at baseball practice

Having picture taken

Saying "hi" to a new person

Lying in bedroom while mom is not in sight, in adjacent room

Lying in bedroom while mom is in sight, not in room

Saying "hi" to a friend

Playing in bedroom while mom not in sight, in adjacent room

Playing in bedroom while mom is in sight, but outside bedroom

Easier

Playing on one side of room with him mom on other side of room

Fig. 1 "Fear ladder" for child treated with PCIT CALM

5 min of CDI with Connor. The therapist identified that Mrs. G. engaged in a number of behavioral descriptions during the coded interaction, and that coaching would emphasize the use of labeled praises and reflections. The therapist also identified that Mrs. G. would benefit from displaying more enthusiasm, and that she could make her attention more effective by limiting her use of questions and indirect commands during CDI time. Connor appeared to enjoy the play. The rest of the session was spent coaching Mrs. G., focusing mostly on increasing the number of labeled praises and reflections. At-home practice of CDI skills was assigned.

At the beginning of the third PCIT CALM session, the therapist first reviewed the child's anxiety symptoms and Mrs. G's home practice during the prior week. Homework compliance was strong. Connor and his mother were reportedly both enjoying their nightly special time, and Mrs. G. reported feeling more comfortable incorporating the CDI skills into their play. Mrs. G. and Connor were observed for 5 min of CDI coding, which revealed that Mrs. G was frequently using behavioral descriptions and reflections but still did not use labeled praises frequently and

was inconsistent in her enthusiasm when playing with Connor. Connor spoke to his mother more in this session than in the initial coaching session. Mrs. G.'s skills improved during coaching and her pacing improved with skill drills. At the session's end, a few minutes were spent preparing for next week's upcoming low-level in-session exposure during which, for some of the play, Mrs. G. would sit about 5–7 ft away from Connor.

During the following two sessions (sessions 4 and 5), the session format continued as described above, with the exception that low-level exposures were added during CDI coaching. After CDI coding and 5 min of coaching, the therapist informed Mrs. G that they would soon begin the previously selected low-level exposure practice. During the play, after announcing the "bravery practice" to Connor, the therapist instructed Mrs. G. through the bug-in-the-ear device to calmly slide over about 1 ft from Connor without calling verbal attention to it, and to continue using her CDI skills to attend to his play. Mrs. G. did so, and Connor did not even seem to notice that she had moved. After a couple more minutes, the therapist instructed Mrs. G. to slide over another foot or two and to again continue using her CDI

skills. Mrs. G. did so, and Connor, absorbed in his play and his mother's attention, again did not seem to notice. Mrs. G. continued to use her CDI skills, while the therapist encouraged her to slide over another few feet. At this point Connor asked his mother repeatedly why she moved "so far away." The therapist encouraged his mother to answer one time, and then to ignore repetitions of the question, instead describing and praising positive aspects of Connor's play: "That's such an awesome Lego tower you built," and "You put the blue Legos on top of all of the red Legos." Soon Connor stopped asking his mother why she was sitting further away, and again became absorbed in his play. Session 5 followed a very similar procedure, with Mrs. G. ultimately using CDI skills while sitting on the very opposite side of the room by the end of the session and Connor relatively comfortable in his play. During these weeks, Mrs. G. was assigned to practice CDI at home, to practice CDI while sitting on opposite sides of the room from him, and finally to practice CDI while sitting outside of the room in which he is playing.

Mrs. G. attended the parent-only session 6 (DADS Teach) by herself. The therapist reviewed Connor's progress thus far and introduced the second phase of treatment using DADS steps to scaffold more difficult exposure tasks. Mrs. G. reported that she felt her relationship with Connor was improving, that he seemed a bit more positive and upbeat, and that she was impressed that when he plays in his bedroom at home, he was now allowing her to watch from outside of his room. At the same time, she reported that he was still extremely shy around other children and his teacher. Mrs. G. was provided a handout with the DADS steps so that she could follow along with the therapist while each skill was introduced. After teaching the DADS steps, the therapist playfully quizzed Mrs. G., and then led her in a series of role-plays using the newly learned DADS skills. Mrs. G was engaged throughout the role-plays, and expressed relative enthusiasm and cautious confidence in the next phase of treatment.

For the remaining sessions, the session format continued as described above, starting with check in, parent–child interaction coding, 5-min CDI coaching and then new exposure practices while Mrs. G. was coached in the DADS steps.

In the first DADS coaching session (session 7), both Connor and his mother attended. They also brought to session his cousin's best friend, Pepe, with whom Connor often played after school but rarely spoke to, so that Mrs. G. could be coached in the DADS steps while having Connor say hi to another child he knew well. During CDI coding, Mrs. G. met CDI mastery criteria for behavioral descriptions (14), labeled praises (13), and reflections (10), but missed meeting full CDI mastery criteria due to also using a number of questions (4) and indirect commands (3). CDI Coaching was spent helping Mrs. G. minimize questions and commands while retaining a high rate of behavioral descriptions, labeled praises, and reflections. When it was time for exposure practice, Mrs. G was coached to tell Connor, "You have been doing a great job being brave lately. Now we are going to practice being brave again. Pepe will come into the room and we will practice speaking to him." Pepe was brought into the playroom and instructed to begin coloring at the table on the opposite side of the room from Connor and his mother. Connor seemed a bit less relaxed with Pepe in the room, and he leaned in a little closer to his mother while they continued to play. The therapist prompted Mrs. G. to provide three descriptions to initiate the situation (D_1 Step): (1) "I see Pepe over there," (2) "He's coloring at the table," and (3) "He's using your favorite color, green, to color the house." Mrs. G. then modeled the brave behavior that Connor would be expected to do (A Step), by confidently saying "Hi, Pepe," who replied cheerfully "Hi, Mrs. G. Hey Connor." Connor leaned further into his mother and looked downward. Mrs. G. was coached to ignore the more withdrawn and avoidant clinging behavior. She was instructed not to hug him back as he burrowed into her, and to instead slide over a bit to give him some space.

Mrs. G. was guided to give Connor a direct command to say "hi" to Pepe (D_2 Step): "Connor, please say hi to Pepe." Connor did not utter any words and let out a very slight whine, but he did

look toward Pepe and he burrowed a little less into his mother. After waiting 5 s, Mrs. G. was coached to praise Connor for staying in the room and looking in the direction of Pepe. She was also coached to say "I'm going to keep talking to Pepe" and to then discontinue her current play with Connor and get up and interact with Pepe (S Step). Mrs. G. then used CDI skills to interact with Pepe about his drawing, while ignoring Connor's bids for attention (e.g., whining, pulling her shirt, trying to ask her if they could leave the room).

After about a minute of her ignoring Connor's anxious behavior, the therapist noted that Connor had calmed down and encouraged his mother to praise him for doing so ("Thank you for calming down—it's so fun to play with you when you are being calm!"). Connor picked up a crayon and began drawing on paper next to Mrs. G. and Pepe. Mrs. G. was coached to praise Connor for joining her and Pepe in the play ("Thanks for coloring with us!"). After a minute of Mrs. G. describing his play and praising him, Pepe naturally said to Connor ("Awesome rocket ship you're coloring, dude!"). Connor smiled but did not say anything. Mrs. G. was coached to provide a direct command for Connor to say "thank you" (D_2 step) and Connor indeed whispered (barely audibly) "thanks." Mrs. G.'s started to say "louder" but the therapist jumped in and coached her to ignore his whispering volume and instead to give him lots of labeled praises for bravely speaking to Pepe (S Step): "Awesome job, brave talking! So cool that you told Pepe 'thanks'!" Connor bashfully smiled. Mrs. G. was coached to return to using her CDI skills while playing with the two children.

After about 5 min, Mrs. G. was coached to instruct Connor to praise Pepe on his drawing (D_2 Step): "Tell Pepe you like the car he's drawing." Connor looked down and leaned into his mother. To help Mrs. G. wait five full seconds following her direct command, the therapist counted "1…2…3…" for her into the bug-in-the-ear device. Just as the therapist reached "4," Connor said in a whisper, "Cool truck." Without needing a prompt, Mrs. G. exclaimed "Awesome brave talking!" Pepe responded "Thanks, man!" Mrs. G. was instructed to revert back to using her CDI

skills as she continued playing with the boys. The therapist and Mrs. G. were both delighted when Pepe asked Connor what the big yellow thing on his picture was, and Connor replied (somewhat louder than his previous comment): "It's the sun." Mrs. G. provided another enthusiastic labeled praise: "Thanks for answering Pepe—amazing brave talking! Mommy is so proud of all of your brave talking. You guys seem like you're having lots of fun!" At-home CDI practice was assigned as well as continued exposures, including letting Connor play in his bedroom while Mrs. G. worked in an adjacent room.

At the beginning of session 8, Mrs. G. reported that since last week's session, Connor was feeling really proud of himself. He apparently bragged to his father and to his aunt that night about how good his brave talking was in the session, and they had decided to take him out for a celebratory dessert that night. Mrs. G. also reported that overall Connor seemed a bit more relaxed this past week, and his teacher had sent her an email this week also commenting that he seemed less "in his shell" than in the previous week. His teacher noted that he raised his hand to answer her questions in front of the class on two occasions that week.

The following week (session 8), Mrs. G. met CDI mastery criteria during the 5-min coding session. For this session, the clinic receptionist brought in her 5-year-old son ("Timmy"), whom Connor did not know, to take part in that session's exposure focused on Connor interacting with a boy he did not know. Connor did a terrific job saying hi to Timmy and the two interacted well during an extended play session. Mrs. G. successfully used the DADS steps throughout the session, with only minimal periodic prompting and/or correction from the therapist. The majority of parent coaching involved the therapist praising how strongly Mrs. G. was using the skills, and how brave Connor was being with Timmy.

Exposures during sessions 9 through 12 entailed Connor having his picture taken, playing baseball at a park next to the clinic, and throwing a mock birthday party. Across sessions 9 through 11, Mrs. G. reported that Connor's anxiety was showing substantial improvements. At home,

Connor was now regularly playing in his room without his parents needing to be in the room (or even watching him) as long as they were on the same floor of the house. Many of their out-of-session exposures involved sleeping away from them, and he was now at the point where he could fall asleep without his parents lying down next to him or even sitting in his room, as long as they were sitting in the adjacent room. His teacher commented that he seemed to be enjoying himself more in the classroom. Although he was still quite shy, he was answering her questions out loud (albeit with one or two word answers), and he was playing with kids a bit more in the classroom and on the playground. In addition, Mrs. G. reported that he even batted at the plate once at baseball practice and twice stopped balls that were hit in his direction.

Mrs. G. had some trouble applying the DADS steps during the exposures involving Connor having his picture taken. She began the exposure with three descriptions (D_1 Step), and then modeled the activity for him by letting the therapist take her picture multiple times (A Step). When Mrs. G. instructed Connor to "stand over there so Dr. D. can take your picture" Connor whined and hid under a pile of toys in the corner, and Mrs. G. yelled at Connor to "get out of there and stop embarrassing yourself!" The therapist quickly reminded Mrs. G. how important it was to model a calm posture during exposures, to ignore anxious and avoidant behavior, and to display confidence that Connor would ultimately do the exposure. The therapist instructed Mrs. G. to engage in her own play, while describing her play loudly enough for Connor to hear about it. Mrs. G. began playing with a Mr. Potato Head set, and talked about how much fun she was having with it. When Connor quieted down a bit, Mrs. G. was coached to praise him for calming down: "I love how you're being calm now. I get so proud when you can calm yourself down." Connor approached his mother and began playing with her, and Mrs. G. was again coached to praise his return to the play.

After a few minutes of CDI play, the mother was coached to again describe that the therapist had a camera (D_1 Step), and to model the expo-

sure activity he was expected to engage in (A Step), although the therapist suggested they lessen the difficulty a bit. Specifically, Mrs. G. had the therapist take a picture of her feet while she made a silly face off camera. Connor giggled at his mother's face, and Mrs. G. provided him with a labeled praise: "I love how silly you're being when I'm having my picture taken." Mrs. G. then gave Connor a command to "put your feet in front of Dr. D.'s camera and make a silly face so she can take your picture" (D_2 Step). Connor ran over and put his foot out while making a funny face, and his mother jumped in with a very enthusiastic labeled praise. After this success, they worked their way up to having his picture taken while he made a silly face, and then to having his picture taken with her, with the therapist, and with the clinic receptionist. He was really enjoying himself by the end of the session, and his mother reported that he even let his dad take silly pictures of him in between sessions without protest.

On the final session, the therapist threw a mock birthday party, which also doubled as a treatment graduation party. In addition to Mrs. G. and Connor, Connor's father, aunt, Pepe, the clinic receptionist, and Timmy all attended. Cake was served, and there were a number of group activities (e.g., games, problems to be solved), that the therapist had Connor work on collaboratively with Timmy and Pepe. Mrs. G. was encouraged to continue using the DADS steps to encourage and reinforce Connor's brave talking and participation in the group activities. Connor enjoyed these activities, and told his therapist that he was proud of himself for doing such great brave talking at the party.

In this final session, the therapist also reviewed Connor's and his mother's progress throughout treatment, and reviewed relapse prevention strategies.

Assessment of Treatment Response

The week following the 12th session (the graduation/mock birthday party) Mrs. G. returned to the clinic for a post-treatment evaluation. She

reported that although Connor was still a relatively shy child, he seemed to be showing much more bravery, and he was increasingly proud of himself for all of his "brave talking." Importantly, she felt that she had learned important tools for having a more enjoyable relationship with Connor and for helping guide him to challenge himself more in anxiety-provoking situations. She talked about how powerful it was for her to see him step out of his "comfort zone" and for things to go well for him, and also how powerful it was for her to step out of her "comfort zone" and see that the anxiety did not "break" him. She also reported that the home environment was much more enjoyable, which she attributed to Connor's not needing his parents at his side, and to her keeping her cool more and not yelling at him when she was frustrated with his anxiety. Baseball games and birthday parties were also much more enjoyable—by the end of treatment, Connor was willing to take a turn at bat approximately once every other practice, and at birthday parties he was being less clingy and more open to talking and laughing with the other children. His teacher still described him as a shy child who needed extra prompting and offered few spontaneous interactions with other children, but also noted that he was still much more outgoing than he was ever in the year, and that he was continuing to improve. Connor was able to join group play with children he knew well, but still exhibited some difficulty in joining the play with unfamiliar peers.

At this posttreatment evaluation, the ADIS-IV-P was again administered. Following treatment, Connor no longer met diagnostic criteria for separation anxiety disorder. Connor did continue to meet diagnostic criteria for social anxiety disorder, although relative to his baseline presentation the severity of his social anxiety disorder significantly decreased, and his symptoms were associated with significantly less impairment and interference (CSR = 4 at posttreatment, compared to CSR = 6 at intake).

Conclusion and Future Directions

Despite the prevalence, impairment, and long-term trajectory associated with early-onset anxiety disorders, historically evidence-based practices for anxiety in younger children have been relatively understudied. Recent years have witnessed critical advances in the evaluation of developmentally sensitive treatment strategies for early-onset anxiety problems. Among these innovations, PCIT adaptations for anxiety, such as the PCIT CALM Program, have shown very promising results. This chapter presented a session-by-session overview of the PCIT CALM program, and included an illustrative case example to help bring the treatment to life.

The important challenge ahead, as with all PCIT adaptations (Elkins et al., 2017), will be to consider how to best disseminate these clinical advances for widespread adoption and broad implementation. The majority of children in need lack access to quality mental health care. Regional workforce shortages in mental health services (and PCIT services in particular) limit the availability of care, and stigma-related concerns about going to a mental health facility interfere with the acceptability of care.

Technological advances may be central to efforts to increase the accessibility and acceptability of care. The field of PCIT has seen the advent of Internet-delivered PCIT (I-PCIT; Comer et al., 2015)—a videoconferencing-based format for the delivery of real-time PCIT to the home. All I-PCIT sessions are conducted online with families participating from their own homes. Using webcams, families stream home-based parent–child interactions to their remote therapist who provides real-time parent coaching through a parent-worn Bluetooth earpiece. The first randomized trial of I-PCIT examined children with externalizing problems (Comer et al., 2017), and found 70% of children treated with I-PCIT showed treatment response. Many gains were maintained across a 6-month follow-up period, and were comparable to the gains found in comparison youth treated

with clinic-based PCIT. Importantly, in this trial the rate of "excellent response" was significantly higher in I-PCIT than in clinic-based PCIT, and I-PCIT was associated with significantly fewer parent-perceived barriers to care (Comer et al., 2017). Indeed, I-PCIT formats may improve the accessibility of treatment, and may also improve the ecological validity of care by treating families in their natural settings. Over the last couple of years, case studies have been published examining videoconference-based delivery of the PCIT CALM Program for early child anxiety (e.g., Cooper-Vince et al., 2016), and our program is currently conducting a waitlist-controlled randomized trial evaluating Internet-delivered PCIT CALM (I-CALM) in the treatment of early child anxiety. If such telemental health formats for the remote delivery of the PCIT CALM Program prove successful, our field may be in a stronger position to better translate our clinical advances into a meaningful public health impact.

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Part III

Innovations in Format and Setting

Group PCIT: Increasing Access and Leveraging Positive Parent Pressure

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Abstract

Adapting PCIT to a group format is an innovative strategy to reach more families, especially in settings with workforce shortages. Another potential benefit for group PCIT includes the ability to promote peer support amongst the parents, which could increase engagement in care. This chapter will give an overview of efforts to date regarding the adaptation of PCIT to a group format. Research on group PCIT will be reviewed, highlighting a randomized-control trial that compared group PCIT and individual PCIT. This trial found that group PCIT has comparable clinical outcomes as individual PCIT, pointing towards its promise as a model to serve multiple families at the same time. Providing PCIT in a group format did not lead to differences in engagement outcomes. Other brief PCIT group models that have been implemented with parents will also be discussed, including evidence for providing group PCIT to incarcerated mothers and foster parents. An illus-

trative case example will describe the implementation of group PCIT, and the potential benefits and challenges of group PCIT will be discussed.

Why Group PCIT?

Parent–child interaction therapy (PCIT) has the potential to prevent the enormous personal and societal costs of early-onset conduct problems and child maltreatment, which include long-term mental health and substance abuse problems and higher rates of involvement in the foster care and juvenile justice systems (Fergusson, Horwood, & Ridder, 2005; Moffitt, Caspi, Harrington, & Milne, 2002; Prinz, Sanders, Shapiro, Whitaker, & Lutzker, 2009). Unfortunately, even with recent large-scale dissemination and implementation efforts, the public health potential of PCIT is not being met due to challenges with accessibility (Lieneman, Brabson, Highlander, Wallace, & McNeil, 2017). Two major barriers exist that limit the reach of PCIT. First, there are not enough trained providers to treat every family that would benefit from services. Second, even when families do enroll in PCIT, challenges with attendance, adherence, and attrition can limit the impact of treatment. Innovative mental health service delivery models are needed to increase

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the access of evidence-based treatments and engagement in these interventions (Kazdin & Rabbitt, 2013). This chapter will provide an overview of one innovative solution to reach more families and promote engagement—the adaptation of PCIT into a group format.

Group-Based Parenting Programs

PCIT is one of multiple behavioral parent training programs (BPTs) based on Hanf's two-stage model of treatment, which teaches parents relationship-enhancing skills in the first stage of treatment and effective and consistent discipline strategies in the second stage of treatment (Kaminski, Valle, Filene, & Boyle, 2008). Though there are many similarities in the parenting skills that are taught across different BPTs, the formats of the treatments are different. Many effective BPTs are delivered in a group format (Gross et al., 2009; Webster-Stratton, 2005). The group format has several potential benefits, including the capacity of therapists to serve more families at the same time. Significant workforce shortages limit the availability of quality mental health treatments in the United States, especially in low-income and rural settings (Thomas, Ellis, Konrad, Holzer, & Morrissey, 2009). Multiple county and statewide implementation efforts have sought to increase the availability of trained PCIT therapists, but challenges remain in developing and maintaining an adequate workforce (Beveridge et al., 2015; Timmer et al., 2016). Limited numbers of certified PCIT providers can lead to long waitlists for treatment, which in turn can increase the risk of attrition from care (Gross, Belcher, Budhathoki, Ofonedu, & Uveges, 2018; Lieneman et al., 2017). In one community-based study, which compared individual PCIT to another group-based BPT, parents had to wait significantly longer to enroll in PCIT due to the limited number of certified PCIT therapists (Gross et al., 2018). A group format for PCIT has the potential to address workforce barriers to access, as fewer clinicians are needed to provide care for a greater number of families.

Even when families are able to access PCIT, challenges still exist in successfully engaging parents in care. Parental engagement includes attending sessions, utilizing skills between session (i.e., homework), and completing the treatment successfully (Chacko et al., 2016). Regular practice of the targeted parenting skills (e.g., "special time") is a critical component of PCIT and is associated with faster skill acquisition, a shorter length of treatment, and improvements in parenting stress and child behavior problems (Ros, Hernandez, Graziano, & Bagner, 2016; Stokes et al., 2016). Faster treatment completion can be beneficial for families, as they have quicker treatment gains and no longer have the burden associated with attending weekly therapy appointments. Furthermore, when families are enrolled in care for extended periods of time, clinicians are not able to serve as many families (Gross et al., 2018). Therefore, improved adherence to homework completion can be beneficial for the individual, providers, and other families seeking care. Regular attendance is not only essential for a family to progress in treatment, it also impacts the financial stability of the agencies providing services, as it can be extremely costly when families miss appointment and therapists are not able to bill for their service hours (Hoagwood et al., 2014). A group format of PCIT has the potential to increase parental engagement through providing families with social support, normalizing their experiences with their children with challenging behaviors, and offering positive peer pressure to complete homework and attend sessions (Chacko et al., 2016; McKay, Harrison, Gonzalez, Kim, & Quintana, 2002; Niec, Hemme, Yopp, & Brestan, 2005; Webster-Stratton & Herbert, 1993).

In a recent update on the evidence-base of treatments for disruptive behaviors in children, Kaminski and Claussen (2017) found that group-based BPTs and individually delivered BPTs that include child participation, such as PCIT, have been identified as having the highest level of evidence and can be classified as well-established treatments. However, the authors provided an important caveat to classifying both treatment

formats as well-established, pointing out that the different formats might not lead to the same strength of effectiveness and that involving children in treatment has distinct benefits that could lead to improved outcomes. Specifically, when the child is involved in a BPT it allows the therapist to directly observe the parent's use of skills that are being taught and the child's behaviors, as opposed to solely depending on the parent's report. Further, the authors pointed to important pragmatic reasons to have BPT models that include the child in treatment, including that it can be easier to justify reimbursement for therapy when the diagnosed individual is involved in treatment. Finally, parents are able to practice the skills they are learning with their own child, which is a feature of parenting programs associated with larger effect sizes (Kaminski et al., 2008). Indeed, in a comparison of individual PCIT with a different group-based BPT, therapists rated parents as being more engaged in PCIT, which might be related to the active participation required from practicing the skills in session with the child and receiving in vivo feedback (Gross et al., 2018). As such, there is the potential to increase the impact of BPTs by leveraging the strengths of the PCIT, including direct observation parent–child dyad and coaching, with the benefits associated with the group format of treatment.

Group Format for PCIT

Several group-based PCIT models exist, but all retain the core features of PCIT, including opportunities for the parents to practice the targeted skills with their child and receive in vivo coaching of their skill use. The only group PCIT model that has been compared in a randomized controlled trial (RCT) to individual PCIT included 14 treatment sessions: an orientation session, five Child-Directed Interaction (CDI) sessions, and eight Parent-Directed Interaction (PDI) sessions (Table 1; Niec et al., 2005; Niec, Barnett, Prewett, & Shanley, 2016). Two therapists led the groups, which consisted of three to seven parent–child dyads (i.e., two to five families depending on the

Table 1 Group PCIT

Session/Topic
Orientation Session
CDI Teach
CDI Coach Sessions (4)
PDI Teach
PDI Coach 1 (Individual families)
PDI Coach 2–6
PDI Coach 7/Graduation

number of caregivers involved in treatment). To provide adequate coaching time for each family and to allow time for pre- and post-coaching discussion, group PCIT sessions lasted 2 h. The orientation session focused on fostering rapport and collaboration among parents and establishing guidelines for the group. Group PCIT included the same didactic sessions at the beginning of each phase of treatment as individual PCIT. Coaching sessions were also similar in structure and content to individual PCIT, with each caregiver receiving opportunities to practice parenting skills with their child and to receive in vivo feedback from the therapists. Group PCIT offered opportunities for vicarious learning, as parents watched other members of the group being coached with their child. Therapists encouraged parents in the group to provide supportive feedback to others in the group following coaching.

In this model, the first PDI coaching session was delivered individually to each family in the group. This session, which is the first time that children are introduced to the new discipline skills is frequently a longer session as children often test their parents' new response to noncompliance (i.e., time-out). Delivering this session individually allowed therapists to provide the parents and children with the time and attention they would need to first implement these skills. Following this session, all parents in the group practiced and observed discipline skills for the remaining six PDI coaching sessions. The final group session focused on ways to maintain treatment gains and strategies to address setbacks or new problems that might arise in the future. Parents were encouraged to stay in contact and to support each other in implementing the parenting skills.

Empirical Support for Group PCIT

Clinical and Engagement Outcomes

In order to determine the impact of delivering PCIT in a group format, it is critically important to evaluate if differences exist for clinical outcomes in comparison to the individual delivery model. In a randomized control trial, group and individual PCIT were compared for families with children diagnosed with oppositional defiant disorder or conduct disorder (Niec et al., 2016). In order to control for dosage, the same number of sessions was delivered in group and individual PCIT formats (i.e., mastery criteria were not used). Clinical outcomes for parents and children were comparable for both treatment formats, with group PCIT having noninferior outcomes to individual PCIT. Families in both treatment conditions demonstrated significant improvements in observed parenting behaviors, reductions in children's conduct problems and adaptive functioning, and significant decreases in parenting stress from pretreatment to posttreatment and at the 6-month follow-up. Even though both treatment formats were time limited, close to 70% of children moved from the clinical range on the intensity of their behavior problems at intake to within normal limits at the 6-month follow-up for group and individual PCIT.

In the RCT, group and individual PCIT were also compared on how they impacted engagement measures, including homework completion, attendance, and attrition. It was hypothesized that the positive peer pressure and social support might enhance engagement in the group format. However, no significant differences emerged in any of these engagement measures. Surprisingly, parents in both treatment formats reported similar improvements in social support on a questionnaire even though group PCIT specifically focused on parents supporting each other. However, anecdotally, parents in the groups reported calling each other to discuss the skills they were learning, carpooling to session, and spending time together outside of treatment. Therefore, the self-report measure may not have captured the ways in which the group format

strengthened parents' social support systems. Future research may benefit from including a qualitative evaluation to better understand parents' perspectives on how participating in group treatment impacted them.

Beyond establishing efficacy of group PCIT, it is important to establish if it is feasible and effective in community-based settings. In a small-scale community-based evaluation, 27 families enrolled in PCIT groups that were delivered in a Child Advocacy Center. Families presented to treatment for a range of issues, including child behavior problems and substantiated child maltreatment. Pre- and posttreatment evaluations demonstrated significant improvements in parent reports of their child's conduct problems and improvements in their parenting skills (Nieter, Thornberry Jr., & Brestan-Knight, 2013). In a community-based, randomized control trial, 47 parents with substantiated or a perceived risk for child abuse and/or neglect were assigned to either group PCIT or treatment as usual. The treatment as usual, which was a group-based curriculum developed by the community-organization, provided psychosocial education on stress management, communication, discipline, and natural and logical consequences. Both of the treatments in this trial were 12 sessions long, with 6 sessions of CDI and 6 sessions of PDI for group PCIT. Parents assigned to group PCIT reported greater improvements in their child's internalizing and externalizing behaviors as compared to those in treatment as usual (Foley, McNeil, Norman, & Wallace, 2016). Notably, though the Nieter et al. (2013) and Foley et al. (2016) studies were conducted in community-based organizations, graduate students under the supervision of certified PCIT trainers delivered group PCIT, which might limit the generalizability of the findings. Future effectiveness trials on group PCIT should investigate outcomes when community clinicians deliver the intervention.

The Treatment Process in Group PCIT

Adaptations to evidence-based practices need to maintain the core components associated with

behavior change or the potential exists to decrease the potency of the interventions (Lau et al., 2017; Stirman, Miller, Toder, & Calloway, 2013). Given the importance of coaching to the effectiveness of PCIT, it is important to evaluate if this component of treatment is delivered with adequate intensity when PCIT is delivered in a group format. In the comparison of group and individual PCIT, no significant differences existed in the amount of coaching that mothers received. Interestingly, father received significantly more coaching when they participated in group PCIT (Niec et al., 2016). Further, in vivo feedback techniques used in the group and individual PCIT formats were similar, with some evidence suggesting that parents' skill acquisition was associated with the use of responsive coaching statements (i.e., reinforcing the parent's skill use) and not directive coaching statements that told a parent what to do (Barnett, Niec, & Acevedo-Polakovich, 2013). It makes sense that individual and group PCIT had similar clinical outcomes as the active treatment ingredients were maintained in both conditions. Future efforts to implement group PCIT with children who display severe levels of conduct problems will likely benefit from maintaining the coaching process and the length of coaching time that parents receive.

Brief Group Models

The group format has also been used with brief PCIT-based interventions as a strategy to reach more families. Even a four-session prevention parent group provided in primary care demonstrated improvements in parent reports of their children's behaviors (Berkovits, O'Brien, Carter, & Eyberg, 2010). Another innovative adaptation of group PCIT sought to reach parents with significant barriers to care—incarcerated mothers. In this intervention, mothers participated in seven sessions, which taught PCIT skills and included role-play practice and coaching with other mothers in the group. In comparison to the parenting group that was typically provided by the correctional facility, mothers in the PCIT group demonstrated significant improvements in their use of

positive parenting skills (Scudder, McNeil, Chengappa, & Costello, 2014). A brief group format has also been used to train foster parents to better manage behaviors of the children in their care (Mersky, Topitzes, Grant-Savela, Brondino, & McNeil, 2016). Trainings occurred with four to eight foster parent–child dyads over 2 full days. In the first day, foster parents learned the CDI skills in a didactic session and then had opportunities to practice the skills with their child and receive coaching. The second day followed a similar structure but focused on the PDI skills. Foster parents then received phone consultation to help support their home practice of the skills. Mersky et al. (2016) found similar improvements in the child's internalizing and externalizing symptoms when foster parents received either 8 weeks of phone consultation or 14 weeks of phone consultation and a booster session to practice PDI skills.

Conclusions

To date, research on group PCIT holds promise, with a randomized controlled trial showing that clinical outcomes, adherence, attendance, and attrition are similar to individually delivered PCIT (Niec et al., 2016). Other studies also support the use of group PCIT, demonstrating that the model is feasible to implement in community settings with parents presenting with maltreatment histories and children with disruptive behaviors (Foley et al., 2016; Nieter et al., 2013). Further, group PCIT outperforms parenting groups that are provided as treatment as usual (Foley et al., 2016), which is consistent with past research comparing individually delivered PCIT to treatment as usual (Chaffin, Funderburk, Bard, Valle, & Gurwitch, 2011; McCabe & Yeh, 2009). At the same time, the group format does not appear to increase parent engagement as has been previously hypothesized, as adherence, attendance, and retention were not significantly different across individual PCIT and group PCIT (Niec et al., 2016). These findings are consistent with another trial that compared traditional, mastery-based PCIT with a different session-limited

parenting group, which found similar enrollment and successful completion rates across the two interventions (Gross et al., 2018). Interestingly, in this trial with predominately low-income, African American clientele, these engagement outcomes were similar across interventions even though families needed an average of 30 PCIT sessions to graduate successfully compared to the 12 sessions in the other parenting program. Furthermore, a recent meta-analysis that looked at engagement data across 262 studies of BPT found that there were no significant differences between group and individually delivered interventions (Chacko et al., 2016). In sum, evidence does not seem to indicate that group-based BPTs improve parental engagement through social support and positive peer pressure. However, other benefits still exist for providing PCIT in a group format. By serving multiple families at the same time, workforce challenges can be addressed with more families receiving services from fewer therapists. Therefore, group PCIT provides a promising strategy to increase the access of this effective treatment model.

Case Example

Four families enrolled in the Thursday night PCIT group during a winter semester at our outpatient university clinic for children and families. The four participating children (3 boys) ranged in age from 36 to 62 months. In two families, the participating caregivers were single mothers; in one family they were a mother and stepfather, and in one family a grandmother (i.e., five caregiver–child dyads). Families were referred by their children's pediatricians or preschool teachers.

Pretreatment Assessment

Intake therapists (doctoral students with a minimum of 1-year of training in PCIT and supervision by a PCIT Master Trainer) conducted assessments with each family individually 3 days to a week prior to the start of the group. The pre-

treatment assessment included a clinical interview, broad- and narrow-band measurement of children's behavioral functioning (i.e., Behavioral Assessment System for Children-Parent Rating Scale; BASC-PRS, Reynolds & Kamphaus, 2004; Eyberg Child Behavior Inventory, ECBI, Eyberg & Pincus, 1999), and Parenting Stress Index-Short Form-fourth Edition, PSI-SF-IV; Abidin, 1995), and a behavioral observation measure of parent–child interaction quality (Dyadic Parent–Child Interaction Coding System-IV; DPICS-IV, Eyberg, Chase, Fernandez, & Nelson, 2014). Three of the children met the diagnostic criteria for oppositional defiant disorder (ODD) and had parent-reported conduct problems well within the clinical range. One child met the criteria for attention deficit hyperactivity disorder (ADHD) and also had parent-reported conduct problems in the clinical range. All parents expressed feeling highly stressed and ineffective in managing their children's behaviors. Behavior observations as coded with the DPICS revealed that all parents used very few child-centered skills in their interactions with their children. Repeating commands, threatening removal of privileges, and in the case of the single grandmother, negotiating and pleading were the primary strategies used to gain child compliance. During the assessment, grandmother expressed concern about whether she would be able to continue acting as the primary caregiver for her granddaughter.

Child-Directed Interaction

Two advanced clinical psychology doctoral students led the group under the supervision of a PCIT Master Trainer. Different from standard PCIT, an orientation session was held after the assessment and prior to the CDI Teach session in order to give families the chance to meet one another and to begin to develop rapport among themselves and with the therapists. Parents were encouraged to share their goals for the program, the things they found most challenging about parenting their children with conduct problems, and the things they enjoyed the most about their

children. The therapists' focus during the orientation session was to (1) normalize parents experiences of stress and frustration, (2) foster parents' sense of confidence in their ability to bring about change in their family, and (3) foster group cohesion (e.g., create a group environment in which parents felt comfortable sharing their challenges and supporting one another). At the end of the orientation session, families were already talking to one another as they left the meeting room, some of them continuing to share their hopes for change.

During the CDI Teach session, therapists presented the same content with the same format as in individual PCIT (Eyberg & Funderburk, 2011). However, therapists took care to provide examples and offer metaphors for skill use that would fit with each family. Each family was helped to identify the specific time and place in which they would practice the CDI skills at home with their children. Parents were encouraged to help each other to brainstorm how to make the special time practice a successful habit. When one single mother worried aloud that she would never remember to practice that week because of extra obligations at work, the other single mother in the group quickly suggested they might call each other to provide reminders. They agreed it would be a helpful strategy for the first week and decided to share phone numbers outside of session.

The first CDI coach session was held on a day when the weather was snowy. Three of the four families made it to the session, with only the grandmother missing. In the group format of PCIT, because multiple children are present, it is not possible to have them play in the same room as the parents during the pre-coaching check-in. Thus, childcare staff (undergraduate students training in CDI skills) showed the children to a playroom where they would play together until being taken one-by-one for special time with their parents. During the check-in time, the two mothers who had agreed to remind each other about home practice had each completed special time five times during the week. The third family had only completed special time three times (for both mother and father), and they expressed dismay that they had not completed as much practice as the others in the group. They asked if they

might also join in the reminder calls and were welcomed by the other two parents; thus, a small phone tree was established to support homework completion. One mother announced that they would also offer the support to the missing grandmother at the next session.

The group then moved to the observation and parent–child play rooms. Each parent–child dyad was observed one at a time, using the same format as individual PCIT: 5 min of coding of CDI skills followed by in vivo coaching. While each dyad was coded, the other parents coded along with the therapists in order to give caregivers the opportunity to practice identifying the skills (and after coaching, the opportunity to praise one another for skill use). Parents also observed one another during coaching, and thus, learned through observation as well as through active practice.

In the following week (CDI Coach 2), all four families attended session. Grandmother reported that she had missed the previous session because she had been nervous to drive in the snow. Another parent offered to pick her up if the session again fell on a snowy day. During the pre-coaching check-in, the therapists continued to identify and redirect conversation topics that could lead to unhelpful or overly negative perceptions of children's behaviors, and instead remained solution-focused, reframing parents' comments as opportunities in which to use the CDI skills to improve their children's behaviors.

All families attended the final two CDI coach sessions, with skills improving for each parent as the coaching continued to target the specific needs of each dyad. Although the group format was not mastery based, by CDI Coach 4, one family met mastery criteria for the CDI skills (Eyberg & Funderburk, 2011); one family was very close to mastery (only missing the criterion for behavior descriptions); the other two families met mastery for at least two categories each.

Parent-Directed Interaction

By the time of the PDI Teach session, the parents appeared comfortable in one another's presence and were sharing their weekly homework experiences

readily. In addition, the children had become friendly with each other and would willingly go with the child care staff to play prior to the play time with their parents. During the Teach session, parents seemed to benefit from the group setting as they shared their anxiety and excitement about learning the new discipline procedure. For example, when one single mother shared her doubt about being able to tolerate her son's tantrums in time-out, other parents reminded her of the progress she had made so far and expressed confidence in her ability to "keep her cool."

The first PDI Coach session is the only session in the group model that is conducted with each family individually. Providing one individual session allows each family to receive the therapists' undivided attention during a session that can often be long and difficult (Niec et al., 2005, 2016). Of the four families in the group, two experienced time-out sequences with their children during the first PDI Coach session, and all four families taught their children about the new discipline procedure using the "Mr. Bear" model.

During the remaining PDI Coach sessions, the group's cohesiveness was evidenced by the support they gave to one another during difficult time-out procedures and by the way the parents worked together to come up with solutions to the challenges faced during the PDI phase of treatment (e.g., how to make a room a safe back-up room for the time-out procedure; what to do if one sibling tries to get another out of the time-out space; which local stores were the most family friendly for rehearsing the parenting skills in public). As the treatment drew closer to its completion, families began to share ideas for maintaining contact and supporting one another in an ongoing fashion.

Graduation and Posttreatment Assessment

Similar to individual PCIT, the last session of the group model included a review of progress for each family, a discussion of how to address future problems, should they arise, and a celebration for the parents and children. During the celebration,

the children presented one another with hand-drawn cards and the parents presented to the therapists a photo that the group had taken together of all of the children, along with a note of thanks. Grandmother reported that she felt the experience had been "life changing" and that she felt not only more confident in managing her granddaughter's behaviors but also that their relationship was closer and warmer than it had been prior to treatment.

Posttreatment assessment included the same instruments that had been administered at pretreatment. Three out of four children had significant reductions in conduct problems (ECBI Intensity Scale scores within normal limits); only one single mother reported that her son's behaviors were still within the clinical range, although they had also decreased. Observed child-centered (CDI) skills remained near mastery and PDI skills near mastery for all five caregivers. All caregivers reported satisfaction with the treatment model.

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Taking PRIDE in Your Home: Implementing Home-Based Parent–Child Interaction Therapy (PCIT) with Fidelity

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Abstract

Clinically significant externalizing behaviors in young children is an increasingly common issue with estimates ranging from 4% to 15% affected, yet roughly only 3% of young children with a mental health problem receive any treatment whatsoever. Due to the underutilization of outpatient therapy, attrition rates ranging from 30% to 70%, and a host of barriers that preclude families from using mental health services (e.g., stigma, transportation), a need exists to make evidence-based interventions for disruptive behaviors more available and transportable to least restrictive environments. This is particularly important for highly stressed, limited resourced families. As the empirical focus has shifted from treatment efficacy trials to examining effective ways to disseminate and implement validated treatments, the investigation of evidence-based intervention models in "real world" settings, such as home-based PCIT, is now becoming critical to ensure children and families receive the most proven mental health treatments. This chapter presents an overview of home-based models, outlines a rationale for home-based PCIT, reviews the home-based PCIT literature and presents practice parameters and clinical modifications to adapt to the home setting while maintaining fidelity to core components of the model.

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Overview of Home-Based Models

Public and private home-visiting programs are expanding rapidly across the United States. These programs are serving over two million families with a pregnant woman and/or child under the age of 3 (Lanier, Macguire-Jack, & Welch, 2015). Results of a meta-analysis by Sweet and Appelbaum (2004) suggested that families benefited from home visiting programs in the following areas: parenting attitudes and behavior, parent education (i.e., parent's returning to school), child cognitive and socioemotional outcomes, and decreased actuality or

possibility of abuse. While these results are statistically significant, the authors note that the majority of the outcomes had small effect sizes (i.e., less than 0.20). Despite inconsistent results, the Centers for Disease Control and Prevention identified home-based programs as the preferred modality for families at risk for child physical abuse and neglect (Briss et al., 2000).

Due to the Patient Protection and Affordable Care Act (2010), there has been an increase in funding over the past several years toward home-based programs, with hundreds of millions of dollars allocated for such services. The number of children and parents served by home visiting program has quadrupled since 2012, and the number of home visits provided has increased fivefold, with more than 3.3 million home visits provided over the past 4 years (Health Resources and Services Administration, 2017). The Maternal, Infant, and Early Childhood Home Visiting (MIECHV) program works at the federal-, state-, and community-level to improve outcomes for at-risk children through the age of 5 with evidence-based home visiting programs (Health Resources and Services Administration, 2017). General programs through MIECHV include the Tribal Home Visiting program as well as the Mother and Infant Home Visiting program. The goals of these programs are to promote health of parents and their children, foster positive parenting, prevent child maltreatment, and provide resources to these families to encourage child development and competency in academic settings. Areas in which the MIECHV measures success include: health, maltreatment, school readiness and achievement, crime or violence in the home, family economics, and utilizing community resources (Health Resources and Services Administration, 2017).

A recent effectiveness review conducted by Mathematica Policy Research (Sama-Miller et al., 2017) on behalf of the Department of Health and Human Resources identified 20 home-based treatments meeting stringent criteria (e.g., randomization of groups, low attrition of sample, favorable outcomes across participants) for a high-quality evidence-based model (see Table 1). These treatments focused on parent and child outcomes including physical health, academic success, and mental health, to name a few. Outcomes indicated that each model had a number of favorable, lasting effects on child outcomes, and outcomes were found across the sample (rather than specific subgroups only).

Adapting Evidence-Based Treatments (EBTs)

After an evidence-based treatment (EBT) is shown to be efficacious in a highly controlled setting (e.g., lab, university-based clinic), further investigations can determine effectiveness of the EBT with different groups (e.g., ethnic, cultural) and locations (e.g., community mental health agencies, hospitals). When this practice of implementation across varying populations occurs, outcomes that were previously attained in the original targeted population may change, improve, or worsen with new clientele. In some instances, certain cultural differences may clash with an EBT insomuch that it creates a roadblock to individuals' willingness to even engage in the treatment. When this happens, a change in treatment delivery may be necessary.

Core components of EBTs may not be altered for the treatment to maintain its distinct characteristics, however, when implementing standard treatment is not appropriate or feasible with a new group, *adaptation* of the EBT may be required to address the need (Eyberg, 2005). Unlike *tailoring* which alters the "focus or delivery style of essential elements in established treatments" for specific cases (Eyberg, 2005, p. 199), or *modifications* which are changes made across a treatment protocol by the treatment development team (Eyberg, 2005, p. 200), *adaptations* are changes for new populations that restructure the EBT to enhance treatment outcomes for the group.

Distinct examples of adapted PCIT for new populations includes McCabe, Yeh, Garland, Lau, and Chavez's (2005) work with adapting PCIT for Mexican American children (i.e., Guiando a Ninos Activos; GANA), Pincus, Santucci, Ehrenreich, and Eyberg's (2008) adaptation for children with separation anxiety,

Table 1 High-quality home-based treatments (Department of Health and Human Resources)

Treatment model	Target population	Length of treatment	Prevention/ Intervention	Professionals	Monitor fidelity	Outcome assessment
Attachment and Biobehavioral Catch-up Intervention (ABC) (CEBC, 2016a)	Multi-problem families of children 6 months–2 years	10 weekly, 1 h sessions	Intervention	Clinician, no educational requirements	Y	– Child stress (cortisol) – Child behavior problems – Parental emotion processing (EEG) – Child attachment – Child cognitive flexibility
Child FIRST (Lowell, Carter, Godoy, Paulicin, & Briggs-Gowan, 2011)	Pregnant women, families of children prenatal—6 years	Weekly 45–90-min sessions	Prevention and Intervention	Clinical team = master's level developmental/mental health clinician and associate's/ bachelor's level care coordinator	Y	– Emotional/behavioral disturbance – Learning problems – Child and family maltreatment – Child language – Child behavior problems – Parental stress
Early Head Start Home Visiting (US DHHS & ACF, 2016a)	Low socioeconomic pregnant women/families with children prenatal—3 years	Weekly 90-min sessions until child is 3 years, two group socialization activities per month	Prevention	Family visitor, associate's degree in early childhood education	Y	– Family conflict – Parental supportiveness and engagement – Child attachment – Child cognitive development – Parental discipline
Early Intervention Program for Adolescent Mothers (EIP) (Koniak-Griffin et al., 2002)	Pregnant adolescents (14–19 years) from underserved minority groups, pregnancy—1 year	17 sessions lasting 1.5–2 h each	Prevention	Public health nurses	N	– Parental self-management skills – Stress and depression – Communication skills – Emergency room visits – Health behavior

Table 1 (continued)

Treatment model	Target population	Length of treatment	Prevention/ Intervention	Professionals	Monitor fidelity	Outcome assessment
Early Start (based in New Zealand) (Fergusson, Boden, & Howood, 2012)	Underserved, at-risk families with children birth—5 years	Starting at 3 h per week and concluding with 1 h per 3 months	Prevention and Intervention	Family support workers in nursing, teaching, allied disciplines	Y	– Child health – Child maltreatment – Parenting skills – Family economics – Parental depression – Domestic violence
Family Check-Up (CEBC, 2016b)	At-risk, low socioeconomic families with children ages 2–17 years	1 h sessions every 1–2 weeks for 1–4 months	Prevention	Community practitioners, master's level with some clinical experience	Y	– Parental depression – Child problem behaviors – Parental involvement with child – Parental social support – Relationship satisfaction
Family Connects (US DHHS & ACF, 2016b)	Families with special needs, children 2–12 weeks	1 session (maximum 3) lasting 1.5–2 h	Intervention	Nurse	Y	– Mother and infant health – Family utilization of community resources
Family Spirit (US DHHS & ACF, 2016c)	Young American Indian mothers, pregnancy—3 years	52 sessions lasting 45–90 min; starting with weekly sessions and concluding with bimonthly sessions	Prevention	Paraprofessionals/health educators from participating community familiar with local culture; high school diploma/GED	Y	– Child behavior problems – Child emotion regulation – Child sleep – Child eating – Parental depression – Parental anxiety
Health Access Nurturing Development Services (HANDS) (Williams et al., 2017)	Pregnant or new, at-risk, first-time parents, prenatal—2 years	60 -min sessions, starting at weekly sessions and concluding with monthly or quarterly sessions	Prevention	Professionals (public health nurses, social workers, college graduates in early childhood education) and paraprofessionals (at least high school diploma/GED)	Y	– Preterm birth – Birth weight – Child maltreatment – Prenatal care – Hypertension – Maternal weight gain – Breastfeeding – Family economic self-sufficiency
Healthy Beginnings (US DHHS & ACF, 2015a)	At-risk first-time mothers from disadvantaged areas, pregnancy—2 years	Eight, 45–90 -min sessions at major developmental periods (prenatal, 1, 3, 5, 8, 12, 18, and 24 months)	Prevention	Nurses	Y	– Child physical activities – Child diet – Parental health (smoking, diet) – Child development

Program	Population	Dosage	Type	Staff	Y/N	Outcomes
Healthy families America (HFA) (CEBC, 2016c)	Multi-problem pregnant women or families with newborn children ages 0–5 years	1 h visits ranging from 2 times weekly to 2–4 times per month until child is 3–5 years	Prevention	Staff, high school diploma	Y	– Child maltreatment – Prenatal care – Parent–child interactions – Child school readiness – Parental depression and stress – Parent knowledge of child development
Healthy Steps (US DHHS & ACF, 2015b)	Families with children birth (less than 4 weeks)—3 years	Pediatric setting (enhanced well care appts., phone calls, parent group meetings) with a min. of 6 total home visits	Prevention	Paraprofessionals, background in child development, early intervention, special education, social work	N	– Childhood trauma – Child social-emotional development
Home Instruction for Parents of Preschool Youngsters (HIPPY) (CEBC, 2016d)	Families of children 3–5 years lacking confidence in child school readiness	Weekly 1 h sessions for 30 weeks—3 years	Prevention	Home visitors, high school diploma/GED with early childhood education experience	Y	– School readiness – Child cognitive skills – Child test scores – Child classroom behavior – Parental stress – Parental depression
Maternal Early Childhood Sustained Home Visiting Program (US DHHS & ACF, 2014)	At-risk/disadvantaged pregnant women or new mothers, pregnancy—2 years	Min. of 25 60–90-min sessions	Prevention and Intervention	Registered nurses	Y	– Breastfeeding – Parent knowledge of child development – Immunizations – Maternal health (e.g., diabetes, hypertension, depression) – Family functioning
Minding the Baby (US DHHS & ACF, 2016d)	First-time mothers with low socioeconomic status, pregnancy—2 years	45–90-min sessions, starting with weekly, concluding with bimonthly visits (min. 10 total)	Prevention	Pediatric nurse practitioner and licensed clinical social worker	Y	– Immunizations – Parental responsiveness – Parental anxiety and depression – Child attachment – Child maltreatment

(continued)

Table 1 (continued)

Treatment model	Target population	Length of treatment	Prevention/ Intervention	Professionals	Monitor fidelity	Outcome assessment
Nurse-Family Partnership (NFP) (CEBC, 2016e)	First-time low socioeconomic mothers and their children pregnancy—2 years	60–90-min sessions every 1–4 weeks	Prevention	Registered nurses, bachelor's degree	Y	– Parental health – Child health and development – Family economic self-sufficiency – Child maltreatment – Parent discipline – Domestic violence
Oklahoma's Community-Based Family Resource and Support Program (CBFRS) (US DHHS & ACF, 2012)	First-time mothers from rural communities, pregnancy (28 weeks gestation)—1 year	Starting with weekly sessions, concluding with biweekly sessions (30 total visits)	Prevention	Child development professionals	Y	– Maternal health (e.g., smoking) – Parent knowledge of child development – Utilization of community services – Family planning – Household safety – Immunizations – Parental responsiveness
Parents as Teachers (PAT) (CEBC, 2015a)	At-risk, pregnant mothers or parents with children through age 5	1–2 h sessions delivered 1–4 times per month until child is 5 (2 year min. enrollment length)	Prevention and Intervention	Parent educators, min. high school diploma/ GED + 2 years supervised work experience	Y	– Parent knowledge of child development – Child maltreatment – Child school readiness – Parental sense of competence – Child attachment
Play and Learning Strategies (PALS) Infant (CEBC, 2015b)	Families with children 5–15 months	Weekly, 90-min sessions for 11 weeks	Prevention	Home visitor with associates degree in early childhood	Y	– Parent–child relationship – Parent sense of competence – Parental responsiveness – Parent knowledge of child development – Child language – Child social development
SafeCare Augmented (CEBC, 2016f)	Families with a history or at risk for child maltreatment, children ages birth to 5 years	Weekly 1–1.5 h sessions for 18–20 weeks	Intervention	College-educated staff	Y	– Child maltreatment – Home accidents – Parental depression and stress – Child problem behaviors – Positive parenting strategies (engagement, responsiveness)

and Comer et al.'s (2014) efforts to adapt PCIT using an internet-based delivery model. When deciding how to adapt PCIT for Mexican American families, McCabe et al. (2005) created a "modification process" which entailed collecting information related to cultural adaptations for this population, sorting potential options for adapting the protocol, and then discussing options with experts (e.g., researchers, focus groups) to finalize the adaptation package (pp. 113–114). Pincus et al. (2008) determined adapting PCIT for children with separation anxiety was necessary as alternative treatments for children with separation issues were guided toward older children (over 7 years). Treatments for older children were inappropriate for younger populations who were already experiencing anxiety symptoms around separation (Cartwright-Hatton, McNally & White, 2005). In addition, standard PCIT alone was not making significant changes in children's levels of anxiety until an additional component (i.e., Bravery Directed Interaction) was added to the protocol (Pincus et al., 2008). As a final example, Comer et al. (2014) recognized a significant gap in the number of children with severe behavior disorders and those who receive services. They labeled these limitations to services as barriers in availability, accessibility, and acceptability (Comer et al., 2014, p. 2). To combat the numerous barriers, the researchers adapted PCIT by delivering the treatment via the internet to families in their homes.

The implementation of PCIT in different settings (e.g., the home) provides agencies without outpatient clinic care and families without access or mobility to travel for outpatient services a greater opportunity to receive mental health care. As PCIT continues to expand across diagnostic groups, contexts, and ages, it is important that researchers and clinicians responsibly and carefully make changes only in circumstances where the standard model is not applicable. For home-based PCIT, these changes extend from the lack of infrastructure typically seen in clinics. Although some adjustments are needed for implementation, the core components of the therapy remain intact, as noted in later sections.

Rationale for Home-Based PCIT

The programs listed in Table 1 vary on a considerable number of variables including intervention goals (e.g., child health outcomes, prenatal care, child abuse prevention), structure (e.g., time-limited intervention), population served, and type of staff (i.e., professional, paraprofessional). Despite the recent proliferation of home-based, parenting-focused programs, the vast majority focus on prevention. In addition, none of the programs listed in the table use licensed mental health professionals to deliver services for young children with clinically significant behavioral challenges. Further, although some programs contain some coaching element, most do not include assessments used to drive treatment goals, contain a mastery component, meet conjointly with a parent and child, or have detailed manuals to ensure fidelity to the model. As such, there exists a void in the home-based landscape for empirically supported, clinically validated treatments carried out by mental health professionals and targeting families and children with clearly identifiable behavioral issues.

Overview of Home-Based PCIT Research

PCIT is expanding its evidence-base through in-home treatment implementation. Different groups have been targeted in the adaptation process to determine the benefit for each population in the home setting. Findings from PCIT home-based studies are described below and can be found in Table 2.

Case study of in-home in addition to outpatient. Gordon and Cooper (2016) conducted a case study on PCIT in-home delivery. While treatment was jointly delivered in an outpatient clinic, the family requested in-home sessions as well. The subject stated that the inclusion of in-home sessions (especially during PDI) helped reduce parental stress and travel time to and from the clinic. In addition, the authors suggested that the delivery of treatment in the home allowed for viewing and conducting therapy within a more

Table 2 Studies of PCIT conducted in the home setting

Study	Published?	N	Treatment	Measures	Outcomes
Bagner et al. (2013)	Yes	Seven 12- to 15-month-old at-risk infants and parents	Home-based adaptation of PCIT to prevent child behavior problems (CDI only)	Satisfaction Child behavior problems Parent skill acquisition	Increases in parenting skill, high satisfaction, and decreases in child behavior problems
Bagner et al. (2016)	Yes	Sixty 12- to 15-month-old at-risk infants and mothers	IH = Home-based adaptation of PCIT to prevent child behavior problems (CDI only) C = control	Child behavior problems Parent skill acquisition Parenting stress Child compliance	IH > C on child compliance and positive parenting skills C > IH for child aggression levels and negative parenting skills
Blizzard et al. (2017)	Yes	60 mother-infant (13.52 months) dyads	IH = Home-based adaptation of PCIT to prevent child behavior problems (called Infant Behavior Program) C = control	Parent skill acquisition Parental warmth, sensitivity	Parental skill acquisition correlated with attachment-based parental behaviors IH increased parental warmth, sensitivity
Chengappa et al. (2017)	Yes	3 parents with intellectual disability and their child with disruptive behaviors	Multiple baseline design across behaviors	Parent skill acquisition Child compliance Child behavior problems	General trends indicated improvements in parenting skill, child compliance, and reductions in child behavior problems
Galanter et al. (2012)	Yes	83 parent–child dyads	All families received PCIT delivered in the home and measured pre- and post-treatment Compared graduated families (G) to dropouts (D)	Child behavior problems Parent attitudes Parent skill acquisition Satisfaction	Significant positive outcomes for child behaviors, parent skills, and parent attitudes. G > D on positive child outcomes and lower risk of child abuse
Gordon and Cooper (2016)	Yes	One 4–year-old girl with ODD	PCIT in clinic and home setting	Child behavior problems Child aggression Parental confidence in handling child behavior	Child and parent significantly improved in measured outcomes at post-treatment, 1 month and 1 year follow up
Gran (2016)	No	74 parent–child dyads	35 = in-home PCIT (IH) 39 = office-based PCIT (O) Quasi-experimental pre-/posttest with nonrandom groups	Child behavior problems Parent skill acquisition Parenting stress	O = IH on improvements in child behavior, parent stress, parent skill acquisition

(continued)

Table 2 (continued)

Study	Published?	N	Treatment	Measures	Outcomes
Lanier et al. (2011)	Yes	120 parent–child dyads (37 completers)	67 = outpatient PCIT (O) 53 = in-home PCIT (IH)	Child behavior Parent stress Parent functioning Attrition	Both O, IH = positive outcomes O = faster gains in measured outcomes (vs. IH) O = IH rate of attrition
Timmer et al. (2010)	Yes	73 parent–child dyads (58% boys)	40 = Outpatient PCIT + 1 h PCIT in-home coaching (IH) 33 = Outpatient PCIT + 1 h in-home social support (SS)	Rate of CDI mastery Parent skill acquisition Child behaviors Parent stress Parent tolerance with child behaviors	IH = SS for rate of CDI mastery, parenting skill acquisition, child behavior problems. IH > SS reduced parental stress & tolerance in handling child behaviors
Wallace et al. (2016)	No	N = 73 Master's level in-home therapists with child clients	41 = Staff-Child Interaction Therapy (SCIT) 32 = Treatment as usual (TAU)	Staff skill acquisition Child behavior problems	SCIT > TAU in staff skill, child improvements in behavior problems
Ware et al. (2008)	Yes	5 families and their children with disruptive behaviors	In-home PCIT as single subject A/B design	Parent skill acquisition Child behavior problems Child compliance Satisfaction	Families completing PCIT had decreased negative parental behavior, increased positive behavior and praise, decreased child behavior problems, and increased child compliance. All families reported high satisfaction

natural environment to improve generalization. Overall, the case study had significant reductions in problem behavior that remained after a 1 year follow up.

Larger scale in-home addition. Researchers incorporated an in-home component in addition to regular PCIT outpatient services (Timmer, Zebell, Culver, & Urquiza, 2010) to determine if PCIT services in the natural home environment were beneficial for families to "overlearn" the skills (p. 43). Patients were randomly assigned to receive one 1-h coaching session or a comparable hour-long in-home support session in addition to their regularly scheduled hour-long therapy session in clinic each week. The study ended up finding no difference in how quickly families achieved CDI mastery, attained skills, or the level of child behavior problems at mid-treatment.

Outcomes also indicated that families receiving the addition of home-based coaching were no more likely to stay in treatment than clinic-based families. However, outcomes did indicate significantly larger improvements in parental stress and tolerance of their child's behaviors for families receiving in-home coaching compared to social support.

Single subject design. Ware, McNeil, Masse, and Stevens (2008) implemented PCIT in the home for hour-long sessions two times a week. The study enrolled five families who received PCIT using a single subject A/B design. Treatment was delivered via in-room coaching. Results indicated significant improvements in child compliance and behaviors, while parents improved on their skill acquisition, and had high levels of satisfaction with the protocol. Results found similar

rates of attrition as studies conducted in outpatient settings (40%) though the small sample size should be considered in interpreting the results.

Home delivery alone. Galanter et al. (2012) studied 83 parent–child dyads (children ranged from ages 2–10 years) who received PCIT delivered in the home. Home delivery was chosen to reduce barriers to treatment participation for the population (e.g., transportation, child care). Sessions were delivered once per week and ranged in length from 45 min to 2 h. Unlike other in-home studies, therapists used a bug-in-the-ear device to communicate with parents during sessions in the home. Because many living situations did not allow for appropriate back-up spaces, adaptions included either the removal of privileges or a second time-out chair during PDI. Results from the study yielded significant reductions in child behavior problems, improvements in parent skill acquisition, and increases in child compliance. In addition, the vast majority of parents indicated that they were satisfied with treatment.

In-home vs. outpatient. Lanier et al. (2011) explored parenting stress, parent functioning, and attrition for families enrolled in PCIT in a community-based clinic compared to an in-home delivery model (2011). In both settings, parents made significant positive gains; however, the clinic-based setting yielded faster gains. Specific barriers (i.e., income, parent functioning) predicted parent attrition regardless of setting. In addition, the researchers found that no differences were present in the treatment delivery setting for rates of completion of treatment (Lanier et al., 2011).

In another outpatient comparison study, Gran (2016), in an unpublished dissertation, compared home-based to office-based PCIT in a nonrandom quasi-experimental design. Weekly sessions ranged in length from 45 min to approximately 4 h. Standard protocol was used in clinic settings while therapists in the home setting utilized in-room coaching with a bug-in-the-ear device. In addition, in-home therapists utilized the standard time-out procedure (e.g., time-out room) while therapists in the clinic utilized swoop-and-go due

to the absence of a time-out room. Positive outcomes after treatment were found for both groups in parental skill acquisition, child behaviors, and parenting stress. No differences in outcomes were found between groups.

Large-scale implementation. The state of Delaware has conducted the largest-scale PCIT home-based implementation effort to date (Beveridge et al., 2015; Fowles et al., 2017). In partnership with the University of Delaware, Delaware's Division of Prevention and Behavioral Health Services (DPBHS) gathered data comparing 181 children and families who received clinic-based PCIT and 133 families who received intensive home-based PCIT. Children in the home-based group were self-selected based on prior attrition in outpatient therapy, severe disruptive and aggressive behavior, or a caregiver facing challenges that threatened continued care. Home-based families received two sessions per week and were paired with a case manager to identify and address family stressors. Clinic-based families received PCIT as usual. The study indicated that both versions of the therapy were effective in reducing child-behavior problems and increasing parenting skills. Importantly, however, intensive home-based participants were twice as likely to complete treatment (64.66%) compared to clinic-based participants (33.15%) despite facing more challenges and stressors (Fowles et al., 2017). A 2-year follow-up investigation is currently underway measuring long-term sustainability of the treatment model (Grassetti, Masse, Fowles, & Beveridge, 2018).

Another significant state-wide initiative, under the leadership of Naomi Perry, has taken place in the state of Washington for over a decade. Funded under a Children's Administration (CA) PCIT-specific contract, the CA has partnered with state-wide community agencies to serve at-risk families through PCIT services. A database is maintained of all CA contracted agencies so families can be immediately referred to begin services (usually within 1 week). The goal of this process is to work with families who have children removed or are under threat of removal from the home and to increase the likelihood a child will remain in their

home with their caregivers without delay. All agencies contracted through the CA are required to uphold a strict quality assurance plan which outlines that all PCIT providers have access to 40 h of paid training and a year-long learning collaborative (i.e., monthly consultation, tape reviews by a Level 2 PCIT trainer). To promote fidelity and sustain agency growth, several Level 1 PCIT trainers are also stationed within agencies to train newer providers.

Further adaptations—very young children. Bagner and colleagues (Bagner et al., 2016; Bagner, Rodriguez, Blake, & Rosa-Olivares, 2013; Blizzard, Barroso, Ramos, Graziano, & Bagner, 2017) adapted PCIT for families of infants ages 12- to 15-months in an in-home setting to prevent child behavior problems. One of the largest adaptations for this population was the removal of PDI due to the inappropriate nature of time-out for very young children. In the pilot, families received CDI treatment in their homes that was limited to six (Bagner et al., 2013) or seven (Bagner et al., 2016) 1–1.5 h weekly sessions (including the CDI teach session). To meet CDI mastery criteria, families were either required to have ten reflections or to have 75% reflections of infant noises (in addition to normal CDI mastery requirements) due to the limited vocabulary and vocalizations of infants. Families in the pilot (Bagner et al., 2013) reported high satisfaction, improvements in parental skills when interacting with their child, and general improvements in their child's behavior problems. Families in the larger study were randomly assigned to either in-home PCIT or to a control group (Bagner et al., 2016). Outcomes indicated significant changes in positive and negative parenting skills for the experimental group compared to controls as well as child compliance and child aggressive behaviors. Moreover, other analyses revealed parenting skills were correlated with parental attachment-based behaviors. In addition, the PCIT adaptation (known as Infant Behavior Program) had a direct effect on levels of warmth and sensitivity. Researchers in these studies reported that participating families had a high retention rate and moderately high rates of

homework completion (Bagner et al., 2013, 2016). This short, in-home parenting prevention model shows promise in providing services to families with limited resources while preventing the development of more severe behavior problems in young children.

Parents with intellectual disability. Researchers have also adapted the PCIT protocol for in-home treatment of intellectually delayed parents of children with disruptive behaviors (Chengappa, McNeil, Norman, Quetsch, & Travers, 2017). Treatment of the adapted protocol was delivered to families within their homes to improve generalization of parent skills. Additional adaptations also were made for the population (e.g., more frequent CDI sessions up to three times per week). General trends showed improvements in parenting skills, child compliance, and reductions in child behavior problems.

Families in wraparound. Wallace, Quetsch, Robinson, and McNeil, in an unpublished manuscript (2016), explored the adaptation of PCIT to families receiving services for in-home wraparound programs in Pennsylvania. The adapted protocol, entitled Staff–Child Interaction Therapy (SCIT), involved training bachelor's level in-home providers with PCIT-based skills to deliver to parents of children with behavior problems for at least 1 h during the week. Families were assigned to treatment as usual or SCIT. PDI was adapted to Adult-Directed Interaction (ADI) which substituted the time-out sequence with a broken record, physical guide, and restriction of privilege for continued child noncompliance. Outcomes indicated significant improvements in staff use of positive skills after SCIT training as well as significant decreases in child disruptive behavior. While large numbers of staff and clients dropped out of treatment, limiting the generalizability of outcomes from this study, certain initiatives have been launched due to the promising results. Specifically, the Early Childhood Wellness Initiative (ECWI) was launched following the conclusion of SCIT. The ECWI uses a variation of PCIT (entitled Intensive Family Coaching) within the Behavioral Health

Rehabilitative Services (BHRS) framework housed in Pennsylvania. The ECWI uses a PCIT team directed and supervised by a PCIT Level 1 Trainer. These teams also consist of a master's level home-based therapist and a bachelor's level skills trainer in a co-therapy team. Bachelor's level support staff conduct skills training with siblings during coaching sessions so caregivers can focus on practicing and mastering PRIDE skills without frequent interruptions. Bachelor's level support staff also assist with data tracking of families and fidelity checks with clinicians. A demonstration project evaluating this approach was launched in 2016 by Community Care Behavioral Health in Pennsylvania and is being used by hundreds of clinicians across the state. Outcomes from these trials will be published following the conclusion of initial implementation efforts.

Overall, comparable differences in outcomes have been found between clinic-based and home-based groups suggesting both models produce favorable results, with in-home providing services to a wider range of families who may not otherwise have access. Results are mixed in terms of attrition rates with the largest home-based project showing the most promise.

Clinical Advantages

Home-Based PCIT has a number of clinical advantages with the greatest being ecological validity. By observing and treating behaviors in their "natural" environment versus a lab or clinic-based setting, clinicians attain a real-time "front row seat" to a wide variety of behaviors and environmental stimuli caregivers experience on a daily basis. This can help caregivers with on-the-spot issues that may otherwise be forgotten or not reported in the clinic. In addition, parents often state that a child's behavior problems are more intense and frequent at home. Clinicians may have difficulty with some children in outpatient clinics whose PDI sessions fail to yield a timeout due to the somewhat artificial nature of the environment (McNeil & Hembree-Kigin, 2010). Thus, taking advantage of naturally occurring opportunities in this setting is an important ele-

ment of home-based PCIT. For example, when conducting a CDI teach session, a therapist can model and prompt parents to use newly learned skills in the moment (e.g., a child asks caregiver "can I take the toys out of the closet?" and therapists can praise the child for that behavior; a child attempts to talk to the caregiver with a mouth full of food and therapist can use this opportunity to discuss differential attention and praising the opposite of undesirable behaviors). Other examples may include being able to observe and work with caregivers on timeout escape strategies, real-time ignore sequences in a child's bedroom, or an unanticipated arrival of a sibling, spouse, neighbor, or pet (McNeil & Hembree-Kigin, 2010). Home-based PCIT eliminates the "wait and hope" phenomenon that occurs in a clinic when parents are assigned to implement strategies on their own.

Last, it would seem that home-based PCIT would eliminate the high rate of no-shows and dropouts typically seen in a clinic setting (Warnick, Bearss, Weersing, Scahill, & Woolston, 2014) considering the modality eliminates the logistics associated with attending sessions. Surprisingly, the research has not supported this supposition with exception being the aforementioned Delaware home-based project (Fowles et al., 2017). This is an area that warrants further investigation.

Clinical Challenges and Solutions

The greatest disadvantage for conducting PCIT in the home setting is losing a degree of environmental control and predictability (McNeil & Hembree-Kigin, 2010). Although all contingencies cannot be controlled, efforts should be placed on working to attain control and structure in the home setting. The following "4 Be's" constitute several strategies designed to create a home environment for PCIT success: Be preventative, be selective, be assertive, and be flexible and creative.

Be preventative. Being preventative is important to anticipate potential issues that may arise in the home setting. Awareness of the environment

starts with a "house tour" to assess areas that are conducive for play, toy selection, timeout space, and potential escape (McNeil & Hembree-Kigin, 2010). Also a discussion with caregivers about areas that are off-limits in the house is warranted. In terms of preparation, develop a PCIT "on the go" kit consisting of low cost toys conducive to PCIT and organized materials and resources needed for each session. If a family has a low inventory of appropriate toys, consider give-aways contingent on home practice completion, child behavior, or sibling behavior (e.g., staying occupied) during the session. Encourage caregivers to reserve specific toys for home practice. For children with shorter attention spans, consider a toy "carousel" approach where new toys are introduced at regular intervals, namely during the initial coaching sessions. Ultimately, it is optimal to use the toys already in a home or to encourage caregivers to purchase very economical toys/activities to promote generalization and motivation to participate in treatment.

Thinking preventatively is important in the structure of the home-based session. Clinicians should speak to families prior to starting in-home sessions to set a basic set of guidelines about how the sessions will proceed. Discuss the minimization of distractions (e.g., television, visitors) and what they should expect during the scheduled PCIT time. Knowing the structure before starting will help families better prepare and not be surprised if the clinician asks the family to adjust their environment. Also, having a two-clinician team to handle distractions in the home during session can make a significant difference in delivering treatment with fidelity and structuring the session for success. A second clinician allows for sibling management and can handle the distractions that often occur when conducting PCIT in the home. Using a co-therapy model is recommended in the home setting whenever feasible.

A preventative mindset is also critical at the outset of each session. Taking pause and assessing situations that may arise given the time of day, who is present in the home, a caregiver's mood, are all important to note. For example, if a lengthy timeout is anticipated, develop a plan with the caregiver around extraneous logistics

(e.g., preparing sibling with screen time, alerting another adult to help with siblings). Overall, staying vigilant and having some prior planning can be beneficial to session success.

Be selective. Being selective is important in terms of choosing play areas and spaces. By designating a play area the caregiver and child are aware of the play parameters. One consideration is to use a blanket designated solely for PCIT (McNeil & Hembree-Kigin, 2010). As an aside, if introducing a blanket, strive to do it at the outset of therapy as not to raise suspicion that you find the area or home to be unclean. During initial CDI sessions, it may be beneficial to first begin in a room with a door (with clinician sitting in front of door) as to disallow potential escapes from play. A thorough inspection of the space is important to anticipate areas a child may be drawn to. For example, a TV, computer, sibling, or video game console may be more rewarding than a parent at the outset of CDI (e.g., during an ignore sequence). Either blocking the use of these or removing them from the room may be warranted. However, as caregiver skill increases, moving to a more open area with additional stimuli can serve as a barometer for strength of caregiver attention.

Conducting PDI in the home has both advantages and potential pitfalls. One area where being selective is especially helpful is with PDI logistics. Home-based therapists should work with caregivers to carefully choose a time-out chair, the chair's location, and the backup space. Given that children's bedrooms often have the fewest number of breakables and valuables, they may be a safe and effective place for the timeout space. More valuable or breakable items may need to be removed during the first few weeks of PDI. In the case of damage to the bedroom, further restitution commands can be given to assist with the repair process. Alternatively, parents may consider the bathroom as the timeout space. It should be noted, however, that the bathroom poses several challenges because it contains numerous, potential hazards (e.g., hot water, hard, slippery surfaces). Although still a possibility, the bathroom requires a thorough search and careful preparation. Another important factor to consider when discussing timeout spaces with families is that some homes do not

have closed-off rooms to accommodate the timeout space. In these cases consider a way to block off an area within a more open space (e.g., for smaller children one could pull out the couch from the wall and install a child gate on one end to prevent escape). Similar to clinic-based PCIT, backup rooms should be at least 5 feet by 5 feet, should be well-lit, and should be ventilated spaces. Areas such as closets, dark laundry rooms, and food pantries should not be used. If the child needs eyes on him or her during this time, consider adding a latch (e.g., door monkey) or putting an object like a towel into the door gap to prevent it from closing entirely. If a child has a history of trauma involving seclusion, use an alternative backup such the swoop-n-go technique (see Eyberg & Funderburk, 2011). It should be noted that most of the recommendations in this clinical section have no research support (for a thorough timeout overview, see Quetsch, Wallace, Herschell, & McNeil, 2015).

Although timeout space varies depending on the layout of a residence, it is important to consider that PDI is best conducted in the smallest amount of physical space to prevent a child from running off during the sequence and to increase parental control. As such, it is recommended that home-based clinicians establish a "PDI triangle" with the toys, the timeout chair, and the entrance to the backup room serving as points of the triangle with the caregiver positioned to block escape routes such as stairs. This allows for a very small and manageable space to work with while the child and caregiver are in the early phases of minding exercises. This area can be expanded as the parents develop their discipline skills and begin to use them in other situations outside of the session.

Be assertive. Next, being politely assertive is a critical skill to have when conducting any home-based service. Without some parameters, home-based sessions can become less-than-productive making it difficult to realize significant treatment gains. One area that requires direct discussion is house guests. Home-based therapists often report this to be an issue where they arrive for session and an individual unknown to the clinician is in the home. Due to this possibility, it is recommended that a "who's who in the house" sheet is completed at the outset of therapy and the caregiver lists any individuals who live in or often visit the home. With this sheet, a visitor policy can be developed to gain an understanding on who could be in the home while outlining the importance of protecting the session time. Likewise, a "no distraction" contract can be signed outlining the limits around cell phone usage, televisions, etc. A door sign can be devised with a caregiver informing visitors to come back at a later time. If a therapist feels like the home environment is not conducive to PCIT (e.g., unsanitary conditions, issues with safety) or an individual in the home is thwarting the therapy in some way, then it is important to be able to respectfully express these concerns and propose a change of venue. As an example, a child's day care center or early childhood classroom might be a place to conduct sessions.

Be flexible and creative. Although preventing extraneous individuals or distractions is optimal, being flexible and taking advantage of unplanned situations (i.e., "controlling the chaos") is another advantage of the home setting. For example, if a sibling is present, include the sibling if it is a later CDI or PDI session. If a spouse is present, take the opportunity to speak with a spouse who may not have otherwise presented to the clinic. Give an overview of the treatment to the spouse highlighting parent and child changes that have been realized since pre-treatment. Oftentimes, just having a spouse or other family member observe coaching sessions can enhance buy-in and motivation toward their own participation. If there is interest, taking additional time for the spouse to catch up can prove to be valuable. Further, flexibility with session timing should be a consideration. Home-based therapists have the opportunity to observe and coach interactions with various family members during different parts of day. For example, a therapist could coach a caregiver when their children are getting dressed for school, eating breakfast, at snack time, homework time, or any situation a parent identifies as a valuable learning opportunity for the child.

Pragmatically, it is very difficult to control every situation that comes up in a home setting whether it is pets, unannounced visitors, or unfa-

vorable conditions, and so being able to manage situations and to remain calm in the moment (e.g., when a child is yelling, a parent is nervous, a dog is barking, you're coaching amidst a pile of laundry, the school bus just dropped off the other children) is a critical skill for home-based therapists.

Description of the Modifications to the Protocol

Although conducted in the home setting, it remains essential that clinicians adhere to PCIT's core components to realize proven outcomes. Although there is a range of therapeutic ingredients that are critical to the fidelity and success of PCIT, the three most essential elements include: coding, coaching, and home practice (the fourth being CDI stage preceding PDI stage). Below is a description of modifications made to home-based PCIT to adapt to the setting while maintaining fidelity to core components of the model. In addition, Table 3 outlines practice parameters for home-based PCIT. The guidelines are not exhaustive but act as general recommendations based on the clinical experience of home-based PCIT therapists.

Coding. When coding in the home environment, strive to establish a reliable, distraction-free coding space. Because coding is so critical to establishing coaching goals and measuring treatment progress, minimizing distractions during this time is crucial to have a valid gauge of the parent–child interaction. To create such an environment, anticipate potential issues such as pet interference (remember not to code caregiver-pet talk!), cell phones, a child needing to use the bathroom, potentially spilled drinks, and visitors. A direct conversation with caregivers about protecting the coding time period is warranted. In addition, any individual in the home should be involved in the discussion. Clinicians can even establish a nonverbal cue indicating coding is in progress to minimize interruption. Of course, some situations cannot be anticipated and, in these cases, clinicians should "make the call" as to whether to stop coding temporarily while the situation is handled.

Next, clinicians should ensure that children are unable to hear coding instructions. Precluding children from hearing the instructions eliminates the chance of reactivity and increases the likelihood of more naturally occurring behavior. Therefore clinicians should write down the coding instructions on an index card that can easily be shared with a caregiver. This would extend to any instructions that are given to the parent (e.g., pre-treatment DPICS across three situations).

Another potential issue that may arise during coding (or coaching) is a child trying to attain the attention of the clinician in some way (e.g., asking questions, attempting to play). To allow for in-room "distance" between the child and therapist and to maintain the focus on the parent–child interaction, it is important to use differential attention skills to ignore these bids for attention while praising the child at the end of the session for playing exclusively with the caregiver. What follows is a script that a clinician may use in this effort (McNeil & Hembree-Kigin, 2010). This script can be used at any time during therapy, but a discussion around this should be had with a child at the outset of treatment.

Example: "*I cannot look at you or talk to you when you are playing with your mom. You should pretend that you have a magical power that makes me invisible or not in the room. I will be whispering ideas to your mom/dad to make playing with you even more fun. If you try to talk to me while you are playing with your mom/dad, I won't be able to talk back to you. Once our coaching time is over, then I will talk to you and play with you again and tell how great you did using those magical powers*."

Coaching. The clear distinction with home-based PCIT is coaching without the benefit a one-way mirror. The key to in-room coaching is to minimize therapist interference by having the child hear as little coaching as possible. The natural tendency for an in-room therapist is to coach less as not to interfere by distracting the child. Research has demonstrated that continuous coaching is critical to positive outcomes (Shanley & Niec, 2010) and therefore it is essential to provide a dose of coaching comparable to clinic-based PCIT.

Table 3 Practice parameters for home-based PCIT

Category	Practice parameters
Safety	• Have charged cell phone at all times • Make location known to supervisor or colleague • Considering conducting intake at neutral site • Leave setting if it feels unsafe
Boundaries	• Strike balance between respectful houseguest and therapist while carefully monitoring role slippage. A guest is attended to, a therapist attends to the needs of the client • Develop clearly defined policy around accepting food/drinks and gifts and role in terms of assisting client with chores or household tasks • Seek out consultation and supervision for "close calls" • Keep length of sessions to appropriate time limit with structure to avoid informal time at the home
Confidentiality	• Be attuned to nonfamily members within earshot of session • Obtain necessary release forms for nonfamily members in the home • If necessary, consider meeting in a public space
Training	• Clinician should first be extensively trained in clinic-based version • Clinician should have training or experience in home-based therapy provision • Clinician should continue to see clinic-based clients concurrently • Lots of support, supervision, and consultation
Implementation	• Employ clinical assistants for safety issues, to manage siblings during teach and coach session, and to help with home practice on nonsession days • Consider "hybrid" PCIT by using a clinic space for initial CDI/PDI sessions for overly chaotic environments or highly aggressive children • Consider twice/week sessions for highly stressed families or children with more severe behaviors. If not possible for duration of treatment, consider stronger "dose" of treatment sessions in the beginning
Session structure	• Establish session timing from the initial sessions • Develop "mantras" to get into coaching (e.g., "we need to wrap up and coach") • Ensure at least 30 min of coaching each session
Family support	• Attempt to include family partner, preferably a caregiver who graduated from PCIT • Engage in shared decision-making, goal identification, and treatment planning with the caregiver • View caregiver as partner versus client reflecting on caregiver strengths • Respect family diversity • Embed PCIT into family activities

To maintain a high rate of coaching, it is best to be positioned at the back of the caregiver to be able to provide instructions with a quiet, yet therapeutic, demeanor. This position will foster more coaching and reduce the tendency for a parent to talk with a therapist. Having an initial discussion about the seating arrangement and informing caregivers of the coaching style (e.g., "I may tap you on the shoulder to prompt you" or "I will be back here whispering to you") is recommended. It is important that the parent is instructed to talk solely with the child during coaching. Moreover, it is common for older children to demonstrate more appropriate behaviors for the initial sessions and then habituate to in-room coaching over time (namely, as the therapist ceases to reinforce bids for attention or the

novelty of the situation fades). Sometimes in-room coaching proves to be too distracting or reading can be too difficult for the caregiver. In these instances, if the environment allows for it, clinicians can consider using the bug-in-the-ear system and coaching from a different room or across the same room in the home environment. Some home-based clinicians have coached from outside a home through a window or door alongside a baby monitor to ensure proper sound quality! Another coaching option is to write down coaching statements and present them to the parent during coaching. A written system can be worked out prior to the session so the therapist and caregiver are in concert with the coaching plan. Preparing a set of index cards containing common coaching statements (along with blank

cards to write on during session) also helps to facilitate this coaching method.

Although there can be more latitude in coaching during CDI sessions, PDI coaching requires that the parent is solely delivering the commands and the time-out sequence. If protocol is adjusted, there is potential that a child may comply with a therapist's coaching statement prior to the parent having an opportunity to use PDI skills. As such, it is important that overt communication is kept to a minimum. Again, a therapist could present a parent with index cards containing PDI coaching statements or develop a communication system in which coaching statements are written down. At first, it is prudent for a caregiver and therapist to draft specific commands to give during the coaching session in an effort to reduce verbal communication. As therapy progresses, the communication can be reduced to smaller phrases (e.g., "command," "warning," "chair") in order to allow for transfer of training to the caregiver. Again, an additional option is to use visuals as nonverbal cues to facilitate PDI coaching. It is important that the parent retains control over the discipline procedure and acts as the discriminate stimulus for compliance (vs. the therapist) regardless of the method used.

Home Practice. The importance of daily homework practice is consistent across therapeutic settings. Similar to clinic-based PCIT, it is important that home practice is made a priority during the CDI teach and the outset of each session. Clinicians should align their behavior with this principle such that home practice becomes an essential component of each session's check-in. In addition, coding, coaching, and the ECBI should each be linked to home practice so that families understand what is required for improvement in their skills as well as their child's behaviors. Lastly, therapists should problem-solve barriers to home practice with parents to help increase parental compliance and improve parents' rate of skill acquisition.

Conducting PCIT in the home environment has distinct advantages for home practice completion. As previously mentioned, conducting a home tour is beneficial to assess appropriate rooms and spaces for home practice. Also, surveying toys and activities can allow clinicians to provide families with instructions as what to use (and not use) during home practice. For families with limited toys, clinicians may need to be creative when suggesting toys or activities (e.g., making designs with cereal on the kitchen table). Conducting in-home sessions during certain times of a day or knowing when other family members tend to arrive home can also lend insight into when home practice has the greatest likelihood of completion. Work with caregivers on hanging reminders for home practice around the house (e.g., post-it on the fridge, bathroom mirror, setting an alarm clock) or help them set up an alarm or auto-texting technology as a useful prompt. If using a work-issued cellphone and texting is in accordance with policy, parents can be instructed to text the clinician following their home practice to increase accountability. Likewise, a therapist can send a text reminder.

Overall, the more time clinicians spend in the home, the better prepared they will be to help the family practice at home successfully. Clinicians who are able to discuss the specifics of home practice with parents such as toys used, time of day to schedule, location of play, and family members present, the greater likelihood families will be able to carry out the activity with consistency. Furthermore, it may even be beneficial for clinicians to write down this specific information on the family's home practice sheet to help structure the play and to guide the next session's check-in.

Training and Preparing Home-Based PCIT Providers

Training home-based PCIT therapists consists of all training elements outlined in the PCIT International training guidelines (http://www.pcit.org/therapist-requirements.html). For novice home-based therapists, some important yet sometimes overlooked strategies to teach clinicians include wearing comfortable and casual clothing, having closed-toe shoes, making sure to keep bags zipped, overviewing general safety precautions, and thoroughly understanding mandated reporting guidelines. Other important topics to be presented include issues around creating rapport, details of

professional boundaries, and how to respect and honor one's home environment and life circumstances from a nonjudgmental standpoint.

From a more bio-ecological systems perspective, it may be beneficial to include training content on the ways in which a therapist is a small part of the family's ecological system. In turn, therapists should be cognizant of how their behavior interplays within that ecological system. From a family systems perspective, education around how one family member's behavior may impact other members may be prudent. Also, help clinicians understand the notion of homeostasis within this system. For example, efforts to correct and improve parenting strategies may be undermined by other family members in an effort to maintain balance in the family system (even when the "balance" may not be healthy for all family members). Therefore, efforts to reach out to all family members may be of importance in such situations (Roggman et al., 2016). As many home-based programs target families from low socioeconomic backgrounds, impacts of poverty on family functioning could be emphasized in training. Last, home-based therapists should have familiarity with community resources for parental mental health issues, domestic violence, and basic child needs.

Overall, regardless of home-based experience, increasing supervision or consultation for home-based therapists would be sensible. Indeed, research demonstrates that the level of ongoing support home visitors receive impacts their ability to engage and retain families (Wasik & Bryant, 2001).

Case Example

Jarrod is a 5 year-old male referred to outpatient therapy for frequent episodes of aggression, noncompliance, whining with little provocation, and tantrums in both the home and school environments. He is the oldest of two children, with the other child being his 2 year-old sister. He frequently upsets his sister and is aggressive with her. When he becomes very upset, he often is destructive toward toys and household objects. For example, there are several holes in Jarrod's bedroom walls from where he kicked them dur-

ing efforts to send him to timeout. Although his behavior has worried his mother for the past several years, she was unsure about what to do. Once Jarrod started school, teachers would often call home or send her reports about his negative behavior. In a meeting with a school social worker, Jarrod's mother received community referrals for outpatient therapy. Despite making efforts to attend sessions, Jarrod and his mother's attendance was inconsistent due to issues with transportation, timing of sessions, lack of daycare for his sister, and financial strain. In addition, Jarod's extended family believed therapy was unnecessary and often told Jarrod's mother that she just needed to be firmer with him.

After several missed sessions, Jarrod and his family were referred to the home-based PCIT team consisting of a licensed therapist and a clinical assistant. At the outset of treatment, the therapist conducted a house tour to look for the best places to conduct the treatment and a toy survey to determine which toys would be most suitable. Since Jarrod lived with his grandparents and had two dogs, the therapists discussed ways to reduce potential distractions around the home and times were chosen that best fit the needs of the family (e.g., during his sister's nap time). A nonverbal cue was developed between caregivers to signify when coding was in progress. Plans were also made to have his grandparents watch his sister if sessions got extended or she woke up early from her nap. Also, during sessions, Jarrod's neighbors agreed to watch his dogs.

Similar to clinic-based PCIT, his therapist administered the ECBI and conducted the pre-treatment DPICS observations. Given that Jarrod's behavior at school was escalating, the team decided to conduct two sessions per week for the first 3 weeks of treatment to quickly advance his mother's PRIDE skills and markedly improve her differential attention. Coaching was awkward at first, as Jarrod would often laugh when he heard his mother repeating the therapist. Jarrod frequently tried to gain the attention of the therapist by calling the therapist's name, putting toys in the therapist's face, and walking up to the therapist during the session. Over time, with repeated therapist ignores and greater acquisition of positive parenting skills, these negative bids for attention

faded. Jarrod's mother mastered PCIT in 4 weeks (eight sessions). After careful consideration of various spaces, the team decided PDI could be conducted by using Jarrod's bedroom as the time-out room, despite it being on the second floor. During initial PDI sessions, a written communication system was established with Jarrod's mother so she was able to remain in control of the discipline procedure. Therapists conducted early PDI sessions forming the "PDI triangle" outside Jarrod's bedroom door. Jarrod received several timeouts in the first PDI sessions, each one gradually decreasing in intensity and duration. Once timeouts diminished to less than two per day, PDI progressed to more general commands. Generalization sessions contained a variety of tasks around the home that served as learning opportunities (e.g., cleaning up after meals, turning off TV, playing gently with sister and pets). During PDI, it became apparent through coding and general observation that Jarrod's mother was not using her CDI skills as frequently. The therapist decided to dedicate more coaching time to increase her CDI back to mastery levels. After 5 weeks of PDI (ten sessions), Jarrod successfully progressed through house rules (i.e., no hurting), and public behavior. Given that behavior toward his sister was a major stressor for his mother, session time was dedicated to coaching both children. This took place at several points throughout treatment and was also implemented when his sister refused to go to her grandparents' home.

A graduation session occurred after Jarrod's ECBI scores declined significantly to within normal limits (i.e., Intensity score = 103), his mother mastered CDI and PDI, and when she felt she was able to manage the great majority of Jarrod's behavior on her own.

Concluding Remarks and Future Directions

Research has shown home-based PCIT to be a feasible alternative to the clinic-based model with comparable outcomes. Despite some loss in environmental control, there is an advantage in being able to observe and coach caregivers in a more organic environment. Future research should examine intensive home-based PCIT as intermediate treatment for children who would benefit from a higher level of care without the acuity of a day treatment or residential program. In addition, future explorations in research may shed light on the effectiveness of varying home-based coaching strategies, hybrid home and clinic models, differing session dosages, the inclusion of a care management or wraparound model, and adjunctive internet-based sessions. In addition, further studies should measure the impact of home-based PCIT on parental stress, attrition and no-show rates, cost effectiveness, and maintenance of treatment gains.

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Parent–Child Interaction Therapy for Toddlers (PCIT-T)

Jane Kohlhoff and Susan Morgan

Abstract

PCIT-T is an adaption of PCIT designed for toddlers aged 12–24 months presenting with challenging behavior. The program has been developed over many years at the Karitane Toddler Clinic in Australia, and has recently been further developed and communicated in a formal treatment manual. PCIT-T shares many features with standard PCIT including utilization of dyadic treatment sessions, direct live coaching, and emphasis on "Do skills" (Praise, Reflect, Imitate, Describe, and Enjoy) and "Don't skills" (questions, commands, and negative talk). PCIT-T differs from standard PCIT, however, in its assumption that difficult toddler behavior is a sign of emotional dysregulation rather than purposeful defiance or a coercive parent–child interactional cycle. The prominence of the parent–child attachment relationship in the first 2 years of life is acknowledged as the vehicle through which the child's capaci-
ties for emotion regulation and social-emotional functioning emerge and are consolidated (Sroufe, 1995). The focus in PCIT-T is therefore on enhancing the quality of the parent–child relationship, and in particular on improving a parent's capacity to understand and meet the emotional needs of his or her toddler. This chapter begins by discussing disruptive behaviors in toddler-aged children and provides a rationale for early intervention. It then provides a detailed description of PCIT-T including theoretical underpinnings, key features and differences from standard PCIT, recommended assessment and treatment procedures, and a case study illustration.

Ella, aged 18 months old, is the only child of single mom, Tania. Tania separated from her partner during the pregnancy and has felt depressed on and off throughout Ella's life. Tania says that Ella was an unsettled baby and describes her as "stubborn," "bossy," and "demanding." She says that "from the moment Ella wakes up, she is cranky and difficult to deal with" and "Ella is only happy if she gets her own way." Ella has multiple tantrums every day and Tania feels helpless and hopeless when they occur, reminded of

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the way her father treated her when she was a girl. During these moments, Tania cannot help but freeze and withdraw, "waiting until the storm has passed." She feels sad and guilty about the lack of closeness between them, commonly asking herself questions such as "What have I done wrong?," "Is it my fault that Ella is like this?," and "Why can't I enjoy being a mother?"

Billy, aged 20 months, is the son of Jack and Sally. Sally is 7 months pregnant with a second child and they have recently moved to a new house and neighborhood. Billy's parents describe him as "out of control," "aggressive," and "like Dr Jekyll and Mr Hyde." In a matter of seconds, Billy can go from being calm and happy, to crying, yelling, and thrashing on the ground in anger, his face screwed, fists clenched, back arched, and body tightened. Sometimes he makes himself vomit by putting his fingers down his throat. Billy also bites and scratches his parents, and pulls Sally's hair and hits her when having his diaper changed or being buckled into his car seat. Sally and Jack feel frustrated and angry, stating "We don't know how to control him," "What's wrong with him?," and "How will we cope when we have two children?"

Thomas is 22 months, son to parents Caroline and Robert, who have two older children aged 10 and 12 years. Caroline describes Thomas as "clingy," "anxious," and "possessive." She says that Thomas constantly wants her attention and that he becomes extremely anxious during daycare drops off or even when being left with grandparents. Robert says that when he and Caroline are talking, Thomas positions himself in between them and pushes them apart, sometime putting his hand in the air and saying "Stop!". He has also recently started biting Caroline and pulling her hair when she is on the phone or not giving him full attention. Thomas was slow to speak and still has few words, although is able to emphatically say "stop" and "my momma" during bids for Caroline's attention. Caroline feels trapped, tired, and worn down by his behavior. She worries a lot about him and is nervous that he won't be able to make friends and adjust to school and social settings in the future. She has a long-standing history of anxiety including panic attacks and generalized worry.

These stories are representative of families who present for assistance with toddler behavioral difficulties. Disruptive behaviors, such as those described, are common, and parents come with a range of negative feelings and thoughts about the child and about themselves as parents. In our own work we have seen an adaptation of parent–child interaction therapy (PCIT) designed specifically for this younger age group to be highly successful in improving toddler behaviors, equipping parents with positive parenting skills, and helping parents and toddlers enjoy warm, positive relationships with one another. Pilot data have provided initial evidence of the program's effectiveness (Kohlhoff & Morgan, 2014, 2018), highlighting it as a promising new early intervention approach.

In this chapter we will describe the research supporting an adaptation of PCIT for toddlers (PCIT-T), a summary of the key differences from standard PCIT, and information about suggested assessment and treatment procedures for this specific age group.

Disruptive Behaviors in Toddlers

Toddlerhood is a developmental period characterized by rapid language acquisition, increased physical mobility, advances in representational abilities, increased desire for independence/autonomy, and/or separation anxiety (Crockenberg & Leerkes, 1993; Lieberman, 1993; Sroufe, 1995). It is natural for toddlers to experience feelings of frustration, anger, and anxiety as they navigate their way through this developmental stage, and with limited capacity for emotional self-regulation, language and physical control, disruptive behaviors are common. It has been shown that as many as 80% of children aged 12–24 months display aggressive behaviors, tantrums, defiancec, or other externalizing behaviors (Alink et al., 2006; Tremblay et al., 1999). In one sample of children aged 17 months, it was found that 70% took toys from other children, 46% pushed others to get what they wanted and 21–27% displayed biting, kicking, fighting, or physically attacking behaviors (Tremblay et al., 1999).

Aggression and other externalizing behaviors in the toddler years can be conceptualized as normal and indeed adaptive responses to the challenges associated with this developmental stage, stemming from the child's wish for autonomy, desire to test limits, master environmental constraints, and practice social skills (Campbell, Shaw, & Gilliom, 2000). For a proportion of children, however, disruptive behaviors emerging in the toddler years can persist and indicate a risk of emerging emotional/behavioral problems. Briggs-Gowan, Carter, Bosson-Heenan, Guyer, and Horwitz (2006), for example, examined behavioral and emotional problems in 1082 toddlers (aged 12–40 months) and found that 50% of children still displayed problems 12 months later. When disruptive behaviors in toddlers do not resolve naturally with time and/or when they start to interfere with the development of age appropriate social skills, they can be the sign of an emerging disruptive or psychological behavior disorder (Campbell et al., 2000; Zeanah, 2009).

Severe and persisting disruptive behaviors in early childhood can be the start of a trajectory towards poor outcomes across the lifespan. Studies have shown behavioral difficulties in the toddler and preschool years to be associated with social-emotional and academic problems and conduct disorders in middle childhood and adolescence (Campbell, 1995; Campbell, Spieker, Burchinal, Poe, & Network, 2006) and psychopathology and anti-social behavior in adulthood (Campbell et al., 2000; Kim-Cohen et al., 2003). In addition to the disability felt directly by individual sufferers and families, early onset disruptive behaviors also place significant burden on wider society. When they develop into conduct disorder, for example, the societal burden is particularly clear. In one study it was calculated that by the age of 28 years, the health, education, and criminal costs associated with individuals with conduct disorder at age 10 years were ten times higher than for individuals without conduct disorder (Scott, Knapp, Henderson, & Maughan, 2001).

Given the significant personal and societal costs associated with early onset disruptive behavior disorders, it is important that effective interventions are available. Evidence suggests that treatments should be provided as early as possible (e.g., in infancy and the toddler years) to provide the best opportunity for success (All Party Parliamentary Group for Conception to Age 2—First 1001 Days, 2015). By effectively intervening in the very early years of life, trajectories can be altered before coercive parent–child behaviors and interactions become entrenched. The plasticity of neurobiological systems during the toddler period also highlights this period as a key time for intervention and prevention (Fox & Hane, 2008; National Scientific Council on the Developing Child, 2007; Schore, 2001).

PCIT for Children Under 2 Years: The Research So Far

The evidence base for PCIT in treating children aged 2–7 years with disruptive behaviors is extensive (see chapter "Parent–Child Interaction Therapy: A Transdiagnostic Intervention to Enhance Family Functioning" for a review). PCIT was not, however, originally developed for use with children under 2 years, and for a number of reasons, it is not suitable in its standard format for use with this younger age group. Most notably, poorer receptive language abilities and limited capacity for behavioral control and emotion regulation mean that it is not realistic for toddlers to understand and comply with many parental commands. In light of this, there have been a number of adaptations of PCIT for younger children. Dombrowski, Timmer, Blacker, and Urquiza (2005) reported on "Parent–Child Attunement Therapy" (PCAT), an adaptation of PCIT designed to meet the needs of maltreated toddlers aged 12–30 months. The key differences between PCAT and standard PCIT were that PCAT focussed on using simplified language, limited the use of commands and questions, and emphasized ignoring and redirection rather than time-out in the case of inappropriate behavior. A single case study of PCAT delivered to a toddler aged 23 months has been reported but positive outcomes for this child were not clearly demonstrated (Dombrowski et al., 2005). There has

been no further research using larger samples to examine efficacy of the PCAT intervention. With younger children, McNeil and Hembree-Kigin (2010) recommended coaching parents to use exaggerated facial expressions and tone of voice, shorter sentences when praising or giving direct commands, direct imitation rather than reflections accompanied with elaborations, and "hand-over-hand" prompts rather than time-out in response to child noncompliance. Again, these recommendations were based on clinical anecdotal evidence and research data to support these specific adaptations has not been collected.

More recently, Bagner, Rodríguez, Blake, and Rosa-Olivares (2013) described an adaption of PCIT developed to meet the needs of "at-risk" infants aged 12–15 months, the Infant Behavior Program. Designed as a preventative intervention to be delivered in a home-based setting, key departures from standard PCIT included the implementation of the Child-Directed Interaction (CDI) phase only and focus on using positive physical touch (e.g., patting the infant's back) and nonverbal praise (e.g., clapping hands) to reinforce appropriate infant behaviors. Attention was also given to helping parents have developmentally appropriate expectations of the infant. In a randomized controlled study, Bagner et al. (2016) compared the Infant Behavior Program to treatment as usual in 60 infants aged 12–15 months. Compared to controls, infants who received the intervention displayed lower levels of externalizing and internalizing behavior problems post treatment and at follow-up. They were also found to be more compliant than controls at 6-month follow-up.

PCIT for Toddlers (PCIT-T)

Our own work with PCIT for toddlers began following the establishment of the "Karitane Toddler Clinic" in the South Western region of Sydney, Australia in 2005. This community-based treatment clinic was established following an identified need in the region for a short-term, evidence-based, accessible early intervention program for families with toddlers and pre-school

age children presenting with complex behavioral issues. While PCIT was the chosen treatment modality used at the clinic, over time it became apparent that a large proportion of referrals were for families with children aged younger than 2 years. Given the unique developmental characteristics of toddlers, and excited by the possibilities that early intervention afforded, we felt that a version of PCIT designed for this specific age group was warranted. To this end, we developed an adaptation of PCIT for use with children aged 12–24 months called PCIT for Toddlers (PCIT-T).

PCIT-T shares many features with standard PCIT including utilization of dyadic treatment sessions, direct live coaching, and emphasis on "Do skills" (Praise, Reflect, Imitate, Describe, and Enjoy) and "Don't skills" (questions, commands, and negative talk). There are, however, some key departures from the standard PCIT protocol that are designed to meet the developmental needs of the younger age group. Importantly, these departures are based on the rationales (1) that disruptive behaviors in toddlers are signs of emotional dysregulation rather than deliberate defiance, and (2) that the early parent–child attachment relationship is the vehicle through which capacities for emotion and behavior regulation emerge and are consolidated (Sroufe, 1995). Thus while PCIT-T, like standard PCIT, aims to enhance the quality of the parent–child relationship, in PCIT-T there is an added emphasis on enhancing parental capacity to understand and meet the emotional needs of the child. In keeping with a strong body of evidence from the attachment literature (Bowlby, 1988; Cassidy, 1994; Schore, 2001), it is believed that by receiving emotional "scaffolding" in the early infancy and toddler years from a primary caregiver, the child will develop the capacity to manage physical and emotional challenges independently. Also, although some age-appropriate limit-setting techniques are taught in PCIT-T to ensure safety of the child and others, and to encourage engagement in positive and productive play, the standard PCIT PDI phase is not included. As a recent development, a PCIT-T specific "PDI-Toddler" phase has been incorpo-

rated into our most recent iteration of the PCIT-T model. Based on the understanding that noncompliance in toddlers results from insufficient learning and behavioral practice rather than intentional defiance, however, this phase comprises a guided compliance procedure rather than implementation of negative consequences for noncompliance.

Preliminary data relating to the initial PCIT-T model (which comprised CDI only) has been promising. Results of a retrospective file review of 29 toddlers aged 12–24 months who received PCIT-T (CDI-T only) showed decreased intensity of disruptive child behaviors, increased parental utilization of PCIT parenting skills, decreased parental depressive symptoms, and high levels of consumer satisfaction with the program (Kohlhoff & Morgan, 2014). Preliminary data from the first 28 parent-toddler dyads (aged 15–24 months) participating in a subsequent waitlist-controlled trial indicates that the PCIT-T intervention is associated with statistically significant decreases in externalizing and internalizing child behavior, increases in parental use of positive parenting skills ("Do skills"), decreases in use of negative skills ("don't skills"), and increases in parenting sensitivity (Table 1) (Kohlhoff and Morgan, 2018).

Assessment of Child and Family

Practical considerations. Given toddlers" short attention spans, it can be useful to conduct the initial assessment over two shorter sessions. It is also important to prioritize components of the assessment because toddlers are unpredictable and the assessment session may need to be cut short if the child becomes tired, hungry, and thereafter unsettled. Ideally, we conduct the initial assessment session with two therapists. Families often bring more than one child with them to the assessment and the session can be quite challenging for the family with many questions and child behaviors emerging as the session progresses and parental attention is directed away from the child.

Table 1 Similarities and differences between PCIT and PCIT-T

PCIT and PCIT-T: Common elements	PCIT-T: Unique features
1. Dyadic treatment sessions	1. Emphasis on coaching the parent in emotion regulation techniques (for child and self)
2. Direct parental coaching through one-way mirror and "bug-in-the-ear" technology	2. Emphasis on under-reaction and re-direction to facilitate the child's engagement in positive play
3. Emphasis on strengthening the parent–child relationship	3. No formal PDI phase (i.e., no time-out sequence) or use of an adapted PDI-T phase comprising guided compliance steps
4. Emphasis on limiting "Don't skills" (criticisms, commands, and questions)	4. Education for parents about age-appropriate expectations for young toddlers
5. Emphasis on using praise, reflection, imitation, behavioral description, and enjoyment (PRIDE skills)	5. Emphasis on paying special attention to the physical surroundings to optimize positive toddler functioning
6. Stopping the play in the case of aggressive or dangerous behaviors	6. Reduced session length (30–45 min) and twice-weekly sessions
7. Home practice between sessions	7. Modified graduation criteria
8. Observational and parent-report assessment measures	

Relationship-focused assessment. A series of questions (listed in Table 2) may be asked with the aim of eliciting further information about parental representations of the parent–child relationship and relationships within the family.

Assessment of developmental issues. As in standard PCIT, in PCIT-T, attention is given to understanding developmental issues that may impact a child's functioning. For some children, the presenting behavioral issues may be related to developmental delays (e.g., cognitive, speech, or motor) or in fact be signs of an emerging developmental disorder (e.g., autism). While such issues do not necessarily mean that the family will be unsuitable for PCIT-T, it is important that the clinician has a thorough understanding of the child's developmental status as it may have a significant impact on treatment focus and progress and/or may require additional assessment and specialized services.

Table 2 Additional "relationship"-focused questions asked in a PCIT-T assessment interview

Topic	Questions
Parental representations of the child, themselves, and the parent–child relationship	• "Can you give three words that describe your child/yourself?" • "Does your child remind you of anyone, and why?" • "What is your perception of your relationship with…." • "How confident are you in managing your child's behavior? (scale of 0–10)"
Parental understanding of the child's inner emotional world, reflective functioning, emotional and cognitive response to the child's emotions and behaviors	• "What are your child's strengths?" • "What makes your child happy/angry/sad/frightened?" • "How do you feel when your child is upset or crying? How do you manage these feelings?" • "Why do you think this (the presenting behavior) is happening?" • "What do you think your child is thinking/feeling/wanting at those times?" • Regarding discipline: "What has/has not worked? Why do you think it worked or didn't work?"
Intergenerational parenting patterns, attachment representations, and recollections of difficult childhood experiences	• "Tell us about your family growing up" • "Who you were close to?" • "What do you think your parents did well and what would you do differently?" • "Was there history in your family of violence or abuse? This may be physical, neglect, emotional, or sexual"
Relationship with partner	• "How do you work together on parenting issues? Do you approach parenting in the same way?"

In our initial assessment of toddlers, we include questions about the following issues related to the child's developmental history and current functioning:

- Prenatal and postnatal complications for either the mother or child.
- Maternal medication or substance use during pregnancy.
- Length of gestation, type of delivery, any delivery complications, and neonatal status.
- Physical history including fine and gross motor development, toilet training, eating behavior and sleep patterns, bedtime routine including use of pacifiers and bottles.
- Health of child including any hospitalizations, medical conditions, and medications.
- Results of any speech/hearing tests.
- Social-emotional functioning including separation anxiety, reaction to strangers or other specific fears, usual sensitivities, exploration of the environment, and competencies such as attention, prosocial peer interactions.
- Exposure to significant stresses or recent changes in the home environment.

- Daily activities including time spent watching television and/or playing electronic games.

We also administer the Social Concerns Questionnaire (SCQ; Rutter, Bailey, & Lord, 2003) as part of our initial assessment. The SCQ is a validated 40-item parent-report questionnaire designed to screen for symptoms of autistic behavior (Charman et al., 2007; Rutter et al., 2003). In our clinic, children who score over the SCQ threshold or who we suspect to be experiencing developmental delay are referred for a comprehensive developmental assessment. Referrals are often made to Speech Therapists, Occupational Therapists, and Pediatricians for further assessment and support as required.

Assessment of parental mental health. A large body of evidence links parental depression with poorer parenting practices and compromised child outcomes (Carter, Garrity-Roukos, Chazan-Cohen, & Briggs-Gowan, 2001; Lovejoy, Graczyk, O'Hare, & Neuman, 2000). The known impact of postnatal depression and anxiety on parenting and

child development (Stein et al., 2014) highlights this as an issue of particular relevance when working with young children and their families. Many families who present to our clinic with children under 2 years report longstanding parental anxiety/depression and/or un-diagnosed perinatal depression. Unresolved grief and trauma following childbirth and exposure to domestic violence are also common. Our assessment interview therefore includes detailed questioning about current and past personal and family mental health concerns and treatments (both parents), suicide/self harm risk assessment, and domestic violence screening. Where there have been parental mental health issues during the child's lifetime, parents are also asked to reflect on the impact of these issues on parenting abilities/functioning and the impact of the child on the parent's mental health and functioning. We also routinely administer the Edinburgh Postnatal Depression Scale (EPDS; Cox, Holden, & Sagovsky, 1987), a 10-item self-report scale originally designed to screen for depression symptoms in the postnatal period but now also validated for non-postnatal populations (Cox, Chapman, Murray, & Jones, 1996) and fathers (Matthey, Barnett, Kavanagh, & Howie, 2001). When mental health issues are identified, referral to mental health and psychiatry support services are arranged.

Child behavior questionnaires. The Eyberg Child Behavior Inventory (ECBI; Eyberg & Pincus, 1999) is a required tool for the assessment of child behavior in PCIT. However, it has not been validated for use with children young than 2 years. Many of the items, for example, are not age appropriate (e.g., "has poor table manners," "does not obey house rules," "lies," "wets the bed") and so total pre-treatment scores often fall below the clinical range, failing to reflect the nature and severity of presenting problems. In our pilot work we found, for example, a pre-treatment mean ECBI intensity score of 120.59 for the children aged less than 2 years, compared with the pre-treatment score for the group of children aged 3–4 years, which was 150.69 (Kohlhoff & Morgan, 2014). This difference may have been a reflection of more

severe behavior problems in the older children or may have been a reflection of a lower sensitivity of the ECBI items to the types of misbehaviors more often observed in toddlers.

A promising alternative to the ECBI for the younger age group is the Devereux Early Childhood Assessment for Infants And Toddlers (DECA-I/T; Mackrain, LeBuffe, & Powell, 2007), a validated behavior rating scale for children aged 1–36 months providing scores on three protective factor scales: attachment/relationships, initiative, and self-regulation. The Child Behavior Checklist (CBCL; Achenbach & Rescorla, 2000), a parent-report scale assessing frequency of externalizing and internalizing symptoms, could also be used, however the scale is long (100 items) and is only designed and validated for use with children aged 18 months and over.

CDI Teach Session

The Teach session in PCIT-T can be lengthy as it follows much of the standard PCIT protocol for the CDI teach (Eyberg & Funderburk, 2011) and also includes additional elements specific to this younger age group. Specifically, the following elements from the Standard CDI teach session are covered: (1) discussion of treatment expectations, (2) overview of PCIT-T, (3) structure of therapy sessions, (4) attendance policy, (5) explanation and role-play of the "Do skills" (Labeled Praise, Reflection, Imitation, Descriptions, and Enjoyment) and the "Don't skills" (Commands, Negative Talk, and Questions), (6) discussion about toys to use in special play, and (7) discussion about homework. Additional PCIT-T teaching topics include:

- The parent–child dyad as a "unit" and the toddler's dependence on the parent for emotional regulation.
- Normal toddler development, with an emphasis on emotion regulation (e.g., that toddlers are still learning how to manage emotions).
- Parental skills/techniques to help the child and parent regulate emotions.

- The importance of paying attention to the biological needs of the child (e.g., that tantrums are more likely if needs such as hunger, tiredness, and sickness are not attended).

CDI Coaching

Attention to the physical surroundings. As in standard, PCIT, in PCIT-T, special attention is given to the physical surroundings to optimize positive child functioning and prevent parent–child conflict. This includes setting up the therapy room so that it is age appropriate by eliminating any potential safety hazards for children in this age group (e.g., choking hazards, falling risks, escaping the room, pulling things on top of self, objects that could be put in nose/ears). It also includes choosing a limited number of developmentally appropriate toys, modeling to the parent that with simple foresight and planning, some "battles" with their child can be prevented (e.g., not choosing toys shaped like round circular objects which the toddler will throw). By carefully preparing the physical environment prior to the session, the therapist models to the parent the important role that planning and structure can play in reducing conflict and disruptive child behaviors.

Appointments should be conducted at times that will optimize the child's best functioning. This means not scheduling appointments during the child's usual sleep or meal times. It is also important that sessions are conducted when the child is not hungry, sick, or has a dirty diaper. Further, rather than having weekly 60 min coaching sessions as is typical in standard PCIT, in PCIT-T we typically see families for two 30–40 min sessions per week, usually for 5–6 weeks. Families with toddlers tend to respond well to a more intensive intervention and more regular contact with the therapist. The shorter sessions are good for the toddlers who have limited attention spans and who tire easily.

Focus on emotion regulation. A difference between PCIT-T and standard PCIT is that in PCIT-T, instead of using selective ignoring or time-out in response to disruptive child behavior, the parent is taught to conceptualize disruptive child behavior as a sign that the child is emotionally deregulated and to address the behavior by helping the child to manage emotions. With limited cognitive and verbal skills, toddlers can struggle to understand and articulate their experience of emotions, whether they be fear, worry, frustration, anger, or discomfort. In PCIT-T parents are therefore coached to notice early changes in behavior and to recognize these as signals that the child is feeling (or starting to feel) distressed (e.g., whiny voice, negative facial expressions, getting rough with the toys, disengaging from play, saying no, demanding things such as wanting to go home, trying to get out the door, going to mom's bag, pulling at mom, aggression with mom, or behaviors that signal a sudden desire to go home). In the coaching sessions, the therapist interprets and labels the child's feelings and experience until the parent is able to do this for him or herself. Coaching statements can include:

- "I can see he is looking at the door. He seems to be worried about the noise outside the room"
- "He's playing roughly with the blocks. He's becoming frustrated, I think he needs your help"

Once the parent has recognized that the child is distressed or upset, he or she is coached in the implementation of a series of emotion regulation techniques represented with the acronym "CARES."

"*Come in*": When the early signs of child distress or dysregulation have been identified, the parent is coached in the skill of "coming in" close to the child. By this we mean that the parent moves closer to the child, and that they do this quickly and calmly. To be effective, the parent needs at all times to maintain an active stance of physical and emotional "availability." Coaching statements can include:

- "I can see that she's getting frustrated because she can't fit the block in the hole. She needs

your help. Come in close to her. I like how you are staying calm"

- "I like how you have come in close and right there for him"

"*Assist*" *the child with the issue/problem*: The parent is coached to offer practical assistance to the child, to help prevent escalation of the distress/frustration/negative emotion. In some instances this will be to assist the child with the problem by demonstrating a solution (e.g., if the child is getting frustrated because they don't know how to use a toy, the parent demonstrates how to do so). By assisting the child to deal with the issue or problem, the child becomes less distressed, and the likelihood of escalation to a tantrum or other externalizing behavior is decreased. It also increases the parent's confidence in their ability to assist the child, and gives the child the experience of collaboration and support. Coaching statements can include:

- "By helping him build that tower you help him to stay focused and calm"
- Child starts to whine. Parent moves close beside the child and says, "I'm here to help." Therapist says "Great job letting him know that you are there to help if he needs it"
- Child starts to touch the animals roughly. The parent demonstrates gentle touch with the toys and says "I like it when we are gentle with the animals." Therapist says "I love the way you are showing him what it means to be gentle"

"*Reassure*" *the child*: It is also important that the parent provides the child with verbal reassurance when they are distressed or emotionally dysregulated. This may have a calming effect on the child as it lets them know that they are not alone and that help is available to them if they need it. In the same way, the therapist offers verbal reassurance to the parent by speaking in a calm voice and using behavioral descriptions and labeled praises to affirm the parent's behaviors. Coaching statements can include:

- "You can tell him, 'it's okay, mommy's here'"
- "Let him know that 'Mommy's here to give you a cuddle when you are ready'"
- "Let him know that 'Daddy's here to help if you need it'"
- "It's hard for him, but he knows you're there to help him"
- Child struggling to build a tower. Parent says "I know it's frustrating. Mommy's here to help." Therapist says "Nice job reassuring him that he's not alone"

"*Emotional Validation*": One of the most valuable steps in the process is for the parent to name the issue/problem that the child is facing and to label the negative emotion that the child is experiencing as a result. For example, "You're trying to put the big car into the small hole. It's frustrating when the cars don't fit." Labeling the child's emotion and doing so nonjudgmentally may help children to better understand and accept their feelings, improves their confidence/trust in the parent (because it tells the child that the parent understands how he or she is feeling), and may enhance the child's self-esteem (because it sends the message that the parent accepts them and values them no matter what they are feeling or doing). Coaching statements can include:

- "Great job labeling his emotion"
- "I love how you're are being so sensitive to his emotions"
- "It's great the way you've named his feelings. That will help him to learn words for the feeling"

"*Soothe*" *the child with voice and touch*: Another vital step is that the parent calms the child with a soothing voice (tone rather than content) and physical affection (e.g., rub on back, cuddle, touch, sitting on mom's lap). Soothing is a very important skill that many parents need to learn and practice. Sometimes this involves simply a rub on the back or stroke of the child's hair. At other times it involves a "time in" technique

(Weininger, 2002) in which the parent picks up the child and cradles him in her arms like a baby. The "time in" technique is very different from behaviorally focused techniques of selective ignoring or time-out utilized in standard PCIT. It is, however, an important adaptation for young toddlers because they do not yet have the capacity to self-regulate, particularly in cases where the parent has previously been managing the child's tantrums or disruptive behaviors with punitive measures or emotional withdrawal. Coaching statements can include:

- "Those back rubs are really helping him to stay calm. Well done averting a tantrum by being right there with him to soothe him"
- "He's looking more relaxed in your arms"
- "You're helping him to calm down"
- "He's feeling safe with you"
- "You're doing a great job at helping him calm down by giving him that cuddle"
- "I know it's hard to be with him when he's so upset, but you are doing such a great job helping him to calm"
- "Your calm voice is keeping him calm"

Returning to Special Play: Once the child has calmed down, the parent is coached to help the child return to positive play. Toddlers can, at the best of times, find it difficult to transition between activities and so re-engaging in play after a break due to high levels of emotion can be particularly challenging. Parents are encouraged to help toddlers with this by using distraction and redirection techniques, doing so in an animated and fun way (e.g., with an excited voice or toys that make noises). Labeled praises to reinforce the child's utilization of the parent for emotional regulation can also be helpful. On some occasions, when the child's dysregulation was only minor (perhaps when the parent was able to successfully use emotion regulation skills to calm the child down prior to the escalation of emotions), distraction and redirection techniques may be turned to fairly quickly. Coaching statements can include:

- "Let him know that you loved the way that you came in for a cuddle when he was feeling upset"

- "He seems to have calmed down with your help. Now use your PRIDE skills to get him back into play"
- Parent uses distraction and re-direction to engage the child back in play after the child lost focus for a short while. Therapist says "Great job getting him back into the game"
- Child had a tantrum but parent used emotion regulation skills to get them back into play. The child is now concentrating hard on pushing the trains around the track. Therapist says "Wow, his game is so organized now that he has you to help him organize his feelings"

It can be also common for toddlers to have periods in which they become unfocused in their play. This can manifest in repetitive behaviors with a toy (e.g., repeatedly pressing a button that makes a noise) or simply stopping the play and staring into space or walking around the room aimlessly. Such behaviors are usually triggered by tiredness or boredom and in these instances parents are coached to "under-react" to the behavior and use distraction and re-direction techniques to re-engage the child in positive play. Example coaching statements:

- "That has really helped to move him on by your distraction with the toy bus"
- "Your enthusiasm with that toy has been a great distraction for him, well done"
- "You are making that game look so much fun that he wants to join you"
- "It was so great to watch how easily you were able to distract him just now"
- "Great work, you picked up that he was tired and you moved in closer to support him"

Other considerations: It is important to note that these emotion regulation techniques can be used sequentially or concurrently, and not necessarily in the same order each time. In many situations it will be appropriate to move back and forth between the techniques, until the child has become calm. The important thing is that the parent uses these skills in a way that is empathetic (giving the message "I know that you need me," "I understand that you feel ……..") and car-

ing (giving the messages "I love you," "we are connected," "I'm here to help you," "I'm on your side"). This conveys a message of emotional availability, or in other words, (1) "I'm here for you," "you are not alone with this emotion," "I'm here to support you," and (2) "Your feelings are important to me." Through repeated practice and coaching in these skills the parent's understanding of the child's emotional needs and their understanding of their own role in meeting those needs increase. Increased parental confidence, self-efficacy, sensitivity, and responsiveness are natural flow-ons. Importantly, as the parent becomes better able to provide the "scaffolding" that the child needs for emotional regulation, the child's working internal model of the parent shifts towards one characterized by an expectation of emotional safety, support, and nurturance—hallmarks of the secure parent–child attachment relationship that is known to be a strong predictor of optimal social-emotional child outcomes (Fearon, Bakermans-Kranenburg, van Ijzendoorn, Lapsley, & Roisman, 2010; Fearon & Belsky, 2016; Sroufe, 2005).

The therapist must also be aware that for many parents, negative feelings about themselves, the child, or the child's behavior (e.g., helplessness, anger, anxiety) can prevent them from following these steps. Parents therefore benefit from coaching directed at their own feelings and coping techniques during challenging parent–child interaction moments. The therapist coaches and supports the parent to "be with" the child during the tantrum or disruptive behaviors, while the therapist, in a parallel process, models "being with" with the parent through constant coaching through the "bug-in-the-ear" microphone. A series of adult "CARES" steps are also taught to develop the parent's emotion regulation skills. For further information about the adult CARES steps, see Girard et al. 2018. Coaching statements can include:

- "It's distressing for you when you hear him cry, he's just a bit angry at the moment, and you are doing great job supporting him"

- "By you being calm and with him when he is frustrated it's helps him to learn how to stay calm"
- "I can see it is getting frustrating for you. It's hard when he gets so distressed and it brings up feelings for you"

Emphasis on the Relationship

Just as in standard PCIT, in PCIT-T the emphasis is on building a positive parent–child relationship and increasing the number of positive experiences the parent and child have together. Throughout the session, the coach therefore looks for any positive exchange between the parent and child or any positive emotion in the parent or child and points these out as an observation or labeled praise. Example coaching statements:

- "He's talking to you so much today, and that's because you've been using your PRIDE skills – that encourages him to use his words."
- "He just came and gently touched your arm – he's learning to be gentle. You've been working so hard with teaching him how to be gentle."
- "He just looked straight into your eyes with a big smile – that shows he's really enjoying spending time with you."
- Child comes close to mom and touches gently to snuggles head in. Therapist says to the parent, "he is getting close and looking at you." "I
- think he is enjoying being close to you."

Modeling of Appropriate Behaviors

As in standard PCIT, in PCIT-T parents are coached to model positive behaviors. Positive modeling helps the child to "move on" when they get stuck between activities and also teaches them about appropriate social behavior in a way that is easy for them to understand. For example, after a break in play (possibly after a tantrum or difficulty transitioning between parents in the

coaching session) the parent may be coached to model positive play behaviors with the aim of engaging the child. Or for a child who commonly shows a certain type of inappropriate behavior (e.g., playing roughly with toys or speaking with a very loud voice), the parent may be coached to model the opposite appropriate behavior in the course of play. Example coaching scenarios:

- Child has a tendency to be rough with the toy cars. Parent takes a toy car and begins to drive it on the ramp slowly and gently saying, "Mommy's pushing the car gently."
- Child is placing farm animals roughly in a toy barn. Parent demonstrates how to put an animal in gently, and says with a calm voice, "Mommy's putting the animal in gently."

Aggressive Toddler Behavior

The only time in PCIT-T when the parent withdraws attention from the child as a consequence for inappropriate behavior is in the case of aggressive behaviors directed towards the parent or a sibling. In an attempt to teach children from an early age that hurting others is unacceptable, in such situations the parent is coached to use the following "no hurting" sequence: (1) stop the play, (2) take the child's hands firmly and say "no hurting," (3) briefly withdraw attention from the child (looking away from the child for 3 s), (4) re-initiate eye-contact and repeat the words "no hurting" or "gentle hands," and (5) re-engage the child in positive play by physically rotating the child around towards a new toy and using distraction and re-direction. This "no hurting" sequence has a behavioral element (i.e., withdrawal of attention following the child's inappropriate behavior) but it is very brief and also draws on the social learning theory principle of teaching via instruction.

Modified PDI-T Phase

With limited receptive language skills and life experience, toddlers struggle to understand and follow parental commands. During the course of PCIT-T, parents are taught the difference between direct and indirect commands but are encouraged to use them sparingly. The only time that commands are always used is when transiting between locations, a task that this age group finds very difficult (e.g., "Hold mommy's hand"). Parents are coached to use commands that are succinct, simple, and clear, and are encouraged to be animated, to accompany commands with gestures to actively help the child to comply with the command (e.g., holding out hand to child), and to use praise for compliance ("Good boy for holding mommy's hand!"). In the most recent iteration of the PCIT-T model, a PDI-T phase has been included. PDI-T differs fundamentally from the PDI of standard PCIT as it does not include any negative consequences for noncompliance. Instead, a guided compliance procedure with concrete, graduated steps (tell-show-try again-guide) and labeled praise for listening is used.

Case Study: Samantha and Heidi

Identifying information and presenting problem. Samantha was 31-year old accountant—successful in her career and used to being competent and in control. She was married to Fred, aged 33, a chef who was running a busy café and trying to be a good provider for his family. They had an 18-month old daughter, Heidi, who they were having difficulty managing due to persistent tantrums, aggressive behavior, and general unhappiness.

Samantha and Fred had been married for 5 years. They had always wanted a family. Samantha became pregnant easily but before long began to worry about the health of the baby, the delivery, and whether she would cope with

being a mother. After Heidi was born Samantha struggled to adjust. Samantha described Heidi as having been an "unsettled" and "demanding" baby, hard to feed, and a poor sleeper. In the early postpartum months, Samantha spent many hours alone trying to overcome these difficulties, struggling with self-doubt and exhaustion and feeling guilty about her lack of enjoyment of motherhood. She experienced low mood at various points, but never spoke to anyone about how she was feeling and did not receive any professional support. Fred was working long hours at the time—he knew that Samantha was struggling but didn't know how to help.

From around the time that Heidi turned one, Samantha started to worry that there was something wrong with Heidi. Heidi was not interacting well with other children and daycare teachers had noted that she was biting others and being aggressive in the playground. At home, she was having tantrums and was difficult to control. When Heidi was 18 months old, Samantha and Fred sought help from a community health nurse. The nurse was unable to help and suggested a referral to the General Practitioner (GP). The GP could find nothing wrong with Heidi and referred her to a pediatrician. After a detailed assessment, the pediatrician concluded that Heidi was "physically well," describing her as a "typically developing 18-month-old with a lot of energy and curiosity." He referred the family to an Early Childhood Behavior Treatment Clinic for parenting support and intervention.

Assessment. Samantha, Fred, and Heidi attended the Clinic for the initial assessment session. When asked about their reason for coming to the clinic, Samantha stated "everything with Heidi is a fight…from the moment she wakes up in the morning she refuses to get dressed or have her nappy changed. She is unhappy and out of control most of the time." She reported many tantrums a day, the worst of them lasting for up to an hour, usually triggered by her not getting her own way. Heidi's typical behaviors during a tantrum included head banging, hitting, screaming, and crying. At other times, Heidi was "bossy" and "hard to please." Heidi's behavior and tantrums

had become so distressing for Samantha that she had begun to avoid leaving the house. Samantha said that she did not know how to deal with Heidi's tantrums and often found herself becoming angry and yelling at Heidi, or withdrawing completely out of frustration and helplessness. Samantha said that she had tried time-out but that it had not worked as Heidi refused to stay put. She said that her relationship with Heidi was a "constant battle." When asked to give three words to describe Heidi and herself, Samantha described Heidi as "angry," "uncontrollable," and "difficult" and described herself as "weak," "lost," and "overwhelmed." She said that at times Heidi reminded her of her mother—who during her own childhood had been critical and overly strict. She described her father as a quiet and kind man, but said that he worked long hours and so was relatively uninvolved in day-to-day parenting.

Samantha's score on the EPDS (Cox et al., 1987) was 11, indicating symptoms of minor depression. Her responses to the ECBI (Eyberg & Pincus, 1999) yielded a total Intensity score of 120 and a total problem score of 19. Her score on the SCQ (Rutter et al., 2003) was within the normal range. In the pre-treatment DPICS observation, Samantha asked in excess of 30 questions and gave no labeled praises, reflections, or behavioral descriptions. On a number of occasions she spoke negatively to Heidi, saying things such as "You never do what I ask you" and "Stop it." When the therapist entered the room after the DPICS assessment, Samantha stated "I don't know how to make her happy. I should have stuck to accounting. I am a terrible mom."

Samantha and Fred said that their goals for treatment were to "get help managing Heidi's behavior" and "improve their relationships with Heidi so that they could enjoy her more." PCIT-T was the chosen model of treatment and plans were made for the family to attend a teaching session followed by twice-weekly coaching sessions.

Treatment. Samantha and Fred both attended the PCIT-T teaching session and engaged well with the material presented. They were particularly interested in the emotion regulation information

and techniques, Samantha saying that she usually felt so frustrated with Heidi that she hadn't ever considered that Heidi's tantrums may be a sign that she was having difficulty managing her emotions. They were also quite pleased to hear that it was their job to help Heidi calm down rather than to punish her when she was having a tantrum. Both parents were keen to use the PRIDE skills in home-based Special Play sessions. Samantha said that she was less sure about her ability to use the Emotion Regulation techniques (CARES skills) and was glad that the therapist would be there to offer support and guidance.

During coaching sessions (attended mainly by just Samantha and Heidi), Samantha quickly learned to use Labeled Praises, Reflections, and Behavioral Descriptions with Heidi. She was amazed to see how much impact the PRIDE skills had on Heidi's behavior and how much they were enjoying playing together. Many times during the coaching sessions, the therapist drew Samantha's attention to moments in which the relationship between Samantha and Heidi seemed closer and warmer. For example, when Samantha gave a labeled praise and Heidi responded by looking into Samantha's eyes with a smile, or when Heidi, touched Samantha while focusing intently on a toy or game.

Every session there were situations where Samantha was able to practice her emotion regulation skills using the CARES model. On one occasion during an early session, Heidi walked to the door of the therapy room and said that she wanted to go home, pulling at the handle and banging on the door. She eventually started to cry, stomping her feet and becoming angry. In this instance, Samantha was coached to notice the early signs of Heidi's frustration (e.g., her initial look towards the door and movement in that direction), and use the CARES skills to calm Heidi down. This included naming Heidi's frustration ("I know that you want to go home – it's frustrating – but for now we will play some more"; "*emotional validation*"), physically coming in close to Heidi so that she was able to offer support ("*come in*"), reassuring Heidi that Samantha was there for her and available ("It's ok, mommy's here"; "*reassure*"), using a calm voice and touch (e.g.,

rub on the back) to help Heidi to manage her emotion and feel calmer ("*soothe*"), and to then re-engage her back into positive play using distraction and redirection (e.g., "I'm going to play with these blocks, this is so much fun!")

On another occasion, Heidi became frustrated when she could not get a toy to work properly and so she stood up and began to throw it. Samantha quickly responded by saying "Don't do that," which resulted in Heidi becoming more angry and frustrated. Within a very short space of time, Heidi was lying on the floor screaming and thrashing around. Samantha's initial reaction was to step back helplessly, but she was soon coached to come in to within arms distance of Heidi ("*come in*") and to label the problem and the feeling ("I know, it's frustrating when the block won't fit in the hole"; "*emotional validation*"), offer reassurance ("mommy's here to help"; "*reassure*"), gently demonstrate how to solve the problem (i.e., to show her how to use the toy; "*assist*"), and to use physical touch and a calm voice to help Heidi calm down ("*soothe*").

During one of the sessions, despite Samantha's best efforts to identify early signs of emotional dysregulation, Heidi's frustration rapidly escalated into a tantrum. The therapist used this opportunity to coach Samantha in the adult CARES skills for both Samantha and Heidi. While Heidi was at the height of the tantrum, the therapist coached Samantha to stay calm using techniques such as deep breathing. The therapist spoke with a calm and supportive tone, giving positive and consistent feedback. In doing so, she modeled to Samantha how to be calm, consistent, and available for Heidi. As the intensity of the tantrum dropped, Samantha was coached to pick Heidi him up in her arms and to cradle her ("*come in*"), at the same time rocking her, making a shushing sound ("*soothe*") and communicate to her that she was not alone ("It's ok, mommy's here with you"; "*reassure*"). Heidi eventually calmed down in Samantha's arms and returned to Special Play happily. Using the child and adult CARES techniques was a very positive experience for both Heidi and Samantha, and a new skill that Samantha came to use on other occasions also, with a lot of success. Other skills prac-

ticed in session included helping Heidi through transitions (i.e., from the waiting room to the therapy room, from the therapy room to the car) using the "no hurting" sequence when Heidi displayed an aggressive behavior such as hitting.

Outcome. At the end of PCIT-T treatment,[1] Samantha said that she was feeling more confident in managing Heidi's tantrums, and that she was doing this by noticing early signs of distress and using the CARES emotion regulation techniques. Her scores on the ECBI had improved (ECBI intensity was down to 105; ECBI problem score was down to 2). Samantha said that she now felt more in-sync with Heidi's emotions and was gaining confidence in understanding her body language and averting issues before they had escalated. She said that she felt that PCIT-T had changed how she felt about herself and her relationship with Heidi, and that she now felt much closer to her and that she had tools in her "tool kit" to use with Heidi. Samantha also said that her mood had now improved, a comment confirmed by her post-treatment EPDS score which was now at 4. Six months later, Samantha commented on how far her relationship with Heidi had come. She said that Heidi was much calmer and happier, and they were both enjoying the relationship much more.

Caveats and Conclusions

PCIT-T is an adaption of PCIT that brings together attachment and behavioral theories with the aim of meeting the unique developmental needs of toddlers. The program includes many of the elements of standard PCIT but is unique in its particular focus on the parent's role in helping the child to regulate emotions. Recently, we have also added a new age-appropriate PDI-Toddler phase that focuses on the teaching of listening skills through a guided compliance approach rather than extinction of unwanted child behaviors through a time-out sequence.

Our experience with PCIT-T over the years has been fulfilling, both for ourselves and for the families with whom we work. Time and again, families walk through the door of our clinic before treatment expressing concerns, and views of their children similar to those expressed in the vignettes at the start of this chapter. After completing PCIT-T, they are transformed—toddlers are calmer, parents are more confident and families are enjoying their relationships and feeling happy together. These clinical reflections are supported by pilot data (Kohlhoff & Morgan, 2014) and preliminary data from a recent wait-list controlled trial (Kohlhoff & Morgan, 2018). While rigorous evidence for the efficacy of PCIT-T is currently lacking, particularly with regards to longer-term outcomes and outcomes associated with the addition of the newly developed PDI-T phase, the intervention demonstrates promise. We have also recently commenced a RCT study to evaluate the efficacy of the most recent iteration of PCIT-T relative to an alternative intervention and a waitlist condition.

In sum, PCIT-T demonstrates preliminary promise as an adaptation of PCIT appropriate for families struggling with disruptive toddler behaviors. By educating and coaching parents and by giving parent–child dyads a new and positive experience of "relationship" together, like the standard model of PCIT, PCIT-T enhances parenting skill and capacity, improves child behaviors, strengthening parent–child relationships, with the goal of building resilience in individuals and families.

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[1]The recently developed PDI-T phase was not implemented with this family.

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PCIT: Conceptualizing a Continuum of Prevention

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"It is easier to build strong children than to repair broken men."

—Frederick Douglass

Abstract

Strengthening the parent–child relationship in early childhood has the potential to serve as a buffer against multiple negative developmental outcomes. Waiting until problems are pervasive or severe can be more costly, and most families in need of treatment do not receive it. Prevention models offer the possibility of reaching more families and building resilience prior to the onset of debilitating mental health issues. This chapter reviews research on existing PCIT-based prevention models across the continuum from universal to indicated prevention and describes in detail Family Camp, a selective prevention model designed to be implemented by natural helpers (i.e., lay health workers or other community members). Key adaptations of the Family Camp model include (1) reducing the intensity of the intervention for children with subclinical problem behaviors, (2) user-friendly materials that facilitate implementation by natural helpers, (3) increased focus on fathers and the importance of the father–child relationship, (4) intentional discussion about heritage and culture to address acculturation-related chal-

lenges, and (5) guidelines to increase the portability of the intervention within community settings. Finally, we offer recommendations for the future directions in the development, research, and implementation of PCIT prevention models, with a focus on developing a continuum of care.

Why PCIT-Based Prevention Models?

As a treatment model, PCIT has 40 years of empirical support. It demonstrates large effect sizes for the reduction of childhood conduct problems and the improvement of parenting skills (Niec, Barnett, Prewett, & Shanley, 2016; Schuhmann, Foote, Eyberg, Boggs, & Algina, 1998). Increasingly, support has been found for the use of PCIT to address childhood internalizing problems as well (Carpenter, Puliafico, Kurtz, Pincus, & Comer, 2014). Given the strong findings that support the treatment approach, is there a need to create alternative models? After all, PCIT can be conceptualized as prevention in itself—that is, it is an indicated prevention intervention for children already demonstrating disruptive behaviors who are at risk of developing severe conduct problems in later childhood and adolescence (Munoz, Mrazek, & Haggerty, 1996).

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Do we *need* to adapt the model to provide options for other levels of preventive interventions?

A number of important reasons exist to explain why the answer to the question is yes. One key reason to consider PCIT-based prevention models is to address family or child risk factors before symptoms manifest or become severe. Conduct problems are one of the most costly mental health issues in the US. At the societal level, the costs of childhood conduct problems are related to lost productivity, criminal justice involvement, and medical and behavioral health services involvement (Aos, Lieb, Mayfield, Miller, & Pennucci, 2004; Cohen & Piquero, 2009). Between the ages of 7 and 13 years, a child with unaddressed conduct problems will require about $70,000 more in social spending than a peer without conduct problems (Foster, Jones, & the Conduct Problems Prevention Research Group, 2005). By the age of 28 years, adults who experienced untreated childhood conduct problems require ten times the social spending that is required by individuals without conduct problems (Scott, Knapp, Henderson, & Maughan, 2001). Beyond the costs to society, conduct problems take their toll on individuals and families, being associated with parent stress (Donenberg & Baker, 1993), increased risk for child maltreatment (Whipple & Webster-Stratton, 1991), and child and adolescent comorbid mental health problems, including issues such as substance use and suicide (Dodge, Greenberg, Malone, & the Conduct Problems Prevention Research Group, 2008). A universal prevention model of PCIT—which would be available for all parents—would have the potential to strengthen parent-child relationships and build family resilience in order to prevent the onset of conduct problems or ameliorate the risk of child abuse; while a selective prevention approach to PCIT would target families at-risk for parent–child conflict. By addressing risks and building resilience before problems become serious, both levels of prevention have the potential to reduce the social and personal costs of parent–child conflict and childhood conduct problems. Development of PCIT models at the universal and selective prevention levels offers the potential for clinicians to provide a continuum of services that are consistent in approach but offer increasing intensities of intervention.

A second important reason to consider prevention models of PCIT is that prevention models are generally less intensive than treatment (e.g., Niec et al., 2014). They may be shorter, require fewer resources to deliver, and may be implemented by interventionists with less training than licensed mental health care providers (e.g., Acevedo-Polakovich, Niec, Barnett, & Bell, 2013; Calzada et al., 2005). It is less costly to provide prevention than for children to go untreated (Dunlap et al., 2006). Thus, prevention models may allow agencies to reach more families than possible with treatment models. Currently, mental health provider shortages, slow dissemination progress, and a dearth of sustainable treatment programs all play a role in limiting access to evidence-based treatment (Niec et al., 2016). Upwards of two-thirds of the families in need of services do not receive them (Kazdin, 2011) and many families who present for treatment do not benefit from it (McMahon & Forehand, 2003). Thus, developing interventions that can extend the reach to underserved families is a critical goal.

Prevention approaches also offer the opportunity to create models that may be less stigmatizing and more community based. Families from ethnic minority backgrounds, for example, are less likely to access services due to issues such as the perception of stigma surrounding mental health treatment or discomfort with formal health care settings (Clement et al., 2015). Although these families are less likely to receive services, their risk for parent–child conflict or childhood conduct problems may be greater, as they may be more likely to face multiple stressors, such as those associated with poverty and acculturation, that can disrupt effective parenting, putting children at higher risk for conduct problems (Domenech Rodríguez, Davis, Rodríguez, & Bates, 2006; Parra Cardona et al., 2009).

A fourth reason to consider PCIT-based prevention models is that the PCIT model may be particularly suited to reaching families that are historically underserved (Niec et al., 2014). The
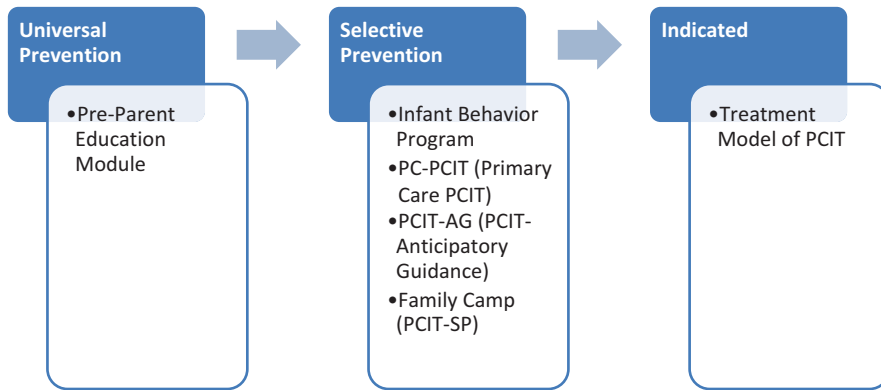
Fig. 1 PCIT models

primary mechanisms of change in the PCIT approach include active practice and in vivo coaching: parents learn new strategies to change their children's behaviors by practicing those strategies in real-life situations, rather than merely role-playing or watching videos of other parents using the strategies. Further, in families in which education and literacy rates are low, interventions that rely primarily on didactic approaches or reading materials may be less likely to be effective (Knapp & Deluty, 1989). PCIT provides a unique intervention format and a powerful, effective approach to changing parent behavior. Harnessing these strengths in the form of community-based prevention models may increase the access to effective services for families from a wide range of backgrounds (Fig. 1).

PCIT-Based Prevention So Far

To date, five PCIT-based prevention models have been published. Each model targets a different population and uses a different delivery format from one another and from the original treatment model. The five models include (1) a Pre-Parent Education Module for young adults (Lee, Wilsie, & Brestan-Knight, 2011), (2) a CDI-only model for at-risk infants, the Infant Behavior Program (Bagner et al., 2016; Bagner, Rodríguez, Blake, & Rosa-Olivares, 2013), (3) a four-session group intervention for preschoolers with emerging behavior problems, Primary Care PCIT

(PC-PCIT; Berkovits, O'Brien, Carter, & Eyberg, 2010), (4) a set of anticipatory guidance reading materials based on PCIT handouts, PCIT-Anticipatory Guidance (PCIT-AG; Berkovits et al., 2010), and (5) a selective prevention model designed to be implemented by lay health workers, Family Camp (Acevedo-Polakovich et al., 2014; Niec et al., 2014). Below, we briefly review each model, including existing empirical support (see Table 1).

Lee et al. (2011) developed a Pre-parent Education Module, adapted from the treatment PCIT protocol. The model offers a universal prevention format of PCIT designed to be taught to young adults prior to becoming parents. In their evaluation of the model, Lee and colleagues (2011) delivered modified versions of the Child-Directed Interaction (CDI) and Parent-Directed Interaction (PDI) teach sessions during students' participation in a developmental psychology course. Following each didactic presentation, students practiced the basic parent–child interaction skills in class. During PDI instruction, students were taught fundamental principles of discipline (e.g., giving effective commands, important components of time-out), but not specifically how to implement time-out. Results from the study suggested that students who received pre-parent education possessed significantly greater knowledge of PCIT parenting principles than students who received general instruction in developmental psychology or those who had not yet taken the course. Students who

Table 1 PCIT prevention models

Study	Intervention model	Study design	Target population	Sample	Assmnt
Berkovits et al. (2010)	Primary Care PCIT or PCIT Anticipatory Guidance: 4-session Clinician- or Self-guided PCIT	Randomized Control Trial	Children age 3–6 with raw ECBI Intensity = 68–132	30 mother–child dyads	ECBI
Bagner et al. (2016)	Infant Behavior Program: PCIT with infants 5–7 session in-home CDI	Randomized Control Trial	Infants age 12–15 months: 75th percentile or higher on BITSEA	60 mother–infant dyads	ITSEA, DPICS-III
Lee et al. (2011)	Pre-Parent Education Module: PCIT didactic taught in developmental psychology course	Randomized Control Trial	19–25-year-old undergraduate students	300 Psychology students	PCIT Content Quizzes, DPICS-III
Acevedo-Polakovich et al. (2014) Niec et al. (2014)	Family Camp, PCIT-Selective Prevention delivered by natural helpers	Qualitative: Intervention development study	Parents of children ages 2–7	37 natural helpers 50 parents	NA

Note. *Assmnt* assessment, *PCIT* parent-child interaction therapy, *ECBI* Eyberg Child Behavior Inventory, *BITSEA* Brief Infant-Toddler Social and Emotional Assessment, *ITSEA* Infant-Toddler Social and Emotional Assessment, *DPICS-III* Dyadic Parent–Child Interaction Coding System–Third Edition

received the pre-parent education module also used more child-centered skills (e.g., labeled praises and unlabeled praises) during a standardized observation of their interactions with a confederate. Thus, brief instruction using an adaptation of PCIT content increased young adults' knowledge of positive parenting practices. Although it is unknown whether this knowledge generalized to the students' eventual parenting, it is a promising step to developing a method through which a universal format of PCIT might be delivered.

Bagner et al. (2013, 2016) further extended the work on PCIT prevention models with the development of the Infant Behavior Program, a brief, selective prevention model targeting infants 12–15 months of age. Families were randomly assigned to receive the parenting intervention or standard pediatric primary care (Bagner et al., 2016). The Infant Behavior Program included only child-directed parenting skills (no parent-directed interaction) and was delivered in the home. Parents received a CDI teach session plus five to seven coaching sessions. The treatment CDI protocol was maintained with regard to coding and coaching, with minor adaptations to pro-

vide developmentally appropriate examples of the child-centered skills. Skill-mastery criteria for parents were adjusted to account for infants' lower rates of verbalization/vocalization (Bagner et al., 2013). Mothers receiving the intervention reported a lower incidence of problem behaviors in their children, demonstrated an increase in their use of "Do" skills, and showed a reduction in their use of "Don't" skills, with positive changes generally maintained at 6-months follow-up. Additionally, at follow-up, toddlers in the intervention group were more compliant than those in the control group with mothers' commands during a clean-up situation.

While the prevention model for infants only taught CDI skills, Berkovits et al. (2010) developed two prevention models that included both phases of PCIT and were meant for delivery within a pediatric primary care setting. Each model contained the same content, but different delivery formats: one model included four therapist-led group sessions (CDI Teach, CDI Coach, PDI Teach, PDI Coach), while the second model included written anticipatory guidance materials and was self-guided. Participants in both conditions received handouts describing

child behavior management techniques based on PCIT and parenting "tip sheets" (e.g., describing how parents are models for their children) all based on the handouts in the PCIT treatment protocol. Parents in the self-guided condition received the CDI and PDI information as written materials but did not meet with therapists and did not receive in vivo coaching. Following both interventions, mothers' perceptions of child behavior problems (scores on the Eyberg Child Behavior Inventory), parenting efficacy, and ratings of treatment acceptability and adherence did not differ across conditions. Although there was no observation of actual parenting behavior, mothers in both groups reported lower levels of misbehavior following intervention.

Family Camp: PCIT-Selective Prevention

With the exception of the anticipatory guidance reading materials (Berkovits et al., 2010), the prevention models described above share in common their delivery by interventionists with graduate degrees in a mental health field. Unfortunately, in many areas of the US—and in many countries globally—shortages of mental health providers mean that families in need of services may languish on long waitlists or have nowhere to turn to receive effective parenting programs (Kazdin, 2008; Kazdin & Blase, 2011; Satcher, 2000). Within the US, over 5000 regions have been designated as mental health professional shortage areas (HPSA-Mental Health, 2018). Innovative delivery strategies for PCIT could help to address need in these provider shortage areas. One solution may be to adapt PCIT into a format suitable for implementation by natural helpers. Natural helpers are defined as lay health workers or other community members to whom families naturally turn for support and assistance with parenting problems (Israel, 1985). The use of natural helpers in community prevention programs is increasing as a method of combating service disparities (Ayala, Vaz, Earp, Elder, & Cherrington, 2010; Barnett, Lau, & Miranda, 2018; Koskan, Hilfinger Messias, Friedman, Brandt, & Walsemann, 2013;

Rhodes, Foley, Zometa, & Bloom, 2007; Stacciarini et al., 2012). Some evidence suggests that natural helpers can be as effective as licensed professionals in delivering mental health interventions, particularly behavioral or cognitive behavioral interventions (Acevedo-Polakovich et al., 2013; Montgomery, Kunik, Wilson, Stanley, & Weiss, 2010).

Family Camp is a selective prevention model of PCIT, informed by parents from ethnically diverse backgrounds, that was designed to be implemented by natural helpers (Acevedo-Polakovich et al., 2014; Niec et al., 2014). Similar to the treatment model of PCIT, the primary goals of Family Camp are to strengthen the parent–child relationship, increase parents' positive parenting practices, and improve children's behaviors. However, Family Camp was designed specifically as an intervention for children whose problem behaviors have not reached clinically significant levels.

Family Camp was developed using a community-based participatory research-informed approach in order to better integrate (1) the needs of parents regarding assistance with parenting issues and (2) the needs of natural helpers regarding training and implementation of a PCIT-based parenting intervention. Fifty parents of Latina/o background and 37 natural helpers participated in six focus groups. Some of the key issues expressed by parents and natural helpers included (1) a need for more community support for parents, (2) acceptance of the core components of the PCIT model, (3) a need for fathers to be actively engaged in parenting interventions, and (4) an interest in seeing the model implemented by community members (e.g., teachers, elders, law enforcement; Acevedo-Polakovich et al., 2014; Niec et al., 2014).

Structure of the Program

Family Camp maintains all the core components of the treatment model of PCIT. It includes ten sessions and can be offered in an individual family or a group format. Each of the intervention phases, Child-Directed Interaction (CDI) and

Parent-Directed Interaction (PDI), consist of one teach session and three coaching sessions. Although both phases are comparable to the treatment protocol in content, because the target population for Family Camp includes only children with subclinical problem behaviors, progress from CDI to PDI is not contingent on parents reaching the mastery criteria of the skills (see Table 2). The treatment protocol of PCIT emphasizes the reduction of children's conduct problems from clinical levels to within normal limits; however, a key component of Family Camp is the development of children's psychosocial competencies. Weekly throughout the intervention, children's positive behaviors are assessed using a brief, standardized, narrow-band parent-report measure, the Psychosocial Strengths Inventory for Children and Adolescents (PSICA; see chapter "Building Resilience Through PCIT: Assessing Child Adaptive Functioning and Parent-Child Relationship Quality" for a review).

Table 2 Family camp overview

Session number	Session content
Session 1	*Orientation*. Overview of the program and parents complete assessment materials
Session 2	*CDI Teach*. CDI teach session to demonstrate the PRIDE skills and discuss at-home special time practice
Sessions 3–5	*CDI Coach*. Code and coach CDI skills with all parents. Review PSICA graph
Session 6	*PDI Teach*. PDI teach session to demonstrate discipline program. Parents complete ECBI
Session 7	*PDI Coach 1—Mr. Bear*. Demonstrate the discipline procedure to the child and coach PDI skills with parents. Review PSICA graph
Session 8	*PDI Coach 2*. Code and coach PDI skills with parents. Introduce House Rules (if needed). Review PSICA graph
Session 9	*PDI Coach 3*. Code and coach CDI and PDI skills with parents. Explain public behavior procedure (if needed). Review PSICA graph
Session 10	*Graduation*. Completion of all post-camp materials and review of family's progress

Note. *CDI* Child-Directed Interaction, *PSICA* Psychosocial Strengths Inventory for Children and Adolescents, *PDI* Parent-Directed Interaction, *ECBI* Eyberg Child Behavior Inventory

Key adaptations of the PCIT protocol for the Family Camp model were based on the existing literature on prevention interventions for parenting (e.g., Calzada et al., 2005) as well as the qualitative feedback from parents and natural helpers (e.g., Niec et al., 2014) and focused on (1) reducing the intensity of the intervention for children with subclinical problem behaviors, (2) creating user-friendly materials that facilitate consistent and effective implementation by natural helpers, (3) using language that is specifically inclusive of fathers and demonstrates the importance of the father–child relationship, (4) including time for discussion of parenting issues related to culture and heritage, as appropriate, and (5) providing guidelines to increase the portability of the intervention within community settings (e.g., schools, churches, family centers).

The Family Camp manual includes detailed scripts for each session and is designed to guide natural helpers in presenting information in a way that ensures key concepts are covered evenly. For example, the Family Camp materials include brief videos to facilitate standardized administration by natural helpers who may have varied levels of experience working with parents. Videos demonstrate the PRIDE skills and the correct implementation of the discipline procedure as well as providing testimonials from parents who have completed the intervention.

Although PCIT has always welcomed and encouraged the participation in treatment of all caregivers who are important in a child's life, as in other parenting interventions, fathers have been seriously underrepresented (Bagner & Eyberg, 2003). Evidence suggests that fathers' engagement in their children's treatment has a significant impact on the maintenance of beneficial treatment effects (Bagner & Eyberg, 2003; Webster-Stratton, 1985). Compared to mothers from involved-father families, mothers in absent-father families (e.g., no male caregiver in the home) reported a loss of treatment gains 4 months after ending PCIT (Bagner & Eyberg, 2003). Thus, we developed Family Camp with a specific aim to increase the participation of fathers and other male caregivers. Throughout the intervention, Family Camp materials (1) add language

that, different from many relationship-focused interventions, includes conventional masculine norms (Triemstra, Niec, Peer, & Christian-Brandt, 2017), (2) provide testimonials from fathers who completed the program, and (3) emphasize the influence of fathers on their children. Further, integrating Family Camp into community settings makes the services more accessible to both mothers and fathers who may be reluctant to seek out assistance from mental health or social services agencies due to perceptions of mental health stigma (McBride & Rane, 1997; Meyers, 1993).

Finally, to increase the portability of the intervention into community settings (e.g., schools, places of religious worship, family centers), emphasis is placed on the effective use of in vivo coaching without expensive audio visual equipment. Low-cost, feasible alternatives are encouraged such as interventionist coaching in the same room as the parent and child. Cell phones are also possible to use to allow the interventionist to provide coaching at a distance in a large room.

Session One: Orientation

The first Family Camp session includes the interventionist and parents, without children, and typically lasts approximately 60–90 min. In focus groups, parents expressed the preference to meet their interventionist prior to beginning the program (Niec et al., 2014); thus, the primary goals of the orientation session are to establish rapport and develop a relationship between the interventionist and parents. Parents are provided an overview of the program using video testimonials from others who have successfully completed the program, and parents who are beginning the program are invited to share their experiences of parenting and how they perceive that their own parents and their heritage are influencing their current practices. This intentional discussion about heritage and culture seeks to address acculturation-related challenges that parents may be experiencing and that may exacerbate parent–child conflict. During the orientation session, parents also complete assessment measures to

provide baseline ratings of parenting stress and perceptions of their children's behaviors (Parenting Stress Index, Fourth Edition, Short Form, PSI-IV-SF; Eyberg Child Behavior Inventory, ECBI; PSICA).

Session Two: CDI Teach

During the second session, parents and children attend together. Parents complete the PSICA to monitor their children's psychosocial competence, and interventionists use parents' responses on the PSICA to tailor their presentation of the CDI skills (e.g., explaining how labeled praises will increase a child's sharing with siblings). The didactic portion of the Family Camp teach session is brief and succinct relative to the teach session in the treatment protocol, as PCIT therapists have sometimes described the didactic as a barrier to parent engagement (Christian, Niec, Acevedo-Polakovich, & Kassab, 2014) and families from lower socioeconomic backgrounds may find it uncomfortable and awkward (Niec et al., 2014). Further, findings show that parents' CDI skills improve after coaching even without an intensive didactic (Shanley & Niec, 2010). After a brief (approximately 20-min) introduction to the child-centered (i.e., CDI) skills, during which parents view short videos to on the "Do" and "Don't" skills, interventionists begin coaching parents in child-led play with their children.

Similar to the treatment model, parents are provided handouts explaining the child-centered skills and appropriate toys for Special Time, and CDI homework sheets to record their practice over the week.

Sessions Three Through Five: CDI Coaching

Following the CDI teach session, parents and children attend three CDI coaching sessions to increase warm and respectful interactions through in vivo coaching of the child-centered skills. At the start of each session, parents complete the PSICA and interventionists review parents' com-

pletion of the home practice. In preparation for coaching, interventionists work with parents to identify the positive opposites of their children's misbehaviors. As with the treatment model, parents are coded in their use of the child-centered skills to assess their skill gains and tailor the coaching to their specific needs.

The Family Camp manual provides examples of specific coaching strategies to use during in vivo coaching for specific parenting issues (e.g., modeling, labeled praises, process comments, prompting; Niec, Eyberg, Funderburk, & Acevedo, 2017). After coaching, interventionists review the CDI skills progress sheet with parents. Child-centered skills are monitored, and interventionists connect increases in parents' "Do" skills to improvements in the child's psychosocial competencies. During the third CDI coaching session, the PSICA graph is reviewed. An emphasis is placed on the relationship between parents' skill practice at home and increases in their children's prosocial behaviors.

Session Six: PDI Teach

During session six, interventionists teach parents how to give effective directions and a safe, effective, discipline procedure to use when misbehavior occurs. As with the CDI teach session, educational videos are used to help parents understand how to make their commands effective and how to implement discipline calmly and consistently. Interventionists describe the components of effective commands (e.g., necessary, single, said respectful) and reasons for following the rules of effective commands, as well as how to use time-out effectively. Modifications from the treatment version of the time-out procedure take into account that the target population of Family Camp includes children without clinical levels of behavior problems. Interventionists and parents role-play the discipline procedure at the end of the session. Handouts are provided to parents that summarize the contents of the session. Easy-to-read flow charts illustrate the discipline sequence.

Session Seven: PDI Coach 1

In this session, children are taught the time-out procedure through a Mr. Bear role-play. In addition to providing the child a demonstration of the time-out procedure and consequences for obeying or disobeying parents' commands, this role-play allows parents to practice implementing the time-out procedure before they need to use it with their own child. Intensive in vivo coaching of the time-out procedure helps parents learn to implement the discipline confidently and correctly. After the role-play in which Mr. Bear obeys, needs a warning, and goes to time-out, interventionists coach parents in giving effective play commands and following through when their child either obeys or disobeys. As in CDI coaching sessions, the Family Camp manual supports interventionists with PDI coaching strategies such as coaching warnings (e.g., "nicely timed warning") and helping parents to regulate their emotion during the discipline phase. For example, coaches are given examples of how to educate and remind parents why the discipline steps are important (e.g., "this will teach him/her to respect you"). In addition to continuing to complete Special Time homework as in the prior weeks, parents are provided with a PDI homework sheet and instructions for practicing PDI play commands during Special Time at home.

Session Eight: PDI Coach 2

In the second PDI coaching session, interventionists code parents' PDI skills and in addition to coaching play commands, begin to incorporate real-life and clean-up commands. After check-in and briefly coaching CDI play, interventionists introduce PDI coding to measure parents' use of effective commands and follow through when their child obeys or disobeys. The remainder of the session is spent on PDI coaching with the manual providing strategies for interventionists to support parents in making commands effective and mastering the discipline procedure. Additionally, during this session interventionists

aid parents in identifying two to four situations in which they will begin giving direct commands outside of Special Time, to begin generalizing PDI skills at home. Using the ECBI as a guide, interventionists work with parents to identify appropriate house rules, if needed, for aggressive and destructive behaviors, misbehavior that is never appropriate (e.g., spitting), and sneaky behaviors that aren't discovered until after they have occurred, such as stealing money. Handouts are provided to parents to help them recognize behaviors for which house rules may be used and those for which house rules should not be used; for these, alternative strategies are described. For nonaggressive, attention-seeking behaviors, vague, and subjective behaviors, such as whining, parents are given examples of how to praise positive opposites.

Session Nine: PDI Coach 3

The last coaching session, PDI coach 3, includes coding for both CDI and PDI skills to capture parents' skill change across the intervention. Interventionists then provide coaching in CDI skills, as needed, and coaching in PDI, incorporating clean-up and other real-life commands. In this session, public behavior procedures are introduced if parents are concerned about their children's behaviors when going to restaurants and stores. As in other sessions, handouts are provided with recommendations for what to do before, during, and after an outing and how to use time-out in public, if needed.

Session Ten: Graduation

The final session of Family Camp is approximately 90–120 min long to allow for a review of parents' progress through the program and completion of post-intervention measures (e.g., ECBI, PSICA, PSI-IV-SF). Interventionists review the PSICA graph, tying together the parents' increased use of PRIDE skills and their children's improved behavior. Emphasis is given to the continued use of skills developed through-

out the program to maintain and continue to improve the child's behavior. Additionally, as in prior sessions, the Family Camp manual aids interventionists in presenting information on other behavior management strategies such as special ignoring, rewarding positive opposites or using if-then statements with handouts for parents. Treatment is concluded with certificates of achievement, symbolizing the family's hard work.

Measuring Progress

Prevention interventions offer challenges in the assessment of family progress and outcome that are not necessarily faced in the implementation of treatment interventions (Proctor & Brestan-Knight, 2016). Family Camp targets children who do not demonstrate clinically significant behavior problems; thus, measuring changes in conduct problems is of less relevance and a focus on building child competencies is key. The Psychosocial Strengths Inventory for Children and Adolescents (PSICA), a 36-item parent-report measure, assesses children's psychosocial competencies, including prosociality, compliance to caregivers, and attention and affective regulation (Niec, Peer, & Courrégé, 2018). The measure has demonstrated excellent internal consistency and preliminary construct validity (see chapter "Building Resilience Through PCIT: Assessing Child Adaptive Functioning and Parent–Child Relationship Quality").

Using this strength-based measure is important to assess increases in psychosocial competencies and to help parents identify and reinforce children's positive behaviors during participation in Family Camp. Further, the PSICA is a brief and user-friendly tool for participants, and it is affordable for administration by natural helpers. The use of the PSICA is a crucial tool for tracking treatment progress by focusing on children's increasing appropriate behavior and can help expand the reach of Family Camp to at-risk and underserved families. As caregivers increase warm, positive interactions with their children through CDI and use safe and consistent discipline throughout PDI,

interventionists use the PSICA graph across sessions to illustrates to parents how they are helping shape and increasing their child's social competencies. While monitoring reductions in problem behaviors, a strategy used in treatment, may not always capture behavioral change in prevention interventions, a focus on increased prosocial interaction, compliance to parents' commands, and greater attention and affect regulation as measured by the PSICA lend support for meaningful improvement in children's behavior after participating in Family Camp.

Next Steps in the Development and Implementation of PCIT Prevention Models

Despite early support for a variety of prevention models based on PCIT, no single format has emerged as the strongest. With the exception of the Infant Behavior Program, none of the existing models have yet been evaluated with a controlled trial that provides observation of actual behavior to evaluate positive change (Bagner et al., 2016). To date, PCIT prevention models demonstrate the ability to (1) increase knowledge of positive parenting practices in young adults, (2) increase the use of child-centered skills in parents of toddlers, and (3) provide a feasible, brief model for implementation in primary care settings. These findings lend support for the development of a continuum of services to address concerns related to the parent–child relationship and children's conduct.

In order to extend the reach of PCIT prevention models to the families in need of them, we must continue to evaluate alternative delivery formats, such as implementation by natural helpers/lay health workers. Two important next steps in advancing PCIT-based prevention models are (1) development of a continuum of services that offer increasing intensities of interventions for children with subclinical problem behaviors and (2) continued research of the effectiveness (including the long-term outcomes) of PCIT-based prevention models.

Child conduct problems are costly at the individual, family, and societal levels, but the contin-

ued shortages of qualified mental health providers means that many families who are in need are unable to get treatment before symptoms become severe. Innovative adaptations of PCIT to establish a continuum of services, from universal to indicated prevention, have the potential to increase access to effective interventions for underserved families. Additionally, development of interventions that are offered in the community by natural helpers may further reduce stigmatization related to seeking mental health services; families at risk for parent–child conflicts can begin to receive early intervention by turning to the people they naturally seek for support.

Research to date suggests that PCIT prevention models are effective at decreasing children's problematic behaviors, and interventions have been well-received by potential interventionists and parents who would receive services. Additional research is needed to assess the sustainability and dissemination of such prevention programs. For example, in the treatment model of PCIT, families meet mastery criteria for the child-centered skills before they progress to the second phase of treatment. Prevention interventions may be shorter, less intensive, and focused on building resilience; thereby making them more sustainable within the community. More empirical support is needed to understand how positive parenting skills develop outside of the treatment context and how long intervention gains are maintained. A continuum of services may provide a natural format within which to assess the maintenance of gains and to offer additional services, as needed. By maintaining the core components of PCIT across the continuum, families can receive increasing intervention intensities. Anticipatory guidance reading materials based on PCIT handouts may be provided to all parents and in vivo coaching, which provides parents guided practice in using the skills, may be offered to families with increased risk factors, such as when children are demonstrating subclinical behavior problems. Given the extensive empirical support for the treatment model of PCIT, research on prevention models should focus on factors related to identifying and reducing the barriers interventionists experience in implementing services, families'

access to services, and measuring improvements in children's strength-based competencies.

Conclusions

Preliminary evidence supports both the need for and the feasibility of providing PCIT models that span the continuum of prevention levels from universal to indicated. Family Camp is a preventive parenting intervention developed to address the needs of families who have early risk factors that make it more likely for them to experience parent–child conflict or child conduct problems. This brief, selective-prevention model based on PCIT was designed to be responsive to the presenting issues of families who have historically experienced mental health disparities, such as limited access to mental health care. These families often experience other environmental stressors that place children at risk for serious negative outcomes (Domenech Rodríguez et al., 2006; Parra Cardona et al., 2009). The delivery of Family Camp by trained natural helpers may allow for greater dissemination of the intervention to these underserved families, and the detailed treatment manual with educational videos across sessions, may facilitate the maintenance of program fidelity. Strengthening the parent–child relationships of families who are most at risk has the potential to reduce negative outcomes for children in many domains of functioning and to make a significant public health impact (Barnett et al., 2018; Masten & Cicchetti, 2010).

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Teacher-Child Interaction Training

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Abstract

Accumulating evidence of PCIT's effectiveness in shaping positive parent–child interactions and decreasing disruptive behavior has spawned interest in adaptations of PCIT to the classroom. Under the rubric of Teacher–Child Interaction Therapy, or more recently, Teacher–Child Interaction Training (TCIT), teachers are trained in relationship and behavior management skills derived from PCIT. Coaching increasingly has been recognized by educators as an effective approach for promoting the uptake of teachers' skills, and thus, PCIT's coaching paradigm offers a potentially useful framework for training classroom teachers in TCIT. Whereas coaching in the other classroom models entails observation with after-the-fact consultation or reflective supervision, TCIT is unique in using PCIT's model of immediate, in vivo feedback during the flow of teacher–child interactions to facilitate teachers' skill development. This chapter reviews research and practice in adaptations of PCIT to enhance teachers' skills in the classroom, including applications designed for clinical and nonclinical populations. Sections describe nascent research on TCIT's effectiveness, modifications made to PCIT for the classroom context, and advantages and challenges in implementing TCIT. A case example illustrates TCIT's implementation in preschool and primary school settings.

Why Focus on Teacher–Child Interactions?

Children's early experiences with parents and other caregivers form an essential foundation for their growth and development (Institute of Medicine & National Research Council [IOM & NRC], 2012). Outside the family, the most significant context for children's experiences is through their interactions with teachers in early care and education settings. It is in these group environments that children develop essential social-emotional skills, such as sustained attention, regulation of emotions, cooperation with peers, and following directions (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011; Jones, Greenberg, & Crowley, 2015). As early as kindergarten, children's social-emotional competence predicts outcomes up to two decades later in multiple areas of early adult functioning (Jones et al., 2015; Moffitt et al., 2011).

Extensive research has demonstrated the importance of teacher–child interactions in

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children's school experiences. Positive teacher–child relationships appear to function as protective factors for children's academic and social development, whereas negative teacher–child relationships appear to function as risk factors (Hamre & Pianta, 2001; Rudasill & Rimm-Kaufman, 2009). In early childhood and early elementary classrooms, the quality of emotional and instructional support from teachers has been shown to predict children's academic, language, and social development (Buyse, Verschueren, Doumen, Van Damme, & Maes, 2008; Curby, Rudasill, Edwards, & Perez-Edgar, 2011; Mashburn et al., 2008). Empirically supported teaching strategies such as warm and responsive positive attention, selective ignoring of mild inappropriate behavior, clear instructions on appropriate behavior, and consistent follow-through with instructions provide effective, supportive learning environments for young children (Hester, Hendrickson, & Gable, 2009; Raver et al., 2011; Votruba-Drzal, Coley, Maldonado-Carreno, Li-Grining, & Chase-Lansdale, 2010). Although teachers often are introduced to these strategies in education or in-service programs, executing them effectively with students who display disruptive behavior is far more challenging. Teachers often resort to repeated reprimands and coercive exchanges when frustrated in dealing with behavior. Preschool and early elementary school teachers report the need for more support in managing disruptive behaviors in the classroom, and behavior problems have been identified as one of the major reasons teachers abandon the profession (Brill & McCartney, 2008; Kos, Richdale, & Jackson, 2004).

Policy recommendations to improve educational outcomes for children have emphasized the need for teacher professional development in relationship and classroom management practices (e.g., Collaborative for Academic, Social, and Emotional Learning (CASEL), 2013; IOM & NRC, 2012; Yoshikawa et al., 2013). Several evidence-based social skills interventions for young children include teacher training components such as classroom management skills and positive emotional support (e.g., Bierman et al., 2008; Domitrovich, Cortes, & Greenberg, 2007; Raver et al., 2009; Webster-Stratton, Reid, &

Stoolmiller, 2008). Other professional development programs, such as MyTeachingPartner (MTP; Hamre et al., 2012; Pianta et al., 2014), aim to strengthen teachers' knowledge and skills in instructional interactions using web-based training resources, video reviews of teaching practices, and consultative feedback.

Accumulating evidence of PCIT's effectiveness in shaping positive parent–child interactions and decreasing disruptive behavior (as documented in the chapters of this edited volume, Niec, 2018, and in reviews and meta-analyses, e.g., Eyberg, Nelson, & Boggs, 2008; Thomas & Zimmer-Gembeck, 2007; Ward, Theule, & Cheung, 2016) has spawned interest in adaptations of PCIT to the classroom. Under the rubric of Teacher–Child Interaction Therapy, or more recently, Teacher–Child Interaction Training (TCIT), teachers are trained in relationship and behavior management skills derived from PCIT (see TCIT reviews and program descriptions by Fernandez, Gold, Hirsch, & Miller, 2015; Gershenson, Lyon, & Budd, 2010; Stokes, Tempel, Chengappa, Costello, & McNeil, 2011; Tiano, 2010). Coaching increasingly has been recognized by educators as an effective approach for promoting uptake of teachers' skills (Kretlow & Bartholomew, 2010; Reinke, Stormont, Webster-Stratton, Newcomer, & Herman, 2012; Schultz, Arora, & Mautone, 2015; Sutherland, Conroy, Vo, & Ladwig, 2015), and thus PCIT's coaching paradigm offers a potentially useful framework for training classroom teachers in TCIT. However, whereas coaching in the other classroom models entails observation with after-the-fact consultation or reflective supervision, TCIT is unique in using PCIT's model of immediate, in vivo feedback during the flow of teacher–child interactions to facilitate teachers' skill development.

This chapter reviews research and practice in adaptations of PCIT to enhance teachers' skills in the classroom, including applications designed for clinical and nonclinical populations. Sections describe nascent research on TCIT's effectiveness, modifications made to PCIT for the classroom context, and advantages and challenges in implementing TCIT. A case example illustrates

TCIT's implementation in preschool and primary school settings.

Review of Research Related to TCIT

Despite growing interest in TCIT over the past 20 years, only nine data-based TCIT studies have been published to date. These articles are reviewed below in chronological sequence to provide a perspective on how TCIT has developed and evolved over the past two decades. Selected unpublished reports and practice applications are referenced briefly to supplement the literature base.

In 2000, McIntosh, Rizzo, and Bliss were the first to describe the application of PCIT techniques in a school setting. In this case study, a psychology doctoral student served as trainer and coach for a first-year preschool teacher who requested help dealing with the aggressive and noncompliant behavior of a 2-year-old girl in her classroom. Teacher training closely paralleled traditional PCIT in format and content. Treatment proceeded in two phases, Child Directed Interaction (CDI) and Teacher Directed Interaction (TDI), each consisting of an initial didactic session and weekly, 20-min coaching sessions (five in CDI and seven in TDI). Except for the last two coaching sessions, which occurred in the classroom, sessions were held in a separate therapy room. The teacher also was instructed to practice the skills during daily 5-min "special time" sessions with the child in the classroom. The trainer used an earlier version of the Dyadic Parent–Child Interaction Coding System (DPICS; Eyberg, Chase, Fernandez, & Nelson, 2014) to record behaviors during 5-min coding periods at the beginning of coaching sessions. Findings from repeated observations during coding showed desired changes in the teacher's use of target skills (e.g., labeled praise, descriptions, reflections, questions, commands, ignoring) and progressive decreases in the child's disruptive and noncompliant behavior across treatment.

Filcheck, McNeil, Greco, and Bernard (2004) further explored teacher training in PCIT skills by offering it as a supplement to a whole-class token economy system in a preschool classroom described as "out of control." After the token economy resulted in only partial improvements in teacher and child behaviors, a psychology doctoral student trained the teacher in CDI and TDI skills, respectively. Each phase included a didactic session and several coaching sessions with one to three children outside the classroom, followed by in-class coaching, with a total training time of 11.5 h. Observations across all children during circle time in the classroom showed reductions in child inappropriate behavior and teacher criticisms following TCIT training, as well as increases in the teacher's use of praise following CDI training. The authors noted that training in TCIT was nearly three times as lengthy as for the token system (4.5 h), but that it may be warranted for teachers whose behavior management skills are low. Although lacking in experimental control, the case studies by McIntosh, Rizza, and Bliss (2000) and Filcheck et al. (2004) suggested the potential of PCIT techniques to improve teacher and child behaviors, setting the stage for more formal research.

In 2006, Tiano and McNeil published a pilot group study of TCIT by comparing implementation in four rural Head Start classrooms to three no-treatment control classrooms. Head Start teachers and teaching assistants in TCIT classrooms received 2 h of group didactic training in CDI skills by psychology doctoral students, followed by individual coaching directly in the classroom, and a similar sequence of didactic training and coaching for TDI. A few modifications were made to the PCIT protocol owing to the classroom context. For example, teachers used a hand signal to cue that a child was being ignored for inappropriate behavior, "praising the opposite" to selectively reinforce classmates' desirable behavior while ignoring a child's inappropriate behavior, "when-then" statements to encourage compliance with instructions, and a modified timeout in a "Thinking Chair" with the back-up consequence of placing the chair in the hallway. Classroom observations at pre- and post-treatment showed a significantly greater increase in labeled praise for the intervention group; however, other expected changes (i.e., unlabeled praise, criticisms, and inappropriate

child behavior) were not found, and instead substantial improvements in teacher and child behaviors occurred over time for both groups. Despite the inconclusive findings and methodological limitations of a small sample, the study piloted the use of group didactic sessions and suggested options for modifying PCIT techniques for use across all children in the classroom.

The next two studies (Garbacz, Zychinski, Feuer, Carter, & Budd, 2014; Lyon, Gershenson, et al., 2009) examined the effects of TCIT when implemented as a whole-classroom, preventive intervention in toddler and preschool classrooms at a large daycare center. Lyon, Gershenson, et al. (2009) employed a single-subject multiple-baseline design across four classrooms (total of 12 teachers and assistants) to evaluate changes in teacher behaviors during weekly classroom observations using a modification of DPICS. This study expanded prior adaptations of PCIT to the classroom in several ways. First, it focused on a predominantly ethnic minority, low-income, urban sample. Second, for pragmatic reasons, CDI and TDI training followed a time-limited format with 6 h of group didactics and 1–2, 20-min coaching sessions per week for 4 weeks in each phase, with all coaching conducted directly in the classroom. Third, it incorporated multiple observations across a variety of everyday classroom situations rather than in only one activity to track changes in teacher skills over time. Fourth, it included consultative collaboration with the daycare director in developing program components to enhance engagement (described in Gershenson et al., 2010). These same procedures were used by Garbacz et al. (2014).

In both the Lyon, Gershenson, et al. (2009) and Garbacz et al. (2014) studies, psychology doctoral students served as trainers. As in McIntosh et al. (2000), teachers were assigned to practice the skills for 5 min daily outside of coaching sessions as homework. CDI skills paralleled those in PCIT, except that teachers were encouraged to reduce rather than eliminate questions and commands due to their appropriateness in teaching. TDI skills diverged further from PCIT, in that teachers were taught the components of

effective commands and a range of methods for encouraging follow-through with commands (e.g., a single repetition of the command, mild physical prompts, logical consequences, and differential social attention), plus a modified, non-exclusionary form of timeout called Sit and Watch (described in Gershenson et al., 2010) for seriously disruptive or dangerous behavior.

Lyon, Gershenson, et al.'s (2009) multiple baseline design demonstrated systematic, moderate increases in teacher skills (e.g., labeled and unlabeled praise, behavior descriptions, and reflections) across training, and consumer evaluations of TCIT were positive. However, variability across classrooms in teachers' behavior gains and in the stability of follow-up data suggested the need for additional coaching. Further, in a separate report, the authors noted that no significant changes were found in teacher ratings of children's social skills after intervention, which may have been due in part to the low levels of social skills problems prior to starting the intervention (Lyon, Budd, & Gershenson, 2009).

Garbacz et al. (2014) further examined the effects of TCIT in their clinical replication of Lyon, Gershenson, et al. (2009) with 12 additional teachers and classroom assistants at the daycare center. The authors used the Devereux Child Behavior Assessment (DECA; LeBuffe & Naglieri, 1999), a strength-based teacher rating measure of social-emotional strengths and concerns grounded in resiliency theory (Naglieri & LeBuffe, 2006). Strength-based measures have been recommended for increasing sensitivity in tracking subclinical problem behavior changes in whole-classroom interventions (Epstein, Nordness, Cullinan, & Hertzog, 2002). As in Lyon, Gershenson, et al., Garbacz and colleagues found that teachers increased their use of TCIT skills across intervention and rated training positively. Teacher DECA ratings of children's social-emotional functioning indicated a significant main effect for time on total protective factor scores for the whole group but not on behavior concerns. However, for children whose ratings fell in the below-average range at baseline, significant large effect sizes were obtained for changes over time for both protective factors and

behavioral concerns. Further, higher levels of teacher skill change were significantly associated with overall higher protective factor scores, as well as lower behavioral concern scores for children when baseline levels of behavioral concerns were high. These findings provided support for the positive impact of TCIT on child behavior when implemented across the whole classroom, suggesting TCIT's benefits not only for children with behavior challenges but as a universal intervention. However, the small sample size and lack of control group limited the generalizability of the findings.

Fernandez, Adelstein, et al. (2015) extended the research base of TCIT by piloting it as a whole-classroom intervention in kindergarten and first grade in urban public schools. Eleven classrooms were randomly assigned to receive TCIT or a no-TCIT control condition, and head teachers in TCIT classrooms received individualized training from a clinical psychologist experienced in PCIT. CDI and TDI phases began with a 2-h didactic session, followed by 1-h coach sessions, all but the first two of which occurred directly in the classroom. Teachers also were instructed to practice the skills outside of training sessions. Coaching continued until the teacher achieved a preset level of skill mastery during 5-min DPICS coding at the beginning of coach sessions. The total training time was greater in this study than in prior TCIT studies, averaging 15.4 sessions per teacher over 11 weeks.

As in the Lyon, Gershenson, et al. (2009) and Garbacz et al. (2014) studies, during CDI, Fernandez, Adelstein, et al. (2015) encouraged teachers to reduce unnecessary questions and commands rather than eliminate them. TDI skills included the elements of effective commands, "if-then" statements as needed to motivate compliance, and timeout in the form of a "Try Again" disciplinary procedure. Results showed that after receiving TCIT, teachers increased rates of positive attention (particularly labeled praise and behavior descriptions) and decreased rates of negative attention. Further, they reported less distress and high satisfaction with the training. No group differences were found in reflections, commands, and questions following training, and the

authors noted that a lack of resources precluded reliability observations on teacher data. In addition, attempts to collect observational data on child behavior were unsuccessful due to problems with reliability and validity. Despite these limitations, Fernandez and colleagues provided an important contribution to the TCIT literature by demonstrating teacher behavior effects in a randomized group design.

Whereas the TCIT research reviewed thus far took place in typical classrooms, Schaffner, McGoey, and Venesky (2016) piloted the use of TCIT in an urban therapeutic classroom serving preschool children with emotional and behavioral disorders. Using an A-B case-study design, four teachers within the same classroom were trained in CDI skills via an initial individual didactic session and weekly, 20-min in-class coaching sessions with one pre-identified child per teacher. A psychologist experienced in PCIT and two doctoral psychology students provided training. The content and format of the intervention closely paralleled the CDI phase in PCIT. Repeated classroom observations during free play suggested increases in play engagement and decreases in disruptive and negative behaviors across training, although the extent of changes varied across children. DPICS data from coaching sessions showed that teachers made progress toward mastery of skills but did not fully attain the preset mastery level after an average of ten coaching sessions. This study is innovative in exploring TCIT in a classroom for children with clinical behavioral diagnoses, and for delivering only the CDI phase, and the results suggest the potential of CDI alone to improve child behavior. Given the children's significant behavior challenges, it would have been interesting to examine if TDI would have resulted in further behavioral improvements. As a cautionary note, the authors commented that the significant time and resources required in coaching posed a challenge for TCIT implementation. On a post-intervention survey, three of the four teachers reported frustration related to inconsistent staffing and scheduling issues.

Given the early stage of TCIT research, it is not surprising that doctoral psychology students

or psychologists trained in PCIT have served as trainers in most studies. However, in light of consistent difficulties found with sustaining evidence-based interventions in real-world settings (e.g., Durlak & DuPre, 2008; Fixsen, Blase, Duda, Naoom, & VanDyke, 2010), Budd, Garbacz, and Carter (2016) explored the feasibility of training local school professionals to deliver TCIT. Using a case study design, two groups of public school preschool and kindergarten teachers (*n* = 20) received training in the time-limited, whole-class TCIT program investigated by Lyon, Gershenson, et al. (2009) and Garbacz et al. (2014). An external, PCIT-trained team (including a psychologist and social worker) trained the first group of teachers, and the school-based staff (a special education director, behavioral health coordinator, and social worker) trained the second group. To prepare for learning the TCIT model, the school staff participated in a 40-h PCIT training workshop before beginning the study. They then observed and assisted with group sessions and individual coaching of teachers during TCIT training of the first group of teachers by the external team. Next, the local school staff delivered TCIT on their own to a separate group of teachers, consulting with the external team by conference calls.

Observational data collected in the classroom showed that teachers in both the externally delivered and local staff-delivered groups substantially increased their use of positive attention skills (labeled praise, behavior descriptions, reflections) following TCIT training (Budd et al., 2016). Intervention effects, as well as program implementation factors (e.g., teacher attendance, homework completion, consumer evaluations), were comparable across external and school-based staff deliveries, suggesting that local staff could implement TCIT effectively. Further, teacher ratings on the DECA, the strength-based measure of social-emotional skills, significantly improved for both total protective factors and behavioral concerns following intervention, supporting the child behavior changes found by Garbacz et al. (2014). Implications of this study are tentative, given its pilot nature and the lack of a controlled experimental group design.

Nevertheless, they provide an encouraging indication that with, pretraining and ongoing support, local school professionals can implement the whole-class TCIT model effectively, and that intervention results in desired changes in teacher and child behaviors. A case example based on this "train-the-trainer" TCIT approach is provided later in this chapter.

A 2018 study by Kanine, Jackson, Huffhines, Barnett, and Stone expanded the focus of TCIT to a therapeutic school for 38 preschool children exposed to maltreatment. In a quasi-experimental design, four teachers in two classrooms were assigned to TCIT and the remaining four teachers to treatment-as-usual. A psychology doctoral student delivered intervention using the procedures of the whole-class TCIT model (Garbacz et al., 2014; Lyon, Gershenson, et al., 2009). Findings indicated substantial improvements in teacher and child behaviors for TCIT classrooms compared to treatment-as-usual, replicating findings of prior TCIT studies. Despite its small scale, this research is notable for demonstrating teacher skill change in videotaped observations, including a 3-month follow-up, and providing initial support for the applicability of TCIT with children exposed to trauma.

In summary, the small research literature on TCIT to date is promising yet tentative. In addition to the published studies reviewed above, several unpublished reports have described generally positive findings on applications of TCIT in preschool or kindergarten (e.g., Barnett & Budd, 2015; Campbell et al., 2010; Devers, Rainear, Stokes, & Budd, 2012; Janney, Masse, & King, 2014; Tempel & McNeil, 2010), day treatment (Fernandez et al., 2008; Kurtz et al., 2010), and special education classrooms (Leslie & St. Peter, 2017). In addition, numerous reports have described practice applications of TCIT, including a set of presentations on coaching in TCIT (Budd & Stern, 2017; Girard, Juarez-Williamson, Despues, & Ardeshna, 2017; Ray, Wyant, Quetsch, & McNeil, 2017; Tadros & Kurtz, 2017). The specific TCIT model, number and age of participants, prevention level (primary, secondary, tertiary), and emphasis on controlled research versus program evaluation have varied across

reports. The increase in presentations on TCIT at professional conferences suggests that the number of published studies will grow in the coming years.

Whereas virtually all TCIT research thus far has focused on the immediate or short-term effects of training, one unpublished report investigated the sustainability of intervention over time. In a qualitative follow-up 3 years after local school staff were initially trained to deliver TCIT (cf. Budd et al., 2016), Budd, Barnett, D'Amico, and Andrews (2013) interviewed 43 teachers, coaches, and school administrators and found continued growth and sustained, district-wide implementation of TCIT. Themes noted regarding TCIT's benefits were teachers' sense of empowerment, improved child self-regulation, and the program's cost-effectiveness as a school-based behavioral health initiative. Challenges were reported with integrating TCIT into existing academic curricula (such as TCIT's focus on reducing questions, given the inquiry-based nature of most early childhood and early elementary curricula), discomfort expressed by some veteran teachers with TCIT's emphasis on positive attention over traditional disciplinary techniques, and practical challenges in carving out and protecting coaching time amidst other staff responsibilities and exigencies. Similar concerns were noted by authors in some of the published TCIT studies reviewed above (e.g., Filcheck et al., 2004; Schaffner et al., 2016), suggesting that they are issues that will need to be addressed as part of implementation planning for TCIT. However, it is notable that, despite the acknowledged challenges, TCIT remained in active use at 3-year follow-up.

Collectively, the available research and field demonstrations support TCIT's potential to improve teacher–child relationships and, in some cases, positively impact children's classroom behavior. The larger impact of TCIT on children's later social and academic functioning, a crucial goal of any school mental health intervention, has yet to be established and remains a priority area of future research. Due to the preponderance of small n studies, frequent lack of controlled experimental designs, methodological limitations, and mixed findings, TCIT's efficacy has yet to be established; however, all studies have shown some positive results with TCIT intervention. The next section describes modifications of PCIT for use with teachers, based on TCIT studies to date.

Adapting PCIT into TCIT

The backbone of TCIT is the strong research base of PCIT, grounded in theories of child development, social learning, and adult–child attachment (Zisser & Eyberg, 2010). As a backdrop to discussing changes made in PCIT for TCIT, it is useful to consider the *participants* and *goals* of PCIT relative to those of TCIT. The shift from an individual dyad or family in PCIT to the teacher and classroom in TCIT broadens its potential focus from a targeted intervention with a single identified child to a group of students and implementation by a classroom teaching team. To the extent that more teachers and children have been included as TCIT participants, the format for training often has incorporated group didactic training, time-limited rather than mastery-based coaching, greater emphasis on in-class coaching, and multiple trainers/coaches. Several TCIT models have used the term Teacher–Child Interaction Training rather than Teacher–Child Interaction Therapy, given their aim to enhance teachers' interaction skills with all students rather than to provide therapy to an individual child (Gershenson et al., 2010). Further, the educational mission of the school setting dictates that TCIT skills must be feasible for teachers to implement within the flow of classroom routines and while delivering academic content to the entire class. The dynamics of the classroom have prompted tailoring some PCIT skills, particularly in TDI, to be practical yet consistent with the theory underlying PCIT.

Table 1 displays six core elements included in the PCIT protocol (Eyberg & Funderburk, 2011) and modifications made to these elements in TCIT, based on the published studies reviewed

Table 1 PCIT elements retained in TCIT and modifications to the PCIT protocol for TCIT

PCIT Element	Description	Modifications for TCIT
1. Inclusion of both CDI and PDI (called TDI in TCIT) phases of intervention	CDI phase focuses on relationship building and allowing the child to lead (i.e., PRIDE skills), and TDI phase focuses on effective discipline strategies	CDI: reduce rather than eliminate questions and commands TDI: procedures such as praising the opposite, mild physical guidance, and/or when-then statements taught to enhance compliance; timeout modified to a non-exclusionary procedure
2. Didactic session(s) at beginning of each phase	Trainers meet with teachers to introduce basic content and rationale for skills prior to coaching	Extent of didactic training ranges from 1–6 h per phase Didactic sessions for individual teachers or small groups
3. Individualized coaching sessions	Trainers observe teachers during live interactions with children and provide in vivo coaching and feedback	Length of coaching sessions ranges from 20–60 min, 1–2 days per week Coaching conducted in therapy room or during classroom interactions Preset mastery criteria or time-limited coaching
4. Coding of teacher–child interactions in coaching sessions to guide treatment	Trainers code teachers' use of target skills for 5 min prior to coaching using modified version of DPICS	CDI: no modifications reported in behaviors coded TDI: limited information on coding of commands, procedures to enhance compliance, and implementation of modified timeout
5. Homework assignments between sessions	Teachers are asked to practice skills daily outside coaching sessions	Homework activities assigned in some studies but not others; little information on content or feedback given to teachers
6. Standardized assessment of child behavior	Teachers are asked to rate child behaviors on a standardized measure before and after TCIT	Different teacher-rating measures used (problem-focused or strength-based) Number of children rated varies depending on targeted or universal intervention model

Note. Table adapted from Gershenson, R., Lyon, A., & Budd, K. S. (2010). Promoting positive interactions in the classroom: Adapting Parent–Child Interaction Therapy as a universal prevention program. *Education and Treatment of Children, 33,* 261–287

in the prior section. The first element relates to implementation of both CDI and PDI (or, in TCIT, TDI) phases. In all but one published study (Schaffner et al., 2016), TCIT has included both CDI and TDI phases. TCIT's CDI phase has included training in the same positive skills plus reducing negative talk as in PCIT, but studies vary in the extent to which questions and commands were targeted for elimination. Several authors reported coaching teachers to reduce unnecessary questions and commands rather than to eliminate them, given that they often are appropriate for learning and classroom behavior management. Only some TCIT research reported data on these behaviors, and findings are mixed on whether they changed with intervention. Similarly, consistently ignoring inappropriate child behavior, another PCIT target skill, sometimes is not practical in the classroom due to the

effect of a child's disruptive behavior on the class. As a modification, TCIT programs frequently train teachers to "praise the opposite" by providing positive attention to classmates who are behaving appropriately as a differential attention strategy. In TDI, TCIT has included training in delivery of commands along with various procedures to encourage compliance as alternatives to timeout for noncompliance. In light of restrictions against exclusionary timeout in almost all group care and education settings, timeout often has been modified to an in-class procedure such as a "Thinking Chair" (Tiano & McNeil, 2006) or "Sit and Watch" (Lyon, Gershenson, et al., 2009).

The next three elements of PCIT displayed in Table 1 are a didactic "Teach" session at the beginning of each phase, individualized coaching, and coding of teacher skills at the beginning

of coaching sessions. Didactic sessions often have been longer than 1 h in TCIT and, in some studies, extended over multiple sessions. All TCIT studies employed individualized coaching with in vivo feedback, preceded by 5-min coding of teacher skills at the beginning of coaching sessions. As described in the review of studies, the format for coaching sessions in TCIT has varied in length, frequency, number of children included, and whether sessions took place in the classroom or in a separate therapy room. Mastery criteria have been used to assess TCIT program completion in some investigations, whereas others provided a time-limited number of coaching sessions for practical reasons. TCIT studies have not yet reported on the quality of coaching provided to teachers nor of the relationship between the amount or quality of coaching and changes in teachers' skill use. These issues have only recently been studied in PCIT (e.g., Barnett, Niec, & Acevedo-Polakovich, 2014; Shanley & Niec, 2010) and remain one of many topics for future research.

The final two elements of the PCIT protocol in Table 1 are homework assignments and standardized assessment of child behavior outcomes. Some TCIT studies instructed teachers to practice TCIT skills outside coaching sessions, and a few have reported on homework completion (Budd et al., 2016; Garbacz et al., 2014; Lyon, Gershenson, et al., 2009). However, little information has been provided on the types of practice or homework activities assigned and whether teachers received feedback on their homework. In place of the parent-rating scale used to assess changes in child behavior problems in PCIT, some TCIT studies administered a problem-focused teacher-rating scale (Fernandez, Adelstein, et al., 2015; Lyon, Budd, & Gershenson, 2009; Tiano & McNeil, 2006), with mixed findings. Others used a strength-based measure, which was sensitive to measuring child behavior change from pre- to post-intervention in universal TCIT applications (Budd et al., 2016; Garbacz et al., 2014). Although in PCIT parents complete weekly child behavior ratings, in TCIT teachers have done so only as a prepost measure.

Advantages and Challenges in Implementing TCIT

As described in the chapter introduction, PCIT's extensive evidence base as an effective intervention for young children with disruptive behavior problems has generated considerable interest in its applicability to the classroom. One motivating factor for a classroom application among PCIT therapists and researchers has been to facilitate generalization of the beneficial effects of treatment for PCIT clients into a major context for children's experiences outside the family. PCIT therapists who provide consultation to daycare or school staff on children enrolled in PCIT have needed to design their own informal strategies for training teachers in PCIT skills, due to the lack of a PCIT skills-based protocol for use with teachers. One advantage of the burgeoning TCIT research is that it can inform PCIT clinicians who wish to provide school-based consultation on the strategies and modifications shown to be effective with teachers. Although no TCIT studies to date have focused specifically on children receiving both PCIT and TCIT services, this is an interesting area for future study.

Another impetus for interest in classroom applications of PCIT is broad recognition that individual psychotherapy, currently the dominant mode of mental health treatment delivery, is never likely to be able to meet the enormous need for children's psychological services (Kazdin & Blase, 2011). Fortunately, school-based prevention and intervention programs involving teachers appear promising for accessing populations less likely to seek or qualify for traditional mental health services (Burchinal, Vandergrift, Pianta, & Mashburn, 2010; McCoy, Connors, Morris, Yoshikawa, & Friedman-Krauss, 2015). Early care and education settings serve a wide continuum of children, including those with a range of developmental and mental health needs. Thus, a significant potential advantage of TCIT is that it could vastly increase at-risk children's access to intervention based on PCIT. A related caveat, however, is that, given the preliminary state of TCIT research, TCIT's efficacy in improving child behavior has yet to be established. Further,

a challenge for TCIT models is that the classroom context (i.e., the presence of multiple students and the academic demands of education settings) limits teachers' ability to focus on individual children and the social-behavioral goals of PCIT to the extent afforded by an individual parent–child context. Whether the robust effects of PCIT will be replicated in classroom applications is still unknown.

In addition to TCIT's potential to expand the reach of PCIT as an intervention for children with identified behavioral difficulties, TCIT also has shown promise as a universal prevention approach. Young children display occasional disruptive behaviors as part of normal development; however, predicting *which* children will experience sustained problems is difficult so early in children's development (Carter, Briggs-Gowan, & Davis, 2004). Universal TCIT models are designed for delivery across all children as Tier 1 supports (National Association of School Psychologists, 2016), not only for those with identified difficulties. Universal TCIT seeks to equip teachers in regular classrooms with skills to promote children's social-emotional functioning and readiness to engage in sustained learning activities; additionally, it helps teachers tailor their skills as needed for children who have special needs. Some universal programs described in the TCIT literature were designed specifically for settings serving predominantly children from low-income or socially disadvantaged backgrounds (Garbacz et al., 2014; Lyon, Budd, & Gershenson, 2009; Tiano & McNeil, 2006), where the need for preventive interventions is greatest. However, the potential advantages of universal TCIT are tempered by the same research limitations noted above for TCIT as a targeted intervention.

One final area where TCIT offers both potential advantages and challenges relates to "scaling up" interventions such as TCIT within education or childcare settings by developing systems to support consistent program implementation and practices (Metz, Naoom, Halle, & Bartley, 2015). In most TCIT reports thus far, doctoral students or PCIT-trained therapists have provided teacher training, and issues of program expansion and sus-

tainability after study completion were not addressed. The sole exception is Budd et al.'s (2016) study, which trained local school staff to deliver TCIT using a train-the-trainer approach. Budd et al.'s (2013) 3-year follow-up report suggests that the TCIT program expanded and remained active despite some challenges noted in qualitative interviews. The findings suggest the promise of the investigators' train-the-trainer approach for overcoming some typical barriers to dissemination and implementation for evidence-based programs, including lack of readily available training, service drift, and insufficient support for program sustainability (Durlak & DuPre, 2008; Fixsen et al., 2010). These potential advantages must be considered tentative, however, given that they are based on one case study rather than through controlled research on implementation of TCIT using the trainer-the-trainer approach.

In summary, TCIT's classroom-based application of PCIT offers the possibility of important advantages in terms of reach, scalability, and sustainability of implementation over traditional PCIT, due to limited access to PCIT's individual therapy mode for the population of children who could benefit from treatment. By training teachers as intervention agents using PCIT's robust treatment procedures, employing PCIT's unique, in-the-moment coaching format, and retaining adherence and fidelity to the intervention protocol, emerging TCIT research suggests its potential to provide effective professional development to teachers. This intervention, in turn, could facilitate meaningful improvements in children's social-emotional competence, which could increase their chances of academic success. Once TCIT has been implemented across an educational setting, students in successive classes stand to benefit from the teachers' continued use of positive relationship and behavior management skills.

At the same time, the school-based context of TCIT presents unique challenges in comparison to the individual therapy context of PCIT. One such challenge is that schools and early childhood centers are complex organizations with multiple priorities, stakeholders, and systems variables; and these aspects need to be aligned to support TCIT implementation. Another chal-

lenge is that traditional mechanisms for funding and delivering professional development to teachers are different from those supporting individualized parent–child therapy services in a mental health setting. The TCIT programs described in research were carried out using graduate students or via small grant funding rather than as part of ongoing, school-based professional development resources. Feasible methods of funding, training, and, importantly, sustaining TCIT programs in educational and early childcare settings have yet to be established. Further, extensive research on generalization of behavior change (Stokes & Baer, 2003) reminds us that the strongest effects of any intervention are directly in the setting in which it occurs, and that spread of intervention from the family to the home or vice versa is likely to be less extensive. This fact underscores the importance of both PCIT and TCIT as intervention approaches for some children.

Case Example: Application of Teacher–Child Interaction Training-Universal (TCIT-U) in Preschools and Kindergartens in a Midwestern Regional School Organization

This case example illustrates application of the TCIT model developed and evaluated by Budd and colleagues (Budd et al., 2016; Garbacz et al., 2014; Gershenson et al., 2010; Lyon, Budd, et al., 2009; Lyon, Gershenson, et al., 2009) and described in the review of research. This model is called TCIT-U (with the "U" for universal) to emphasize its universal prevention focus, application to the whole classroom, and inclusion of both teachers and classroom support staff in training. Based on Budd et al.'s (2016) study showing the feasibility of training local school staff to independently deliver the model, Budd and Stern (2017) further developed the trainer-the-trainer sequence for implementing TCIT-U. (More information on TCIT-U and the train-the-trainer approach is available at www.tcit.org.) This case example features a school organization

that Budd and Stern trained in TCIT-U and presents data collected by the local staff.

Method

Setting. Activities took place in a regional service organization that provides professional development and other services to public school districts in a Midwestern state. Group TCIT-U training sessions for participating teachers were conducted in a conference room in the service organization's headquarters, and individualized coaching was conducted in teachers' classrooms.

Participants. Four education professionals employed full-time by the regional service organization received training as local TCIT-U trainers. They included two masters'-level social workers, a masters'-level special education teacher, and a doctoral-level school psychologist. Two of the four individuals had some prior coursework or training in PCIT, but none had experience as PCIT therapists.

Two groups of teachers and children from preschool to second grade classrooms participated in TCIT-U across the 2015–2016 school year. The Fall group consisted of 11 teachers and 162 students, and the Spring group consisted of 14 teachers and 184 students. The classrooms were in several different schools and early childhood centers served by the regional service organization. Most of the participating teachers volunteered for the program based on prior experience with the local trainers, and a few were suggested by their school principals.

Training of Local School Staff. The local staff participated in a 4-day initial TCIT-U training workshop in the summer conducted by the TCIT-U Master Trainers (Budd and Stern). Training activities and a detailed written guide covered background, underlying theory, and procedures of TCIT-U; protocols, slides, and fidelity checklists for didactic "Teach" sessions delivered to teachers at the beginning of CDI and TDI phases; documents and forms relating to observation, use, and coaching of TCIT-U skills; teacher and child

assessment measures; and an implementation "to do" checklist outlining tasks to be completed by the local school staff. Training included didactic sessions and discussions, role plays, practice during interactions with children in classrooms, and homework exercises. The workshop format was similar in several respects to an initial PCIT training workshop, except that the goals and content of training focused on implementation of TCIT-U.

To supplement initial workshop training, Master Trainers made two visits (at the beginning of the CDI and TDI phases for the Fall group of teachers) to the site to support the local staff as they delivered TCIT-U. The staff practiced presenting the group didactic training in advance with Master Trainers, conducted the training sessions with the teachers while the Master Trainers observed, and met after sessions for debriefing. Master Trainers also shadowed coaches during their initial coaching sessions to provide support. Monthly video conference calls were scheduled across the academic school year for consultation between visits and during implementation of TCIT-U with the Spring group. Practice activities and integrity checklists were used to assess acquisition of skills by the local TCIT-U trainees.

Measures. Individual teachers were observed in their classrooms for 5-min behavioral samples an average of one time per week by the local staff. Except for 1–3 pretraining observations, data were collected at the beginning of coaching sessions. The local staff used a modified version of DPICS to record targeted teacher behaviors, including Labeled Praise (LP), Behavioral Descriptions (BD), Reflections (RF), Negative Talk (NTA), Direct Commands (DC), and Questions (QU). In addition, they recorded Follow-Ups to Direct Commands and Follow-Ups to Questions to denote instances when the teacher used one of the recommended TCIT-U follow-up procedures to children's responses. For practical reasons, no formal reliability checks were collected on the observational data.

To monitor changes in child behavior, lead teachers completed a standardized, strength-based rating scale on each child in their classroom at the beginning and end of TCIT-U. Preschool teachers completed the DECA (described in the research review), and teachers in kindergarten to second grade classrooms completed the DESSA (Devereux Student Strengths Assessment) (LeBuffe, Shapiro, & Naglieri, 2009/2014). Teachers also provided anonymous consumer satisfaction ratings on a Teacher Evaluation Form at four points during training. The local staff administered and summarized teacher responses on these measures.

Teacher Training. TCIT-U training for both groups was similar in most respects to that used by Budd et al. (2016) and described above in the research review. The CDI phase began with two 3-h didactic training sessions scheduled 2 days apart. The first coaching session occurred between didactic training days, and weekly coaching continued for 6 weeks. The TDI Phase began with two 3-h didactic sessions on adjacent days and was followed by weekly coaching for 6 weeks. One change introduced for TCIT-U was to continue coaching sessions until a teacher met predefined criteria in use of CDI and TDI skills during 5-min observations at the beginning of coaching. Two levels of performance were identified: proficiency (five instances each of LP, BD, and RF, two or fewer NTA, and use of follow-ups on 50% of DC and QU), and mastery (seven instances each of LP, BD, and RF, one or less NTA, and follow-ups on 67% of DC and QU). When a teacher reached proficiency level, coaching was faded to once every 2 weeks and continued until the teacher achieved mastery level.

Results

Figure 1 shows the mean levels of TCIT-U skills recorded by local school staff during 5-min observations of teachers in the classroom in pretraining and during the last three coaching sessions for the 11 teachers in the Fall group. Before training, teachers showed low levels of positive attention and rarely provided follow-ups for commands and questions; however, their use of these skills, on average, increased to mastery levels by the end of coaching. Due to very infrequent use of negative attention by most teachers, this behavior is not graphed.

Fig. 1 Teacher skills changes in TCIT-U. The top graph shows the mean frequency of Labeled Praise (LP), Behavior Descriptions (BD), and Reflections (RF) by teachers during pretraining observations (Pre) and during the last three TCIT-U coaching sessions (TCIT-U) for 11 teachers in the Fall group. The bottom graph shows the mean percentage of Direct Commands (DC) and Questions (QU) for which teachers provided follow-up responses after child behaviors in the same two periods
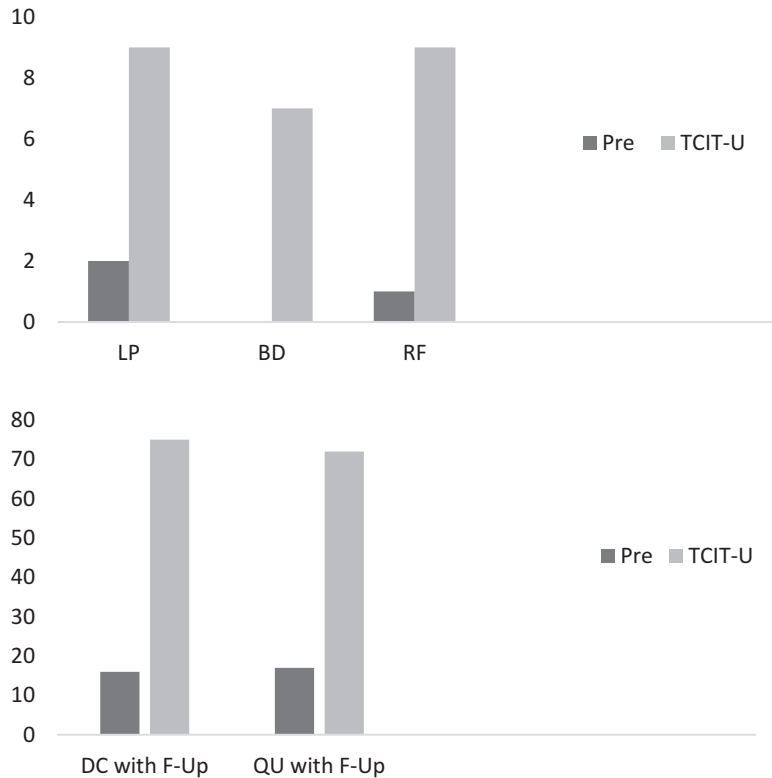
Teacher ratings of child behavior on the DECA and DESSA at pre- and post-training suggested that children's overall adaptive functioning increased following TCIT-U. On the DECA, teacher ratings of preschool children's total protective factor scores increased from the 48th percentile at baseline to the 73rd percentile after TCIT-U. Similarly, on the DESSA, ratings of kindergarten to second grade children showed a mean change from the 43rd to the 65th percentile on the social-emotional composite following training.

Teachers' feedback about their experiences in TCIT-U were uniformly positive. Teacher anonymous ratings showed high satisfaction with both the didactic sessions and coaching. Spontaneous teacher comments on consumer evaluation forms at the end of training included, "My coach is SO positive and makes me feel like a great teacher!," "Loved the one-on-one time and feedback," "This program has changed the entire dynamic of my classroom," and "This should be offered as a course in teacher education classes at colleges and universities."

Discussion

The findings from this case example, collected by the contracting regional service organization, suggest that the sequence of training activities prepared the local school team to successfully deliver TCIT-U, and that training resulted in similar changes in teacher and child behavior to those reported by Budd et al. (2016). The local team trained a second cohort of teachers in the same academic year and a new cohort of nine teachers the following year. Virtually all teachers in the second year reached proficiency in use of TCIT-U skills, and most reached mastery. However, a few teachers were unable to attend all didactic training sessions and received the information in a less formal manner from their coach. The data suggested that this was not as effective for skill acquisition. Teachers who demonstrated the most skill acquisition attended all didactic training sessions and had ten or more coaching sessions. Three of the four members of the local team planned to continue training teachers in the upcoming year. Fortunately, the school organization collects

program evaluation data to guide their ongoing intervention planning, which is an important component of the TCIT-U implementation framework.

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Part IV

Adaptations for Diverse Populations

Cultural Enhancement of PCIT for American Indian Families: Honoring Children, Making Relatives

Dolores Subia BigFoot and Beverly Funderburk

Abstract

Honoring Children is a series of cultural translations of evidence-based treatments for children and families. Honoring Children—Making Relatives describes an approach for translating the core concepts of PCIT to explore their alignment with traditional family values and ways of caring for children. The concepts of PCIT theory match traditional cultural parenting teachings of the Indigenous people of the US that have stood the test of time. Modern research confirms what has been known in the tribal communities for centuries—attention, warmth, commitment, and structure serve parent–child bonding well. PCIT provides a format and methods that can improve the transmission of these well-established concepts. The chapter describes the rationale, research support, and techniques that support the application of PCIT to American Indian families.

Rationale for the Adaptation/ Paradigm

Has anyone ever improved on the shape of a canoe? Innovations have been made in materials and construction methods, but the basic sleek shape remains—a perfect unity of form and function. Modern knowledge of engineering principles has confirmed that the shape of the canoe is indeed the most efficient form to serve its function. But the understanding—the conceptualization of the canoe—preceded current scientific descriptions by many centuries. Similarly, the concepts of PCIT theory match traditional cultural parenting teachings of the Indigenous people of the US that have stood the test of time. Modern research confirms what has been known in the tribal communities for centuries—attention, warmth, commitment, and structure serve the parent–child bonding well. PCIT provides a format and methods that can improve the transmission of these well-established concepts. Research provides confirmation that PCIT is an effective way to impart sound concepts; practice-based evidence has proven the validity of the parenting concepts as being applicable for American Indian families. It also reinforces the basic intuitive methods that over time evolved as practice-based evidence confirmed the evidence-based practices of PCIT. The foundational concepts are analogous, but methods and delivery may vary.

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The use of theories to explain human behavior is not a recent phenomenon limited to written scholarship. Scholar tradition typically credits those who provide the written account of a theory or conceptualization with ownership of the ideas, regardless of how long those ideas may have been in circulation by means of oral transmission and daily application. For example, Maslow spent time with the Blood/Blackfoot in Canada where he learned Indigenous teachings on human development as moving from the most basic physical needs upward toward the spiritual. The notion of Maslow's Hierarchy of Needs, symbolically pictured in a teepee form (triangle), became associated with Maslow rather than with the Indigenous originators of the Old Wisdom. The value of the heuristic as communicated by Maslow is unquestionable, but the appropriation of concepts by dominant culture does not erase their origins in Indigenous knowledge and their validity for native people.

There is much current interest in adapting evidence-based treatments, including best parenting practices, to be more attuned and applicable to culturally based minority populations. This goal is admirable and in line with the very important awakening to the need to include underrepresented populations in the development and administration of mainstream treatments. However, in the American Indian and Alaska Native communities there is also a need to reclaim their traditional practices and cultural values that were intact within their Indigenous cultures. There was a systematic attempt to "acculturate" children into the dominant culture by dismantling, discounting, and even destroying their traditional cultural ways. The current disproportionate levels of vulnerability (e.g., substance abuse and mental health problems) within American Indian and Alaska Native populations can be traced to the assault on political, economic, social, cultural, relational, and spiritual pathways that previously served to hold tribal or village groups together and provided the structure for family relations and social order. Boarding schools, missions, military conflict, broken treaties, oppression, exploitation, and removal undermined the structure of tribes and

native villages, which eventually impacted the unity and stability of the American Indian or Alaska Native family.

Archambault-Stephens (1985) uses Black Elk's teachings as a way to describe the completeness of the circle. "Everything that is of the world is represented in some form of the circle. The sky is round, the earth is round, the wind, in its mighty power, also circles the earth. The birds and animals build their nests and dens with curves and roundness. The sun and moon both form circles with their substance from day to day, and from month to month. Things always come back again in the circle. The nation's hoop forms a circle. The circle encompasses respect, love, understanding, communication, sharing, acceptance, and strength. This establishes an arena for discussion with rules and respect to govern behavior. When approached in the proper way, the circle can be a very powerful means of touching or bringing some degree of healing to the mind, the heart, the body, or the spirit."—from BigFoot (1989)

In many ways, cognitive-behavioral evidence-based treatments that represent the standard of care today are reaching back to knowledge and practice that was foundational to American Indian and Alaska Native cultural understandings that translate into proven parenting practices. Cross (1997) wrote about Relational Theory based on the Circle and connections among people and infrastructure. The Circle Theory that is fundamental to American Indian/Alaska Native cultural beliefs and practices contains similar constructs regarding relationships, connection, environment, affirmations, identity, and inclusion.

This is Old Wisdom that was applied for many generations, but the transmission of these teachings was interrupted when the structure of the Indigenous social composition was attacked

and almost destroyed. There is a need to return to the structure that nurtured children for generations, a return to the traditional understanding that children are the center of the Circle. There is a need to reclaim the wisdom of Indigenous practices, and this need interfaces with the need for cultural sensitivity in evidence-based practices in order to offer the best available care to a vulnerable population. However, the very notion of the direct adaptation of an evidence-based protocol can be regarded as a Westernized, linear approach. Circle Theory incorporates concepts and practices that overlap and interact to synthesize into a holistic, relational understanding. For this reason, it is preferable to consider an "enhancement" of a treatment, in this case PCIT, rather than an adaptation. The descriptors: translation, transformation, and enhancement will be used interchangeably. Instead of a linear reconfiguration or an addition of "culture modules," all core elements of the treatment are preserved as in any adaptation, with these evidence-based elements translated into a context that is familiar and understandable to those it is intended to serve.

The purposes of cultural enhancement are twofold. Cultural enhancements should help align the elements of a treatment with what is familiar to the intended consumers of the treatment, making the core concepts of the evidence-based treatment more readily understandable and thus enhancing rapport with the family. Good rapport and successful therapeutic alignment can help increase the family's motivation to overcome barriers to participate fully in the treatment. If the clinician succeeds in creating a congruent context to understand the skills being introduced and practiced in session, those skills will more naturally transfer into the home and be maintained over time. Practitioners of an evidence-based treatment need to have an understanding of the treatment and how to practice with fidelity to the model. Similarly, the clinician should have a deep empathetic respect for the beliefs and traditions of each family they serve. The most successful clinicians will be those who combine an understanding of their craft with a respectful

willingness to communicate their knowledge in the way that is most helpful to the family.

Review of Research Related to the Adaptation

"Treatment adaptations refer to changes in the structure or content of an established treatment," (Eyberg, 2005) usually because some elements of the treatment are not feasible or familiar for a particular group, culture, or setting. Eyberg (2005) notes "for designation as efficacious within a specific population, a treatment application in the population must have its efficacy demonstrated on the relevant target measures in studies meeting the same methodological criteria as the established treatment." By this standard, few if any evidence-based treatments exist for underrepresented and disadvantaged minorities. For example, PCIT has been tested extensively with American preschoolers (some in samples that include American Indians), but not specifically with American Indian children.

The Indian Country Child Trauma Center (ICCTC) was established as part of the SAMHSA National Child Traumatic Stress Network Initiative to serve the American Indian/Alaska Native population. ICCTC worked with many American Indian/Alaska Native consultants to integrate an Indigenous worldview and Indigenous practices into a culturally congruent treatment framework titled the Honoring Children Series. The series consists of cultural enhancements of three evidence-based treatment approaches for American Indian/Alaska Native children and families exposed to trauma: *Making Relatives*, an enhancement of PCIT *Mending the Circle,* an enhancement of Trauma-Focused Cognitive Behavioral Therapy (TF-CBT) (BigFoot & Schmidt, 2006); and *Respectful Ways*, an enhancement of Treatment of Children with Problematic Sexual Behaviors (CBT-PSB). The three approaches were selected because all have strong empirical evidence of reducing children's symptoms and/or improving the parent–child relationship following exposure to family

violence or trauma from a cognitive-behavioral orientation.

The approaches were adapted using a learning collaborative model similar to one recommended by the National Initiatives for Children's Healthcare Quality (NICHQ) for implementing evidence-based treatment (EBT) in pediatric primary care (http://www.nichq.org/resources/papers_and_publications.html). This approach to dissemination and community uptake was reciprocal and transactional in nature as opposed to the fidelity or adherence training approach typically used in clinical trial projects. This circular or iterative training plan is consistent with the American Indian/Alaska Native understanding of a holistic way of viewing the world. Invited American Indian/Alaska Native cultural consultants assisted the authors in the process to assure that the beliefs, practices, and understandings incorporated were consistent with American Indian/Alaska Native cultures. Developers and master trainers of the EBTs were included to maintain fidelity to the model and clarify their perspectives. The cultural adaptation is guided by the founding assumption that American Indian/Alaska Native cultures possess healing processes and respective healing practices. These practices are based on old knowledge about how to teach healthy relationships, parenting, modeling, discipline, inclusion, and healing. There was consensus on shared values that are common to most, if not all, Indigenous communities such as extended family, practices about respect, beliefs regarding the Circle, and the interconnectedness of spirituality and healing. These elements form the foundation of the cultural translation that incorporates these beliefs, practices, and traditions into the provision of evidence-based services for at risk American Indian/Alaska Native children and their families.

In work that sets the empirical standard for cultural adaptations, McCabe and colleagues conducted a randomized controlled trial comparing standard PCIT to a carefully constructed cultural adaptation of PCIT for Mexican American families called GANA (McCabe & Yeh, 2009; McCabe, Yeh, Lau, & Argote, 2012). Both GANA and PCIT demonstrated better out-come than a services-as-usual control condition, and the gains persisted at follow-up measured up to 24 months post-treatment. No significant differences were found between GANA and PCIT, indicating that the adaptation could be used without loss of power for the intervention, and perhaps with benefits in terms of cultural congruence. Notably, client attrition did not differ between GANA and PCIT, indicating that the cultural adaptation did not reduce client dropout relative to standard PCIT. This is of interest since a major goal of cultural adaptations is to improve family engagement with the treatment and to reduce dropout. The authors cautioned that all therapists in the three research conditions were bilingual and highly familiar with Mexican American culture and that "it is impossible to instruct bicultural therapists to act in a way that is culturally insensitive" (McCabe et al., 2012). Therefore the project was not a comparison of "culturally insensitive" practices to a cultural adaptation, but of standard PCIT offered by culturally competent clinicians compared to the adapted GANA by similarly qualified clinicians.

PCIT appears to be a resilient treatment for various cultural groups (e.g., Matos, Torres, Santiago, Jurado, & Rodriguez, 2006; McCabe & Yeh, 2009; Querido, Warner, & Eyberg, 2002), likely because of its strong grounding in normal child development. With due respect to cultural variations, it is nevertheless true that children grow and learn according to the laws of human development across cultures. All young children must move through the same progression of developmental tasks as they progress through developmental milestones and gradually develop autonomy and self-regulation, so there is congruence of parenting milestones that cuts across cultures (http://www.focusfeatures.com/babies). Thus normal child development is a sound framework for cultural enhancements of evidence-based practices. Further, examination of components of traditional parenting practices reveals that the blending of social learning, family systems, and play therapy techniques in PCIT appears to be compatible with traditional Indigenous practices in that the assumptions tend to be behaviorally

based, relational, and recognize common developmental markers with minimal cultural bias. Describing social learning theory, Albert Bandura wrote about how people learn new behaviors by observing and then imitating what they saw. This valuable understanding parallels the long established cultural practices of Indigenous people who taught children to "watch and listen" (BigFoot, 1989). The cognitive-behavioral principles that underlie many evidence-based treatments are complementary to traditional tribal practices that include watching, listening, and doing. Cognitive-behavioral approaches have been described as more culturally appropriate for American Indian/Alaska Native populations than other mainstream mental health treatment models because the assumptions are less biased (LaFromboise, Trimble & Mohatt, 1990).

In a cultural adaptation of PCIT for Puerto Rican families with preschool children with ADHD and disruptive behavior symptoms, Matos et al., 2006 included additional time at the start of each treatment session to strengthen engagement, and materials were modified to "reflect the daily experiences and idiomatic expressions of Puerto Rican families." The extended time to address rapport and engagement was congruent with the modifications made in the GANA adaptation for Mexican American families, as were efforts to include family members beyond the nuclear family as appropriate for the participating family. It can be argued that these modifications are actually simple tailoring that represent good clinical practice in PCIT. Multiple caregivers and extended family are routinely welcomed into standard PCIT, with the clinician collaborating with caregivers to determine the most effective level of participation for each adult within the time constraints of the young child's stamina and the time available for sessions. Similarly, the sensitive clinician always recognizes that therapeutic rapport is foundational to any progress in treatment. Every client's cultural context must be considered in order to establish a comfort level sufficient to proceed with the intervention. Many clinicians working with families of any cultural background can cite examples of skeptical parents who believe their child just needs medication, parents who are convinced that

their child will not be amenable to treatment due to previous attachment disruptions, exposure to traumatic events, or factors such as prenatal substance exposure. Parents ordered into treatment may feel coerced and alienated. In every case, the wise therapist will take the time to validate the caregiver's perceptions and concerns and to have an honest discussion of the potential benefits and limitations of PCIT. Cultural considerations for specific cultural groups are recognition of the importance of finding a common language and understanding at the start of PCIT and throughout the course of treatment. Research on cultural enhancements can provide trail markers to guide clinicians in creating a path forward with each family. Sensitivity on the part of the clinician is likely to be equally or more important than an adapted protocol in providing services to American Indian families. Differing levels of cultural assimilation into the dominant culture typically indicate more need for cultural accommodation, and the role of cultural enhancements is to expand the clinician's understanding and repertoire in order to tailor treatment to meet each family's needs. That said, there is no doubt that concerns exist about difficulties for many vulnerable and traumatized American Indian/Alaska Native parents to access services to assist them in parenting their children in a stable, healthy, nonviolent environment.

Description of the American Indian Populations

Consideration of the American Indian population is complex since myriad entities comprise the general parameters of this highly varied population. For clarification, some terminology would be helpful. The general and commonly used legal term is a combination of American Indian and Alaska Native which describes the Indigenous peoples of the continental United States. As recognized by historical fact, the Indigenous people did not call themselves American Indian or Alaska Native. They independently and individually identified themselves by their native identity and their native tongue. Federal, legal, scholarly, and other works use terms including Indians,

Treaty Indians, Tribal, Native American, Native, Indigenous Nations, American Indian Tribes, Federally Recognized Tribes, nonfederally recognized tribes, state recognized tribes, and many others. There are more than 570 federally recognized tribes, and many other nonfederally recognized groups exist such as tribes that are state recognized but not federally recognized and those seeking federal recognition (Trimble, King, LaFromboise, BigFoot, & Norman, 2014). This chapter will use the terms American Indians and Alaska Natives.

Distribution of the American Indian population occurs across all 50 states with slightly more than 70% residing in urban and surrounding locations, and the remainder living on reservations (tribal land with defined borders regarding jurisdiction) or on allotment land (parcels of land allotted when the government opened land settlements to nontribal citizens), and rural villages or small tribal communities scattered mainly in the western United States.

There were 5.2 million self-identified American Indian and Alaska Natives in the 2010 Census, 38% of whom were under the age of 18, indicating that this population is relatively young compared to the general population (U.S. Census, 2010), resulting in many underage children and youth in need of care and support. Nationally, American Indians and Alaska Natives have the highest poverty rates of all racial/ethnic populations (U.S. Census, 2010; Zuckerman, Haley, Roubideaux, & Lillie-Blanton, 2004). It has been suggested that "there seems to be a solid consensus that people who live at 200% of the Federal Poverty Level (FPL) have many of the same problems of those who live below it," and census data shows that this includes 55% of American Indians and Alaska Natives. Educational attainment and secure employment are inversely related to poverty, so it is not surprising that 20% of American Indians and Alaska Natives live in families in which no adult graduated from high school (Zuckerman et al., 2004).

Rates at which reports of abuse or neglect involving American Indian and Alaska Native children are investigated, substantiated, and removed from their families and placed in foster care are well beyond their population numbers. One study that looked at systemic bias in the child welfare system found that American Indian and Alaska Native families were twice as likely to be investigated and have reports of abuse and neglect substantiated, and four times more likely to have their children removed and placed in foster care than their White counterparts (Annie E. Casey Foundation, 2007).

Looking back to the historical and cultural traditions of the Indigenous People of the New World, there were numerous separate and diverse groups, some connected by alliances or language but each having their own beliefs, customs, rituals, ceremonies, and territories. Most possessed creation stories that spoke of their origin and their way of life. Within their stories and practices, passed from generation to generation, they were taught how to treat each other, their relationships to the land and the other creations (animals, earth, and sky), their sources for food, shelter, guidance, and good favor, and the purpose of their journey in this world. They knew about and were respectful of the seasons, which brought either blessings or demise. They also knew and were respectful of the elements; for example, if one disrespected water then one could drown or be pulled under by the spirits who lived below the water. Finally they knew and were respectful of the forces of nature; for example, if one disrespected the wind, those spirits could carry one away and leave orphans of ones' children (Trimble et al., 2014). As stated earlier, while there is no single group that can be labeled as representing American Indian cultures, nevertheless certain shared values do exist across most groups. These values include cherishing the family network and extended family relationships, beliefs about generosity and sharing, valuing of elders and wisdom, respect for nature and nature's ways, and the interdependency among members, including the tradition of honoring children as precious gifts from the Creator to be placed at the center of the Circle.

Shared values were necessary for survival since survival was dependent on trust and sharing of resources.

Description of the Modification

Statistics describing the dire conditions disproportionately faced by American Indians and Alaska Natives fail to capture the rich and vibrant cultural thread that is woven among the families, communities, villages, and tribes. The shared values that cut across the diverse cultures of the American Indian and Alaska Native population provide a foundation of beliefs integral to Indigenous parenting practices that can be echoed and drawn upon in translating the evidence-based practices of PCIT for these families. The chart in Fig. 1 identifies that there is a world view or orientation to the world that can explain human behavior and relationship building with a focus on parenting. It can be recognized that there is different self-identification that had distinctions for each separate Indigenous group while some

overlap may occur. This is not to fully explain the chart but rather to illustrate that there are differences in assumptions, practices, beliefs, application and that similar constructs do exist. How those concepts are interpreted, the relational aspects of the pairing, or the assumptions must be considered since that will influence what level of familiarity they may have to culturally based families and communities. The interpretation or assumptions will also direct techniques or practices that build on what would be reinforced or encouraged from generation to generation.

The overarching belief about the interweaving of traditional practices with evidence-based concepts is that American Indians and Alaska Natives are reclaiming their old wisdom and traditional healing ways that have been lost or misplaced. The protocol of an evidence-based practice such as PCIT can be encompassed by the protocols of traditional healing practices that provide structure and support to restore balance and bring healing.

Much can be learned from how children are viewed in Indigenous culture. Children are

Specification (Not a Continuum)

Concept	Indigenous	Western (Caucasian)	American Indian Tribes	Alaska Native	Tribe/Village Specific
Orientation/ Worldview	Medicine Wheel, Pipe, Pottery, Tree	Theories (Psychological/ Sociological)	Circle, Relational	Creation Stories	Origins (land, water, trees, mountains, etc.)
Child Wellbeing	Having family, not being an orphan	Best Interest of the Child	Circle, Relational, Creation Stories	Creation Stories	Well Being (knowing who they are, where they come from)
Family and Extended Family	Camps, Lodges, Alliances, Clans, Bands, Societies, Camp Locations, Markings, Pledges	Single Unit	All my Relatives, Being a Good Relative, consider 7th Generations back and forward	Extended Family, Location	Clans
Attachment	Ceremony	Mother/Child Pairing	Culture/Identity, Use of Ceremony	Cultural/Identity, Use of Ceremony	Ceremony, Culture/Identity (being a human being)
Discipline	Self-regulation	Punishment or privileges removed	Self-regulation	Self-regulation	Self-regulation

Fig. 1 In seeking to illustrate some concepts that have application across cultures, this chart was developed. It is not comprehensive and it is conceptualized based on Dr. BigFoot's collective knowledge and understandings. Various Indigenous members gave input and feedback but it remains a framework of Dr. BigFoot

believed to be the center of the Circle, surrounded by many relatives both in the present and those that came before them and those that will come after them. The Circle is a protection as well as a teacher, an understanding, a way of being connected, a way of knowing relatives, a way of belonging, a way of having an identity, a way of having purpose, a way of recognizing boundaries and responsibilities, a means of testing and safety, a generosity of exchanges both inwardly and outwardly. See Fig. 2.

While respect for traditional beliefs that support children as the center of the Circle is crucial to cultural translations of PCIT for American Indians and Alaska Natives, respect and understanding of the evidence-based PCIT model is equally important. The practitioner must know the model thoroughly before adapting. Cultural sensitivity demands that tailoring is included from the start for every family—offering familiar language, idioms, and context to communicate the new practices being offered—but any changes to the protocol must support theory. Theory should drive the enhancement; alterations are only made with the intention to enrich the learning environment in support of the theory. As an example of the admittedly blurred line between offering sensitive tailoring and imposing nontheoretical adaptations, a seasoned

American Indian clinician with a deep commitment to cultural competency reported in consultation that she would not be able to start PCIT with a young urban father for several months. She explained that he had not been brought up with tribal traditions and so she needed to educate him about his tribal heritage before he would be ready to receive PCIT services with cultural accommodations. It had not occurred to her that she could simply offer standard PCIT since his upbringing was more aligned with the dominant culture in which he was raised than with his ancestral heritage.

Another clinician reported that one young parent requested that they burn sage and offer prayers prior to PCIT sessions. Finding this practice to be enriching, the therapist suggested it to the next clients, who expressed resentment at having traditional practices forced on them from an American Indian provider in a way that resurfaced memories of how their older relatives made them feel guilty for not adhering to traditional customs. The major consideration is that the sensitive clinician forms an alliance with the client that is informed and guided by the client's cultural values, beliefs, and practices.

Helping the family feel comfortable with the apparatus of PCIT—the bug-in-ear coaching, DPICS coding, homework sheets—is not signifi-
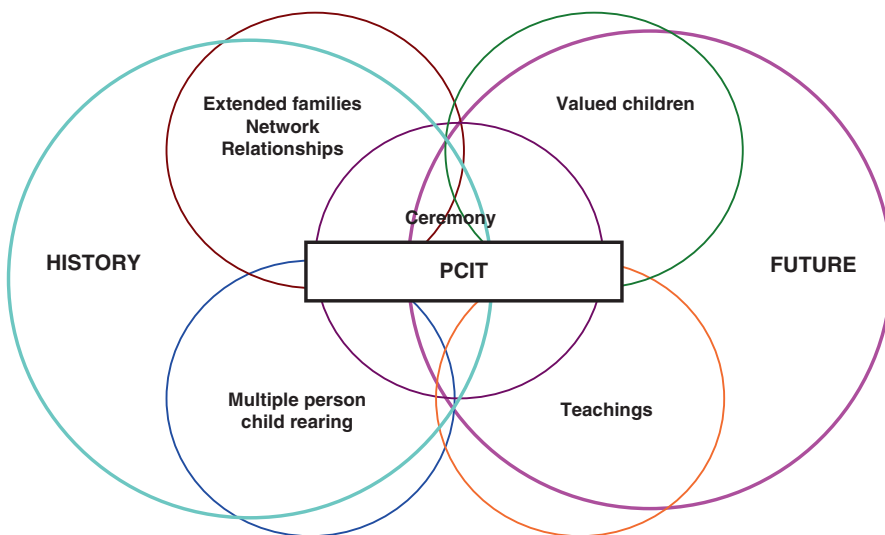
Fig. 2 PCIT fits within the circle

cantly different for American Indian clients than for any family. It is the job of the clinician to put the focus on the collaborative relationship in which the coach (therapist) walks along with the parent as they match the skills to the needs of the child. The equipment and format are the tools that the therapist uses, but the focus is on the *product* rather than the tools. The medical doctor focuses on how the treatment will help the patient, not on how the stethoscope works or the biochemistry that underlies the medication. Similarly, the PCIT therapist highlights what is relevant to the family and de-emphasizes the techniques or mechanics that they are applying. This can be difficult for new PCIT therapists who are by design over-trained with the "tools of the trade" such as coding and protocol. The more experienced clinician has mastered the technical aspects of the treatment so that the mechanics can take a background to joining with the clients and their story.

Advantages and Challenges to Implementation of Culturally Enhanced PCIT

There are many barriers to successful implementation of evidence-based practice, and PCIT in particular, in areas serving American Indian families. Developing cultural competence is one important challenge for training practitioners to assist underserved populations, but there are many others. Training an agency in an evidence-based practice does not guarantee that a sustainable practice will take root and flourish over time. A follow-up interview with one agency several years after PCIT training had been successfully completed is representative of the challenges to sustainable practice in many agencies. Seven practitioners at the agency received initial PCIT training over the course of 2 years, when a new training director obtained funding to introduce two evidence-based treatments, Trauma-Focused Cognitive-Behavioral Therapy (TF-CBT) and PCIT, aiming to generally revamp the therapeutic philosophy and practices of the agency to improve treatment outcome. Approximately 10 years after

the shift to evidence-based practices, the director had left the agency, as had five of the seven therapists trained in PCIT. No evidence-based treatments were being offered at this agency now. Elements of TF-CBT and PCIT were still used, but not to fidelity due to several factors including space and staff limitations. The current director indicated that barriers to sustained implementation included changes at the agency from one building location to another building with a different configuration for therapy rooms, decrease in the number of staff plus high staff turnover, and limited clinical supervision for evidence-based treatments, as well as therapists not feeling comfortable with evidence-based approaches. Additionally, the focus of clinical services at the agency had shifted from early childhood to an adolescent focus due to several events in the community. Asked if there is still a need for services for families of young children, the director indicated that the needs of families remain high, but that parents are struggling with daily demands and most have to travel a significant distance to clinic so that it is hard for parents to attend more than a session or two. Clinicians in the agency are reportedly too busy to provide home-based services so they tend to provide therapeutic services to the children at school without parent involvement.

This agency's story is representative of many other agencies. Clinicians who are stretched thin by the overwhelming needs of their community resort to crisis response mode, sacrificing long-term planning for day-to-day survival. Unfortunately, tribal communities have had an abundance of treatment initiatives that have not proven helpful, resulting in skepticism about the potential for services that might truly be beneficial. It is not surprising that engagement and retention are problems in communities where clinicians do not expect regular attendance from their clients and families see mental health clinics as avenues of crisis assistance rather than for long-term change. Families accustomed to the chronic deprivation that accompanies poverty and lack of services tend to have low expectations for change, not even understanding the possibility of effective treatment. Agency scheduling

policies and provider turnover result in a system that may train clients not to expect regularity. A mutual cycle develops in which clinicians doubt the families' ability to engage with services and families see little point in engaging. A representative example was a family who received an annual in-home checkup. A number of problems were noted, including developmental delays in the children and mental health concerns in the care providers. This same assessment had been offered several years in a row; however, no services were initiated. The family reported satisfaction with the contact provided, even gratitude that a professional annually took notice of them, never realizing that they should have been offered the services for which they were eligible.

Developing an appreciation of the potential for effective services is needed throughout American Indian communities to promote implementation of PCIT and other evidence-based treatments. There is great need for the recruitment and retention of therapists who have the education and mindset to implement evidence-based treatments. There is a shortage of trained professionals of Indigenous descent as well as other ethnic or racial minorities. These professionals are often drawn away from the rural areas where underserved groups are located. The most productive clinicians are often promoted into leadership positions or hired away by other agencies. Those clinicians who choose to remain in the rural area are typically over-burdened and wear many hats at their workplace. For example, a highly talented clinician who was progressing toward mastery of PCIT training competencies was abruptly put in charge of developing an adult inpatient substance abuse treatment program, effectively ending development as a PCIT therapist. Many agencies have high turnover of administrators or members of governance boards who direct the mission of the service agency, and the mission frequently shifts with change of administration. Commitment to evidence-based practice may be discontinued altogether or there may be a shift of funding to different evidence-based practices. The availability of external funding often directs or redirects the mission of an agency. For example one agency received funding 1 year to adopt PCIT training, but dropped the PCIT implementation a year later when new funding was received to pursue another new treatment model. It is a sad reality that funds are often more available to adopt new programs than to sustain established programs.

Non-Native providers in underserved areas face many of the same challenges as Indigenous providers, with the added necessity of bridging the cultural divide between their heritage and that of the families they serve. In short, the need outstrips the availability of workers. Agency administrators face difficult choices in how to allot resources for adoption of best practices. For those agencies that value EBT, many have "overtrained." For example, one therapist was questioned about sporadic attendance on PCIT consultation calls, only to report on being trained in three different evidence-based practices simultaneously, with expectations for attendance on three different consultation calls per week, with requirements to submit clinical data and/or session recordings and master specific techniques for each EBT. Not surprisingly, the clinician reported feeling overwhelmed and having difficulty keeping the various treatments distinct. This clinician ultimately did not successfully complete training for any of the treatment modalities, instead offering "evidence-informed" services with elements of all of the above rather than fidelity to any model. Many agencies seek uptake of EBT without full understanding of the rigor that is required. Agencies that train every clinician in every EBT may lack referrals to develop sufficient caseloads for each therapist to become skilled in the chosen intervention. Despite descriptions of training requirements, some administrators hold on to outdated notions of "train and hope" in which they perceive that training is complete after an introductory workshop. Some agencies approach trainings like a buffet, in which clinicians can pick and choose the therapeutic elements that they prefer, which generally involves omitting core components like live practice and immediate feedback. Administrators may not recognize the need to relax productivity requirements in order to permit the clinician time needed to master new tech-

niques and participate in consultation and supervision required during the training period for the EBT (approximately 12–18 months for PCIT). Implementation science has increased knowledge about the importance of agency readiness and is rendering such situations less frequent. However, the availability of funding resources continues to be a driver.

The most successful clinicians in our experience have made a deep commitment to finding their own solutions to bring their PCIT program to fruition. Unfortunately, full agency support often follows behind the clinician's demonstration that the treatment is indeed offering better results than the traditionally offered mix of non-evidence-based treatments. How do they get it done? With determination to understand and correct failures. One clinician began providing PCIT services in-home because their agency was paralyzed in attaining needed space for a PCIT suite including a child-proofed playroom, observation room, and audio equipment for coaching. The in-home treatment proved too much for a novice therapist treating an extremely difficult case with a history of trauma exposure, family disruptions, severe aggression, and a physically limited elderly caregiver. Committed to the idea that the caregiver needed the PCIT skills to help calm the child's behavior and bring structure to the home in order to save the placement, the therapist used their own resources to transform an unused space at the agency into a PCIT room and obtain affordable equipment. The family was able to respond to treatment in the more controlled clinic setting and to gradually generalize treatment gains into the home. Agency staff, from the director to the receptionist, recognized that the "impossible" case known to everyone had been transformed, and a PCIT program was launched. It is certainly unreasonable to demand this level of initiative from every clinician; it demonstrates the importance of agency preparation as a vital component of PCIT implementation.

The desire to respect a family's cultural traditions and understandings can at times lead to hesitation on the part of the clinician. Even American Indian practitioners are not immune to this phenomenon. A young American Indian therapist was very concerned that the tenants of PCIT would be perceived negatively by her elderly clients. She accommodated by debriefing extensively on every element of the protocol—how did they feel about the ECBI, about the bug-in ear, about her coaching, etc. She was surprised when the couple—elders who were highly active in their community—discontinued treatment after a few sessions. They indicated that they had hoped to learn better ways to manage their unruly grandsons, but with their long drive and the 90 min required to complete each session due to extensive debriefing, they could not spare the time demanded. The novice therapist had imposed her own doubts about the cultural appropriateness of the treatment for tribal elders rather than gaining a genuine understanding of the clients' needs. Her hesitation, perhaps born of her incomplete understanding of the core theory of PCIT, undermined her ability to deliver efficient and effective treatment. Another young therapist with American Indian heritage notes that she is only familiar with her own tribal culture and beliefs and is reluctant to bring her own cultural understandings into a different tribal setting. She is working in a different part of the country with different tribal communities far from her own upbringing. While there is often an immediate level of comfort in a shared identify, she is ever mindful that she cannot presume to know the beliefs and traditions of her clients. She approaches clients being "cautious not to impose my culture knowledge on them, I can only express that "This is my way." There are over 570 recognized tribes, each with distinct teachings and traditions. Further, within each tribe or band there are myriad differences based on age, degree of tradition-based transmission, acquisition of more formal religious affiliations, rural versus urban residence, and innumerable other factors. Like other minorities, the American Indian community is not monolithic. Cultural respect is an ongoing process of discovery rather than a state of knowledge.

Some agencies employ cultural consultants who are available to assist clients who wish to deepen their cultural knowledge or to guide clinicians as they incorporate cultural practices into

service provision. The authors have been able to present entire tribal-specific PCIT trainings with a cultural consultant serving as a translator much the way that a sign language interpreter provides immediate interpretation. Even when agencies do not have a formally designated position for cultural consultation, cultural mentors are often available in the community. A non-Native therapist who worked for a tribal agency maintained a number of committed PCIT families to completion. Describing his approach to bridging the cultural gap, his answer was simple: "I ask them." His successful engagement was based largely on his humble willingness to learn from his clients supplemented by his genuine interest in developing his understanding by seeking out cultural mentors among more seasoned clinicians and from elders in the community.

A final barrier to implementation of PCIT and other evidence-based treatments in Indian Country relates to the lack of research specific to this population. Complicating the issue, a history of abuse of minorities and oppressed populations in research has created an understandable distrust of research conducted by dominant culture investigators. Evidence-based treatments are typically evaluated using standardized measures, but these measures are "standardized" on the dominant culture, and their relevance can be questioned for underrepresented populations. There is a "catch-22" whereby families or tribal communities may be reluctant to participate in research that lacks standardized, normed methods of inquiry, but their very reluctance blocks the opportunity to conduct the research that is needed. Tribal entities are sovereign nations, and each has control of research concerning their citizenry. The process of having research approved by the governing councils and developing agreements with the respective Institutional Review Boards adds levels of complexity which often serve to perpetuate the lack of research on the underserved community. As noted, tribal members are the critical decision makers regarding lasting changes in addressing issues of substance abuse, violence, and mental health; it must be acknowledged that it takes more than simply training a mental health provider to impact communities. Coalitions must

be built within the community to bring about systems change. Participatory-based research efforts are needed to have a lasting impact on improving the mental health care provided to American Indian children and their families.

Despite these challenges, PCIT is in many ways uniquely situated to bridge the research-to-practice and practice-to-research gap. PCIT trainers are required to also be PCIT practitioners, and the assessment-driven structure of PCIT requires clinicians to incorporate elements of single-subject design in every case they see, so each PCIT clinician has potential as a researcher. Smith and Wilkins (2018) note that "scholar-practitioners span boundaries and bridge communication and perspective gaps between researchers and practitioners. They can serve as knowledge brokers, translating and disseminating science. This is particularly true for scholar-practitioners who reside in practice settings and are intimately connected to the work being done and community sentiments and values." Too often, representatives of Indigenous cultures are asked to review and approve research plans or interventions designed without their input, limiting their role in true collaboration. There is a need to include practitioners as "full and equal thought partners" from inception to implementation efforts (Smith & Wilkins, 2018).

Our mission in service to American Indians and other underserved populations is how to prepare and support communities and clinicians to incorporate evidence-based practices. This includes supporting expansion of the workforce of diverse professionals who will bring cultural congruence to those they serve. The therapist serves as a guide, orienting the client to the therapy environment and setting the path and pace of treatment. Training in EBT must address having the therapist enthusiastically embrace the treatment, developing the agency's ability to support and sustain the practice, and finally imparting the necessary technical and clinical skills. This expanded perception of training is necessary to instill the highest standard of services in vulnerable populations. It must be acknowledged that developing trusting and respectful partnerships between Indigenous representatives and research

institutions requires diligent work and a willingness to listen on the part of the researchers.

Meanwhile, every child and every caregiver is entitled to best practices. For example, in caring for diabetes, medical providers would not exclude the best practices on wound care or eye surgery because it has not yet been tested for a particular minority group. The virtue of evidence-based practice is that it yields predictable outcomes—one knows what to expect from the treatment if it is executed with fidelity and competence. Behavioral parent training is well researched; we understand how to make improvements in family functioning. The most vulnerable populations are deserving of the best treatment modalities available.

Case Example: Telling a Family's Story

The following case example represents a compilation of several cases that protects the identity of individual clients and also serves to highlight salient aspects of the cultural translation. Names are fictitious. There is no one "correct" adaptation but rather a framework of honoring and adapting to the client's particular worldview and style of communication. All features of standard PCIT remain in effect.

Laila Hollis was a 4-year 10-month old American Indian girl referred by our in-house pediatrician for PCIT following the mother's request for medication for ADHD. Stated problems included being "hyper all the time," tantrums several times per day lasting approximately 20 min, and severe jealousy of her siblings, including aggressive actions like putting a pillow over her 2-year-old half-sister's face. Laila also had a 6-year-old half-sister with a medical condition that required multiple surgeries and ongoing care. There was sporadic contact with Laila's biological father, monthly or less, and the mother was in an intermittent relationship with her boyfriend of several years. The mother, Serenity Hollis, currently worked full-time and attended classes at night to become a medical technician. Her mother provided care for the children and

they all frequently stayed in the home of the grandmother. The older two girls were placed in non-relative foster care for several months when Laila was 1 year old due to allegations of domestic violence and drug use in the home by the mother's boyfriend. Laila began full-day prekindergarten this year with no previous daycare experience; no problems were reported by the teacher. Laila had an unremarkable medical history and met developmental milestones on time. Ms. Hollis's ECBI scores were Intensity = 174 ($T = 72$) and Problem = 32 ($T = 82$). In DPICS observations Laila played cooperatively during CLP and PLP but during Cleanup she sat down on the floor and refused, complying with only 12% of commands. The mother was largely silent during CLP with a total of seven questions and two unlabeled praises. The mother stated that Laila's behavior was typical of home behavior during Cleanup, but that she maintained her attention better than typical for home during CLP and PLP. It was noteworthy that Laila played appropriately and independently with toys during the clinical interview with her mother. Laila was given a diagnosis of Oppositional Defiant Disorder and PCIT was initiated.

The clinician must be sensitive to a history of trauma for American Indian families; adverse experiences are not unique to this population, but the base rate is high. In the context of the PCIT intake interview, additional information about the mother's history was pertinent. The interview was extended for 20–30 min to follow up informally on information that the mother provided. Ms. Hollis reported that she had been in special classes for learning disabilities in school before receiving her GED. She had been exposed to family violence and upheaval throughout her childhood. Currently she frequently provided what assistance she could to extended family members, such as taking in a sister with several children and sharing a vehicle and transportation arrangements for extended family members. The approach to eliciting and interpreting the intake information was relational more than linear. The family network was one of complex support and dependency intertwined in the mother's life, her children, and other family members. Changes in

any member of the family system impacted PCIT treatment in subtle as well as overt ways. Additionally, problems of economic insecurity affected treatment when Ms. Hollis was unable to complete homework while working two jobs and attending school (leaving and returning when the children were asleep), and problems such as flooding and gas leaks necessitated several changes of residence. Ms. Hollis was diligent in notifying providers when she was unable to attend sessions, usually due to medical visits for the older daughter. Providers were open to rescheduling appointments or accommodating siblings and/or cousins when the mother was responsible for extra children during the scheduled appointment.

Treatment consisted of 12 CDI Coaching sessions (with four cancellations during that phase) and seven PDI Coaching sessions including three sessions that included siblings (with three cancellations during that phase). Treatment was concluded after 19 sessions for Laila and then extended for two additional sessions of work with the younger sibling. Ms. Hollis initially presented as quiet and reticent. She tended throughout treatment to make limited eye contact, but this was considered culturally appropriate for her upbringing. Laila had a mild speech delay and the mother's vocabulary and speech patterns were relatively sparse. Over the first several sessions the provider noted that both spoke more fluently when toys pulling for common vocabulary (e.g., farm set, dollhouse) were used rather than more abstract toys (e.g., legos, gears). Careful toy selection can help make the setting feel more welcoming for the parent and child; finding familiar activities they can relate to enhances engagement and skills mastery.

Additionally, the clinician suggested including the grandmother in treatment since she frequently served as a care provider. There was conflict between Ms. Hollis and her mother around many issues including childhood incidents, financial stressors, and reliance on the grandmother for childcare. The clinician acted as a sounding board, pointing out that consistency among caregivers is good for children, but respecting the mother's autonomy. After some

discussion about how to talk to her mother about Laila's behavior, Ms. Hollis eventually elected to invite the mother to treatment. The grandmother came to observe at the fourth CDI Coaching session, and agreed to be coached at the sixth session. Her attendance was difficult to arrange because she routinely watched the siblings and cousins every afternoon. She attended four sessions.

The grandmother was initially very skeptical, sitting in the observation room, working on her beadwork, shaking her head and scowling as the mother was coached to play with Laila. The grandmother stated that Laila needed to learn to behave herself and show respect for adults. She stated that she didn't see how playing with her would help. Clinicians readily agreed that Laila indeed did need to learn to respect rules and that the mother and clinicians agreed with that goal. They discussed the path to that goal as winding rather than direct, because PCIT could offer lessons learned from many children with problems similar to Laila's. They discussed the process of PCIT as like beadwork in which each tiny piece (e.g., describing her play, reflecting back her words, etc.) would contribute to the whole. Bit by bit the play would build a pattern of a stronger relationship, better feelings, better cooperation, and a happier child. The grandmother was open to the idea that small pieces can build to great creations, and she even agreed to try out the skills in playing with Laila. A responsibility of the clinician is to make the family members feel welcome—they are entering a new environment and need to feel safe and comfortable in order to try new things. The mother sought treatment and needed little help to accept the principles, but the grandmother had a different view of treatment and child rearing. Once the validity of her concerns and goals for her grand-daughter were acknowledged, she was willing to consider new ways to try to address them.

For children and caregivers who have had traumatic experiences, CDI provides a trauma-informed framework in which the parent can be guided to provide emotional support and model coping skills for the child. Laila initially engaged in repetitive play themes in which small creatures

were injured or lost. Baby birds would fall from the nest; children would tumble off the roof. The mother was encouraged to follow the play describing what had happened, but then offering solutions (e.g., the Mamma Bird flew in to catch the baby, the doctor came to take care of the injured child). The mother was coached to validate the emotions being expressed (e.g. "Oh poor baby bird is scared") and then offer the support of available and caring adults. Within a few sessions Laila began to join with the mother in taking the role of the rescuer in play, and her anxious play themes gradually ceased.

Ms. Hollis had a tendency to denigrate herself in her play with Laila, (e.g., "You are better at coloring than I am."). Feedback was given on Laila's need to know that her mother was strong and capable. It was pointed out that Ms. Hollis was actually caring for Laila in rather heroic fashion as she managed to come to PCIT every week while juggling jobs, school, medical appointments, and raising three children on limited income. As Ms. Hollis gained confidence, she became more vocal in the treatment, coming into session with questions and volunteering her thoughts and concerns. Of note, her progress toward CDI mastery plateaued around CDI-6. She reported practicing 3–5 times per week and Laila corroborated the mother's report by readily naming the toys and activities of Special Time. At CDI-8 Ms. Hollis confided to the therapist that she was confused about the differences among the skills of BD, LP, and RF. She noted that she had trouble in school and was concerned that she was not able to grasp the CDI skills appropriately. Considering this information, the therapist realized that Laila frequently narrated her own play, and the mother reflected Laila's words. So if the mother said "You put the bird in the nest," the therapist replied "Good Behavior Description," if Laila was quiet; "Good Reflection," if Laila just said that, or even "Good Labeled Praise" if mother happened to say "You put the bird in the nest so carefully!" Armed with this understanding, the therapist accepted responsibility for coaching in a confusing fashion and adjusted her technique to only give feedback "Good Reflection" for statements that were pure Reflections that did not also fall into another DPICS category. It was not necessary for Ms. Hollis to master the DPICS coding priority order, but rather just to engage well with her child. Mastery was achieved at CDI-12 and the move to PDI was scheduled.

The therapist must be mindful that no one ever wants to feel foolish. Parents make themselves vulnerable when they open themselves up to try new and unfamiliar ways. The Grandmother, who "did not believe in psychologists" took a risk by coming into this strange setting out of concern for her family. The mother took a risk by attempting to learn something new and difficult despite her feelings of inadequacy in addition to being overwhelmed and exhausted. The therapist must honor the endeavor that the client is undertaking. It is important to recognize the gift they are giving the child—an opportunity for positive changes and a better life. In Laila's case, it was important for the Grandmother to attend the PDI-Teach along with the mother so that she could hear the rationale and procedures of PDI. The clinician arranged for a student to babysit Laila and her siblings during the session so that both caregivers could attend. In the Teach session, the importance of the form and structure of the PDI procedures was emphasized. Ceremonies and rituals are an integral feature of American Indian culture, so the notion of carefully adhering to a specific format is a relatively familiar idea. For example, most gatherings follow a formal structure that begins with recognition of the elders, includes an opening song or blessing, and allows for the participation of all members. The format of PCIT sessions offers a framework within which to concentrate on expanding parenting practices. The traditional ways in which children learned by sitting with adults or older children, watching and practicing until they master the new skill, are compatible with the core elements of PCIT in which the clinician first teaches the parent, then mentors the parent, and finally allows the parent to take the lead. As in standard PCIT, it was emphasized that the child learns most quickly and easily when presented with very clear and predictable rules. Some argue that evidence-based practices are too

rigid for Indigenous cultures, but this ignores the rich tradition of the child as the center of the Circle, the understanding of the lawful nature of learning principles, and the deep respect for protocol and structure in human relations.

Laila's progress through PDI was typical, with few modifications made in the name of cultural accommodation. The mother's schedule became even more hectic as she added a clinical practicum to her classes and job. She was unable to practice CDI and PDI skills every day, but maintained at 3–4 times per week. Some extra time was included in every PDI session to coach CDI skills, which were variable week to week. Laila obeyed all commands in the first two PDI Coaching sessions, requiring several warnings, but no timeouts. A role-play of the PDI procedure was included at that end of PDI-2 in order to make sure Ms. Hollis and Laila were familiar with the timeout procedure, and home PDI practice was assigned. Laila never did need a timeout in the playroom coaching, where she consistently basked in her mother's rare 1:1 attention. At PDI-4 she received a timeout when the mother was coached to give transition commands in the waiting room. Laila sat quietly in timeout and twice refused to obey, resulting in additional time on the timeout chair until she was ready to comply. Ms. Hollis learned the PDI procedures easily, but required practice to give direct commands with a confident tone. The grandmother attended a session and her tendency to want to "rescue" Laila from timeout was discussed. She was accustomed to letting the children get away with misbehavior if they apologized and she admitted that she found it difficult to apply consequences unless she was angry. With the discussion of how everyone learns best in a calm environment and the adults' role as teachers, she was agreeable with the idea of not interfering with Ms. Hollis when she managed the children's behavior. Ms. Hollis showed improvement in her ability to combine CDI and PDI skills and was asked to bring the siblings to session PDI-5. The sibling session revealed that the youngest sister (now age 3) simply was not required to follow directions. The mother repeated commands to little sister, but did not follow through, and this tended to

escalate Laila's pouting and jealousy, complaining that "It's not fair." The clinician talked with the mother about her difficult work schedule and discussed her ability and/or desire to use PDI procedures with all the children in the home. It was noted that a transition was taking place for the little sister and for the mother, as her last baby was moving into childhood. This transition needed to be acknowledged and accepted if the caregivers were to change their parenting practices with the "baby." After a week's reflection and discussion with the grandmother, Ms. Hollis indicated that she wanted to tackle PDI with the little sister. Laila was now minding well in session and at home, ECBI scores were down, and the mother was no longer concerned about symptoms of ADHD. A final individual session was held with Laila to celebrate their progress. Subsequently, a session was held for little sister in which she needed only one timeout but left the chair seven times before sitting quietly in timeout. In a following session the mother appeared with all the daughters and two extra cousins. She was coached in a clean-up situation with all the children. The cousins responded well to the CDI skills and Laila helped explain PDI to them. The little sister required six timeouts in this session due to her ingrained habit of ignoring simple requests from her mother. Each time she sat quietly in timeout, and by the end of the session she required a warning for each command, but she obeyed each warning. A follow-up session was held in 2 months with all three sisters present; the mother continued to use the skills and treatment gains were maintained.

In summary, PCIT with American Indians contains every element of standard PCIT, with an appreciation of the family's history, current circumstances, perceptions, and ways of communicating. In this case the practitioner put emphasis on incorporating PCIT into the extended family network that was this mother's reality. The mother had a strong familial role of trying to keep the peace in conflictual relationships. She had to make a determined effort to take an assertive role with her young daughters as well as respectful but clear communication with her mother. Her confidence grew under the influence of the imme-

diate feedback and sustained support offered in PCIT and was maintained by the positive changes that she saw in her daughters' temperament and behavior.

Therapists working with American Indian families can tend to draw therapy out—in an effort to be sensitive to cultural differences they can be reluctant to move into action. While respectful interest in the family's attitudes and traditions is key, it is also important to remember that doing helpful things establishes the relationship that builds rapport. Therapy can be a place of cleansing; a fresh start. Special time gives the child and the relationship a fresh start every time, and effective discipline provides a framework of clear and appropriate limits within which to thrive. We can present PCIT with confidence—it is a gift and they are worthy.

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Tailoring PCIT for Latino/a Families

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Abstract

The Latino/a community is a diverse population encompassing various races, cultural beliefs and practices, acculturation levels, and countries of origin. Many Latino/a families face challenges such as migration and acculturation stress, language barriers, separation from family members, disruption of support systems, discrimination, social inequalities, and poverty. These stressors place many Latino/a children at heightened risk for mental health issues. However, Latino/a families experience significant disparities in access to and quality of health services compared to non-Latino/a Caucasians, even when controlling for socio-demographic variables. In this chapter, we review research on the application of standard PCIT and adaptations of PCIT among Latino/a families, highlighting the advantages and challenges in implementation. A case example of PCIT with a Latino/a family is discussed. The most rigorous research suggests that PCIT is efficacious in treating Latino/a families with and without adaptations, and is readily tailored without altering its structure or core content. Multiple aspects of standard PCIT have been found to be consistent with cultural values within the Latino/a community. Necessary next steps include developing innovative ways to improve access to evidence-based services for families who need them.

Latino/as represent the largest and fastest growing ethnic minority in the United States. Roughly 17.4% (56.6 million) of individuals living in the US identified as Latino/a in 2015, a number projected to near 40% by 2060 (USCB, 2012, 2015). The Latino/a community is a diverse population encompassing various races, cultural beliefs, acculturation levels, and countries of origin, with individuals of Mexican origin comprising the largest proportion (63.4%), followed by Puerto Ricans (9.5%), Salvadorans (3.8%), Cubans (3.7%), Dominicans (3.3%), and Guatemalans (2.4%; USCB, 2015). Many Latino/a families face challenges such as migration and acculturation stress, language barriers, separation from family members, disruption of support systems, discrimination, social inequalities, and poverty (DeNavas-Walt & Proctor, 2014; Fontes, 2005; French & Chavez, 2010; Santisteban, Suarez-Morales, Robbins, & Szapocznik, 2006; USCB, 2013). These stressors place many Latino/a youth at increased risk for mental health issues (Gonzales, Fabrett, & Knight,

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2009). At the same time, the majority of Latino/a youth lack access to quality services (e.g., Kataoka, Zhang, & Wells, 2002).

As a whole, Latino/as experience significant disparities in access and quality of health and mental health services compared to non-Latino/a Caucasians (e.g., AHRQ, 2017; Cabassa, Zayas, & Hansen, 2006; Flores, 2010; LaVeist, Gaskin, & Richard, 2011; USPHS, 2001), even when controlling for socio-demographic variables, such as family income, insurance coverage, and parent education (Alegría et al., 2008; Garland et al., 2005; Kataoka et al., 2002; Merikangas et al., 2011). Latino/a youth and their families are not only significantly more likely to underutilize mental health services (Coker et al., 2009; Freedenthal, 2007; Garland et al., 2005; Yeh et al., 2002) and drop out of care prematurely (Harpaz-Rotem, Leslie, & Rosenheck, 2004; Kapke & Gerdes, 2016; Miller, Southam-Gerow, & Allin, 2008), but also to receive inadequate, lower-quality treatment (Alexandre, Martins, & Richard, 2009; USDHHS, 2001).

Numerous factors contribute to the significant mental health service disparities among Latino/as. First, logistical barriers related to time, scheduling, transportation, proximity to services, childcare, cost, and being waitlisted for services affect utilization and premature drop out among Latino/a families (McCabe, 2002; McKay & Bannon Jr., 2004; Owens et al., 2002; Young & Rabiner, 2015). Immigration status also serves as a barrier to accessing mental health care, due to fears of detention and deportation (Rodríguez, Bustamante, & Ang, 2009; Shattell, Hamilton, Starr, Jenkins, & Hinderliter, 2008). Yet another factor related to seeking and remaining in mental health services is level of acculturation, with families who identify less with mainstream US culture being more likely to underutilize services (Kapke & Gerdes, 2016; Lara, Gamboa, Kahramanian, Morales, & Bautista, 2005). Relatedly, Latino/as with lower English proficiency and preference for Spanish language are also significantly less likely to access mental

health services (Keyes et al., 2012; Kim et al., 2011), as are Latino/as who have more recently arrived in the US (Nandi et al., 2008). Research suggests that stigmatized attitudes regarding mental health among Latino/a caregivers is a major barrier to seeking mental health services for their children as well (McKay & Bannon Jr., 2004; Rastogi, Massey-Hastings, & Wieling, 2012; Young & Rabiner, 2015). Latino/a caregivers' beliefs regarding the cause of a child's difficulties, adherence to traditional gender norms, as well as attitudes and expectations for treatment may also contribute to decreased engagement in mental health services (McCabe, 2002; McCabe, Yeh, Garland, Lau, & Chavez, 2005; Yeh et al., 2005; Yeh, Hough, McCabe, Lau, & Garland, 2004). Finally, engagement in mental health services is lower among Latino/a families when providers fail to understand, respect, and respond sensitively to relevant cultural factors (Flicker, Turner, Waldron, Brody, & Ozechowski, 2008; Forehand & Kotchick, 2002; McKay & Bannon Jr., 2004; Walker, 2001). In fact, many Latino/as experience stereotyping, stigmatized attitudes, discrimination, and challenges communicating in health care settings (Alegria & Woo, 2009; D'Anna, Ponce, & Siegel, 2010; Shavers, Klein, & Fagan, 2012).

Increased recognition of the significant mental health service disparities among minority youth, including Latino/as, has led to large-scale efforts to disseminate evidence-based treatments (EBTs), such as parent–child interaction therapy (PCIT), among underserved communities (Hoagwood et al., 2014; LACDMH, 2011; McHugh & Barlow, 2010; Starin et al., 2014; Trupin & Kerns, 2017). However, much of the efficacy research on PCIT was conducted among Caucasian families and may not generalize to Latino/a families, given their unique experiences, needs, and cultural values (Butler & Eyberg, 2006). Therefore, it is important to determine whether PCIT requires tailoring or adaptation in order to be acceptable and effective among Latino/a families.

Why Might PCIT Need To Be Tailored or Adapted for Latino/a Families?

Despite being a richly diverse group, many members of the Latino/a community identify with several shared cultural values (Gutiérrez, Rafiee, Bartelma, & Guerra, 2010), which may not always align with the approach of behavioral parent training programs (Forehand & Kotchick, 2002). In discussing common cultural values among Latino/as relevant to behavioral parent training programs, Barker, Cook, and Borrego (2010) highlighted six factors that may affect treatment delivery and outcomes among Latino/a families: *familismo* (familism)*, personalismo* (personal relationships), *respeto* (respect), *machismo* and *marianismo* (adherence to traditional gender roles), and acculturation level.

Familismo is a value that emphasizes close connection, loyalty, and reciprocity between family members, typically including the nuclear and extended family (Barker et al., 2010; Cardemil & Sarmiento, 2009). Latino/as who identify strongly with *familismo* tend to be relationship-oriented and rely on close friends and family members for support and guidance (Campos et al., 2008; Mio & Iwamasa, 2003; McCabe et al., 2005; Smith & Montilla, 2006; Stein et al., 2014). Given stigmatized attitudes regarding mental health within the Latino/a community (McKay & Bannon Jr., 2004; Rastogi et al., 2012; Young & Rabiner, 2015), *familismo* could negatively impact caregivers' likelihood of obtaining mental health treatment for their children if their support network discourages help-seeking (Barker et al., 2010). Conversely, close friends and family members with positive views of mental health care may serve as a bridge to services. This is supported by research on *promotoras*, or natural helpers within Latino/a communities (e.g., Acevedo-Polakovich, Niec, Barnett, & Bell, 2013; Stacciarini et al., 2012)*.* Additionally, Latino/a caregivers high on *familismo* have been found to hold favorable views towards parenting strategies commonly taught in behavioral parent training, such as monitoring of children and consistent discipline (Niec et al., 2014; Pemberton & Borrego, 2007; Romero & Ruiz, 2007), which could increase engagement in PCIT. Finally, a family treatment such as PCIT that promotes warmth and closeness in relationships may also appeal to Latino/a families that identify with *familismo*, given acceptability and success of other family-focused treatments for youth among Latino/as (Coatsworth, Pantin, & Szapocznik, 2002; Flicker et al., 2008; Szapocznik, Schwartz, Muir, & Brown, 2012).

Personalismo is another cultural value that should be considered when working with Latino/a families, which is characterized by warmth and trust within interpersonal interactions (Ayón & Aisenberg, 2010; Guilamo-Ramos et al., 2007; Sue & Sue, 2016). Being relationship-oriented, many Latino/as search for health care providers that are warm, friendly, and respectful, which fosters a more personal relationship (Smith & Montilla, 2006). This type of relational style helps build confidence in the health care provider, which directly affects a client's involvement and commitment to services (CHCF, 2004; Flores, Abreu, Schwartz, & Hill, 2000; Garza & Watts, 2010). Because child and family progress in parent training programs relies upon caregiver engagement, forming a strong therapeutic relationship with Latino/a caregivers who identify with *personalismo* is imperative (Barker et al., 2010). A directive, skills training intervention like PCIT, which prescribes a brief check-in may be perceived as insensitive to *personalismo* and affect engagement. On the other hand, caregivers who strongly identify with *personalismo* may appreciate that most of the session is spent directly interacting with their children, learning skills to enhance the warmth of the parent–child relationship. This is supported by research among Latino/a caregivers who expressed favorable views towards positive parenting strategies taught in PCIT, such as praise and positive reinforcement (Niec et al., 2014).

Along with emphasizing close, warm, and trusting relationships, many Latino/as emphasize *respeto* (respect) when engaging with others (Garza & Watts, 2010; Gutiérrez et al., 2010). Smith and Montilla (2006) describe *respeto* as

the unquestioned authority of elders as well as respect within the parent–child relationship. Many Latino/a families and communities follow a hierarchical structure and collectivistic orientation (Keller, 2013), striving to raise "socially well educated" children who are obedient, polite, and moral, known as *ser buen educado* (Halgunseth, Ispa, & Rudy, 2006). Valuing *respeto* in the parent–child relationship may lead to reluctance among some Latino/a caregivers to implement positive parenting techniques and preference for discipline techniques. This is supported by research by Borrego, Ibanez, Spendlove, and Pemberton (2007), who found Mexican-American families viewed use of consequences, such as response-cost and time out, more favorably than use of differential attention as a behavior management strategy. However, other research among Latino/a caregivers suggests families utilize and value positive parenting strategies, such as positive reinforcement and differential attention, in combination with consequences for misbehavior (Niec et al., 2014). The cultural value of *respeto* also has implications for the caregiver-therapist relationship. In one study, Latino/a caregivers reported that they would be reluctant to express disagreement or dissatisfaction with mental health providers due to respect for authority; rather, they would simply not follow recommendations or drop out of treatment (McCabe et al., 2005), which has major implications for treatment retention and progress.

Another cultural factor important to consider with regards to behavioral parent training is adherence to traditional gender roles within the Latino/a community (Gutiérrez et al., 2010). Among Latino/as of Mexican descent, the terms *machismo* and *marianismo* refer to ideal gender behavior for men and women, respectively. Definitions for *machismo* vary widely, but more recent conceptualizations are bidimensional, with two independent factors: (1) traditional *machismo,* more commonly associated with characteristics that hold a negative connotation (e.g., sexism, hypermasculinity, aggression) as well as (2) positive characteristics associated with *caballerismo*, or masculine chivalry (e.g., hard work, responsibility, protecting one's family, nurturance; Arciniega, Anderson, Tovar-Blank, & Tracey, 2008). Identification with traditional *machismo* may make Latino/a caregivers less likely to engage in behavioral parent training programs, as caregivers who conform to traditional masculine gender-role norms have been found to hold more negative attitudes toward seeking mental health services for their children, regardless of gender (Triemstra, Niec, Peer, & Christian-Brandt, 2016). This is supported by research among Latino/a families, which identified traditional gender roles as a barrier to male caregiver participation (McCabe et al., 2005). However, more research on help-seeking behavior is needed to determine whether this relationship holds true among Latino/a caregivers using a bidimensional measure of *machimso*.

In additional to behavioral norms for males, many Latino/as hold expectations for female behavior. The term *marianismo* refers to ideals for Latina behavior, including submissiveness, self-sacrifice, virtuosity and chasteness, maintaining family harmony, responsibility for child rearing, and being spiritual leaders within the family (Castillo, Perez, Castillo, & Ghosheh, 2010; Piña-Watson, Castillo, Jung, Ojeda, & Castillo-Reyes, 2014). Research on *marianismo* and help-seeking is lacking; however, conforming to this female gender ideal could make a caregiver less likely to engage in parent training if other caregivers, such as a co-parent or extended family members, discourage treatment. Of course, being the primary caregiver for children in the family may also lead female caregivers to seek services if child behavior is disrupting the family.

Finally, a family's level of acculturation is relevant to behavioral parent training. As noted previously, Latino/as with lower levels of acculturation are significantly less likely to utilize mental health services (e.g., Kapke & Gerdes, 2016). Not only has acculturation level been associated with mental health service use in general, but also with parenting practices specifically. Research suggests that, in general, Latino/a caregivers with lower levels of acculturation display an authoritarian parenting style, characterized by controlling and strict practices (e.g., Chun & Akutsu, 2003; Grau, Azmitia, & Quattlebaum, 2009), while Latino/a caregivers

more acculturated to mainstream US culture display an authoritative parenting style, which combines high levels of warmth and expectations for child behavior (Fontes, 2002; Grau et al., 2009). This implies that strategies taught in behavioral parent trainings such as PCIT may be less acceptable among Latino/a caregivers with lower levels of acculturation, making it more challenging to engage and retain these families in treatment.

Tailoring, Adapting, or Modifying PCIT for Latino/a Families

Given the unique experiences, needs, and cultural values among Latino/a families, PCIT may require tailoring in order to be culturally acceptable and effective among Latino/a families. In recent years, evaluations of standard PCIT have included increasingly diverse samples, with positive outcomes comparable to past PCIT efficacy research with non-Latino/a Caucasian samples. Among families being treated in community mental health (26% Latino/a), one study found PCIT led to significant reductions in child externalizing behaviors and parenting stress as well as increased use of effective parenting practices (Porter et al., 2012). Timmer, Ware, Urquiza, and Zebell (2010) and Timmer et al. (2011) also found significant reductions in child behavior problems among samples that included Latino/a families (22% and 25% Latino/a, respectively). In yet another study, PCIT was evaluated among adopted children (14% Latino/a) with primarily Caucasian adoptive parents (Allen, Timmer, & Urquiza, 2014). PCIT resulted in significant reductions in problematic child behavior (both externalizing and internalizing) and parenting stress as well as increased use of effective parenting practices in these bicultural families. Finally, positive outcomes related to child behavior, parenting stress, and parenting skills were found in a study evaluating the implementation of PCIT in community mental health across Los Angeles County (Timmer et al., 2016). Latino/a families comprised 68% of the sample, with 30% receiving services and materials in Spanish. Of note, none of the aforementioned studies compared treatment outcomes between ethnic groups or

tested ethnicity as a moderator. While findings provide initial evidence for the effectiveness of standard PCIT among Latino/a children and families, it is unclear whether outcomes are comparable to non-Latino/a Caucasians.

Surprisingly, limited research has been conducted on the tailoring and adaptations of PCIT for Latino/a families. The existing literature on PCIT among Latino/a families includes models that fall along a continuum from tailoring to adaptation to modification (Eyberg, 2005). Examples of tailoring include the provision of services in Spanish, translation of handouts, and use of culturally relevant examples and metaphors. Adaptations include extending the length of sessions and incorporating treatment engagement strategies, while examples of modifications include adding content and altering discipline procedures. Overall, the studies evaluating these changes reported positive outcomes; however, most studies did not compare their tailoring, adaptation, or modification of PCIT to standard PCIT, which makes it challenging to compare the models to standard PCIT.

Borrego, Anhalt, Terao, Vargas, and Urquiza (2006) described tailoring the implementation of PCIT with a Mexican-American monolingual Spanish-speaking foster parent and Mexican-Chilean-Filipino foster child using a single subject design. Per the authors, tailoring was minor and "efforts were made throughout the entire process to keep the integrity of the PCIT treatment protocol" (p. 130). Tailoring to PCIT included conducting treatment in Spanish, translation of caregiver materials into Spanish, and increasing responsiveness to cultural values. Specifically, the Mexican-American, bilingual therapist described making time for informal conversation with the caregiver as a means of being sensitive to *personalismo* and *simpatía* (friendliness and harmony in relationships), using formal language to demonstrate *respeto* (i.e., addressing the caregiver by her last name and using *usted* rather than the more informal *tú*), and framing the use of praise and PRIDE skills as *cariños,* or "terms of endearment" for children. The tailored implementation of PCIT was associated with positive outcomes, including a significant reduction in

the child's externalizing behaviors and foster parent's parenting stress as well as increase in the use of effective parenting practices, gains which were maintained at a 1-year follow-up.

PCIT has also been modified and evaluated among larger samples. Matos, Torres, Santiago, Jurado, and Rodríguez (2006) implemented a modification of PCIT among nine Puerto Rican families with children exhibiting hyperactivity in Puerto Rico using a pre-post design. Like Borrego et al. (2006), the team stayed true to the core principals of PCIT, stating, "our goal was to develop a version of the manual with the content, procedures, and guidelines included in the English version, but adapted to the sociocultural context of Puerto Rican families living on the island" (p. 209). Authors translated and altered the PCIT protocol according to a culturally sensitive framework (Bernal & Sáez-Santiago, 2006). Some of the tailoring included simplifying language, incorporating examples relevant to families, and use of idiomatic expressions in treatment. As in standard PCIT, therapists provided support to caregivers by engaging extended family members in utilizing skills learned in PCIT. Modifications included additional content and changes to session structure. Researchers included two psychoeducational sessions focused on the biopsychosocial model of hyperactivity, disruptive behaviors commonly associated with hyperactivity, as well as treatment options for hyperactive behavior. Additionally, initial check-ins with caregivers were extended to 20 min. This adaptation allowed for discussion of other issues important to the family. Finally, authors noted that in accordance with the cultural value of *personalismo,* therapists tailored treatment by accepting small gifts from families (although it should be noted that maintaining certain professional boundaries, such as turning down gifts from clients is not referenced in the PCIT protocol). The authors' modification of PCIT was associated with significant reductions in child externalizing behaviors and parenting stress as well as increased use of effective parenting practices. Treatment gains were maintained at a 3-month follow-up and caregivers reported satisfaction with the treatment model.

Based on interviews with caregivers and Puerto Rican clinical psychologists, Matos, Bauermeister, and Bernal (2009) made further modifications to their PCIT model and conducted a randomized wait-list control trial among 32 families in Puerto with children meeting diagnostic criteria for Attention-Deficit Hyperactivity Disorder (ADHD) and exhibiting disruptive behaviors. In addition to developing a handout on medication treatment for ADHD, multiple format and content changes were made to the PCIT protocol. First, sessions were extended to one and a half hours to allow for longer discussions with caregivers prior to coaching. Second, when excessive force was required by caregivers with children who refused to go to the time out chair or room, loss of privileges was utilized in place of time out as a consequence for not minding. Per the authors, this modification was made in response to caregivers expressing strong, negative feelings towards the use of the back-up room and refusing to use the technique (Matos et al., 2006). Third, sessions were limited to eight for Child-Directed Interaction (CDI) and nine for Parent-Directed Interaction (PDI). Finally, mastery criteria for caregivers' skill acquisition were also altered, with seven of each "do skill" being the benchmark in CDI rather than ten and the Eyberg Child Behavior Inventory (ECBI) Intensity Scale score was not used as a criteria for graduation; though no clear theoretical reason was provided and no empirical support offered for these changes. The modified PCIT model was associated with significant reductions in child externalizing behaviors as well as increased use of effective parenting practices, gains which were maintained at a 3-and-a-half-month follow-up. Caregivers also reported high levels of satisfaction with the treatment model. Given the research design, it is unknown how the model compares to standard PCIT or whether treatment gains were maintained beyond 3 months.

The only model of PCIT tailored and adapted for Latino/a families that has been evaluated relative to standard PCIT was developed by McCabe et al. (2005). The model includes primarily elements of tailoring, with minor adaptations for Mexican-American families. The process of tai-

loring and adaptation included reviewing the literature on Mexican-American families and barriers this population faces to accessing effective treatment, focus groups and interviews, as well as expert opinion. Many of the changes McCabe and her colleagues made were similar to those of other researchers. First of all, to decrease stigma, PCIT was renamed to *Guiando a Niños Activos* (GANA; Guiding Active Children) and framed as an educational program provided by a "teacher" rather than mental health treatment by a therapist. The two phases of treatment were also renamed: *Ejercicios de Comunicación* (ECO; Communication Exercises) and *Disciplina Consistente* (DISCO; Consistent Discipline). Second, GANA used an adapted process for engaging families based on previous research (i.e., McKay, Stoewe, McCadam, & Gonzales, 1998) that involved unlimited phone calls and home visits prior to the first session and up to three home visits during treatment. Therapists also tailored treatment by seeking to engage other caregivers throughout treatment by sending home videos of therapy sessions and materials as well as phone calls. Third, as is done routinely in standard PCIT, caregivers' expectations for treatment, beliefs regarding etiology of child behaviors and what would help, as well as barriers to treatment were thoroughly assessed at the outset of GANA so that parenting skills could be presented in the most useful manner to families. Based on this assessment, therapists tailored GANA to each individual family. Families were also provided more information about the program via videos of other families to orient them to treatment. Similar to other adaptations of PCIT for Latino/a families, GANA sessions were extended to allow for longer check-ins with caregivers, to foster a sense of *personalismo* in the therapeutic relationship. Materials were also tailored to the population under study via translation, with language simplified and made relevant to Mexican-American families. Finally, therapists tailored the protocol by actively eliciting concerns and complaints from families throughout GANA, based on caregiver input during focus groups and interviews regarding how *respeto* would lead them to ignore recommendations or

drop out of treatment rather than question the authority of the mental health provider.

McCabe and Yeh (2009) conducted a randomized trial of GANA among 58 Mexican-American families reporting low levels of acculturation. Families were randomly assigned to GANA, standard PCIT, and treatment as usual (TAU) in a community mental health agency. Families across conditions demonstrated significant reductions in child externalizing behaviors and parenting stress as well as increases in the use of effective parenting practices, but GANA was statistically superior to TAU across all measures, with the exception of one variable (i.e., compliance with clean-up during DPICS). Standard PCIT was statistically superior to TAU on observational variables (i.e., DPICS) as well as several parent report variables related to child externalizing behaviors and parenting stress. Differences were not found between GANA and PCIT, and families reported higher satisfaction with those conditions than TAU. Authors noted that therapists likely delivered PCIT in a culturally responsive manner as all therapists in the study were bilingual and bicultural or familiar with Mexican-American culture. Additionally, the first author supervised both PCIT therapists and GANA therapists, which may have increased similarities in the delivery of PCIT and GANA. Forty-eight families were reached for follow-up 6 months to 2 years after terminating treatment to complete caregiver-report measures (McCabe, Yeh, Lau, & Argote, 2012). Analyses revealed no significant differences between GANA and PCIT, with the exception of superior child internalizing outcomes for GANA. GANA also continued to significantly outperform TAU on most variables.

Across studies on PCIT among Latino/a families, researchers tailored and adapted PCIT in similar ways (Table 1). Tailoring included translation of materials and provision of services in Spanish as well as altering language and examples to increase cultural relevance. All but one study (i.e., Borrego et al., 2006) also reported explicitly discussing the importance of including other caregivers. Additionally, all studies utilized Latino/a or bicultural therapists, with the exception of one study that also utilized non-Latino/a

Table 1 Tailoring of PCIT for Latino/a families

	Translation of materials into Spanish	Treatment conducted in Spanish	Modifications to language and examples for cultural relevance	Therapist matched to family culture and language	Responsive to common Latino/a cultural values	Extended time for check-in with caregivers	Discussed how to involve and get support of extended family
Borrego et al. (2006)	✓	✓	✓	✓	✓	✓	
Matos et al. (2006)	✓	✓	✓	✓	✓	✓	✓
Matos et al. (2009)	✓	✓	✓	✓	✓	✓	✓
McCabe et al. (2005)	✓	✓	✓	✓[a]	✓	✓	✓

[a]When not culturally matched, therapists were highly familiar with Mexican-American culture

Table 2 PCIT outcomes Latino/a families

	Reduced child externalizing behavior	Decreased parenting stress	Increased use of effective parenting practices	High caregiver acceptability/satisfaction with treatment	Gains maintained at follow-up
Borrego et al. (2006)	✓	✓	✓	✓	✓
Matos et al. (2006)	✓	✓	✓	✓	✓
Matos et al. (2009)	✓	✓	✓	✓	✓
McCabe et al. (2005, 2012)	✓	✓	✓	✓	✓

therapists highly familiar with the population under study (i.e., McCabe et al., 2005). Across studies, therapists responded sensitively to cultural values such as *personalismo* and *familismo* and adapted delivery of PCIT by increasing time for caregiver check-ins at the beginning of session. Two studies extended session time by half an hour in order to accommodate longer discussion between therapists and caregivers (Matos et al., 2009; McCabe et al., 2005). One team of researchers made major modifications to PCIT (Matos et al., 2006, 2009).

Outcomes were consistently positive across studies (Table 2). Child externalizing behaviors improved, as did parenting practices. PCIT was acceptable to families and reduced parenting stress, with the one exception being Matos et al.

(2006)'s initial study. Although caregivers reported satisfaction with PCIT overall, they expressed strong, negative feelings towards use of the back-up room and indicated that they would not use the technique following treatment, which led Matos et al. (2009) to use of privilege removal as a back-up in the subsequent trial. Finally, across studies treatment gains were also maintained over time.

Tailoring PCIT to be more culturally responsive to the needs of Latino/a families provides numerous advantages. Tailoring, such as the provision of treatment in Spanish, use of culturally relevant examples and terms, allowing extra time to build *personalismo* in the therapeutic relationship, and making concerted efforts to engage other caregivers in treatment appeared to decrease

barriers that this community faces in accessing services. Tailoring may also help to expand the reach of evidence-based treatments, such as PCIT. However, given the positive results associated with standard PCIT implemented in a culturally responsive manner among Latino/a families, it remains unclear whether adaptations are necessary to achieve comparable outcomes and to what extent (e.g., does extending sessions by half an hour result in improved treatment retention, trust in the therapist, and treatment outcomes?). These are important questions for researchers to consider, given that developing and implementing adaptations can be time-consuming and costly.

Case Example

The following case example describes the treatment of "Rogelio," a 3-year-old bicultural male living with his 25-year-old first-generation Mexican-American mother "Ana" and maternal grandparents, who immigrated to the US with their five children 20 years prior to the present treatment. Rogelio and the family did not have not contact with his Caucasian biological father, who had been incarcerated prior to his birth for larceny. Rogelio was referred to PCIT by his pediatrician, due to Ana's concerns regarding aggressive behavior as well as "not listening."

Due to reluctance on Ana's part to seek mental health treatment, the therapist arranged to meet with Ana at the pediatrician's office to provide her more information on PCIT. The therapist also used the meeting to assess and address barriers to treatment. Ana reported that Rogelio had always been a strong-willed and rambunctious child, whom she found increasingly difficult to "control." Despite describing him as "loving," Ana also expressed fears that Rogelio was "taking after his father, who was a bad man." Per Ana, she and her parents frequently disagreed on how best to parent Rogelio, with Ana adopting a more permissive approach in contrast with her parents' strictness, stating, "they're old school Mexican—I'm more American." The therapist spent time building rapport and trust with Ana, using her language to validate concerns while also normal-izing the challenge of parenting a "rambunctious" child in the context of acculturation differences with her "old school" parents. The therapist also provided psychoeducation on how PCIT would teach her "special parenting skills," which would help Ana feel "in control" of Rogelio. By describing how PCIT had worked with many kids like Rogelio, the therapist sought to instill hope and self-efficacy in Ana. Ana indicated a desire to "give it a try," but expressed fears that her parents would not be "on board." The therapist encouraged Ana to invite Rogelio's grandparents to the intake and offered to call them with a personal invitation.

After speaking with Rogelio's grandparents by phone, they agreed to attend the initial intake session. A 2-hour session with caregivers was scheduled in order to allow for time to build rapport, develop trust, and thoroughly assess caregivers' perceptions of Rogelio's behaviors, family beliefs, parenting practices, attitudes towards services, and expectations for treatment. The session was conducted primarily in Spanish, although family members commonly code-switched between Spanish and English. Addressing the caregivers using the formal *Usted* and by last name, the therapist began session by thanking Rogelio's grandparents for attending and validating the important role they played in the family, as caregivers to Rogelio, and as the major source of support for their daughter. Grandparents expressed belief that Ana just needed to be more firm, citing their success parenting five children. The therapist validated the importance of consistent limits for young children as well as the experience and expertise they brought to the family, highlighting the ways in which PCIT taught caregivers "firmness." Consistent with Ana's report, Rogelio's grandparents were wary of working with a mental health professional, stating that "psychiatrists were for crazy people." The therapist presented PCIT as an educational, skills program rather than traditional mental health treatment, emphasizing the use of consistency, limit-setting, and consequences for misbehavior. Over the course of the intake session, the therapist continued to build rapport with Rogelio's grandparents and

Ana. His grandparents indicated they would not be able to regularly attend session, due to their work, but wanted to support their daughter and grandson, and agreed to phone check-ins.

Ana and Rogelio attended treatment regularly. Ana was eager to utilize the PRIDE skills, and consistently completed "special time" at home. She struggled with ignoring Rogelio's misbehavior, but was responsive to coaching and therapist support during challenging sessions. Ana indicated her parents sometimes interfered when she was trying to utilize ignoring in the home, so the therapist supported her in inviting them to a session so they could see ignoring "work." The therapist spoke with Rogelio's grandmother weekly, who reported practicing "*muchos cariños*," using the Spanish-language handouts that the therapist had sent home. She noted Rogelio was playing better with his cousins and helping her in the kitchen.

PDI proved more challenging for Ana, as she had difficultly consistently following through with time-out, which led to a rebound of Rogelio's disruptive behaviors. The family subsequently missed several sessions, with Ana reporting "needing a break." The therapist reached out to her parents to secure their support in getting the family back to treatment. Due to their work season slowing down, Rogelio's grandparents were able to attend the next two PDI sessions with Ana. Although initially wary of time out as a consequence, they provided support and encouragement for Ana in session and at home. During phone call check-ins, Rogelio's grandmother excitedly reported using "tiempo aparte" with the other grandchildren with success.

Rogelio and his mother made excellent progress in PCIT with the support of her parents (Figs. 1, 2, and 3). Not only did Rogelio's externalizing behaviors improve, but Ana demonstrated increased self-efficacy and consistent use of effective parenting techniques. Despite initial wariness regarding mental health treatment and certain parenting practices, the family was successfully engaged and retained in treatment, which we believe is due to the culturally responsive way in which treatment was tailored to the family's needs. Throughout treatment the thera-
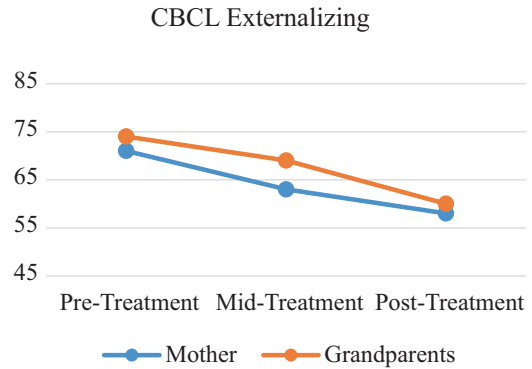
Fig. 1 Child Behavior Checklist (CBCL) Externalizing T-score

pist continually assessed and addressed family member values, beliefs, and practices to increase the acceptability and appropriateness of PCIT. The therapist placed emphasis on the development of the therapeutic relationship with the caregivers, making efforts to include Rogelio's grandparents as much as possible, staying connected to the family outside of session time by phone, validating the experience and importance of Rogelio's grandparents in the family, and presenting concepts in a manner that aligned with the family's cultural values. In this manner, the therapist leveraged the family's values and strengths to engage the family.

Summary and Conclusions

Latino/a families represent a growing, high-need population in the US that faces unique barriers to accessing quality mental health services and social inequities. Commonly shared cultural values within the Latino/a community present challenges to mental health treatment engagement, but can also align well with a family-focused behavioral treatment such as PCIT when provided by therapists who sensitively assess and address family beliefs, practices, and expectations. Standard PCIT and adaptations of PCIT have been associated with positive outcomes among Latino/a children and families; however, it remains unclear whether adaptations are necessary and to what extent they enhance outcomes.
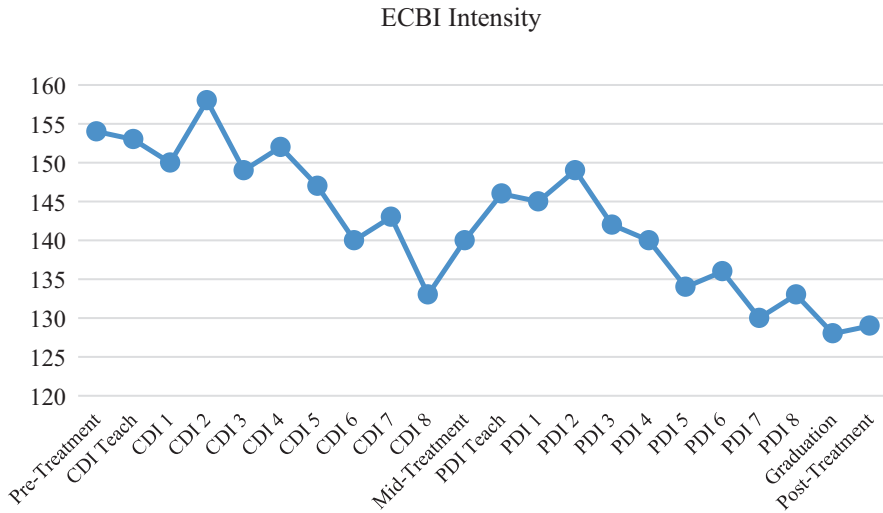
ECBI Intensity

Fig. 2 Eyberg Child Behavior Inventory (ECBI) Intensity raw score

Fig. 3 PCIT PRIDE skill acquisition over the course of treatment

PCIT "Do" and "Don't" Skills
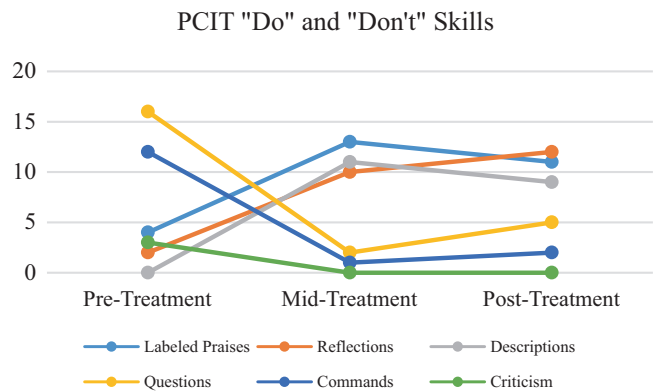
In the only trial comparing standard PCIT provided in a culturally responsive manner to an adapted PCIT program (GANA), no significant differences were found, though both conditions were superior to treatment as usual (McCabe et al., 2012). When provided in a culturally sensitive manner, PCIT appears to be acceptable, consistent with cultural values within the Latino/a community, and effective, which is consistent with research on other behavioral parent training among Latino/as (Barker et al., 2010). Continued research on PCIT among Latino/a families will provide further understanding of how to best meet the needs of this community.

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Transporting PCIT Around the World

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Abstract

Pathogenic parenting and childhood conduct problems are an international concern; thus, a need exists for evidence-based parenting interventions around the globe. In part because of the large treatment effects associated with parent–child interaction therapy, the model has been transported to many countries outside of the United States (e.g., Australia, Germany, Japan, Korea, Netherlands, New Zealand, Norway). Through its inherent flexibility, PCIT may be an intervention of choice because of its sensitivity and responsiveness to cultural variations in child-rearing that can be readily implemented in international samples. In this chapter, we review the characteristics and results of international effectiveness research on PCIT and provide a case example of the dissemination of PCIT in the Netherlands.

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A Global Need for Effective Parenting Interventions

The significant problems experienced by individuals, families, and societies as a result of pathogenic parenting and child conduct problems are not limited to the United States, but are experienced in countries around the globe (Belfer, 2008). For example, the prevalence of child abuse in the United Kingdom is 2.5% for children under 11 years (Radford, Corral, Bradley, & Fisher, 2013) and in the Netherlands is 3.4% for children aged 0–17 years (Alink et al., 2011). In Asian countries, such as Japan, the prevalence of childhood mental problems is 4.6% (Izumi & Okuyama, 2008).

To address these costly issues, governments and international organizations have begun to recognize the importance of effective parenting interventions (e.g., World Health Organization [WHO], United Nations Office on Drugs and Crime [UNODC]; Gardner, Montgomery, & Knerr, 2016; Wessels et al., 2013). In 2006, the Committee of Ministers of the Council of Europe launched Recommendation 19, the "Policy to Support Positive Parenting," declaring the support to be of high importance for developmental and educational science, for family and social policy, and for society in general (Rodrigo, 2010).

To date, parent management training programs, including parent–child interaction therapy (PCIT), have been primarily transported and

evaluated in high-income countries in Europe and Asia, and in countries such as New-Zealand and Australia. However, the number of low- and middle-income countries where parent management training programs are being transported is still growing (Gardner et al., 2016). In some Southern European countries (e.g., France, Spain), where mental health treatments are often psychodynamic, rather than behavioral, an increasing interest exists in the implementation of evidence-based interventions. However, because of the lack of standard implementation and good quality evaluation studies, the dissemination and use of parent management training programs in Southern Europe remains on a small scale (Vázquez, Molina, Ramos, & Artazcoz, 2017).

Empirical evidence generally supports the transport of parent management training programs beyond their countries of origin. In a meta-analysis of 17 trials of well-established parenting programs transported to ten countries, Gardner et al. (2016) found that effect sizes remained substantial without any need for significant cultural adaptations. In fact, countries endorsing "non-western" values had larger effect sizes than countries endorsing "western" values. Similarly, in a meta-regression of 129 randomized parenting interventions separated into four geographical regions, Leijten, Melendez-Torres, Knerr, and Gardner (2016) found that a given intervention's status as "homegrown" or "imported" did not significantly predict its effect size. Thus, there is reason to believe that the regional origins of an intervention, and perhaps even its alignment with local cultural values, are not all-important in predicting whether its effects will be maintained.

In the next section, the international transportation of PCIT will be discussed, including details on the characteristics and outcomes of international PCIT evaluation studies. Finally, a case example of the dissemination of PCIT in the Netherlands will provide an overview of one country's experiences with the benefits and challenges of the implementation process.

Transporting PCIT Around the World

As the previous section has established, the need for effective parenting interventions extends beyond the borders of the United States. This section will describe the growing body of research on the global dissemination of PCIT (Zisser & Eyberg, 2010). Not only is PCIT a highly effective behavioral parent training program, but as has been described in detail in chapter "Parent–Child Interaction Therapy: A Transdiagnostic Intervention to Enhance Family Functioning," it differs from many other parenting programs in important ways: (1) PCIT focuses not only on teaching parents behavior management skills but on developing the parent–child bond; (2) Throughout PCIT, therapists coach parents during in vivo interactions with their children; and (3) Assessment of progress includes standardized observations of actual parent and child behaviors (Eyberg & Funderburk, 2011). Meta-analyses examining outcomes of PCIT have revealed large effect-sizes in the reduction of childhood externalizing behaviors (Thomas & Zimmer-Gembeck, 2007; Ward, Theule, & Cheung, 2016) and parent stress (Cooley, Veldorale-Griffin, Petren, & Mullis, 2014). Within the US, PCIT has demonstrated a high degree of portability, achieving similar clinical outcomes in community settings (Lanier et al., 2011; Lyon & Budd, 2010; Self-Brown et al., 2012), different ethnic groups (Danko, Garbacz, & Budd, 2016; Fernandez, Butler, & Eyberg, 2011; McCabe & Yeh, 2009), child welfare populations (Chaffin et al., 2004, 2009), and cognitively impaired children (Bagner & Eyberg, 2007). These findings, taken together with PCIT's grounding in the basic science of human development and learning (Niec, Gering, & Abbenante, 2011), make for a favorable forecast about PCIT's transport to non-USA settings.

In addition to its robust efficacy, PCIT is a strong choice for transport to other countries because of its inherent flexibility, which allows for sensitivity and responsiveness to the cultural variations in child-rearing that can be seen in international samples. Eyberg (2005) suggested a

triarchic taxonomy for conceptualizing how an intervention may be changed in response to new challenges: tailoring, adaptation, and modification. With tailoring, a therapist uses an individualized assessment of the client's current strengths and weaknesses, and uses this knowledge to create a customized plan for the client's growth toward the prescribed intervention goals. Importantly, tailoring implies no change with regard to the intervention goals or content. Adaptation and modification, on the other hand, refer to two different levels of structural and content-related change that require empirical validation. PCIT is *inherently* tailored in that therapists address the specific needs of each individual family using the same structure and techniques. Thus, different families participating in PCIT will learn the same set of skills but with different rates, styles, and intensities. For example, with a permissive parent, a coach may focus on reinforcing the parent's ability to set appropriate limits with her child, while the focus with an authoritarian parent may be to increase warmth and responsiveness in their parent–child interactions. This flexibility allows for the useful eventuality that all participating parents learn to strike a balance between warmth and healthy limit setting, regardless of each parent's starting point. Given the different parenting styles and family dynamics across cultures (e.g., McCabe et al., 2013), this feature of PCIT is an asset for international dissemination.

In light of PCIT's apparent qualifications, the current review examines the evidence that PCIT can fulfill its promise as an internationally viable intervention. There are three primary dimensions to our review. First, the characteristics of the international studies are briefly reviewed, with an eye toward research design and quality. Second, in keeping with Eyberg's (2005) taxonomy, we address the extent to which the international implementations of PCIT were different from US implementations. After all, it is important to discern that the effectiveness research is indeed about PCIT, and not a substantially modified version of it. Third, the outcomes of PCIT implementations in other countries will be summarized, including the most common outcome measures

in PCIT research (e.g., parent-reported child behavior, parent stress, observed improvements in parent and child behavior).

International Study Characteristics

In most ways, the international research on PCIT resembles the US research base with regard to study design. We found 15 group studies testing PCIT outside of the United States in Australia, Asia, Europe, and Puerto Rico. Study characteristics are reported in Table 1. For reference, there were 13 PCIT studies used in the meta-analysis of Thomas and Zimmer-Gembeck (2007) and 12 PCIT studies used in the meta-analysis of Ward et al. (2016). There was a relatively even split of RCT and non-RCT designs, with RCTs mostly using a waitlist control and non-RCTs using either no control group or a comparison group that was recruited separately. Two studies used a comparative treatment control group (Abrahamse, Junger, van Wouwe, Boer, & Lindauer, 2016; Bjørseth & Wichstrøm, 2016). The first of these had nine clients "cross-over" to the PCIT condition after randomized allocation, so the authors renamed the would-be randomized trial a "comparative effectiveness" trial and completed separate "treatment received" and "treatment completed" analyses in addition to the more routine Intention-to-Treat analysis. Regarding sample size, allocations to the PCIT condition ranged 10–99 families, with most trials allocating between 20–50 families to PCIT. Control and waitlist groups were of comparable size. All studies focused on disruptive or externalizing behaviors as the primary reason for treatment.

Several of the studies included additional features beyond implementing standard PCIT in an international sample. A few studies had unique sample characteristics in addition to the focus on disruptive behavior, including high-risk of maltreatment (Thomas & Zimmer-Gembeck, 2011, 2012) an early childhood age range (Kohlhoff & Morgan, 2014; Phillips, Morgan, Cawthorne, & Barnett, 2008), and a diagnosis of ADHD (Leung, Tsang, Ng, & Choi, 2017; Matos, Bauermeister, & Bernal, 2009). A few studies

Table 1 Study characteristics of International Research on PCIT

	Country	Design	Follow-up	Population	Observational data
Abrahamse et al. (2012)	Netherlands	NC	–	DB	–
Abrahamse, Junger, van Wouwe, Boer, and Lindauer (2016)	Netherlands	CT	6 months	DB	Parent and child
Bjørseth and Wichstrøm (2016)	Norway	RCT, CT	6 and 18 months	DB	Parent and child
Chen and Fortson (2015)	Taiwan	NC	3 months	DB	Parent and child
Kohlhoff and Morgan (2014)	Australia	NC	–	Toddlers	Parent only
Leung, Tsang, Heung, and Yiu (2009)	China	OC	3 and 6 months	DB	Parent and child
Leung, Tsang, Sin, and Choi (2015)	China	RCT	3 months	DB	Parent only
Leung, Tsang, Ng, and Choi (2017)	China	RCT	3 months	ADHD	Parent only
Matos, Torres, Santiago, Jurado, and Rodríguez (2006)	Puerto Rico	NC	3 months	DB	–
Matos, Bauermeister, and Bernal (2009)	Puerto Rico	RCT	3.5 months	ADHD	–
Nixon, Sweeney, Erickson, and Touyz (2003)	Australia	RCT	6 months	DB	Parent and child
Nixon et al. (2004)[a]	Australia	RCT	1 and 2 year	DB	Parent and child
Phillips, Morgan, Cawthorne, and Barnett (2008)	Australia	NC	–	Early childhood	–
Thomas and Zimmer-Gembeck (2011)	Australia	RCT	1 month	Risk for abuse	Parent only
Thomas and Zimmer-Gembeck (2012)[a]	Australia	RCT	–	Risk for abuse	Parent only

NC no control group, *OC* other control group, *CT* comparison treatment group, *DB* disruptive behavior
[a]Sample contained overlapping participants with other study with the same first author

also featured tests of brief formats of PCIT, including an "abbreviated" format with five sessions and five phone consultations (Nixon, Sweeney, Erickson, & Touyz, 2003) and a 12-session-cap of standard PCIT (Nixon et al., 2003; Thomas & Zimmer-Gembeck, 2012). Most of these variations from a standard test of PCIT for disruptive behavior took place in Australia (except for the ADHD samples). This may explain why many of the Australian outcomes were different from those of other countries.

Characteristics of PCIT Outside the US

In most international studies, PCIT was described as conducted consistently with its implementation in US studies. Typically, a small team of PCIT therapists (e.g., masters-level clinicians, doctoral students) provided the intervention. Most therapists were trained by master trainers in a workshop format with ongoing supervision largely consistent with the guidelines provided for training by PCIT International. Four of the fifteen studies systematically rated adherence to protocol using a sample of selected sessions (Abrahamse et al., 2016; Chen & Fortson, 2015; Matos et al., 2009; Nixon et al., 2003). Abrahamse et al. (2016) had an adherence rate of 72%, while the others had 97% or higher. The implementations of Nixon et al. (2003) and Matos et al. (2009) were slightly different from the standard PCIT protocol (the former tested a 12-session-cap version of PCIT, and the latter had developed a translated and modified protocol from their previous study); thus, they were only adherent with respect to

their own versions of PCIT. Four other studies reported a more informal assessment of adherence, which most often involved supervisors or co-therapists observing sessions and monitoring integrity using the manual checklists (Bjørseth & Wichstrøm, 2016; Leung et al., 2017; Thomas & Zimmer-Gembeck, 2011, 2012). In sum, PCIT was only conducted by adequately trained therapists, and adherence to protocol was reasonably assessed in most cases.

Treatment length for PCIT in the international sample was only slightly longer than the average length in the United States, and was mostly within the typical range of variation. In the United States, treatment typically lasts between 10–16 sessions, with an average of about 13 sessions (Gallagher, 2003; Hembree-Kigin & McNeil, 1995; Herschell, Calzada, Eyberg, & McNeil, 2002). One of the studies had an average of 13 sessions (Leung et al., 2017), while other studies averaging around 12 sessions (Nixon et al., 2003; Phillips et al., 2008; Thomas & Zimmer-Gembeck, 2012) were able to do so because of slight alterations in PCIT delivery (Nixon et al. and Thomas and Zimmer-Gembeck had a 12-session cap, while Phillips et al. decided that the second phase of PCIT was deemed unnecessary for some families). The rest of the studies mostly fell within the aforementioned US range, with three studies having average session counts above 20 (22; Abrahamse et al., 2016; 21.14, Bjørseth & Wichstrøm, 2016; 25.44, Chen & Fortson, 2015). Chen and Fortson (2015) explained that client hesitation to use some of the techniques in PCIT might have delayed progress.

Substantial changes to PCIT protocol in international implementations appear to be the exception, and not the rule. Recall that Eyberg (2005) emphasized that PCIT is necessarily tailored to each individual family (i.e., therapists use their knowledge of the family to enhance their uptake of the skills), but not necessarily adapted or modified (e.g., changing format or content of the intervention). In most of the 15 studies reviewed here, most declared no culturally motivated changes in content. The Australian studies reported adaptations, but these changes were either population-specific to early childhood (e.g., removing PDI for toddlers, Kohlhoff & Morgan, 2014) or were testing new dosages of PCIT in the service of implementation science (e.g., Thomas & Zimmer-Gembeck, 2012). Bjørseth and Wichstrøm (2016) reported using "swoop-and-go" or "two-chair procedure" for time-out, for which there is an established precedent in PCIT (Hembree-Kigin & McNeil, 1995). The Asian studies documented some unique responses to the content of PCIT in their samples, but the therapists handled these responses through the built-in tailoring strategies fundamental to PCIT, rather than by modifying content. For example, Leung, Tsang, Heung, and Yiu (2009) found Chinese parents hesitant to use praise, so they offered more culturally acceptable praises (e.g., "your grandmother would like that picture"). The same authors also spent extra effort helping parents ignore inappropriate behavior, surmising that it was perceived as contrary to traditional Chinese values of parental authority. Chen and Fortson (2015) reported similar challenges, and hypothesized that they lengthened treatment.

The only exceptions to the relative lack of modification in PCIT protocol were the Puerto Rican studies (Matos et al., 2009; Matos, Torres, Santiago, Jurado, & Rodríguez, 2006). Matos et al. (2006) selected a four-stage model of translation and adaptation for behavioral therapies (Rounsaville, Carroll, & Onken, 2001). This resulted in multiple changes, including for example, the addition of psychoeducational modules about behavior problems and their treatment, the use of loss of privileges in place of time-out, longer "check-in" time during each session, less stringent mastery criteria. Because this was the only study in the sample that used a detailed translation model, it is difficult to ascertain whether such translation is important (other studies proceeded without applying a specific translation model). Outcomes in the Puerto Rican studies (reviewed further below) were not obviously different from the other studies, but perhaps other unmeasured aspects of treatment may have benefited from such a detailed translation approach.

Outcomes for International Families

The primary outcome measures reported by the international studies of PCIT are consistent with PCIT research in the US: (1) parent-reported child behavior, (2) parent stress, and (3) observed changes in parent and child behaviors. Parent-reported child behavior was often measured with the Eyberg Child Behavior Inventory (ECBI; Eyberg & Pincus, 1999) or a broadband measure of child behavior such as the Child Behavior Checklist (CBCL; Achenbach & Rescorla, 2001). Parent stress was most often measured with the Parenting Stress Index (PSI; Abidin, 1995). Some studies assessed other aspects of parents' experiences, including depression, anxiety, feelings of control/competence, and treatment satisfaction.

Observation of parent and child behavior was primarily coded with the Dyadic Parent–Child Interaction Coding System (DPICS; Eyberg, Nelson, Ginn, Bhuiyan, & Boggs, 2013) and focused on increases in parent's use of positive parenting skills (e.g., praise) while decreasing negative parenting skills (e.g., criticism). Some studies also coded child behavior (see Table 1). Other outcomes included frequency of corporal punishment in the last month (Leung et al., 2009, 2017; Leung, Tsang, Sin, & Choi, 2015), parent-report of discipline practices (Matos et al., 2006, 2009; Nixon et al., 2003), and child abuse potential and reports (Thomas & Zimmer-Gembeck, 2011, 2012). Here we focus on the three most common outcomes. Translations for all measures were made as necessary. Locally validated norms were available for the Chinese ECBI (Leung, Chan, Pang, & Cheng, 2003), the Dutch ECBI (Abrahamse et al., 2015), and the Dutch PSI (De Brock, Vermulst, Gerris, & Abidin, 1992).

Parent-rated child behavior showed the most consistent, sizeable, and long-lasting improvement of any of the outcomes measured across international PCIT studies. Every study reported scores on the ECBI, which made possible the comparison of child behavior effects. Effect sizes for the ECBI-Intensity scale were mostly large in RCT and non-RCT designs (Cohen's $d > 1$), whether comparing control groups to treatment groups or pretreatment scores to posttreatment scores. In studies testing standard PCIT, magnitude of improvement in child behavior change from pre- to posttreatment ranged from $d = 0.77$ (Abrahamse et al., 2016) to $d = 1.99$ (Abrahamse et al., 2012). Improvements were slightly smaller when PCIT treatment was shortened (Nixon et al., 2003; Thomas & Zimmer-Gembeck, 2011, 2012) or younger populations were targeted (Kohlhoff & Morgan, 2014; Phillips et al., 2008). Additionally, whenever follow-up data was available, gains in parent-reported child behavior were maintained at follow-up. In the two studies that compared PCIT to other active treatments, pre- to posttreatment improvements were similar to other studies, but comparisons with the other treatment condition showed mixed results. In Bjørseth and Wichstrøm (2016), mother- and father-rated child behavior were superior to Treatment-As-Usual, but only at the 18-month follow-up ($d = .64$ and $d = .79$). In Abrahamse et al. (2016), both mother- and father-rated child behavior were superior to Family Creative Therapy (FCT) at posttreatment ($d = .85$ and $d = .26$), but not for the intention-to-treat analysis. Thus, while PCIT's effectiveness from pre- to posttreatment in international settings is established, PCIT's superiority to other treatments outside of the US has modest support.

The effect-sizes for reductions of parent stress and other parent outcomes are also large (e.g., $d = .92$ in Chen & Fortson, 2015; $d = .97$ in Abrahamse et al., 2016; $d = 1.38$ in Leung et al., 2009). Meta-analytic comparison of different PCIT outcomes has shown that changes in child behavior tend to be larger than changes in parent stress (Thomas & Zimmer-Gembeck, 2007). Many studies did not report parenting stress scores (Abrahamse et al., 2012; Bjørseth & Wichstrøm, 2016), measured parent distress with another measure instead of the PSI (Kohlhoff & Morgan, 2014; Matos et al., 2006, 2009; Phillips et al., 2008), or found inconsistent results across their measures of parent distress (Nixon et al., 2003; Thomas & Zimmer-Gembeck, 2011, 2012). As with parent-rated child behavior, any studies finding significant posttreatment differences in parent stress maintained these gains at follow-up.

Behavioral observation outcomes were also more mixed than parent-rated child behavior, but there were still significant improvements across all studies that reported them. A third of the studies did not report behavior observation at all, including both Puerto Rican studies (Matos et al., 2006, 2009), one Dutch study (Abrahamse et al., 2012), and one Australian study (Phillips et al., 2008). For those that did report on changes in observed parent behavior, parent skill changes from pre- to posttreatment were large, with a general pattern of larger increases in positive parenting skills than decreases in negative parenting behaviors. Positive parenting increases ranged from $d = 7.7$ (Chen & Fortson, 2015) to $d = 0.94$ (Abrahamse et al., 2016), with many of the Australian studies reporting changes in individual Do-Skills of comparable magnitudes. Negative parenting decreases were smaller, ranging from $d = 2.52$ (Kohlhoff & Morgan, 2014) to Hedges $g = .96$ (Bjørseth & Wichstrøm, 2016). Parent skill changes were typically maintained at follow-up.

Child observations were far less frequently reported, and showed mixed results when they were. For example, Bjørseth and Wichstrøm (2016) and Abrahamse et al. (2016) reported nonsignificant change in total child compliance instances with parent commands at posttreatment. On the other hand, Leung et al. (2009) reported a moderate improvement in child compliance ratio (commands obeyed divided by commands given; $d = 0.49$), and Chen and Fortson (2015) reported very large improvements in child compliance ratio ($d = 6.27$ for Parent-Led-Play and $d = 3.27$ for Clean-Up). While child observations are not as commonly reported observational outcomes in PCIT research, adding them to future research efforts may enhance the validity of parent-rated behavior change.

Summary

When implemented in countries outside of the US, PCIT fares well with respect to form, flavor, and function. In terms of form, reports of training are similar to the guidelines developed by the authorizing organization of PCIT, PCIT International, Inc., and therapists report generally adhering to the model (e.g., Niec, Abrahamse, Egan, Coelman, & Heiner, 2018). In terms of flavor, little adaptation or modification was generally made to the program, with its essential elements intact (e.g., use of behavioral assessment, live coaching, two phases of treatment). In terms of function, PCIT demonstrated large effect sizes and lasting treatment gains in multiple domains of parent and child functioning. While future studies may make use of more varied and multimethod outcome measures and may continue to add experimental rigor through the use of comparative treatment control groups, preliminary studies indicate that PCIT has earned a passport and travels well.

PCIT Implementation: An International Case Example

De Bascule, Academic Center for Child and Adolescent Psychiatry in Amsterdam, was one of the first mental health centers in the Netherlands to search for effective, manual-based interventions for treating children and adolescents. In 2005, the search for effective treatment programs for behavior problems in young children led the leadership at De Bascule to turn to PCIT. The research outcomes on the effectiveness of PCIT for maltreating parents (e.g., Chaffin et al., 2004) contributed to the decision to implement PCIT within the Department of Family Psychiatry, where families with young children having multiple problems were treated after the occurrence of child abuse.

The PCIT implementation process consisted of several phases from preliminary conversations with the developer of PCIT, Dr. Sheila Eyberg, to the training of a first cohort of therapists and the eventual dissemination of PCIT in Amsterdam and other locations in the Netherlands. The initial training of Dutch therapists began in 2006. Trainees started working with Dutch families in 2007. In 2009, an experienced Dutch PCIT therapist was selected to become a master trainer in the Netherlands in order to continue the dissemi-

nation efforts. At that time, the first group of therapists were trained in the Netherlands by a Dutch trainer.

PCIT Training in the Netherlands

The training process for Dutch therapists was developed based on the primary components required for therapists by PCIT International, Inc. (www.pcit.org), the authorizing organization of PCIT. The Dutch training included an initial 40-h workshop, during which therapists were provided information regarding the underlying theories of PCIT, the behavioral observation measure Dyadic Parent–Child Interaction Coding System (DPICS), coaching techniques for both phases of the intervention, and a thorough overview of the full treatment model. As with most US dissemination, teaching techniques during the training included didactic, role-play, and experiential learning with children and families. Subsequent to the initial training, trainees participated in consultation provided biweekly either live or by phone for a period of approximately 1 year.

The two most important aspects to the maintenance of treatment fidelity in the Netherlands subsequent to the initial training were (1) ongoing consultation and (2) skills assessment. Similar to the process in the US, during consultation with trainers, therapists discussed implementation issues and received feedback on their therapy sessions. Consultation was conducted by telephone over a period of 12 months after training. Departing from PCIT International training guidelines, consultation did not begin immediately after the first 40-h initial training, but instead it began after a 2-day continuation training that was provided 3–6 months after the initial workshop. Biweekly consultation continued for 6 months and then was reduced in frequency to monthly consultation for the subsequent 6 months. The departure from PCIT International guidelines regarding consultation timing and frequency was related primarily to the limited resources of the disseminating agency (e.g., hours allocated to the trainer for consultation and tape review). Thus, the decision was not based on

the evaluation of trainee or family outcomes and may have had an impact on the dissemination that was not investigated.

The assessment of therapist competence was based on review of eight recorded therapy sessions submitted to trainers with a reflection report on the strengths and challenges experienced during the sessions. Dutch trainers provided written feedback to each trainee using the PCIT protocol fidelity checklists and a standardized feedback form.

To date, 29 therapists at the Bascule and five other Dutch child mental health care agencies have been trained and are providing PCIT in the Netherlands. Since the initial training, PCIT therapists have received periodic booster sessions from visiting trainers; some therapists have attended biennial PCIT International conferences; and some therapists and trainers have initiated new research projects. New PCIT research in the Netherlands include (1) an effectiveness study on home-based PCIT and (2) a study on PCIT coaching in the Netherlands exploring whether outcomes in the US can be replicated using the Therapist-Parent Interaction Coding System (TPICS; Barnett, Niec, & Acevedo-Polakovich, 2014).

PCIT has now been implemented in the Netherlands for more than 10 years, and a large number of Dutch children and their parents have already benefited from the treatment. The master trainer remains committed to disseminating PCIT and has trained a Level I (in-agency) trainer to assist her. Unfortunately, dissemination is far from complete. Only six agencies provide PCIT across the country, which does not make it possible to reach all regions in the Netherlands, particularly the southern part of the country. This means that PCIT is currently unavailable to many Dutch families who are in need of effective treatment for child conduct problems. Further dissemination of PCIT is therefore still an important issue.

Collaboration with PCIT International

Throughout the implementation process, the Dutch trainers and PCIT therapists maintained active conversations with PCIT colleagues in the

US and collaboration with PCIT International. There was frequent support through email, video conferencing, and periodic booster sessions for the therapists provided by US trainers in the Netherlands. Collaboration has been an important aspect of the implementation process when transporting an intervention from the country in which it was developed to a new culture or country. Contact with the developer, exchanging experiences about challenges, and finding solutions together have been, and continue to be, important aspects of the success of the implementation process.

Challenges Faced and Lessons Learned

The PCIT implementation process in the Netherlands came with a number of challenges. A recent study using a systematic qualitative approach has described significant barriers related to agency, clients, program, and training experienced by Dutch PCIT trainees and therapists (Niec et al., 2018). Although therapists reported positive attitudes toward the PCIT model and described overall feeling satisfied with training and supervision model, some therapists reported a need for additional training and supervision. Other significant barriers were reported related to implementation. First, therapists discovered it was difficult to obtain enough referrals, as parents and other professionals were unfamiliar with the intervention model. Therefore, some therapists had difficulty seeing PCIT cases on a regular basis, which delayed their training. Also, because of the low referral rate, it was difficult to obtain enough participants for the concurrent treatment outcome study, which was being conducted to evaluate the effectiveness of PCIT in a Dutch population.

A second implementation challenge was the complexity of the families referred for services. Although Dutch policy is increasingly moving toward a prevention approach and an attempt to provide services to address childhood conduct problems as early as possible, often families do not reach mental health providers until they are experiencing dysfunction in multiple domains and many families who present for treatment are also experiencing stressors related to financial, transportation, or housing needs that must be addressed prior to focusing on the parent–child relationship through PCIT.

A third challenge during implementation is the relatively small number of therapists at a small number of agencies that are currently trained in the Netherlands. So far, a large nationwide dissemination has been not realized. As therapists change jobs or decide to discontinue providing PCIT, it has been difficult to sustain PCIT in agencies and to provide treatment in a timely manner to families who are referred. Finally, it has been our experience that when PCIT therapists move to new agencies with the hope of starting a new PCIT program, often barriers such as the lack of appropriate space and audiovisual facilities impede them.

Many of the experiences of therapists during implementation in the Netherlands are similar to experiences of PCIT trainees in the US (Christian, Niec, Acevedo-Polakovich, & Kassab, 2014). Implementation and training therefore may not vary widely across cultures, at least across cultures with similar mental health care systems. However, these barriers must be addressed if PCIT dissemination is to continue globally.

Recommendations for Other Countries

Despite the generally positive experiences with the implementation of PCIT in the Netherlands, we would like to provide recommendations based on our experiences that may benefit the implementation efforts beginning or ongoing in other countries.

Have a Long-Term Vision
For PCIT implementation to be successful, it is important to have a plan that includes not only the strategies for training therapists, but also includes details about sustaining the program across time.

Infrastructure Is Important

Even apparently small details such as having clerical support or a program coordinator can help to facilitate the work of PCIT trainers and trainees. Such a support person can, for example, schedule consultation calls, keep track of competence checklists, and ensure that therapists have the measures they require.

Understand the Referral Flow

Without clients, trainees cannot practice their PCIT skills. Have conversations with stakeholders at all levels (e.g., referral sources, administrators, public relations staff) to be certain they are willing and able to direct families to the new programs.

Maintain Close Contact with PCIT International, Inc

As the organization responsible for developing training requirements and promoting the fidelity of PCIT globally, it is important to maintain open communication, ask questions, and seek support as needed. To support long-term sustainability, encourage trainees to obtain their certification as they complete their PCIT therapist training.

Present the Case for PCIT to Policy Makers

Although PCIT is a well-established parenting intervention, many policy makers prefer to see evidence for its effectiveness in their own country. Thus, testing PCIT in the country of implementation may help to demonstrate the value of the intervention to funders and policy makers. Conducting national research studies on PCIT supported by external grant organizations can facilitate the development of a long-lasting nationwide dissemination.

Communicate with Therapists, Families, and Communities

Build a national PCIT website to educate communities about the intervention. Develop a listserv for trainees and therapists to share PCIT-related materials, communicate about upcoming continuing education opportunities, or to seek support regarding a case.

Conclusions

Pathogenic parenting and child conduct problems are a global concern, making effective parent management training interventions a global need. PCIT has been transported (and is in the process of being transported) to many countries and cultures. The evidence for the effectiveness of PCIT when implemented in multiple cultures and countries suggests that the model can be transported readily while keeping its essential elements. Our experiences with the implementation of PCIT in the Netherlands found similar positive effects, both with training and with client outcome, suggesting no need for cultural adaptations. However, at least in the Netherlands, barriers remain in dissemination and implementation that must be addressed if the program is to grow. Focusing on the global transport of PCIT remains an important challenge.

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Part V

Innovations in Assessment

Dyadic Parent–Child Interaction Coding System (DPICS): An Adaptable Measure of Parent and Child Behavior During Dyadic Interactions

Melanie McDiarmid Nelson and Brian Olsen

Abstract

The Dyadic Parent–Child Interaction Coding System, fourth edition (DPICS-IV) is a flexible, but structured, behavioral observation measure used to quantify key parent and child behaviors in standardized situations. The DPICS-IV has been used extensively as an adjunct to parent–child interaction therapy (PCIT), but its utility extends to the evaluation of other parenting interventions and research objectives as well. The core features of the DPICS-IV include (1) focusing on direct observation of parent–child dyadic interactions; (2) using well-defined categories; and (3) maintaining adequate interrater reliability. These features allow for considerable flexibility with regard to the situations used, the categories used, and the way in which behavior frequencies are recorded. As a result, there have been many studies that have used the DPICS to address a wide range of clinical and research questions. This chapter reviews the development of the DPICS as well as current research incorporating the DPICS as a treatment process or outcome variable. In addition, the ways in which the DPICS has been adapted, and the process by which the DPICS is designed to be adapted is summarized. Lastly, a case example is presented to highlight how the DPICS can be adapted to suit unique clinical and research interests.

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The Dyadic Parent–Child Interaction Coding System (DPICS)

The DPICS is a systematic behavioral observation that is used as an adjunct to parent–child interaction therapy (PCIT). However, the DPICS is also a stand-alone observation measure of parent–child interactions that has been used to evaluate other parenting interventions, such as the Incredible Years (e.g., Webster-Stratton, 1994, 1998). Behavioral observations allow for more objective assessment of parent and child behaviors, avoiding potential biases that may be present in parent-report measures. Behavioral observations may also be more sensitive to treatment-related changes in parent and child behavior and show greater associations with long-term outcomes (Aspland & Gardner, 2003; Sanders, Markie-Dadds, Tully, & Bor, 2000; Webster-Stratton, 1994, 1998). Additionally, because young children are not able to reliably report on their interactions with their parents, behavioral observations like the DPICS provide unique information.

The DPICS was created in 1974 by Dr. Sheila Eyberg (Eyberg, 1974), and the first studies were published in the early 1980s (Eyberg & Robinson, 1983; Robinson & Eyberg, 1981). The DPICS was designed as a versatile and adaptable measure that could be used in evaluating parent–child dyadic interactions and serve as an index of parent and child behaviors before, during, and after treatment. Conceptualized as a method for quantifying parent–child interaction patterns, the DPICS focused on behaviors associated with effective and ineffective parenting styles as well as typical and disruptive child behaviors. The DPICS has undergone consistent refinement and revision based on research and feedback from coders to increase its utility and inter-coder reliability. In its second edition (Eyberg, Bessmer, Newcomb, Edwards, & Robinson, 1994), the DPICS included a number of new experimental categories, including categories that more specifically isolated behaviors of interest in the PCIT protocol, for example, distinguishing a Behavior Description, which is a specific skill taught in PCIT and relevant to treatment process and outcome, from an Information Description. Also included in the DPICS-II were complementary categories, that is, all categories were examined for parents and children.

The psychometric properties of the DPICS-II were widely studied, and these data informed the development of the third edition of the coding manual (DPICS-III; Eyberg, Nelson, Duke, & Boggs, 2005). In addition to updating the DPICS-II manual to reflect study outcomes, the DPICS-III manual was also developed to clarify ambiguity among categories. This process resulted in many parent categories being removed due to either their infrequency of occurrence or poor inter-coder reliability. Other parent categories were reclassified as supplemental categories because they did not demonstrate consistent discriminant validity and treatment sensitivity across studies. In addition, parent categories that showed acceptable inter-coder reliability but had been often combined in studies due to difficulty discriminating their discrete influence, were formally combined and renamed to create more inclusive categories. For instance, Parent

Negative Talk was created to include both Smart Talk and Critical Statement and Parent Neutral Talk was added, incorporating both Parent Acknowledgement and Parent Information Description. Broad Child categories were also developed to include the DPICS-II experimental child categories. Specifically, the four Child categories that were developed were: Prosocial Talk, Negative Talk, Command, and Question. Thus, by developing broad categories, researchers and clinicians were able to distinguish common behaviors with less coding effort.

The current edition of the DPICS manual (DPICS-IV; Eyberg, Nelson, Ginn, Bhuiyan, & Boggs, 2013) includes ten parent verbalization categories, two parent physical categories, four child verbalization categories, and six child response to parent question or command categories. There are an additional six supplemental parent categories and two supplemental child categories that are included in the appendix of the *Comprehensive Manual for Research and Training* (Eyberg et al., 2013). The supplemental categories were included, despite lack of clinical utility, to promote additional research endeavors. In addition, research studies such as Thornberry and Brestan-Knight (2011) and Shanley and Niec (2011), showed that parent behavior composites during warm-up periods did not significantly differ from behavior composites during coded segments, resulting in significant changes in DPICS methods from one version to the next.

The DPICS-IV manual details the method for conducting the standardized observation and provides guidelines for categorizing parent and child verbalizations and behaviors. The observation is designed to be conducted in a relatively bare treatment room with a table and three chairs (one of which is a time-out chair). Five toys are removed from their containers and distributed in the room, with two toys on the table and three toys on the floor. Each toy should have its own container and all the smaller containers should fit into a larger container, facilitating clean-up. For the purposes of pre- and posttreatment observations, it is recommended that the same toys be used, with different toys presented throughout treatment. Therefore, many therapists and researchers

have created a "DPICS kit" which includes five selected toys that are used for every pre- and posttreatment assessment to reduce unnecessary variance.

In the standard DPICS observation, the parent and child are alone in the playroom with toys available, while the observer watches from an adjacent room through a one-way mirror. The observer is able to speak to the parent privately using a "bug-in-the-ear," such as a small in-ear FM receiver, walkie-talkie with an earpiece, or a Bluetooth device. Using the "bug-in-the-ear," the observer provides the parent with directions for structuring the play with their child. Verbatim directions are provided in the DPICS manual for the assessor to follow. Following a brief warm-up period, there are three standard play-based situations, Child-Led Play (CLP), Parent-Led Play (PLP), and Clean-Up (CU), each of which is 5 min in duration. In the CLP condition, parents are directed to allow the child to lead they play and follow their child's lead. They are then directed to choose a play activity and get the child to play with them according to their rules; this is the PLP condition. Finally, parents are directed to have the child clean-up all of the toys in the playroom.

During each condition, the observer categorizes parent and child behaviors and tallies the frequency of behaviors in each category. In clinical applications, this typically involves making tally marks for each occurrence on a form designed for this purpose, and then counting the number of tally marks in each category at the end of the observation. Researchers often video-record DPICS observations so that they may document the coded categories relative to frequency and sequence of the coded behaviors.

Behavioral categories are divided into classes of behavior (see Table 1): verbalizations, parent physical behaviors and response behaviors. A fourth class, vocalizations, includes supplemental categories such as Whine and Yell. Composite categories, formed by combining two or more categories into a single coding category, are a common way in which the DPICS is tailored to a specific clinical or research purpose. Combining categories that occur infrequently may increase power to detect group differences. Commonly used composite categories, including Total Praise (Labeled Praise and Unlabeled Praise) and % Alpha Compliance (Child compliance divided by total number of commands with opportunity to comply), are provided in the Appendix of the DPICS Comprehensive Manual for Research and Training, Fourth Edition.

The DPICS is adaptable in many ways without compromising its integrity. The core features of the DPICS include (1) focusing on direct observation of parent–child dyadic interactions; (2) using well-defined categories; and (3) maintaining adequate inter-coder reliability. These features allow for considerable flexibility with regard to the situations used, the categories used, or the way in which behavior frequencies are recorded. As a result, there have been many studies that have used the DPICS in a flexible manner to address a wide range of clinical and research questions.

Research Support for the DPICS

The DPICS continues to be used frequently as an observational measure of parent and child behavior during dyadic interactions. The DPICS-IV Comprehensive Manual (Eyberg et al., 2013) summarizes the studies supporting its clinical utility and psychometric properties from 1980 into 2013. Because the DPICS-IV was published relatively recently, few published studies feature this edition (Abrahamse, Junger, van Wouwe, Boer, & Lindauer, 2016; Barnett et al., 2016; Zisser & Eyberg, 2012). However, there are many recent studies that demonstrate the reliability and validity of the DPICS-III category definitions. Most studies have included the DPICS as a process or outcome variable in treatment outcome research, but a few have specifically studied the properties of the DPICS as an observational measure of its own accord. Hurley, Huscroft-D'Angelo, Trout, Griffith, and Epstein (2014) evaluated the DPICS along with other parenting measures. The authors noted the DPICS to have acceptable inter-coder reliability and cross-informant reliability, but questionable predictive

Table 1 DPICS behavior classes and categories

Class	Category	Parent/child/both	Brief definition	Example
Verbalization	Negative Talk (NTA)	Both	Expression of disapproval or rude speech	I don't like your attitude.
	Direct Command (DC)	Parent	Declarative statement containing an order or directive for the child to perform	Put the crayon down.
	Indirect Command (IC)	Parent	Suggestion, perhaps in question form, for a child behavior; may be unclear that the child is to perform	Can you give me a red one?
	Labeled Praise (LP)	Parent	Positive evaluation of a specific child attribute, behavior, or product	You made a fantastic airplane!
	Unlabeled Praise (UP)	Parent	Positive evaluation of a nonspecific child attribute, behavior, or product	Great job!
	Information Question (IQ)	Parent	Request specific information beyond a yes/no response	What do you want to play?
	Descriptive Question (DQ)	Parent	Question that requires no more than brief yes/no response	Do you want to play blocks?
	Reflection (RF)	Parent	Repetition or paraphrasing of child's verbalization	Child: It's blue. Parent: Blue.
	Behavior Description (BD)	Parent	Declarative statements describing the child's current active and observable behavior	You are drawing a butterfly.
	Neutral Talk (TA)	Parent	Statements that introduce information or acknowledge current activity	There are lots of toys here.
	Command (CM)	Child	Telling or asking the parent to do something	Give me that one!
	Question (QU)	Child	Child's verbal inquiry of the parent that does not suggest parent is to behave in a certain way	Is it special time?
	Prosocial Talk (PRO)	Child	Declarative statement that contributes positively to the interaction	I like playing special time with you, Mom
Physical Behavior	Negative Touch (NTO)	Parent	Physical touch intended to be controlling of or agitating to the child	(holds child's wrist and takes toy away)
	Positive Touch (PTO)	Parent	Physical touch intended to be caring, helpful, or soothing	(rubs child's back)
Response	Answer (AN)	Child	Child answers parent question	Parent: What is this? Child: A bear!
	No Answer (NA)	Child	Child does not answer parent question	Parent: What is this? Child: (no response)
	No Opportunity to Answer (NOA)	Child	Child has insufficient opportunity to answer	Parent: What is this? Parent: It's a bear!
	Comply (CO)	Child	Obeying a parent command	Parent: Put it down. Child: (puts toy down)
	Noncomply (NC)	Child	Disobeying a parent command	Parent: Put it down. Child: (continues to play with toy)
	No Opportunity to Comply (NOC)	Child	Child has insufficient opportunity to comply	Parent: Put it down. Parent: (takes toy from child)

validity and no indication of convergent or discriminant validity. However, these findings were similar or superior to findings for all other parenting measures in the review that included an observational component. Although rare, the recent articles that highlight the DPICS as the primary measure of interest provide new insights into the process of the DPICS observation and associations among the parent and child behaviors elucidated by the DPICS.

DPICS as primary measure of interest. Niec, Shanley, Barnett, Baker, and Solomon (2015) are among the few who have published research on the process of the DPICS observation. In their research, 48 mother–child dyads were randomly assigned to receive the standard DPICS instructions, or more specific instructions that mentioned praising their child in the CLP and CU situations. Results suggested that providing parents with specific directions to praise their child resulted in more praise, but this did not generalize to the PLP condition, in which the specific directions did not mention praise. They also found no significant differences for other parent behaviors of interest (BD, QU, Commands, NTA) between those who received the specific directions and those who did not. They hypothesized that providing the standard directions resulted in parents' typical performance, whereas the parents gave their optimal performance when provided with more specific instructions. This research highlights the impact altering the standard instructions may have on parents' observed behavior, thereby reinforcing the consistent use of the verbatim directions provided in the manual unless there is a specific research or clinical rationale for making changes.

A study in Norway (Bjørseth, McNeil, & Wichstrøm, 2015) evaluated the DPICS as a screening measure to determine the presence of a child behavioral disorder by conducting DPICS-III observations among children with or without behavioral disorders and their parents. Their composite score comprised of parent Negative Talk, parent Indirect Command with child No Opportunity for Compliance, parent Direct Command with child Compliance, and child

command, predicted a disruptive behavior disorder diagnosis in the child, with parent Negative Talk demonstrating the most predictive power. Interestingly, parents of children with disruptive behavior gave 60% more commands than parents of typical children, whereas typical children gave more demands to their parents than children with disruptive behavior disorders.

Given that research had shown specific differences in the parenting behaviors of Mexican American (MA) parents in contrast with European American (EA) parents, McCabe et al. (2013) used the DPICS-III to determine if these differences were observable. Because the authors were working with MA families, they translated the DPICS instructions into Spanish and allowed parents to use the language they preferred. Bilingual research assistants who were trained on the DPICS-III in English coded all observations. The average kappa coefficient was 0.76 for the MA dyads and 0.88 with the EA dyads. Results supported prior research demonstrating that MA parents praised less and used more direct commands and negative talk than EA parents. However, EA parents were more likely to use indirect commands than were MA parents.

Two recent studies have explored results of DPICS observations in cases that involve Attention Deficit Hyperactivity Disorder (ADHD). In an interesting study, Li and Lee (2013) used DPICS-III composite parent categories of praise (LP + UP), negativity (NTA), and child noncompliance to assess the influence of environment on ADHD, in particular, the interactions among genetics, the environment, and ADHD symptoms. Results indicate that parent praise was modestly associated with increased ADHD symptoms but only among youth with the 9/10 dopamine transporter (DAT1) genotype, whereas parent negativity was positively associated with increased ADHD symptoms among children with the 9/9 DAT1 genotype. These results highlight the impact parenting can have in the expression of ADHD symptoms by genotype. Parenting and ADHD also intersect in the case of parents that have ADHD themselves. Zisser and Eyberg (2012) used DPICS-IV composite scales of percent praise, percent negative talk, percent

demandingness (number of commands divided by total number of verbalizations), and maternal impatience (ratio of commands with no opportunity for compliance to all commands). Their results showed that, in CLP, higher levels of self-reported maternal inattention were associated with greater maternal impatience as measured by the DPICS. By contrast, in PLP, higher levels of maternal self-reported inattention were associated with a higher percentage of parent negative talk during the mother–child interaction. Taken together, these recent studies demonstrate that the DPICS is a reliable and useful observational measure of parent and child behavior which can be used to help predict children with disruptive behavior disorders, document differences in parenting behaviors between Mexican American and European American families, and examine the role parenting skills play in the expression of maternal or child ADHD.

DPICS as a measure of treatment process and outcome. Although there have been relatively few studies specifically looking at the method or properties of the DPICS as an observational measure, a considerable number of recent research studies have employed the DPICS-III to quantify parenting behavior and child compliance in research exploring PCIT process and outcomes. Pemberton, Borrego Jr., and Sherman (2013) used time-series analysis of DPICS-III data to discover that parents' contingent PCIT skill use predicted subsequent child prosocial behavior (prosocial talk, positive touch, or compliance with parent command) in a small sample of three families. In another study assessing the training of natural helpers in the PCIT skills, the DPICS-IV was used to determine if the natural helpers were able to attain the parent skills mastery criteria, which they largely were able to do (Barnett et al., 2016). Interestingly, the natural helpers in this study were also taught to use the DPICS-IV to conduct in-home observations of the parent–child interactions. In this way, the DPICS-IV was adapted for use by natural helpers in a nonclinical setting. Results suggested that, although the natural helpers generally improved in their ability to implement the DPICS reliably,

they had difficulty attaining adequate inter-coder agreement after their initial training, but also after 6 months of consultation.

The DPICS has also been used in several studies to explore the relationship between parent and child observed behavior and treatment success. The DPICS-IV was used to document parent skill acquisition in a study by Barnett et al. (2017) looking at the relationship between PCIT therapist behavior in the first CDI coaching session and treatment completion and rate of CDI skill acquisition. Results of this study demonstrate that treatment completers had more Behavior Descriptions and fewer Questions in the first CDI coaching session than treatment dropouts, but the groups did not differ in their rates of Negative Talk. In another study of PCIT treatment completers and dropouts (Danko, Garbacz, & Budd, 2016), no differences were found between the groups at pretreatment on any parent or child DPICS category. As expected, however, treatment completers showed significant gains in their use of the PCIT Do skills (BD, RF, UP, and LP) and significant decreases in their use of the Don't skills (QU, NTA, and commands in child-led play situation only), but child compliance and noncompliance did not show significant treatment effects despite medium to large effect sizes. The authors note that, "The inclusion of observational data on parent behavior change, in addition to parent rating measures, adds to the evidence base since few community-based studies of PCIT have reported observational data on parent skill acquisition" (Danko et al., 2016, p. 44). Examining PCIT in Taiwan, the DPICS-III was translated and used to assess factors affecting attrition and PCIT treatment length. Results indicated that treatment length, but not attrition, was predicted by parent commands and negative talk at the pre-treatment assessment (Chen & Fortson, 2015). Other parent and child behaviors (Parent Do skills, Parent Don't skills, Child Compliance) were not significant predictors of treatment length or attrition in this population sample. These studies support the utility of the DPICS as an observational measure of parent and child behavior that can be used to evaluate treatment processes.

Recent studies that have used the DPICS as a treatment outcomes measure are included in Table 2. This data suggests that most recent studies used the DPICS-III, although there was a range from DPICS-R to DPICS-IV. While most studies looked at PCIT as the treatment of interest, several different versions of PCIT were being evaluated, and some studies evaluated other treatments as well. Most studies included composite parent categories related to positive parent behavior (or Do skills) and Negative parent behavior (or Don't skills). Fewer studies used child categories, which is not surprising as most child categories do not show reliable treatment effects (Eyberg et al., 2013). Notably, studies using the DPICS-IV have demonstrated its inter-coder reliability and treatment sensitivity to be comparable to previous editions (see Table 3; Abrahamse et al., 2016; Barnett et al., 2016; Zisser & Eyberg, 2012).

Modifications to the DPICS

Any time that aspects of the PCIT protocol are adapted, DPICS procedures may likewise be adapted by adding categories, altering guidelines, using new situations or removing categories/guidelines. Although PCIT has been adapted in many ways, the DPICS has remained largely unchanged in most studies. This is surprising because the DPICS is designed to allow clinicians and researchers to create new situations or categories to suit new applications (Eyberg et al., 2013). However, very few have taken advantage of this key feature of the DPICS despite theoretical and empirical support for making such changes.

One way in which the DPICS has been adapted is through translation of the procedures and coding guidelines into other languages. However, few research studies have been published to date using these translated manuals. McCabe et al. (2013) translated the DPICS instructions into Spanish to give Mexican American parents a choice of completing the parent–child interaction in their preferred language. However, they used bilingual coders so a translated DPICS manual

with coding guidelines in Spanish was unnecessary. Researchers in Norway have also been able to take advantage of bilingual coders who can use the English manual (Eyberg et al., 2005) to code dyads speaking in Norwegian (Bjørseth & Wichstrøm, 2016). One study of interactions between Turkish mothers and their 3-year-old children noted that "the original DPICS manual was translated to Turkish and adapted to assess relevant interactions in Turkish families" (Akcinar & Baydar, 2014). They further noted the creation of four unique composite categories which they felt represented varied parenting styles in Turkish families: behavioral control (DC, IC, play directives, rules and warnings about play behaviors), psychological control (threats of guilt induction and removal of affection, negative talk, critical statements, and not responding to child in order to emotionally isolate the child), physical control (inflicting pain, restraining, forcing, pulling, pushing, intruding or interrupting, threats of physical or hurtful punishments), and maternal warmth (positive touch, LP, UP, acknowledgements). Child externalizing behavior was also included as a composite category, comprised of child categories of smart talk, oppositional behaviors, destructive behaviors, and physically negative child behaviors. Further details regarding the ways in which guidelines were adapted were not included, nor were data regarding the psychometric properties of this translated DPICS.

Different situations, beyond the Child-Led Play, Parent-Led Play, and Clean-Up have also been used to structure the parent–child dyadic interaction being observed. Pincus, Santucci, Ehrenreich, and Eyberg (2008) used a situation in which a confederate unfamiliar to the child enters the room to assess parents' acquisition and use of skills for addressing their child's anxiety. Furthermore, they devised new categories to reflect important dyadic behaviors when treating separation anxiety: parent praise of child's brave behavior and parent reflecting the child's emotion. The Selective Mutism Interaction Coding System (SMICS) builds on Pincus' work by incorporating a new situation and new behavior categories that reflect the unique aspects of treating

Table 2 Recent studies using DPICS as a measure of treatment outcome

Study authors	Year	DPICS version	Treatment used	Parent categories/composites used	Child categories/composites used	Coder training procedures described	Inter-coder reliability reported
Abrahamse et al.	2016	IV	Community-based PCIT	% Positive following, % Negative leading, Total praise, Demandingness	Inappropriate behavior, % compliance	Yes	Yes
Bjørseth and Wichstrøm	2016	III	PCIT in Norway	Do skills, Don't skills	–	Yes	Yes
Chronis-Tuscano et al.	2013	III	Integrated parenting intervention for ADHD	Positive parenting, Negative parenting	Deviance	No	No
Chronis-Tuscano et al.	2016	III	PCIT with emotion coaching	Positive parenting, Negative talk	–	Yes	No
Fabiano et al.	2012	II	COACHES	Total commands, total praise, total negative talk	–	No	Yes
Foley, McNeil, Norman, and Wallace	2016	III	Group PCIT	Positive talk, Negative talk	–	Yes	No
Galanter et al.	2012	III	In home PCIT	Positive parent behaviors, Negative parent behaviors	Compliance	No	No
Garcia et al.	2016	III	PCIT	Do skills, Don't skills	–	No	No
Graziano et al.	2015	III	PCIT	Do skills, Don't skills	Compliance	Yes	Yes
Lesack, Bearss, Celano and Sharp	2014	III	PCIT for a child with severe developmental delays	All	Compliance	No	No
Mersky, Topitzes, Janczewski, and McNeil	2015	II	Brief PCIT, extended PCIT, wait-list control	Labeled praise, negative talk, positive parenting composite, negative parenting composite	–	Yes	No
Pearl et al.	2012	III	Community based PCIT	PRIDE phrases, Avoid phrases	–	No	No
Posthumus et al	2012	R	Incredible years	Critical statements, Labeled praise	Conduct problems	Yes	Yes

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Table 3 Interrater reliability estimates (kappa statistic) for DPICS-IV categories

Study	Parent (P) or child (C)	Zisser and Eyberg (2012)	Abrahamse et al. (2016)	Barnett et al. (2016)[a]
Direct command	P	0.84	0.67 (lowest observed parent category)	Range of 0.77 to 0.99 for all parent categories except questions
Indirect command	P	0.71	–	
Labeled praise	P	0.68	–	
Unlabeled praise	P	0.81	–	
Reflection	P	–	–	
Behavior description	P	–	–	
Neutral talk	P	0.74	–	
Negative talk	P	0.71	–	
Questions	P	–	0.80 (highest observed parent category)	0.64
No opportunity to comply	C	0.66	–	–
Yell	C	–	0.68 (lowest observed child category)	–
Negative talk	C	–	0.91 (highest observed child category)	–

Note. [a]In this study, DPICS observations were conducted primarily in Spanish and coded by trained bilingual graduate students

children with selective mutism (Carpenter, Puliafico, Kurtz, Pincus, & Comer, 2014). Parent and child behavior is observed as parents are directed to ask their child different types of questions with and without a confederate stranger in the room. Further, the SMICS divides the DPICS category of questions into three categories (yes/no, forced choice, or open-ended) and labeled praise into two categories (praise for verbal behavior and other praise). A new category was also added to the SMICS, mindreading, which is defined as the parent speaking for the child as if the parent knew what the child wanted to say. Although additional research is needed, preliminary evidence suggests that the SMICS can be coded reliably and it is clinically helpful in assessing skill mastery in SM treatment.

The current literature in PCIT opens up many additional possibilities for extending the DPICS to new populations and applications. For example, researchers working with toddlers and children with autism spectrum disorders have suggested that the Reflection category may need to be altered to include parents' attempts to reflect communicative sounds and word-attempts (Bagner et al., 2016; Lesack, Bearss, Celano, & Sharp, 2014). Likewise, Bigfoot and Funderburk

(2011) advocated for extending the coding interval to accommodate a slower speaking rate in Native American populations. Whereas the categories and coding guidelines may remain the same, the location where the DPICS observation takes place may also be altered, such as in the case of in-home PCIT (Galanter et al., 2012). New categories, such as parent emotion coaching (e.g., "I see you are frustrated"), describing the feared situation (e.g., "There is a new person in the room that you don't know"), and direct command for approach (e.g., "Hand a block to the new person"), are suggested by the research by Chronis-Toscano et al. (2016) and Comer et al. (2012) in their work with children with ADHD and anxiety, respectively. Based on research looking at parenting and PCIT with unique populations, it may be useful to refine the DPICS categories to more clearly quantify emotional responsiveness or enthusiasm for military parents (Pemberton, Kramer, Borrego, & Owen, 2013) or nonverbal communication strategies for Maori families (Capous, Wallace, McNeil, & Cargo, 2016). Similarly, given cultural preferences that are in many ways inconsistent with Labeled Praise in Chinese families (Leung, Tsang, Heung, & Yui, 2009), it may be useful to develop a

category to measure indirect praise to inform the implementation of PCIT in this population. New categories or coding guidelines that reflect how children with Autism Spectrum Disorder interact with their parents, given the difficulties with social communication inherent in the disorder, may support research to evaluate interventions for this population. In this case, developing child categories that reflect the child's social awareness and play behaviors may be particularly useful (Ginn, Clionsky, Eyberg, Warner-Metzger, & Abner, 2015). Adapting the DPICS to address these research findings may create additional clinical and research opportunities, such as using a DPICS category assessing emotional responsiveness that was developed for a military population when working with parents with depression or autism spectrum disorder, as they may also have difficulty with emotional responsiveness.

Advantages and Challenges in Implementing the Adaptation/ Paradigm

There are many advantages to implementing new adaptations of the DPICS. When modified appropriately, adapted DPICS observations can be used to describe important and unique behaviors that take place during parent–child interactions in new situations or populations wherein the reliability and validity of using the standard DPICS is unconfirmed. However, new adaptations require systematic conceptualization and evaluation before they can be used widely. Currently there are many working adaptations of the DPICS procedures and categories, but few have been shared widely in the literature on DPICS and PCIT. Instead, DPICS-related studies are more often presented at conferences as posters or symposia. For example, data regarding the reliability and validity of the DPICS translation completed in Taiwan was presented in a poster at the 2013 PCIT International Convention in Boston, Massachusetts (Chen, Tseng, & Fortson, 2013). Although often a good initial outlet for sharing new empirical information, conference poster presentations and other

proceedings are often not peer-reviewed and are limited in scope, resulting in less dissemination of the translation, and fewer opportunities for others to adopt the adapted protocol. This is true of other adaptations of the DPICS as well, including the SMICS, which is a resource for use in the treatment of selective mutism (Carpenter et al., 2014). It is also true that DPICS-related research is completed as theses or dissertations, which also have limited reach, especially if they are not submitted for journal publication. PCIT clinicians in the community who are implementing adaptations of PCIT, and by extension DPICS, may not have ready access to journal articles. Without adequate awareness and dissemination of adaptations, multiple clinical groups and researchers may develop similar, but different, adaptations in isolation, losing the opportunity for collaboration and consistency.

The challenge of disseminating clinical and research advances in the DPICS is not insurmountable. Just as the community around PCIT has increased communication among providers and researchers over the last 15–20 years through biannual conferences and other activities of PCIT International, communication around the DPICS is likely to flourish as well. However, it is important to continue to promote sharing of clinical insights and research results. It is necessary to promote more published research in the DPICS; indeed, published studies using the DPICS-IV, despite its being over 5 years old, are still rare, limiting our understanding of its applications, reliability, and validity independent of previous editions. Additional published research exploring the psychometric properties of the DPICS-IV may also expand the scope of the DPICS beyond its current use in PCIT and a small set of other behavior parent training programs. One approach to remedying this discrepancy is to encourage more authors of journal articles that include the DPICS to also include more detailed information on (1) how the DPICS was implemented, including any adaptations made with regard to procedure or coding guidelines; (2) how coders were trained; and (3) estimates of interrater reliability for the project sample. The recent literature as presented in Table 2 highlights the need for more

consistency in reporting these details around DPICS adaptations.

Necessary steps to adapting the DPICS. Since the inception of the DPICS, its developers have responded to new research by translating the findings into changes in the measure. As such, the more research available, the more informed and useful the DPICS will be in the future as well. There remains much to be understood about the standard DPICS. Current adaptations continue to need evaluation, and new adaptations should not be undertaken without careful consideration of (1) whether a need truly exists and (2) the steps to the development of a reliable and valid assessment tool.

The first step in adapting the DPICS is to consider if an adaptation is necessary. In some cases, such as translating the DPICS coding guidelines into another language, it is fairly clear that the English guidelines are not effective for therapists and coders who do not speak English, or those who are observing families using a language other than English. Whereas the coding guidelines must be adapted in these circumstances, it is less clear, for example, that the DPICS procedures would also need to be altered. In contrast, application of the DPICS in the home setting may require slight adaptation of the DPICS procedure without altering the coding guidelines. In other circumstances, it may be less clear that an adaptation is needed, that is, it may be that the standard DPICS procedures and coding guidelines are sufficient for the desired purpose but they have never been tested for that purpose. In these cases, evaluating the utility of the standard DPICS in the new application is recommended before making any alterations.

If it is determined that an adaptation is required, all changes should be informed by the available research and reflect a clear theoretical basis. Adaptations may also be based on clinical experience and training. When considering adapting aspects of the DPICS, it is also critical to consider consistency in procedure (i.e., can others conduct the observation in the same way?) and inter-coder reliability (i.e., will multiple raters agree on how a particular behavior

should be coded?). For example, when considering changes the guideline for coding reflections of communicative sounds, it would be necessary to provide guidance on what types of sounds would be suitable. However, it may also be necessary to develop guidelines for determining how to distinguish one vocalization from multiple vocalizations without words, as this level of coding detail is likely to impact inter-coder reliability.

Lastly, it is important to test the adaptation to determine if it can be implemented with adequate reliability and validity. It is advisable to evaluate reliability and validity in a small pilot sample first, and consider modifications to increase its utility if warranted, with additional iterations as needed. However, before an adaptation is implemented widely for a particular application, it should have demonstrated reliability and validity in a sample of sufficient size for reliable statistical estimates. It is worth noting that validity and reliability often work at cross-purposes. That is, factors that make an adapted coding guideline more valid for instance, may result in poorer inter-coder reliability, such as if a coding guideline was added to categorize a verbalization as a command "if the parent clearly means for the child to do something." Whereas this adapted guideline might increase the face validity in that it seems more reasonable to code a parent saying "Over there" while pointing at the toy bin as a command, it would be challenging to maintain a high standard of inter-coder reliability if relying on individual interpretations of parent intent. However, maintaining both adequate validity and adequate reliability are critically important in the dissemination of DPICS adaptations.

Perhaps the relatively limited number of articles related to DPICS is not surprising given that the fourth edition of the DPICS manual was the first to be formally published and much of the data presented as evidence of its reliability and validity also came from unpublished data sets. Nevertheless, as evidenced by the growing amount of published research incorporating the DPICS in many ways, the demand for a psychometrically sound behavioral observation

measure of parent–child interactions is strong. The DPICS has demonstrated its utility in a wide variety of applications, and its scope is likely to continue to grow.

Case Example

Veronica was a 3-year-old female who was removed from her biological parents at birth when she tested positive for methamphetamine. She was born at 29 weeks' gestation, requiring 8 weeks of care in the neonatal intensive care unit (NICU). Her medical history was significant for being small for gestational age, experiencing a perinatal intraventricular hemorrhage, and multiple episodes of apnea in the first 40 days of life. Upon discharge from the NICU, she was placed in the home of foster parents, Adam and Monica Grant, who subsequently adopted her. Veronica was delayed in meeting her major motor milestones, such as sitting up and walking, as well as language development. At age 18 months, Veronica was using good eye contact and gestures to express her needs, but had not begun using words. Mrs. Grant took her concerns to Veronica's pediatrician, and a referral was made to the state's early intervention program. Veronica received physical therapy and speech therapy from age 18 months to 3 years. At that time, Veronica received a comprehensive evaluation which revealed mild delays in cognitive development, fine motor delays, and a receptive-expressive language disorder. Veronica was also experiencing significant behavioral difficulties including hyperactivity, impulsivity, and aggressive behavior. She had been expelled from 2 day-care centers due to repeated episodes of aggression toward other children and rule-breaking behavior. Her parents report fewer behavior problems at home, although the evaluation report noted that Veronica repeatedly pulled her mother's hair and hit her father during the parent interview. Although continued speech therapy and occupational therapy (OT) were recommended, the Grants discontinued these services after Veronica ran from her occupational therapist during a session, leaving the building and running into a busy parking lot.

Veronica was referred for PCIT to address these behavioral concerns. Her therapist, Ms. Gillikin, decided that PCIT would be appropriate for Veronica, now 3, to address her disruptive behavior, and increase Veronica's cooperation with OT and speech therapy.

Ms. Gillikin noted that Veronica spoke very little during the DPICS observation (see Table 4 for results), using mostly single words or rote phrases (e.g., "Got it" and "too much"). Her play skills appeared limited; she played with blocks by repeatedly stacking three to four blocks and knocking them down. No pretend play was observed, and she appeared to quickly become bored with the toys. She spent much of the play-time engaging in negative attention-seeking behaviors, such as throwing crayons and stepping on toy animals. Mrs. Grant tried to manage this behavior by using repeated, ineffective commands. Mrs. Grant also used questions and neutral talk to try and engage Veronica in more appropriate play. Clean-up was characterized by Mrs. Grant asking Veronica to clean-up repeatedly, but Veronica refused and escalated to

Table 4 Pretreatment DPICS results for both parents

Mother	TA	BD	RF	LP	UP	QU	NTA	DC/CO	DC/NC	DC/NOC	IC/CO	IC/NC	IC/NOC
CLP	22	0	4	0	2	18	2	0	0	3	1	0	5
PLP	17	1	3	0	2	33	0	0	0	1	0	5	7
CU	3	0	0	0	4	21	5	1	2	2	2	4	19
Father	TA	BD	RF	LP	UP	QU	NTA	DC/CO	DC/NC	DC/NOC	IC/CO	IC/NC	IC/NOC
CLP	3	0	0	0	1	5	1	1	0	3	0	0	0
PLP	6	1	1	0	0	9	0	2	2	0	1	0	3
CU	12	0	0	1	1	4	2	0	1	4	2	0	7

aggressive behavior. At this point, Mrs. Grant cleaned up most of the toys herself as she continued to try to persuade Veronica to help.

In the DPICS observation with Veronica and her father, Ms. Gillikin noted that Mr. Grant was relatively quiet and unengaged in the child-led play situation, but he was more involved once he was instructed to take a leading role in the parent-led play and clean-up. He used mostly questions, neutral talk, and commands in his interactions. Veronica played repetitively with toy food and animals, but without interference from her father, her behavior did not escalate to disruptive or aggressive behavior. Despite instructions to the contrary, Mr. Grant cleaned up most of the toys during the parent-led play situation, but Veronica cleaned up the rest of the toys on her own during the clean-up situation.

Both parents indicated that Veronica's behavior during the observation was fairly typical, but noted that they usually do not ask Veronica to clean up at home.

Based on Veronica's history, and what she observed during the pretreatment DPICS observation, Ms. Gillikin decided that PCIT would be appropriate for Veronica and her parents. She planned to tailor the treatment to address Veronica's poor play skills and limited speech and language skills. In order to track change in these factors over the course of treatment, Ms. Gillikin resolved to assess play skills and child

verbalizations. She decided to record these behaviors in several ways. First, she would tally each time the child vocalized, noting if it was an intelligible word or an unintelligible sound. She also would record when the parent reflected the child's nonword utterances. Although these parent verbalizations are not coded as reflections per DPICS-IV guidelines, they are conducive to developing Veronica's speech and language skills. To measure play skills, during the CDI coding portion of each session, Ms. Gillikin would note which types of play were used (e.g., sensory, solitary, parallel, cooperative, pretend) and how many toys the child engaged with during the 5-min observation. Lastly, she noted if Veronica engaged in any aggressive behavior during the coding observation.

The family participated in six coaching sessions until CDI mastery was achieved (see Tables 5 and 6).

In addition to reviewing parents' use of the CDI skills in each CDI coaching session, Ms. Gillikin reviewed the child's use of verbalizations, type of play, presence or absence of aggressive behavior, and number of toys used. She demonstrated that the child used more verbalizations over time, showed more cooperative and pretend play, displayed less aggressive behavior, and tended to stay with a toy longer over the course of CDI. At the last coaching session, Mrs. Grant's raw ECBI scores were 145 (Intensity)

Table 5 In-session DPICS coding data for both parents

CDI session	Parent	TA	BD	RF	LP	UP	QU	CM	NTA
1	Mother	14	3	6	2	6	5	0	0
2	Mother	23	5	7	4	10	3	0	0
3	Mother	17	7	7	5	4	1	1	0
4	Mother	31	11	9	13	4	6	0	2
5	Mother	16	10	13	11	3	0	0	0
6	Mother	20	11	16	10	0	0	0	0
1	Father	21	1	3	1	5	7	0	0
2	Father	27	0	8	4	1	9	0	1
3	Father	19	4	4	7	2	2	1	0
4	Father	12	7	6	8	0	0	2	0
5	Father	18	7	9	13	4	0	0	0
6	Father	9	10	18	11	0	0	0	0

Table 6 Additional data collected by therapist during CDI coding observation

CDI Session	Parent	C-voc	C-verb	RF-voc	Sensory play	Solitary play	Parallel play	Cooperative Play	Pretend play	Aggressive behavior	# toys
1	Mother	13	8	2	✓	✓				✓	3
2	Mother	7	9	7	✓	✓	✓				3
3	Mother	11	13	8		✓	✓		✓	✓	2
4	Mother	6	11	6	✓		✓				2
5	Mother	9	14	9		✓	✓	✓	✓		1
6	Mother	5	16	4			✓	✓			1
1	Father	8	3	1	✓	✓				✓	3
2	Father	4	11	2	✓		✓	✓			3
3	Father	15	8	8	✓	✓					3
4	Father	10	12	5		✓	✓	✓		✓	2
5	Father	2	10	1			✓	✓	✓		2
6	Father	7	20	6	✓		✓		✓		1

and 17 (Problem). Mr. Grant' scores were 131 (Intensity) and 7 (Problem).

Veronica had made significant progress in her play behavior during the CDI phase, so Ms. Gillikin opted not to continue recording child verbalizations and vocalizations, aggressive behavior and play behaviors in the PDI phase of treatment. The PDI phase of treatment continued relatively unremarkably, and the parents were able to master the basic PDI skills in four sessions (see Table 7). However, the Grants continued to struggle to manage Veronica's hyperactive and impulsive behaviors, particularly interrupting and invading others' personal space. It appeared to Ms. Gillikin that the Grants were adept at using play-based commands, but found real-life commands, particularly commands for the opposite of problematic behavior, quite challenging. Ms. Gillikin also noted anecdotally that parents had moved away from praising Veronica for compliance, instead providing a label praise for the action itself (i.e., saying "Thank you for handing me the toy" instead of "Thank you for minding"). In order to provide more specific feedback to Veronica's parents starting after PDI coach 5, Ms. Gillikin made note whether commands given during PDI coding were play-based vs. real-life. She was able then to show the parents that they gave exclusively play-based commands, and coach them to use more real-life commands. She also noted if a labeled praise referred to compliance (LP-co) or actions (LP-

ac). She provided parents with this feedback after coding each one, and coached them to praise compliance after each command. Once parents understood these distinctions, they were able to reach PDI mastery criteria while using strategic commands that best addressed Veronica's challenging behavior. As a result, they were able to reduce their ECBI intensity raw scores to 108 and 91, respectively for Mrs. and Mr. Grant, with problem scores of 6 and 2. At graduation, Mrs. Grant noted that family members had commented on the improvements in Veronica's behavior and her current daycare provider had reported no aggressive behavior in the past 2 months. Veronica had renewed OT services in the prior month and the Grants indicated that Veronica has been cooperative. Due to her success with OT, Veronica was scheduled to resume speech therapy as soon as she completed PCIT with her parents.

In the posttreatment DPICS observations with each of Veronica's parents (Table 8), Ms. Gillikin noted that Veronica played cooperatively with both parents, and willingly cleaned up the toys with minimal directions required from her parents. Although parents' skills were not observed to be at mastery levels, it was clear that Veronica and her parents had made significant improvements over the course of treatment. Furthermore, they were able to use the PCIT skills flexibly and effectively with Veronica in each situation. The Grants reported that Veronica's cooperative

Table 7 In-session PDI Coding results

PDI session	Parent	% effective commands	% child compliance	% correct follow-through	% real-life commands	% LP-co
3	Mother	67	100	83	0	50
4	Mother	80	88	100	13	57
5	Mother	88	86	100	71	86
6	Mother	84	100	100	80	80
7	Mother	100	100	89	89	78
8	Mother	100	100	100	92	100
3	Father	44	75	75	0	25
4	Father	87	100	92	38	31
5	Father	56	80	75	67	50
6	Father	80	100	75	80	100
7	Father	90	100	89	68	100
8	Father	100	100	100	67	100

Table 8 Posttreatment DPICS results for both parents

Mother	TA	BD	RF	LP	UP	QU	NTA	DC/CO	DC/NC	DC/NOC	IC/CO	IC/NC	IC/NOC
CLP	23	16	9	13	5	0	0	0	0	0	0	0	0
PLP	26	4	8	6	2	1	0	3	0	0	1	0	1
CU	17	12	4	16	0	0	0	2	0	0	0	0	0
Father	**TA**	**BD**	**RF**	**LP**	**UP**	**QU**	**NTA**	**DC/CO**	**DC/NC**	**DC/NOC**	**IC/CO**	**IC/NC**	**IC/NOC**
CLP	31	14	12	8	16	0	0	0	0	0	0	0	0
PLP	27	5	7	9	12	0	0	2	0	1	0	0	0
CU	5	7	11	14	8	0	0	4	0	0	0	0	3

behavior observed during the assessment was typical for her of late. Ms. Gillikin provided the Grants with feedback on their use of the skills and praised them for completing PCIT.

Based on her experience with this case, Ms. Gillikin decided to conduct a small clinical research study investigating the association between parents' use of real-life commands in session, and parents' report of hyperactive and impulsive behavior. Namely, she was interested in whether parents who rated their child as having high levels of hyperactivity and impulsivity used more real-life commands in PDI sessions than parents who rated their children as having fewer symptoms of hyperactivity and impulsivity. Before undertaking this project, she developed a detailed definition of real-life commands and generated several guidelines for distinguishing real-life commands from other sorts of commands. She video-recorded five DPICS observations and coded all commands not as Direct Command (DC) or Indirect Command

(IC), but as Real-Life Command (RLC) or Other Command (OC). She asked three colleagues to do the same, and calculated the inter-coder reliability. Based on this pilot data, she revised the coding guidelines for these new categories. She and her colleagues coded an additional five DPICS observations to determine inter-coder reliability. Using the guidelines she developed, they attained a kappa coefficient of 0.82. She then felt confident using her new categories in a research capacity and looked forward to sharing the results of her work with others.

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Therapist–Parent Interactions in PCIT: The Importance of Coach Coding

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Abstract

Therapist coaching (i.e., in vivo feedback) of parent behaviors is a core component of parent–child interaction therapy (PCIT). Coaching allows therapists to teach and reinforce parenting behaviors in the moment that they occur. Until recently, limited research had investigated the types of coaching skills that were associated with improved parent skill development and engagement in treatment. This chapter will review efforts to date to measure and evaluate the role of therapist–parent interactions on PCIT using the Therapist–Parent Interaction Coding System (TPICS). The TPICS measures the types of coaching techniques therapists use (e.g., modeling a skill, praising the parent's skill use) and the parent behaviors targeted (e.g., behavior descriptions, questions). Coaching techniques are categorized as being directive (i.e., telling a parent what to do) or responsive (i.e., reinforcing a parent's behavior). Based on the research on therapist–parent interactions, recommendations will be made on how the assessment of therapist behaviors can be used to improve training and supervision in PCIT.

At the core of parent–child interaction therapy (PCIT) is a focus on how moment-to-moment interactions impact the parent–child relationship. Historically, less attention has been given to how interactions between therapists and parents influence the therapeutic relationship and course of treatment. Recently, a measure of therapist behaviors was developed, which allows for the exploration of how therapist–parent interactions relate to parents' skill development and engagement in treatment (Barnett, Niec, Acevedo-Polakovich, 2014; Barnett et al., 2015). Understanding how therapist behaviors in PCIT influence treatment outcomes is critically important to maximize the success for the families served. This chapter will review efforts to date to measure and evaluate the role of therapist–parent interactions in PCIT. Based on the research on therapist–parent interactions, recommendations will be made on how the assessment of therapist behaviors can be used to improve training and supervision in PCIT.

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The Role of Therapist Behaviors in the Treatment Process

Abundant evidence supports the role of the therapeutic alliance on treatment outcomes, but fewer studies have identified how therapeutic techniques impact this relationship (Ackerman & Hilsenroth, 2003). Understanding the impact of therapist behaviors on fostering a positive therapeutic relationship could have important implications for treatment engagement and outcomes, as parents have identified problems with the therapeutic relationship as the factor that most impacted their decision to terminate treatment for their child (Garcia & Weisz, 2002; Stevens, Kelleher, Ward-Estes, & Hayes, 2006). In the psychotherapy processes literature, therapeutic techniques such as exploration, reflection, noting past therapy success, and facilitating the expression of affect have all been associated with improved therapeutic relationships (Ackerman & Hilsenroth, 2003).

In parent training programs, therapists' use of active listening techniques, (e.g., acknowledgment, reflective statements), empathy, and use of role-plays have been associated with improvements in parenting skills (Eames et al., 2009). On the other hand, directive techniques, such as teaching child management procedures or confronting parents, have been associated with greater resistance in treatment (Patterson & Forgatch, 1985). Specific to PCIT, therapist communication style during the intake and an early treatment session predicted treatment completion, with improved results when therapists used more facilitative statements and fewer closed-ended questions and supportive statements (e.g., "That sounds really hard") during initial treatment sessions (Harwood & Eyberg, 2004). This study specifically looked at therapist behaviors outside of "coaching," the in vivo prompts and feedback that therapists provide to parents as they practice the targeted parenting skills with their child. However, the majority of therapist–parent interactions in PCIT take place within the coaching context, and therefore it is critical to identify how different feedback techniques impact treatment engagement and outcomes.

Coaching in PCIT

The use of coaching as the primary strategy to teach and reinforce parenting skills is recognized as a defining feature of PCIT, which sets it apart from other parent training programs. By providing parents with in-the-moment feedback on the skills they are learning, PCIT therapists are able to immediately reinforce or correct a parent's skill use. Accumulating evidence suggests that coaching is a mechanism of change in PCIT and other parenting programs that use this teaching strategy. An analogue study demonstrated that parents who received coaching showed improved parenting skills, whereas parents who did not receive coaching declined in their skill use (Shanley & Niec, 2010). In community implementation of a home visitation intervention for infants with attachment problems, clinician frequency and quality of in-the-moment feedback predicted positive changes in parenting behaviors and retention in care (Caron, Weston-Lee, Haggerty, & Dozier, 2016; Caron, Bernard, & Dozier, (2016). Furthermore, a meta-analysis of parenting programs found that programs that provide opportunities for the parent to practice skills with their child and receive immediate feedback have larger treatment effects (Kaminski, Valle, Filene, & Boyle, 2008).

Even though researchers and clinicians recognize that coaching is a key component that makes PCIT effective, it is not certain what style or frequency of coaching leads to the quickest rate of skill acquisition in parents or improved engagement in treatment. However, expert recommendations regarding coaching suggest the following basic principles. First, PCIT coaching should be guided by weekly assessments of parenting skills and child behaviors. Second, therapists should use behavioral principles in their coaching by reinforcing parents for their positive behaviors and selectively ignoring minor mistakes. In general, it is recommended that PCIT therapists stay positive in their coaching and avoid critiquing parents, as this may increase anxiety and resistance in treatment. Finally, as PCIT therapists provide moment-to-moment feedback while the parent practices skills with their child, the coaching statements need to be as quick and unobtrusive to the parent–

child interactions as possible. These principles are expanded upon in the following sections.

Assessment-guided coaching. One important aspect of PCIT coaching is that it is based on weekly behavior observation of a parent's skill level at the beginning of each coaching session. Therapists use the Dyadic Parent–Child Interaction Coding Systems, Fourth Edition (DPICS-IV; Eyberg, Nelson, Ginn, Bhuiyan, & Boggs, 2013) to measure parents' use of targeted parenting skills in the child-directed interaction (e.g., *labeled praises, behavior descriptions*) and PDI (e.g., *direct commands*). The DPICS behavior observations are used to determine when a parent has reached mastery criteria in each phase of treatment (i.e., *ten labeled praises*, *ten reflections*, *ten behavior descriptions*, and less than three combined *questions*, *commands*, and *criticisms*). During coaching sessions, therapists use the DPICS behavior observations to determine which parenting skills require more attention to reach this mastery criteria. For example, if a parent used eight *behavior descriptions*, seven *reflections*, three *labeled praises*, and nine *unlabeled praises*, the therapist would be able to identify that helping the parent make *unlabeled praises* into specific, *labeled praises* would help the parent demonstrate a high level of mastery of this skill. Therefore, the therapist might set a goal for the parent to label all of their unlabeled praises, and would use a variety of teaching and reinforcing strategies to help the parent do this in session. Beyond the measurement of the parent behaviors, therapists can use the parent's weekly report of child behaviors on the Eyberg Child Behavior Inventory (ECBI; Eyberg & Pincus, 1999) to determine behaviors they might want to help the parent reinforce in session. For example, if the parent endorsed that the child whined frequently throughout the week, the therapists might use coaching to prompt and reinforce a parent to provide strategic attention to this behavior by ignoring whining and praising instances when the child used a calm voice.

Coaching styles. Another important aspect of coaching is the style in which therapists promote parental skill development. Coaching techniques that therapists use to change parent behaviors have been identified as being *directive* or *responsive* (Borrego & Urquiza, 1998). Directive techniques tell the parent what to do and are used as a teaching tool (e.g., "Tell Johnny, 'great job building that tower.'"), whereas responsive techniques reinforce the parent's use of a skill (e.g., "That was an excellent *labeled praise*."). Directive strategies are helpful when a parent is first learning a parenting skill and struggles to generate these skills independently, whereas responsive techniques can be used throughout treatment to reinforce a parent's positive behaviors. Therapists should use responsive techniques frequently as a way to shape the parent's behavior, because the social reinforcement (e.g., therapist's praise) promotes behavior change in a parent. Even when therapists use directive coaching statements, they should reinforce the skill they had a parent use with a responsive statement. The following example demonstrates how a therapist would reinforce a parenting skill that they directed a parent to use:

Therapist: "Tell him, 'Thank you for sharing with me.'"
Parent: "Thank you for sharing with me."
Therapist: "Great labeled praise!"

A third style of coaching has been classified as *constructive criticism* (Herschell, Capage, Bahl, & McNeil, 2008). Constructive criticism in coaching provides the parent with corrections of their use of parenting skills (e.g., "Whoops, you just asked a question."). It is recommended that therapists avoid using constructive criticisms with parents in the initial sessions of treatment to increase a parent's comfort in treatment, and predominately stay positive with their coaching throughout treatment (Eyberg & Funderburk, 2011). Surprisingly, one study on coaching style found that parents acquire skills at a higher rate when coaching statements include more constructive criticism than positive statements (Herschell et al., 2008). However, the generalizability of these findings is limited because they are based on a community sample

that primarily consisted of middle class, highly educated, Caucasian mothers, who may have responded differently to constructive criticism than a clinical population. Furthermore, the experimental nature of the study did not require follow-through from the mothers (e.g., returning for multiple sessions of treatment, completing homework), and therefore it is impossible to know how communication style would have impacted engagement in treatment. Therefore, it is still clinically recommended to limit this type of coaching verbalization.

Beyond these overarching recommendations regarding therapist feedback styles, it is important to recognize that different coaching approaches are needed to meet the demands of the child-direct interaction (CDI) and parent-directed interaction (PDI) phases of treatment. PCIT coaching employs a parallel process to the parenting skills taught in CDI and PDI. In CDI, while parents are being taught to follow their child's lead, therapist coaching follows the parent's lead. Therapists are encouraged to use labeled praises and other responsive techniques to shape and reinforce parent skill use, while limiting their use of directive or critical statements. Similarly to how parents are taught to selectively attend to behaviors that they do not want to see in their children (e.g., ignoring rough play while praising playing gently with the toys), therapists in CDI strategically ignore parent behaviors they want to eliminate (e.g., questions) while providing positive attention for targeted skills. For the most part, therapists are able to reduce the use of "don't behaviors," which include asking questions, giving commands, and criticizing the child, through selective attention in their coaching, though they occasionally use gentle corrections to further eliminate these parent verbalizations.

On the other hand, PDI has parents learn more directive approaches to address defiance in their children. Parents learn how to give effective commands with consistent, scripted follow-up. As opposed to coaching in CDI, coaching in PDI needs to be very directive, particularly early on in this phase of treatment, to guarantee that parents give direct and appropriate commands and employ the correct follow-up procedure. This

means that coaches tell the parents exactly what to say, and they immediately correct any errors in the procedure to make sure the child learns the consequences related to compliance and non-compliance. As demonstrated in the following example, therapists should instantly correct a parent who gives an indirect command when practicing minding with their child:

Therapist: "Ok, we are going to practice another command. Give Manuel a direct, specific command."
Parent: "Can you hand me –."
Therapist: "Make that direct. Hand me…."
Parent: "Hand me that blue car."
Therapist: "Excellent direct command."

Measuring Therapist Behaviors

Behavior observation measures of therapist–parent interactions are important tools to understand strategies that lead to improved clinical outcomes and to evaluate therapist competence in delivering a parenting program (Eames et al., 2009; Harwood & Eyberg, 2004; Patterson & Forgatch, 1985). For PCIT, it is imperative that this measure specifically investigates coaching, as this is the defining feature of the intervention. Understanding what "good" coaching looks like is critically important, especially as PCIT becomes a widely disseminated treatment in community settings across the United States and worldwide. Coaching requires a unique skill set that differs from traditional approaches to therapy or parent training. As opposed to discussion-based and didactic strategies, coaching is fast paced and requires the therapist to respond to both the parent's and the child's behaviors in the moment that they are occurring. Furthermore, these live interactions do not allow for the amount of control (e.g., being able to pause or repeat an experience) that is used in role-playing situations. Therefore, when therapists are gaining proficiency in PCIT, they are faced with acquiring new strategies in how to interact with parents. Training successful PCIT therapists requires that they demonstrate strong coaching competency in

the CDI and PDI phases of treatment. Therefore, it is important that PCIT researchers, supervisors, and trainers have tools to identify and measure quality coaching. Specifically, it is critically important to address the following questions:

1. What does "good coaching" look like across treatment phases?
2. How can therapists develop their coaching skills to maximize the success of the families in their care?

The Therapist–Parent Interaction Coding System (TPICS)

To answer these important questions, the Therapist–Parent Interaction Coding System (TPICS) was developed to provide a standardized behavioral observation system that measures the interactions between the therapist and the parent during PCIT coaching sessions (Niec, Barnett,

Peer, Schoonover, & Boog, 2016). Initially, the TPICS was developed and validated to measure coaching statements during CDI sessions, but recently it has been expanded to measure coaching techniques that are more prevalent in PDI sessions. The TPICS provides a measure to investigate the style and frequency of coaching that is optimal to bring about parent behavior changes and engagement in PCIT, and to evaluate therapist coaching for training purposes (Table 1).

The TPICS was designed to evaluate that therapist coaching: (1) is assessment-based, with standardized behavior observations of parent–child interactions guiding the parenting skills that are the focus of session, and (2) employs a range of coaching techniques, based in learning theory, that support parental skill growth by promoting and reinforcing skills. To address these two aspects of coaching, TPICS codes both the parent skill coached by the therapist (e.g., *labeled praise*, *reflection*, *behavior description*) and the specific technique used to coach the skill (e.g., *modeling*,

Table 1 Examples of TPICS codes

Technique	Example	Recommendations
Directive		
Modeling	"Thank you for sharing" "Hand me the green block"	Use when parents cannot generate skills independently. Quickly limit use of modeling, so that parents are not dependent on therapists
Prompting	"Thank you for…" "You are…"	Use to help parents label praises that were unlabeled, or start behavior descriptions
Direct command	"Describe what he is doing" "Give her a specific, positively stated, direct command"	Use to direct a parent to use a skill that they are capable of using on their own
Indirect command	"What can you praise her for?"	Use to suggest a parent use a skill
Drill	"I want you to use 5 behavior descriptions in a row" "I am going to see how many labeled praises you can use in one minute"	This technique requires parents to generate their own skills, so make sure they can do this before introducing a drill
Child observation	"He just smiled at you" "She's been sitting quietly for one minute"	Use child observations to help parents recognize positive behaviors in their children
Responsive		
Labeled praise	"Great behavior description" "Excellent ignoring"	Use labeled praises frequently to reinforce parenting skills in a supportive way
Unlabeled praise	"Great!" "Nice job"	Limit the use of unlabeled praises as they do not reinforce specific skill use
Process comments	"She is staying very focused with all of your behavior descriptions" "After you praised him for sharing, he did it again!"	Process comments help parents recognize how their behaviors impact their child's behaviors. These can be powerful and reinforcing; however, use process comments sparingly as they tend to be longer verbalizations

drill, *process comment*). The TPICS codes are used in conjunction with the DPICS to evaluate whether PCIT therapists are using coaching to address parents' skill deficits and support their strengths. Beyond coding the parenting behaviors that are coded in the DPICS, the TPICS also codes when the therapist coaches "other" types of parenting behavior. The category allows the TPICS to capture times when the therapist focuses their coaching on behaviors beyond the skills measured with the DPICS, which could include warmth, enjoyment, ignoring, and physical interactions with the child (e.g., "I love how you just patted him on the back"). In order to capture times when the therapist incorrectly coaches a parenting skill, the TPICS also has a category for mistakes. For example, if a therapist told a parent, "Great *labeled praise*," but the parent had used an *unlabeled praise*, the TPICS would code this as a mistake. Likewise, if a therapist directed a parent to use a "don't skill" (e.g., "Tell her to stop that), this would be coded as a mistake. Coding mistakes is critical for training purposes, as parents require that therapists accurately prompt and reinforce skills for them to be able to reach mastery criteria and be successful with the treatment. Consistent with the DPICS, the TPICS codes every verbalization made by a therapist and includes a priority order and decision rule order to determine how to code verbalizations that fall into more than one category. Figure 1 includes a coding sheet that demonstrates how the TPICS codes both the therapist techniques used and the parenting behavior coached by the therapist.

The TPICS codes related to the techniques used to coach a parenting skill fit within two composite categories: directive or responsive (Barnett et al., 2014; Borrego & Urquiza, 1998). Directive techniques, which tell the parent what to do, are used as a teaching tool (e.g., "Give Dante a direct command to hand you the blue block."), and come before a parent's verbalization. Responsive techniques reinforce the parent's use of a skill (e.g., "You just used an excellent labeled praise!"), and always come after a parent's verbalization. Responsive techniques can be positive (i.e., statements that follow parent verbalizations, are positive in nature,

and are intended to reinforce a behavior) or negative (i.e., statements that follow a parent verbalization, which are negatively stated, and intended to correct a behavior).

Directive coaching techniques coded by the TPICS lead parents' behaviors and include: *modeling* the correct phrasing of a skill (e.g., "I like how you are staying at the table."); *prompting* a skill's beginning (e.g., "You are…" to elicit a behavior description); giving parents clear *direct commands* (e.g., "Give him a timeout warning."); suggesting a parent behavior with an *indirect command* (e.g., "Let's think of a direct command to give her."); and using an exercise such as a *drill* (e.g., "We are going to see how many labeled praises you can do in a minute."). Making observations about the child's behavior (*child observation*; e.g., "He just came back to the table!") is also considered directive as these comments prompt parents to attend to their children's behaviors (often with the intention that a parent will then use a skill).

Positive responsive coaching techniques reinforce parents' behavior and include: *labeled praises* of a parent's skill use (e.g., "Great reflection."); neutrally describing the skill a parent used with a *reflective description,* (e.g., "That was a behavior description."); using *process comments* to tie a parent's behavior with a child's behavior (e.g., "She smiled at you when you praised her."). *Unlabeled praises* (e.g., "Wonderful!") are also considered responsive but are not encouraged, as they do not explicitly reinforce the skill that was used. Responsive coaching can also be negative in that it follows a parent's behaviors with the intention to eliminate that behavior. These negative responsive coaching techniques are similar to the constructive criticism described by Herschell et al. (2008). Two codes are included in negative responsive coaching techniques, including *corrective criticisms <u>and</u> exclusion explanations*. Negatively stated (e.g., "Don't pay attention to that behavior.") or gently critical statements of parent's behaviors (e.g., "Oops, that's a question.") are *corrective criticisms*. *Exclusion explanations* include statements that focus on

Caregiver Relationship to Child: _____ **Coach:** _____ **Coder Initials:** _____

CDI Session #: _____ **/ PDI Session #:** _____ **Length of Coding (mins):** _____ **Date:** _____

Coaching Technique	Targeted Parent Skill												Total Coaching Technique
	BD	RF	LP	UP	QU	DC	IC	NTA	EC	TO	Other	Mistake	
Directive													
Drill													
Direct Command													
Indirect Command													
Modeling													
Prompting													
Child Observation													
Responsive													
Corrective Criticism													
Process Comment													
Labeled Praise													
Reflective Description													
Exclusion Explanation													
Unlabeled Praise													
Total Targeted Parent Skill													
Assurance Comment													
Rationale Remark													
Talk													

Fig. 1 TPICS coding sheet

educating the parent on skills to avoid in treatment (e.g., "We avoid indirect commands because they imply that compliance is optional."). Whereas positive responsive statements should be used abundantly throughout treatment to reinforce parent skill development and build a supportive relationship with the parent, negative or corrective statements should be used minimally.

In the recently updated version of the TPICS, codes were added to specifically address behavioral strategies that coaches use in PDI, though these types of statements might be present in CDI coaching as well. *Rationale remarks* are statements that educate the parent about treatment-related skills and procedures. This technique is useful for describing the basis for specific procedures in PDI (e.g., "By making the command

direct, she will understand that you expect her to do it by herself."). *Assurance comments* are statements that reframe a parent or child behavior as normal or expected (e.g., "It's hard to hear him yell, but this is really typical when kids first go to timeout."). Often, parents need reassurance during challenging timeouts, making this technique particularly useful in PDI, though assurance comments can be used when the child is demonstrating challenging behaviors in CDI as well ("We would expect her to whine more when you start ignoring her, but keep it up and she will calm down!"). Notably, these codes are not classified as being directive or responsive, because they do not necessarily come directly before or after a parent's skill use.

Research on the Therapist–Parent Interaction Coding System

To date, three studies have been completed to investigate coaching styles in PCIT as measured by the TPICS. The first two studies investigated coaching within early CDI coaching sessions (Barnett et al., 2014, 2015), and the third study focused on PDI coaching strategies (Schoonover, Boog, Niec, Peer, & Brodd, 2015). The therapists in the studies were primarily trainees in clinical psychology, ranging from graduate students early in their training to post-doctoral fellows. The clinical samples represented a diverse range of clients. In one study, the families were predominately Caucasian, rural families who presented because their children had clinically elevated behavior problems. The other sample included urban, predominately ethnic-minority families who presented to treatment for a range of presenting problems, including clinically significant behavior problems, developmental disabilities, and child maltreatment.

Research using the TPICS has illuminated the types and frequency of coaching statements that PCIT therapists use when coaching parents. Regarding frequency, therapists made two to six responsive statements, and three to five directive statements per minute when coaching in early CDI and PDI sessions. Comparisons between the

two studies that investigated CDI coaching suggested that the number of therapist coaching verbalizations vary across treatment settings and therapists. Further investigation might help increase our understanding of the ideal rate that a therapist coaches a parent, though basic principles can be considered regarding frequency. Therapists' coaching statements need to strike a balance between being frequent enough to provide consistent support and reinforcement for parents, while at the same time not being disruptive to the parent's ability to interact with their child.

Therapists in one study found that therapists used more responsive than directive coaching statements in the first CDI coaching session. However, the second CDI coaching study, which included more novice therapists, demonstrated higher rates of directive statements than responsive ones early in CDI coaching. These mixed findings point to the importance of monitoring the ratio of responsive coaching to directive coaching, as therapists might not use responsive techniques as frequently as would be ideal, especially when they are early in their training. The study on PDI coaching demonstrated that PCIT therapists use more directive than responsive coaching statements in the first PDI coaching session. This finding was consistent with clinical recommendations for PDI coaching, which suggest coaches should be more directive in early PDI sessions (Eyberg & Funderburk, 2011; McNeil & Hembree-Kigin, 2010). All three studies found that the techniques that therapists most frequently use are modeling and labeled praises in early and mastery sessions of the CDI and PDI phase of treatment. Though it is expected that modeling would be used frequently in early sessions of each phase of treatment, findings that this is one of the most frequently used techniques during CDI and PDI mastery sessions is surprising. The PCIT Manual indicates that therapists should reduce their use of *modeling* if parents can generate appropriate statements (Eyberg & Funderburk, 2011), but this might not come intuitively to PCIT therapists. These findings suggest that PCIT therapists could benefit from supervision that encourages decreasing the use of mod-

eling as parents gain fluency with the targeted skills, in order to encourage parent autonomy in skill use. Encouragingly, all three studies revealed that therapists use minimal amounts of corrective and negative statements (e.g., Corrective Criticisms and Exclusion Explanations) in early or mastery sessions, suggesting that they follow clinical recommendations to stay positive in their coaching.

As the TPICS also measures the parenting skill targeted, it is possible to gain insight into the types of parenting behaviors that therapists address in coaching. All three studies found that therapists most frequently target the behaviors they want to increase in parents. In CDI, they most frequently targeted "do skills," which include *labeled praises, reflections*, and *behavior descriptions.* In PDI, therapists also focused on the behaviors they were trying to teach parents, including using effective commands and implementing the timeout procedure. Therapists rarely addressed "don't behaviors," including *questions, commands*, and *criticisms*, suggesting that they typically decrease these behaviors with selective attention and by encouraging parents to replace these verbalizations with the behaviors they are trying to increase. Additionally, one study using the TPICS demonstrated that therapists do use the DPICS behavioral observations to identify the parenting skill they will target in CDI coaching, but that this does not happen in every case, particularly when therapists are initially developing their coaching competence (Barnett et al., 2014).

Research with the TPICS has illuminated the coaching strategies that are associated with increased success in treatment. In the first study, therapist responsive coaching related to parent acquisition of labeled praises from one session to the next (Barnett, Niec, & Acevedo-Polakovich, 2014). Directive coaching techniques were not related to changes in parenting skills. The next study investigated how therapist in vivo feedback impacted the rate of skill acquisition in CDI and retention in PCIT (Barnett et al., 2015). In this study, 51 parent–child dyads received PCIT from 16 therapists, with eight families discontinuing treatment prematurely. Therapist use of direct commands, drills, and responsive coaching statements during the first CDI coaching session predicted treatment completion versus dropout for 84% of families. Parents that completed treatment received more responsive coaching and fewer drills and direct commands than those who dropped out. Furthermore, therapist responsive coaching was significantly related to the length of the CDI phase of treatment, with higher rates of responsive coaching predicting quicker parenting skill acquisition. The two studies on CDI coaching support the important role of positive responsive coaching strategies in promoting parents' skill acquisition and promoting engagement. The consistency of the findings regarding responsive coaching is striking, given that the PCIT trainers, therapists, and families varied across the two studies. These findings support the theoretical underpinnings of PCIT, with better outcomes when therapists reinforce parent skill use consistently. The different types of positive responsive techniques are each individually valuable, though they might be used for different purposes and with differing levels of frequency. For example, *process comments* can be an important technique to help parents recognize how their behaviors are impacting their child. However, because they tend to be longer statements with the potential of disrupting the flow of coaching, they should be used less frequently. On the other hand, therapists should use labeled praises frequently to support and reinforce the parent's skill use, much like parents are taught to use this skill to increase their child's positive behaviors.

Advantages and Challenges in Implementing the TPICS

The TPICS provides a psychometrically reliable and valid tool that can help us understand the types of coaching that are associated with successful outcomes in PCIT. Initial research with the TPICS has allowed us to begin to answer the question: "What does good coaching look like across different treatment phases?" Accumulating evidence suggests that successful coaching includes a high level of responsive techniques in

Fig. 2 Coaching
techniques pyramid
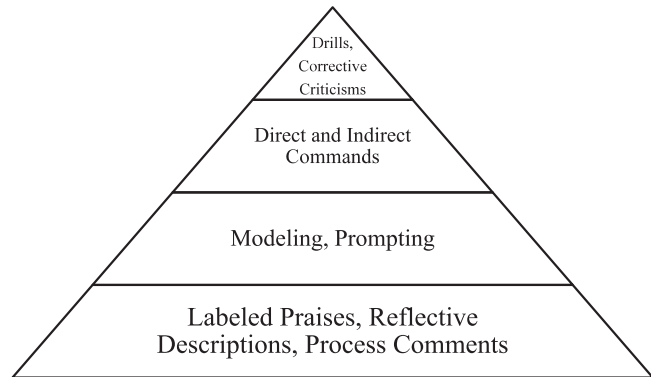
the CDI phase. Directive coaching is likely to be more present in the PDI phase of treatment, though responsive techniques remain important to reinforce parent skill development related to discipline.

With the TPICS, there is potential for a parallel process between PCIT treatment for parents and supervision of therapists. Much as therapists assess parenting behaviors with the DPICS to determine areas that need attention for skill improvement, PCIT trainers can use the TPICS to provide feedback to therapists to increase their use of effective coaching strategies. Similar to recommendations for the feedback that therapists provide to parents, it is important that PCIT trainers provide ample praise for the positive therapist behaviors in coaching, along with constructive suggestions for growth. However, additional research needs to be conducted to fully understand how to best support therapists in developing their coaching skills.

The TPICS was designed so that researchers and trainers can use the individual categories of therapist verbalizations (e.g., *modeling*) or the composite categories (e.g., directive or responsive) as a way to facilitate the development of PCIT therapists' coaching skills. Composite categories of directive and positive responsive techniques are helpful to monitor that therapists are successfully using learning principles regarding scaffolding and shaping parenting skills. Given evidence that responsive coaching is important to skill development and parental engagement in CDI, supervisors can monitor the therapist use of positive responsive coaching to guarantee that

they are frequently reinforcing parents for their skill use. Even when therapists need to use directive techniques to teach and promote skill use in CDI, supervisors can use the TPICS to ensure that therapists are still using a high ratio of responsive statements. One way this could be done would be to encourage therapists to use responsive statements, such as labeled praises, every time after a parent uses a therapist suggestion or responds to their direction. In PDI, directive coaching is more likely to be necessary, given the importance of executing the timeout sequence correctly. Therefore, PCIT supervisors may expect to see more of this style of coaching in this phase of treatment, but should also continue to monitor that therapists are using responsive techniques to reinforce parents' use of PDI skills.

Beyond the use of composite categories, individual codes may be particularly useful to monitor that therapists are using certain techniques abundantly (e.g., *labeled praises*) and other techniques infrequently (e.g., *drills, unlabeled praises*). For example, it would be important to monitor the number of c*orrective criticisms* a therapist gives a parent, as the PCIT manual (Eyberg & Funderburk, 2011) recommends that therapists favor positive over critical feedback, especially at the beginning of treatment. The Coaching Technique Pyramid (Fig. 2) can be a useful visual to use when training therapists in the frequency of the coaching techniques that they should use.

Though the role of directive techniques on changing parent behaviors is still not well understood from the studies to date, we are aware that these therapist behaviors are important to scaffold

a parent's skill development. Monitoring the use of the different directive techniques can help to evaluate whether therapists are using coaching strategies that are appropriate to a parent's ability level. Higher levels of modeling should be used early in CDI and PDI when targeted skills are more novel and challenging to generate for parents, but should be decreased over time so that parents can become independent in their skill use. Given findings that suggest that therapists continue to use similar levels of modeling in CDI and PDI mastery sessions as in the first coaching session of each phase, this might be an area that requires additional support and attention from supervisors. Supervisors can also attend to therapist use of directive techniques that might be too demanding for a parent who is struggling to generate skills on their own. For example, *drills* (e.g., "Give me three behavior descriptions in a row,") requires that parents know how to use a skill on their own, and could be challenging and stressful for a parent if used too early in treatment when they do not have that capacity. Therefore, *drills* are more appropriate for parents who have demonstrated that they can use a skill on their own, but may need to focus on the frequency in which they use that skill.

Beyond supervision using the TPICS, there is the potential for additional strategies to promote therapist coaching competence through self-monitoring. Therapists could be trained to code their own sessions through videotape review to monitor and reflect on their own use of coaching techniques. Reviewing one's own videos of sessions and coding coaching statements has been shown to improve the rate and quality of in-the-moment feedback provided in another parenting program, Attachment, Biobehavioral, Catch-Up (Meade, Dozier, & Bernard, 2014). Further research should be conducted to determine the most effective and efficient strategies for use of the TPICS individually or in supervision to promote excellent coaching.

Challenges still remain with how to best use the TPICS in training. As opposed to behavior observations of parent–child interactions using the DPICS, there are no empirically established guide-lines for "mastery-criteria" to determine when a therapist is competently using the coaching techniques. Furthermore, therapists may feel apprehensive to use directive statements in CDI when they learn that responsive coaching has been associated with better treatment outcomes. However, it is important to note that to date, limited evidence suggests that directive statements are harmful to treatment processes, and in fact both samples of CDI coaching included high frequencies of both directive and responsive coaching. Therefore, the role directive coaching plays in learning parenting skills still needs to be investigated.

Finally, current research has not been able to isolate the role of a parent's behaviors on how a therapist coaches. It is likely that a parent's behaviors impact the type of coaching techniques that are used. For example, it may be that parents who use fewer targeted skills or are resistant to coaching receive more directive statements and fewer responsive statements. Parental resistance to skill use can lead therapists to be more directive or confrontational, which in turn can lead to more resistance from the parent and eventual dropout (Patterson & Forgatch, 1985). The use of sequential coding of therapist and parent behaviors in PCIT coaching, which more clearly matches research done in other parent training programs (Patterson & Forgatch, 1985), would help illuminate how different coaching techniques impact parental engagement or resistance in the moment and over the long term.

Overall, findings on therapist–parent interactions in PCIT demonstrate that therapists use a range of techniques to shape parent skill development. We are beginning to understand that the coaching strategies that therapists use can have important short-term and long-term implications for parent engagement and skill acquisition in treatment. Given these findings, there is the potential to improve therapist training in PCIT by monitoring coaching techniques. The following case example demonstrates how the TPICS can be used to promote coaching success in therapists as they progress through the PCIT training process.

Using the TPICS to Improve PCIT Training: A Case Example

One PCIT training program at the Parent–Child Program[1] will be described to demonstrate how PCIT trainees receive assessment-driven, strength-based training and supervision using the TPICS to better prepare them to coach parents toward successful PCIT completion. The Parent–Child Program is located in a diverse urban community and serves a multiethnic, multilingual population of families of children with a broad range of presenting concerns, including oppositional and defiant behaviors, Attention-Deficit Hyperactivity Disorder (ADHD), speech and language delays, global developmental delays, Autism Spectrum Disorders (ASD), school problems, hearing loss, and involvement with child protective services. Since 2011, the Parent–Child Program has trained over 50 PCIT therapists and delivered PCIT to over 300 families. The diversity of families served by the Parent–Child Program creates a demand for therapists who can provide highly skilled coaching that is responsive to the unique needs of each family.

As with most PCIT training programs, the Parent–Child Program trainees are first introduced to the DPICS-IV categories early on in their initial training workshop. In the same way that parents are expected to master the Child-Directed Interaction (CDI) and Parent-Directed Interaction (PDI) skills during a 5-min observation, trainees are also required to demonstrate mastery of these skills. Through this process of learning and mastering the skills of CDI and PDI, trainees undergo a similar process to that experienced by PCIT caregivers, and as such they also experience many of the same initial challenges. Over the years, some of the challenges most commonly reported by Parent–Child Program trainees include: (1) initial discomfort as they become acclimated to wearing a bug-in-the-ear, (2) difficulty dividing their attention between interactions with the child and the coach's statements, and (3) feeling anxious about

being observed and assessed as they practice using CDI and PDI skills. This learning process, which in many ways parallels the learning process of PCIT caregivers, helps trainees become more empathic and effective coaches. This also serves as an initial introduction to the value of monitoring progress and tracking skill acquisition through ongoing assessment, which is a central component of PCIT. As trainees receive feedback on their skills from their trainers, they learn the value of strength-based feedback that highlights what caregivers have done well while also moving them toward growth so they can achieve the goals of mastery toward which they strive each week.

While the DPICS-IV is used to teach and evaluate trainees in their use of PCIT skills so they can then model these skills appropriately and code caregiver skills accurately, Parent–Child Program uses the TPICS as a means of systematically teaching trainees how to be effective coaches. An initial didactic training is provided in which trainees learn the differences between responsive and directive coaching techniques. They are introduced to the specific types of coaching statements outlined in the TPICS, and they are gradually taught how each type of coaching statement can be used to guide caregivers toward mastery of CDI skills in different situations and at different stages of treatment. Trainees first learn how to provide effective responsive coaching, particularly the responsive coaching techniques that label parent behaviors (e.g., *labeled praise, reflective description*) as this constitutes a large percentage of the coaching statements therapists will use during CDI. The approach of first practicing the less challenging responsive coaching techniques serves several purposes: (1) it increases opportunities for trainees to accurately label DPICS-IV categories in real time, (2) it allows trainees to become acclimated to the coaching process in a low-demand situation wherein they focus primarily on using only a few types of coaching statements, and (3) it allows trainees to foster skills that will be used frequently throughout treatment to shape caregiver behavior. This approach also parallels the progression of CDI, wherein the first coach

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session allows caregivers to become acclimated to being observed and coached as they receive mostly positive, responsive coaching statements designed to increase their confidence and develop trust with the therapist. In this early stage of training, trainees practice responding to caregiver behaviors with correct feedback, such as by giving labeled praise for appropriate use of a PRIDE skill, or neutrally identifying a "don't skill" to increase parent awareness that they used one of these behaviors. As trainees become more skilled in their own use of CDI skills, and as they become more skilled observers of parent–child interactions through their practice of DPCIS-IV coding, they can begin to integrate more complex responsive coaching techniques (i.e., *process comments*) and strategically chosen directive coaching techniques into their coaching practice. For example, trainees learn to recognize the sometimes subtle relationship between child behaviors and caregiver use of skills, and this, in turn, allows them to integrate meaningful and powerful *process comments* into their coaching. Process comments, which highlight the link between child behavior and caregiver behavior, provide caregivers with in-vivo evidence of how their use of the PCIT skills impacts their child's behavior. For caregivers who struggle to recognize the value of the PCIT skills, particularly early on in treatment when much of the practice occurs in a play situation, process comments can be particularly impactful as they draw the caregiver's attention to concrete evidence of their effectiveness. For example, therapists are trained to point out how labeled praises increase a child continuing the behavior they are praised for (e.g., *she shared with you again after you praised her for it*). This increases caregiver buy-in and strengthens the caregiver's trust in the therapist's expertise.

After the initial PCIT training workshop is complete, the TPICS continues to be an important training tool for helping trainees learn to work effectively with caregivers. In Parent–Child Program, trainees serve as co-therapists on cases along with a certified PCIT therapist or Level 1 trainer. This co-therapy model, which is common in PCIT, allows trainees to gradually practice their emerging coaching skills to promote

advancement without compromising the quality of the PCIT services delivered. The lead therapist and trainee typically divide the coaching time so that the trainer can model more advanced coaching skills while the trainee also has the opportunity to practice coaching with live supervision support. In Parent–Child Program, trainers commonly use the TPICS to code trainee coaching skills, either live or via video review, and provide targeted, strength-based feedback akin to the feedback given to caregivers after DPICS-IV coding. This feedback is meant to highlight what the trainee did well, constructively identify errors and/or areas that need further development, and move the trainee toward provision of more skilled and effective coaching.

The following example demonstrates how TPICS data can be used to support trainee skill development and promote increased coaching effectiveness. TPCIS coding was administered for Tara, a graduate student seeing her first PCIT case, during the first 5 min of coaching during a CDI 5 coach session. During this observation, the trainer noted that the trainee effectively used a high level of responsive coaching techniques, specifically *labeled praises* targeting caregiver use of PRIDE skills. The trainee also made several nice observations of the child's behavior. Commands directing the parent to use a particular skill were used sparingly, and no *modeling* or *prompting* coaching statements were used during the 5 min observation. As the parent demonstrated in their DPICS-IV coding at the beginning of session that they were able to generate targeted skills on their own, just at a lower frequency than needed for mastery criteria, the use of *indirect* and *direct commands* as opposed to *modeling* were seen as the appropriate directive techniques to use. Notably, the trainee did not provide any *process comments* in her coaching. During supervision, the TPICS data was discussed with the trainee while conducting a joint video review of the trainee's coaching. Together, the trainer and trainee identified instances in which the trainee used a labeled praise coaching statement for a target skill and where the trainee subsequently made an observation about the child's behavior. Labeled praise and child observations are both excellent techniques to use to encourage

parent skill used, and the supervisor reinforced the therapist for using these appropriate techniques. However, despite being several coaching sessions into CDI, the caregiver continued to struggle to understand the value of using PRIDE skills as a primary tool for shaping her child's behavior. Consequently, she reported that she was not using PRIDE skills frequently throughout the day, and special time was occurring less than 4 days each week. The trainer helped the trainee explore how strategic process comments linking caregiver skill use to child behavior improvements in the very moment that these behaviors emerged may help improve the caregiver's level of understanding and engagement. As the coaching clip was reviewed, the trainee practiced giving *process comments* at key points in the caregiver–child interaction. At the end of this supervision session, the dyad set a goal for the trainee to use two *process comments* during her next coaching opportunity with the same family. During the subsequent supervision session, a new five-minute coaching segment was reviewed and coded using the TPICS. The trainer provided positive feedback to the trainee regarding her use of *process comments* in accordance with the set goal, and video review revealed that the caregiver's use of the targeted PRIDE skill increased notably following one specific *process comment* that linked caregiver use of behavior descriptions to child's increased focus during a building activity.

As trainees in Parent–Child Program develop their PCIT coaching skills, the TPICS serves as a useful tool for understanding and implementing the variety of techniques that a skilled coach can employ to help guide caregivers toward mastery. Parent–Child Program trainees report that review of their coaching skills using the TPICS provides them with very specific and helpful information that can then be used to guide their coaching interactions with caregivers. This style of data-driven supervision allows the trainee to identify very specific coaching targets that are specific to their skill level as well as to the skill level of the caregiver. Overall, the use of TPICS to assess trainee coaching skills is one more way in which PCIT uses ongoing assessment to track progress and promote mastery of skills.

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Assessing Therapist Competence in the Context of PCIT Training

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Abstract

Assessing therapist competence is an essential aspect of ensuring that parent–child interaction therapy (PCIT) services are delivered with fidelity. Currently PCIT International requires all PCIT therapists to complete a highly structured training process in which therapist competence is evaluated at several points. Pre- and post-training measures evaluating therapist knowledge of PCIT, observing therapist performance during role-plays and DPICS coding exercises, and review of therapist work samples during the year-long consultation period following a PCIT training are all useful techniques that are routinely used when assessing the competence of trainee PCIT therapists. Several "code the coach" systems are also gaining popularity as a way to offer structured feedback related to a therapist's coaching style. Still, the specific methods used to assess therapist competence may vary between individual PCIT trainers. We discuss possible future directions in the assessment of therapist competence and present a case example of how the competence of one trainee therapist was assessed.

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Therapists play a critical role in maintaining the delivery of effective parent–child interaction therapy (PCIT; Eyberg & Funderburk, 2011) to families in need of services. In turn, PCIT supervisors are vital in helping new PCIT trainees learn to implement the PCIT protocol with fidelity. Providing effective supervision and training for PCIT trainees is of upmost importance for the continued dissemination and implementation of PCIT; however, we currently have relatively little empirical evidence to guide our definition of best practices in PCIT supervision. Research suggests that individual variations among therapists can function as key predictors of client outcomes and dropout (Harwood & Eyberg, 2004; Herschell, Capage, Bahl, & McNeil, 2008). Given the potential for individual differences among therapists to enhance or impede treatment progress, the assessment of therapist competence is essential during the PCIT training process. In this chapter, we outline a variety of assessment techniques and provide suggestions for tools that trainers can use to assess the competence of PCIT therapists. We offer a case study of the assessment of one trainee and provide recommendations for future research in the area of PCIT therapist training and assessment.

As outlined by the PCIT Training Requirements (PCIT International, 2018), PCIT trainee competence is currently assessed using a checklist format to ensure that specific training activities and skill assessments are included in

PCIT training. Despite having a specific list of trainee skills to assess (e.g., Child-Directed Interaction (CDI)-based skills and Parent-Directed Interaction (PDI)-based skills), there is not yet a unified system for evaluating each of the PCIT therapist competencies. Currently, a checklist based on the PCIT Training Requirements would indicate whether or not an activity was conducted by a trainee or trainer at some point during training rather than provide details regarding the quality of the training activity. Additionally, the training requirements do not provide guidance on the best remediation or training activities to use should a trainee fail to complete a skill listed in the document. With the exception of the Therapist–Parent Interaction Coding System (TPICS; Barnett, Niec, & Acevedo-Polakovich, 2014), which is described in greater detail in the chapter "Therapist–Parent Interactions in PCIT: The Importance of Coach Coding" of this volume, the development and refinement of PCIT trainee competence assessment remains an understudied area in need of additional empirical evaluation.

Current Approaches to Assessing Therapist Competence

The development of a comprehensive approach to the evaluation of PCIT therapist competence would help ensure that PCIT trainees are evaluated in a standardized manner and would facilitate communication among PCIT trainers by clearly defining what constitutes therapist competence. Although the topic of assessing therapist competence is a relatively new area for PCIT training, there is a much larger literature on supervision and training in other clinical areas such as adult cognitive-behavioral therapy (CBT; Muse & McManus, 2013, 2016) and applied behavior analysis (ABA; Granpeesheh et al., 2010; Iwata et al., 2000; Loeber & Weisman, 1975; Luiselli, Bass, & Whitcomb, 2010; Turner, Fischer, & Luiselli, 2016). For example, in a review of CBT therapist competence within the context of treating adult clients, Muse and McManus (2013) distinguish between techniques

used to assess therapist knowledge and techniques used to assess a therapist's practical skills. The authors emphasized the importance of assessing therapist knowledge using a variety of self-report techniques such as case reports and responses to multiple-choice questions, clinical vignettes, or essay prompts. Muse and McManus also highlighted the importance of addressing skills assessment through reviewing surveys of client outcome data, supervisor evaluations of therapist competence, standardized role-play assessments, and ratings of a therapy sessions by the therapist or by an observer. Many of these techniques, including trainee responses to self-report measures, role-plays, and observation of trainees during therapy are currently used in PCIT training and are described in further detail below.

ABA training is perhaps more similar to PCIT training in that a trainer often teaches a junior therapist or parent how to implement treatment techniques in an effort to decrease negative child behavior and increase positive child behavior (Granpeesheh, Tarbox, & Dixon, 2009; Heitzman-Powell, Buzhardt, Rusinko, & Miller, 2014; Turner et al., 2016). The rich literature on training treatment integrity within the ABA field is similar to PCIT and includes the following overall procedures: providing instruction on how to implement a specific technique, modeling the technique for the trainee, conducting a role-play of the technique with the trainee, and providing the trainee with feedback (Iwata et al., 2000; Turner et al., 2016). However, the ABA literature has examined the education of trainees across a wider domain of options including individual versus group instruction and eLearning tools (Granpeesheh et al., 2010; Iwata et al., 2000; Luiselli et al., 2010; Turner et al., 2016).

Current Approaches to Therapist Training and Competence Assessment in PCIT

The development of competency in delivering PCIT services begins through participation in an intensive PCIT training experience (e.g., attending

a 40-h workshop or participating in some combination of 40 h of didactic experience, case observation, and case experience). Per the PCIT Training Requirements, trainees must complete 40-h of training provided by a PCIT Trainer that includes instruction related to the theoretical background of PCIT as well as various components and skills needed for the implementation of PCIT. Following this initial training, trainees undergo a year of continuation training in which they must conduct two complete PCIT cases (i.e., cases that end with graduation) while consulting with a PCIT Trainer who observes selected sessions. Notably, the format of PCIT training and consultation will differ depending on the credentials and location of the PCIT trainer and trainee. For example, if the PCIT trainer is a Master Trainer or Level 2 trainer located some distance away from the trainee, it is very likely that the training experience will occur during a mass learning experience (i.e., 40 h of training within one week or training over two intensive time periods). Consultation for these long-distance training cases tends to occur via phone calls and asynchronous review of previously video-recorded PCIT sessions that are sent to the trainer. Alternatively, if the trainer is a certified Level 1 PCIT trainer located within the same agency as the PCIT trainee, the training may occur for a few hours per week over a longer period of time and the trainer may be present for most trainee sessions as they occur live during the consultation period at their shared PCIT clinic (PCIT International, 2018).

PCIT International identifies the key competencies related to assessment, CDI, PDI, and general coaching that therapists should have developed upon completion of training (see Exercise 1) which can be developed across a range of training activities and settings. However, because training can take several different forms depending on the relationship between the PCIT trainer and trainee, a variety of therapist competence techniques may need to be implemented to assess trainee competencies most appropriately. The following sections apply the framework discussed by both the CBT and ABA training literatures to provide an overview of current methods

used throughout training to assess the knowledge and practical skills of PCIT trainees. Please note that the assessment methods included in this chapter do not represent an exhaustive list and that procedures related to PCIT training and the assessment of therapist competence will likely evolve a great deal over the next decade. In light of the evolving practices in supervision, it is important for PCIT trainers to maintain their continuing education in the area of therapist competence assessment.

Assessing Trainee Competence during a 40-h Workshop

Competency assessment can begin during the initial 40-h intensive PCIT training, and collecting pre-workshop data can be a valuable method for demonstrating to stakeholders (as well as trainees) the extent of learning that occurs during PCIT training. Several self-report PCIT training assessment measures have been developed, and trainers can include measures that are of most interest to their particular agency or needs. Conducting a pre- and post-workshop DPICS evaluation can also provide helpful information regarding the development of trainee coding skill across the 40-h period (Cotter, Proctor, Britton, & Brestan-Knight, 2016). Finally, it can be helpful to include PCIT knowledge quizzes and homework assignments as part of PCIT training process in order to help trainees consolidate their knowledge (Wilsie, 2012).

Assessing PCIT Trainee Knowledge, Competence, and Motivation

One method to assess trainee PCIT knowledge is to use self-report measures at pre- and post-training (Wilsie, 2012). A PCIT knowledge quiz can provide excellent baseline information regarding what a particular PCIT trainee knows about the model prior to and after a PCIT training workshop. These self-report measures have been successfully used as part of intensive 40-h workshops conducted at an academic setting (Wilsie,

2012) as well as within the context of Level 1 trainings conducted at community-based agencies (Mattingly, Frye, & Brestan-Knight, 2013; Wilsie, 2012). See Exercise 2 for an example of some items that can be used to assess trainee knowledge of PCIT principles both prior to and after PCIT training. Notably, preliminary work suggests that exposure to information and terms prior to initial instruction can lead to improved retention of PCIT-focused facts (Lee, Wilsie, & Brestan-Knight, 2011).

Other measures that have been used to evaluate PCIT trainee attitudes at pre- and post-workshop have included an Evidence-Based Practice Questionnaire, a PCIT Competency Measure, and a PCIT Learning Objectives Survey. The Evidence-Based Practice Questionnaire was modeled after a measure first developed by Aarons (2004) and the purpose of this 20-item measure is to evaluate how motivated a trainee is to learn Empirically-Based Treatments, in general, and how motivated they are to learn PCIT, in particular. The PCIT Competency Survey is a 17-item measure designed to elicit self-report ratings for how competent the trainee feels he or she is with regard to various facets of PCIT practice. Finally, the PCIT Learning Objectives Survey was designed to address trainee self-reported knowledge for learning objectives linked to the formal Continuing Education process, which is typically offered as part of a 40-h intensive PCIT training workshop. Using the PCIT Competency Survey, the PCIT Learning Objectives Survey, and a PCIT Knowledge Quiz, Wilsie (2012) measured statistically significant increases in PCIT trainee self-reported competency and knowledge of PCIT-focused learning objectives from pre- to post-training workshop completion. She also found good initial psychometric data for the measures. Specifically, Cronbach's alpha for the Competency Survey was protocol without a co-therapist can .95 at pretraining and .89 at post-training, and Cronbach's alpha for the Learning Objectives Survey was .96 at pretraining and .93 at post-training. The PCIT Knowledge Quiz, in particular, has been used with a large sample of trainees (both simulated and actual PCIT training

workshops) and has good reliability data to support its use (Filz, 2014; Lee et al., 2011).

Anecdotally, PCIT trainees who have completed these pre-post workshop measures have reported that they did not know many of the answers prior to training, but that they learned quite a bit and felt much more comfortable with their knowledge of the PCIT background, protocol, and skills following training. If your work is part of a grant-funded PCIT training project, being able to provide pre- to post-training outcome data for measures like the ones described above would likely be compelling information to include in a grant report.

Multiple-Choice Homework Assignments and Quizzes

As part of the PCIT trainings offered by the second author, trainees complete several brief 10-item quizzes designed to assess their knowledge of the CDI and PDI phases of PCIT. These quizzes include items related to the rationale for each phase, as well as the skills and corresponding DPICS codes used in each phase. Homework assignments and quizzes are given to trainees at the end of the first 4 training days. These written assignments provide additional data pertaining to trainee knowledge of DPICS coding and, in the case of PDI, the time-out procedure. Together multiple-choice quizzes and homework assignments completed during initial training both evaluate trainee learning throughout training and provide trainees an opportunity to review and apply information learned during the training sessions. For example, having a trainee complete a blank PDI discipline flow chart (see Exercise 3) is one nonthreatening way to help trainees learn the discipline procedure prior to having them role-play the procedure in front of a group. Going over homework assignments—and discussing both the correct and incorrect options for each item—also allows trainees the opportunity to monitor their own learning process and to ask follow-up questions as needed.

Assessment of Therapist Competence for DPICS Setup

One novel way to assess trainee understanding of the DPICS observation is to have trainees pick out the errors in a contrived DPICS observation playroom setup (Bonatakis, personal communication). For this scenario, trainees are brought into a prearranged room and provided with a checklist (see Exercise 4). Trainees are asked by their PCIT trainer to look over the room and indicate which areas in the playroom need to be corrected in order to improve fidelity to the DPICS setup described in the DPICS Manual (Eyberg, Nelson, Ginn, Bhuiyan, & Boggs, 2014). This room setup task provides an excellent DPICS "warm-up" for the trainee. Trainees who are in solo practice and who implement PCIT for the first time at their own clinic have described feeling overwhelmed with the procedural and logistic aspects of conducting a DPICS observation on their own (Christian, Niec, Acevedo-Polakovich, & Kasab, 2014). This discomfort with implementing aspects of the PCIT protocol without a co-therapist can also be compounded by trainee discomfort with their DPICS coding accuracy. Providing the trainee with some guided practice in an exercise like the above mentioned DPICS setup task is a playful way to provide the trainee with extra support prior to seeing his or her first PCIT family.

Dyadic Parent–Child Coding System (DPICS) Evaluation

Providing PCIT trainees with feedback regarding their Dyadic Parent–Child Coding System (DPICS; Eyberg et al., 2014) coding skill is a cornerstone of PCIT training. One could argue that a thorough understanding and mastery of DPICS coding is relevant for treatment change as well as for proper implementation of the PCIT protocol (Brestan-Knight & Salamone, 2011). During an in-house training experience, it is vital that trainers code the 5-min Child-Led Play (CLP) and Parent-Led Play (PLP) observation periods that occur within the PCIT protocol in

tandem with trainees and provide feedback to the trainee. With regard to assessing competency, it is important for trainers to calculate inter-rater reliability (IRR) and to provide PCIT trainees with feedback regarding how they are progressing towards 80% reliability for the DPICS. One option for calculating reliability is to use an Excel spreadsheet similar to the one located on the PCIT website (www.pcit.org). This spreadsheet allows the trainer to input his or her codes alongside the trainee's codes. The spreadsheet then calculates the number of coding agreements divided by the number of agreements and disagreements to calculate percent agreement.

It is very helpful to give trainees feedback on their DPICS coding throughout the course of a 40-h training. Ideally, PCIT trainees are provided with a several coding experiences, ranging from a standard, precoded video-recording to role-play interactions, to real-life demonstration families. Coding accuracy of 80% IRR with a DPICS reliable coder is the goal and trainees can be given feedback on their DPICS coding during every day of training.

Providing an opportunity for trainees to code the same prerecorded CLP and PLP video from the beginning of the 40-h workshop to the end of a 40-h training can be helpful for tracking trainee-coding progress. A recent pilot study for a sample of 24 trainees found a significant increase in pre- to post-workshop coding accuracy, suggesting that the overall DPICS learning objective was met by the group during their 40-h initial training (Cotter et al., 2016). However, it is also notable that although gains were made in DPICS accuracy and the majority of trainees met 80% IRR at some point during the workshop training, 80% of trainees were below 80% IRR for CLP and 95% of trainees were below 80% IRR for PLP at their post-training DPICS evaluation. These preliminary results suggest that it is important for trainers to monitor DPICS competency and continue DPICS training across the consultation period.

The best way to give feedback to trainees about their IRR will depend on the training situation. Within the context of a larger initial 40-h training with four or more trainees, we often give trainees feedback individually by giving them a sticky

note with their best DPICS percent agreement for that day written on it. We are fortunate to have clinical assistants who collect the coding sheets after every DPICS practice, calculate IRR for our trainees throughout the day, and track their progress on a spreadsheet. Rather than point out which trainees have not yet met the 80% DPICS IRR criteria, we will tell them that it is rare for an entire group to make the 80% IRR criteria during the 40-h training, and we give the group a huge labeled praise if/when they do all meet 80% IRR at the end of training. We also recommend having a range of videos with easy to more difficult dyad interactions to code so that you can select the best video for your coding situation and needs. If you do not have prerecorded videos, role-played CLP and PLP situations also work well, and in these situations, it can be very helpful to "coach" your pretend child by providing some guidance regarding what age he or she should approximate and how talkative or how compliant he or she should be. Prepping the parent on whether to be near mastery or closer to pretreatment in skill level can also affect trainee IRR.

If the trainer is a Level 1 trainer, it is best to informally compare coding sheets every time that the trainee and trainer conduct a PCIT session together by simply looking to see whether there are any discrepancies and talking (very briefly) about any challenging statements that the parent might have used during the observation before starting the coaching for the session. Trainers can then calculate IRR prior to supervision or the next time he or she meets with the trainee to provide feedback.

Standardized Role-Play Assessments

Implementing house rules and managing child behavior in public are key issues that are typically discussed with parents during PDI and may serve as a good example of a nonthreatening role play that can be used during the PCIT training period. Role-plays in which trainee therapists simulate teaching parents about house rules and managing public behavior can serve as both use-

ful training exercises and as evaluations of one area of therapist competence. Integrity checklists specifically for house rules and public behavior may be used by a trainer to evaluate the extent to which trainee therapists address the important elements of these handouts during a role-play session (see Exercises 5 and 6). It is helpful to have the "parent" in the role-play provide several examples of problematic behavior so that the trainer can evaluate how the trainee responds. It will also give the trainee "something to work with" during the role play. During the role-play, the trainer will look for several things such as: Does the trainee read directly from the PCIT protocol without looking up? Does the trainee try to integrate examples of the parent's self-reported problem with the child? Does the trainee include a thorough explanation of each key feature of the handout that is provided to parents? The trainer can then provide the trainee with some immediate feedback, focusing on the labeled praise sandwich of (1) something that was positive about the role-play, (2) some things to improve upon next time, and (3) another aspect of the role-play that was especially strong. Much like asking a trainee to determine what is missing in a DPICS setup task or having the trainee complete a PDI sequence on paper, one of the best outcomes of these training role plays is that they provide the trainee another opportunity for practice and mastery in a low stakes and friendly environment.

Assessing Trainee Competence During the Consultation Period

Although it is important to assess these early indicators of therapist competence in order to develop a sense of each trainee's ability to implement PCIT competently and to ensure that each trainee learns the required material from his or her initial training, more intensive evaluations of trainee competence typically occur during continuation training. As noted above, a key component of PCIT training is the observation of trainee sessions by a certified PCIT trainer. Such observation may occur in person, through video analysis software that allows trainees to upload

video and trainers to provide feedback using a single platform (Wilsie & Brestan-Knight, 2012) or via video conferencing technology that enables trainers to observe sessions and offer guidance in real time from a remote location (Funderburk et al., 2015; Funderburk, Gurwitch, & Chase, 2015; Funderburk, Ware, Altshuler, & Chaffin, 2008). Notably, research by Christian et al. (2014) indicates that trainees may prefer in-person, individual consultation to group consultation meetings that involve the trainer contacting trainees from off-site. Thus, Level I trainers may play an important role in providing a high level of individualized and in-person supervision wherever possible.

In this section we will explore various ways that PCIT trainers may use methods to assess trainee competence, including treatment integrity checklists (Eyberg & Funderburk, 2011; Lyon & Budd, 2010; Travis & Brestan-Knight, 2013), and supervisor written feedback (Travis & Brestan-Knight, 2013). Perhaps the most detailed feedback can be given to a trainee with a behavioral coding system analogous to the DPICS that has also been developed as a tool for assessing PCIT therapist competence during the CDI coaching portion of the PCIT protocol (Barnett et al., 2014). The interested reader is directed to the chapter "Therapist-Parent Interactions in PCIT: The Importance of Coach Coding" in this volume to learn this very detailed method for assessing therapist coaching skill.

Assessing Therapist Competence for DPICS Setup and Procedure

Accurate set up and implementation of DPICS observations is a key component of PCIT assessment. Research by Baker (2012) examining fidelity to the DPICS setup and procedure among a sample of 16 PCIT trainees identified several areas in which trainees may struggle to correctly implement a DPICS observation. Video recordings of trainee pretreatment DPICS observations were coded using fidelity checklists developed specifically for the study. Interestingly, DPICS

procedural fidelity was significantly higher than DPICS setup fidelity and, overall, trainees exhibited low fidelity in correct timing (i.e., allowing 5 min) of each DPICS segment and in several aspects of setup, including the presence of unnecessary furniture, the absence of three sets of toys on the floor, and a correctly placed time-out chair (Baker, 2012). Given the existence of these areas for improvement, we again recommend review of trainee DPICS observations by PCIT trainers in order to provide trainees with feedback on this behavioral assessment.

First DPICS Work Sample

Review of a trainee's first DPICS work sample (i.e., the first DPICS observation that they conduct at their home clinic) can also play an important role in evaluating competence with the DPICS. Specifically, the IRR of a trainee's DPICS coding during their first DPICS observation is an indicator of the retention of coding skill from initial training, which can vary quite a bit between trainees depending on whether they are able to see their first PCIT family soon after training or some months after attending an initial 40-h training. Wilsie (2012) reviewed 16 initial trainee DPICS observations and noted that 69% of the trainees were no longer coding at 80% reliability when the training team coded the same videos. DPICS reliability during initial training, training site, education, and number of client-contact hours per week were all important predictors of reliable DPICS coding for this first work sample (Wilsie, 2012). The overall decline in reliable DPICS coding observed by Wilsie (2012) is notable, and, in conjunction with the work of Baker (2012), further illustrates the need for regular trainer review of trainee DPICS observations to maintain both fidelity to the procedure and coding reliability. Having an onsite Level-1 trainer who can guide the trainee step-by-step and who can ensure that first cases are started soon after the training process would likely improve DPICS fidelity and coding, however this is an area that will need future evaluation.

Ratings of Therapy Session Integrity

Treatment integrity checklists serve as a useful tool when evaluating trainee competence throughout a PCIT case. The PCIT manual (Eyberg & Funderburk, 2011) provides integrity checklists that correspond with each session outlined in the protocol. Each checklist allows a rater to identify if the therapist being evaluated completed the required components of the session under review. An integrity score for that session is computed by dividing the number of required components completed by the total number of components and multiplying that value by 100. Using the treatment integrity checklists, Travis and Brestan-Knight (2013) examined trainee fidelity across several sessions during the consultation period of PCIT training. Trainees submitted video recordings of CDI Teach, CDI Coach 1, PDI Teach, and PDI Coach 1 sessions for evaluation, as well as House Rules and Public Behavior segments taken from larger PDI sessions. Encouragingly, the average treatment integrity for these sessions was 87.2%. The study also found that trainees demonstrated better treatment integrity for the CDI and PDI teach sessions than for CDI Coach and PDI coach sessions, likely because the teach sessions approximate the psychoeducation-style sessions that many therapists are accustomed to using in clinical practice prior to implementing PCIT. Interestingly, the authors also found a significant negative correlation between PDI fidelity scores and length of session, suggesting that longer PDI sessions were associated with poorer treatment integrity.

In addition to functioning as a tool for evaluating trainee competence, treatment integrity is also often reported in research examining PCIT outcomes in general (e.g., Lyon & Budd, 2010; Niec, Barnett, Prewett, & Shanley Chatham, 2016). Considering that a review of randomized control trials of 202 psychosocial interventions published in six leading journals concluded that only 3.5% of the interventions examined sufficiently considered treatment integrity (Perepletchikova, Treat, & Kazdin, 2007), the clear commitment of PCIT trainers to evaluating therapist competence is commendable. An example of one treatment integrity checklist with sample feedback to a PCIT trainee is presented in Exercise 7.

Although the current PCIT Training Requirements document does not provide a guideline for what is an acceptable treatment integrity score or a poor treatment integrity score beyond stating that trainees must "adequately explain all non-optional items" for both CDI and PDI (PCIT International, 2018, pp. 3, 4), we contend that a score of 80% could serve as an acceptable benchmark treatment integrity criteria as it is consistent with the 80% IRR that we require for DPICS coding. One could argue that providing an 80% "dose" of a PCIT session is a very minimal amount of the protocol to provide for a family. In this spirit, we suggest that trainers require their trainees complete CDI coaching sessions and PDI coaching sessions within the 80–100% treatment integrity range in order to meet training competency requirements.

Video Review and Therapist Written Feedback

As mentioned above, PCIT training includes a period of continuation training during which trainees complete two PCIT cases to completion in consultation with a PCIT Trainer. Trainers may provide feedback related to trainee work using a variety of formats, but one tool that can be used to standardize feedback to trainees is a rating skills sheet (see Exercise 7) that integrates treatment integrity checklists from the PCIT Manual (Eyberg & Funderburk, 2011) with trainer evaluations of the various aspects of the trainee's coaching in a given session. Specifically, the coaching evaluation allows the trainer to rate trainee performance on a variety of coaching dimensions including enthusiasm, appropriate level of guidance, and knowledge of when to praise or ignore parent behavior. Trainers provide trainees with a ranking ranging from 1 = *Not observed* to 5 = *Excellent* for each aspect of coaching evaluated. Rather than just indicating whether an aspect of treatment integrity was

conducted (yes/no), the use of a rating scale gives trainees more information regarding their session implementation.

It can also be helpful for the trainer to complete the rating scale and for the trainee to complete the scale independently. Comparing the trainer-completed rating scale and the trainee-completed rating can start a discussion with trainees regarding aspects of their clinical work that are strong as well as areas of weakness that may require further growth. Anecdotally, when we use rating scales with trainees and have them submit their rating scales for a session, trainees often report themselves as less competent than we rate them. It is then a very supportive and happy surprise for them when we tell them that we thought the session went well.

Although we have used rating scales successfully, there are likely other rating scales and methods for providing supervision to PCIT trainees. Another version of a similar idea is the use of Therapist Reflection Reports by a PCIT training team in the Netherlands. This team asks trainees to submit the form to their trainer along with the video-recoded session. Sample questions answered by the trainee include "what went well in the session?" What were the difficult aspects of the session?" "On a scale of 0 to 10, how would you view your therapist adherence to the protocol in this session?" (Coelman, Heiner, & Abrahamse, 2016). This rating scale is more global than the first one described in this section, and it provides a wider range of scores for the trainee. Regardless of which method the trainer decides to use, it is the conversation with the trainee about their perceived areas of competency or their desire for advice and help with a specific clinical situation that is most important to the consultation process.

If trainees are being observed through submitted video review, written feedback can be extremely helpful. This feedback can also be given verbally following the observation of a live or recorded session, but the extra step of writing the feedback down could be helpful as a resource for trainees to read over again at a later date. Common themes emerge when giving written or verbal feedback to trainees and new trainers will likely encounter these frequent "rookie mis-

takes." Comments about therapy process, the application of behavioral theory to specific parts of the session, and quality of coaching can all be helpful topics to include. Please see Exercise 8a and 8b for a list of common CDI and PDI themes to look for during a session review, and Exercise 9 for an example of written PDI feedback.

The Therapist–Parent Interaction Coding System

Whereas treatment integrity checklists and trainee work products allow for the assessment of competency across several domains, they do not include a systematic way to evaluate therapist coaching of parents, which is a key component of PCIT. Barnett et al. (2014) developed the Therapist–Parent Interaction Coding System (TPICS) to facilitate more thorough assessment of therapist coaching. The TPICS is a behavioral coding system similar to the DPICS that is designed to classify all therapist coaching verbalizations within one of two broad categories. Directive coaching provides instruction regarding what a parent should do, and responsive coaching reinforces correct parent behavior. Each TPICS code includes the specific coaching technique used and the parent skill that was coached using that technique. Barnett et al. (2014) studied the TPICS among 61 parent–child dyads during the early sessions of CDI coaching and concluded that the TPICS offers some potential benefits for coaching competence assessment. Specifically, Barnett and colleagues observed an inverse relationship between parent use of behavior description and labeled praise and therapist use of directive coaching, suggesting that the TPICS could be used to assess the degree to which therapists adapt coaching to match parent skill. Responsive coaching partially mediated a positive relationship between parent labeled praise skill level during an initial TPICS observation and parent labeled praise skill level at the next session observed. Thus, tracking therapist use of responsive coaching as measured by the TPICS could be an important indicator of competence (Barnett et al., 2014).

It should be noted that work has been conducted on several "code the coach" systems that can be used to provide feedback to PCIT therapists. The CDI Coach Coding Tool developed by McNeil (2011) and the First Coach Coding System (Funderburk, Gurwitch, et al., 2015), like the TPICS, also assign codes to specific therapist coaching verbalizations. Relative to the TPICS, however, the other coding systems are currently less well developed from a psychometric perspective in that data related to reliability and validity have yet to be published. Additional research regarding all of the "code the coach" systems would allow for a more thorough understanding of their psychometric properties as well as the unique clinical utility provided by each coding system.

Electronic Trainee Tracker

One challenge facing PCIT trainers is the need to synthesize several sources of data pertaining to trainee competence in order to allow for the comprehensive assessment of competence throughout training. Currently an Excel workbook designed by Dr. Steven Kurtz to track trainee competency data is available to trainers free on the PCIT web store (Kurtz Psychology Consulting, 2015). The tracker includes a checklist that allows trainers to record when several core PCIT competencies are demonstrated by trainees as well as sheets that allow for the tracking of trainee DPICS reliability and supervision hours. Future efforts to enhance the assessment of PCIT therapist competence should consider the Kurtz tracker when determining how best to facilitate an integrated approach.

Treatment Outcome Data

Outcome data are perhaps one indicator of therapist competence, because the proficient delivery of PCIT typically leads to improvements in child behavior and parent skill use. ECBI scores and DPICS codes are two forms of data generated during PCIT sessions that have been used previously to evaluate trainee competence (Travis & Brestan-Knight, 2013). To be sure, trainee organization and ability to provide the dates and data related to each therapy session can be extremely helpful for the supervision process. Careful review of client treatment data by PCIT trainers is an essential component of evaluating trainee competence in conducting both CDI and PDI sessions, but we caution that these data do not alone demonstrate therapist competence. For example, complicated and difficult clinical situations can arise during a PCIT training experience—clinical situations that would be challenging for even a seasoned PCIT trainer—and it is not fair to assume that a trainee is not competent because ECBI scores are not decreasing or parents have not yet demonstrated mastery of skills. Alternatively, hearing that a parent has met mastery for CDI should be verified by the PCIT trainer through video review or onsite supervision of the case as there can be treatment integrity errors of both omission (e.g., forgetting to provide feedback regarding the ECBI graph; missing many opportunities to coach the caregiver) and commission (e.g., spending long periods of time talking to the caregiver over the bug-in-the-ear rather than coaching) during even the best of PCIT treatment outcome situations.

The more important aspect of trainee competence as it relates to treatment outcome data is that the trainee is organized, keeps accurate records, and can demonstrate how to provide feedback to parents regarding ECBI scores and PRIDE skills. We encourage trainers to use a checklist to conduct a chart review (either paper or electronic chart review) to evaluate whether there is evidence of the following: a PCIT specific treatment plan, weekly homework sheets, weekly DPICS coding sheets (as appropriate), weekly coaching (as appropriate), an ECBI summary graph, and a DPICS summary sheet.

Continuing Education Opportunities

Although not specifically a method for assessing therapist competence, PCIT trainers are encouraged to seek continuing education (i.e., CE training) in topics related to PCIT supervision. As new developments are made in the area of coaching and treatment adaptations for a various clinical populations, it is crucial that PCIT trainers continue to learn and stay informed about best practices in PCIT therapy and supervision. These areas of further clinical skill development can occur through conference attendance, participation in certified PCIT therapist call-in hours, and from online videos (online CE videos can be found at the following websites: http://www.auburn.edu/outreach/opce/pcit/ and https://kurtzpsychology-consulting.wordpress.com/). One video that is specifically related to training and assessing therapist competence is the CE video "PCIT Supervision: Tips and strategies to support clinicians and sustain programs" presented by Dr. Larissa Niec. This video provides a framework for providing feedback and supervision to trainees as well as video-recoded vignettes to demonstrate the concepts presented in the CE video.

Perhaps the most important first step in becoming well versed in the supervision of PCIT and the most up-to-date methods for assessing therapist competence involves becoming a certified Level 1 trainer. Over the years, several names have been used to describe a Level 1 trainer and related workshops (Train the Trainer Workshops, Within Agency Trainer Workshops, "L1" Workshops). A certified PCIT therapist is qualified to attend a Level 1 training workshop once he or she has conducted a total of four PCIT cases to completion. Benefits of becoming a Level 1 trainer include continued consultation and training in the area of PCIT supervision. The workshop itself is typically a 1-day 8-h workshop and consultation includes monthly PCIT consultation calls for Level 1 trainers in training. Trainers in training also receive written feedback regarding their supervision of their trainee and review of their trainee's CDI and PDI session(s). Level 1 training workshops are often conducted as a preconfer-

ence event in conjunction with the biennial PCIT Conventions. PCIT International keeps a list of upcoming Level 1 Trainer Workshops, and the interested reader should look for training activities listed on the PCIT website at www.pcit.org.

Future Directions

One area of future development for supporting PCIT supervision and therapist competence would include development of a PCIT supervision manual. Much like the PCIT treatment protocol, it would be most helpful for PCIT trainers to have a structured guide to follow in order to facilitate standardization of training practices across training sites, particularly if the training site opts not to use a 40-h workshop training. For example, a PCIT supervision manual could include copies of many of the measures presented in this chapter as well as additional helpful measures that are in current use by PCIT trainers. Training activity logs, supervision documentation logs, a bibliography of suggested readings (e.g., the DPICS workbook, the PCIT protocol, selected chapters on the history of PCIT and supplemental material), and suggested role-play vignettes could all be included in the PCIT supervision manual. Finally, having a standard structure for trainee development could be helpful for PCIT trainers and trainees alike. To be especially helpful, training could occur on a continuum—from structured activities towards less structured activities over time. Trainees could watch live or previously video-recorded sessions conducted by certified PCIT therapists or trainers. Ideally, PCIT trainees would watch exemplars of the four key sessions outlined in the PCIT training requirements (e.g., CDI Teach, a CDI Coach Session, a PDI Teach, and a PDI Coach session) prior to beginning their PCIT training activities. Trainees could then participate in role-plays designed to provide them with a skill-building component. Next, trainees would conduct co-therapy with a more experienced PCIT therapist or his or her trainer. The final step would be for the PCIT trainee to serve as a lead therapist or an equal co-therapist for two PCIT cases from

beginning to end. We suggest that providing this scaffolded approach to PCIT training will provide ample opportunities to assess therapist competence as well as an opportunity for PCIT trainees to see PCIT in action prior to taking on their own cases.

Research involving interviews of PCIT Master Trainers could generate important insights when considering future directions in PCIT competence assessment. In one study examining therapist competency assessment in CBT, Muse and McManus (2016) conducted semi-structured interviews of 19 experts in CBT regarding their views related to the assessment of therapist competence. Several considerations regarding how competence should be defined and assessed emerged from the interviews. First, as discussed above, CBT experts described competence as involving both theoretical and practical knowledge. Furthermore, CBT experts reported that in order to be competent, trainees should integrate treatment techniques with their broader clinical skills instead of simply following treatment procedures by rote. Although many of these points apply to PCIT as well as CBT, conducting similar interviews with PCIT Master Trainers could produce a useful framework specific to PCIT for considering the strengths and weaknesses associated with commonly used techniques for evaluating therapist competence, as well as a starting point for the development of additional tools for competence evaluation.

Finally, more research should be conducted to evaluate best practices for PCIT training. Although there is an emerging literature on PCIT dissemination and implementation efforts (Beveridge et al., 2015; Funderburk, Chaffin, et al., 2015; Funderburk, Gurwitch, et al., 2015; Nelson, Shanley, Funderburk, & Bard, 2012; Pearl et al., 2011; Travis & Brestan-Knight, 2013), there are still many questions to answer regarding the most efficient and effective PCIT training techniques. Questions to consider include what is the optimal training format (e.g., weekly live observation of PCIT session versus attending a 40-h workshop), what is the optimal number of video-recoded session reviews during

a consultation period, and to what extent can online training supplement or replace in-person training for specialty topics or advanced training? These questions will be difficult for single training teams to answer given the length of time that it takes to train a PCIT therapist to certification and the low number of trainees that can be included in any one training cohort. Perhaps in the future, PCIT trainers will be able to form wider research collaborations to address these important questions. As we work to provide a more comprehensive definition of therapist competence, the answer to these research questions will surely facilitate PCIT dissemination to an even wider audience.

Trainee Case Study

In this section we provide training data for "Susan B. Therapist," a trainee who completed PCIT training through a 40-h intensive PCIT Training Workshop. As part of her participation in the training program, Susan provided her consent to be part of an ongoing IRB-approved research project evaluating PCIT training efforts.

Susan B. Therapist contacted the PCIT training team, completed a workshop application, and participated in a weeklong PCIT training that was held on 5 consecutive days. As described in the PCIT Training Requirements summary above, Susan learned about the theoretical background of PCIT through didactic lectures, she observed live case sessions with a demonstration family, she learned the DPICS, and she practiced coding both video recorded and role played interactions. Susan also had the chance to demonstrate her 10-10-10 mastery of CDI skills and practice CDI and PDI coaching during role-plays with her co-trainees. At the beginning of the workshop, her PCIT Quiz knowledge score was a 78% and at the end of the workshop her PCIT Quiz score was a 100%. Her DPICS coding for CDI improved from 49% IRR at the beginning of the workshop to 84% IRR at the end of the workshop on a standardized video-recording. Following completion of the workshop, Susan participated in bi-weekly

phone call consultation and she submitted relevant sessions for review and feedback

Susan's trainer provided a rating of her first submitted CDI Coach session (see Exercise 7). The rating scale provided the trainee and supervisor some context within which to discuss what went well in the session as well as areas of improvement for future CDI coach sessions. For this particular session, they agreed that Susan could work on increasing the frequency of her coaching statements. Susan's own ratings for the session were consistently one to two points lower than the trainer's ratings and Susan reported that she did not feel comfortable with the protocol during her first CDI session. Both the trainer and Susan agreed that the next session would feel better now that Susan had one CDI session "under her belt." Exercise 7 provides a fidelity checklist for the CDI coach session as well as detailed written feedback from Susan's trainer. Due to a treatment integrity score that was lower than 80% and a session that was shorter than what is recommended in the PCIT protocol, the trainer asked Susan to submit another CDI session video and written feedback was given to Susan an additional time. Her subsequent sessions had higher treatment integrity scores and she was able to successfully navigate both CDI and PDI sessions. It should be noted, however, that due to the high turnover that was typical at her clinic, Susan started six PCIT cases during her consultation period—three cases dropped out, two cases completed the protocol, and one case was put on hold due caregiver pregnancy. It took 13 months of consultation for Susan and the trainer to complete the two PCIT cases that Susan needed in order to become a certified PCIT therapist.

The written feedback provided a starting point for the discussions that the trainer and trainee had during their bi-weekly phone consultation. Although written feedback worked well for the type of PCIT training provided in this case study (e.g., a PCIT Master Trainer providing feedback to a trainee in another part of the country), elements of the written feedback can be used and adapted by Level 1 trainers who have more immediate contact with trainees.

Figure 1: PCIT Therapist Competency Requirements (PCIT International, 2013)

1. **Assessment Skills.** By the end of the training process, the applicant should be able to:
   (a) Administer, score, and interpret the required standardized measures for use in assessment and treatment planning. (Required measures: ECBI, DPICS-IV; Recommended measures: TAI, PSI-SF, SESBI-R, and BASC or CBCL).
   (b) Administer behavioral observations from the DPICS-IV Coding System.
   (c) Achieve a minimum of 80% agreement with a PCIT Trainer using the DPICS-IV either during 5-min of live coding, or in continuous coding with a criterion video recording.

2. **CDI-Related Therapist Skills.** By the end of the training process, an applicant should be able to:
   (a) Conduct the CDI Teach session, adequately explaining all non-optional items on the treatment integrity checklist in the 2011 PCIT Protocol as observed by the PCIT Trainer.
   (b) Meet the parent criteria for CDI skills (ten labeled praises, ten behavioral descriptions, ten reflections; three or fewer negative talks, questions, plus commands) in a 5-min interaction with a child or a 5-min role-play with an adult portraying a child.
   (c) Demonstrate for the PCIT Trainer how to determine the coaching goals for a CDI session by interpreting the DPICS-IV Coding Sheet data gathered at the start of the session.

3. **PDI-Related Therapist Skills.** By the end of the training process, an applicant should be able to:
   (a) Present the PDI Teach Session, adequately explaining all non-optional items on the treatment integrity checklist in the 2011 PCIT Protocol as observed by the PCIT Trainer.
   (b) Effectively manage a PDI Coach session and accurately demonstrate the discipline sequence with a child in treatment. In the

case when a full discipline sequence does not occur or cannot be video recorded, the applicant must demonstrate the skills through role-play.

   (c) Accurately explain the House Rules procedure as described in the 2011 PCIT Protocol. Accuracy can be assessed through role-play, and does not require observation of an actual session. However, the PCIT Trainer must observe the role-play in real time (e.g., live or online/telehealth) or by video recording.

   (d) Accurately explain the Public Behaviors procedure as described in the 2011 PCIT Protocol. Accuracy can be assessed through role-play, and does not require observation of an actual session. However, the PCIT Trainer must observe the role-play in real time (e.g., live or online/telehealth) or by video recording.

4. **General Coaching Skills**
      (a) By the end of the training process, an applicant is expected to demonstrate adequate and sensitive coaching as observed by the PCIT Trainer.
      (b) By the end of the training process, an applicant is expected to model CDI skills during all interactions with parents and children throughout the treatment.

   (a) "Don't put the airplane on the table."
   (b) "Why don't you put the blocks in the cabinet?"
   (c) "Hand me the red block."
   (d) "Let's play with Mr. Potato head."
   (e) "Watch out."

4. Which of the following should you avoid doing when playing with a child:
   (a) Doing what the child is doing
   (b) Asking the child about what they are doing
   (c) Describing what the child is doing
   (d) Being enthusiastic

5. Which is *not* a benefit of PDI play sessions?
   (a) Teaches children to obey parents in a fun environment
   (b) Teaches parents how to consistently discipline their child
   (c) Allows the parents to use their PRIDE skills with their child
   (d) Increasing the child's creativity

6. When playing with a child during a CDI session it is important for you to:
   (a) Lead the play
   (b) Make sure the focus is on what you are doing
   (c) Show you are interested by asking questions
   (d) Let the child know what they are doing is interesting

Figure 2: Sample Items from the PCIT Quiz

1. PCIT is an acronym that stands for:
   (a) Parents and Teachers in Training
   (b) Proper Child Interaction Therapy
   (c) Parent–Child Interaction Therapy
   (d) Parent–Child Interest Test

2. You and a child are playing with toy animals and the child says, "I've got a moo cow." An example of a reflection you could say is:
   (a) You are playing so nicely with your moo cow
   (b) What comes from cows
   (c) I have a goat
   (d) You do have a brown and white cow

3. Which of the following is an example of an effective command?

Figure 3: PDI Flow Chart

PDI Quiz (Day 3)

1. Jane is playing in a playroom. There are several toys strewn about on the floor (books, blocks, and Legos). Jane's mother tells her to put the blocks in the container. Jane pouts and begins to throw the blocks across the room. Five seconds have elapsed and Jane has not complied with the command. Jane needs to be put in time-out. Assume that in time-out Jane behaves appropriately for the full 3 min. After sitting in the chair, she complies with the original command. Be sure to include the procedure(s) that should follow including all parent verbalizations. Began the diagram

with the parent giving the command. You can write along the arrows and use the boxes.
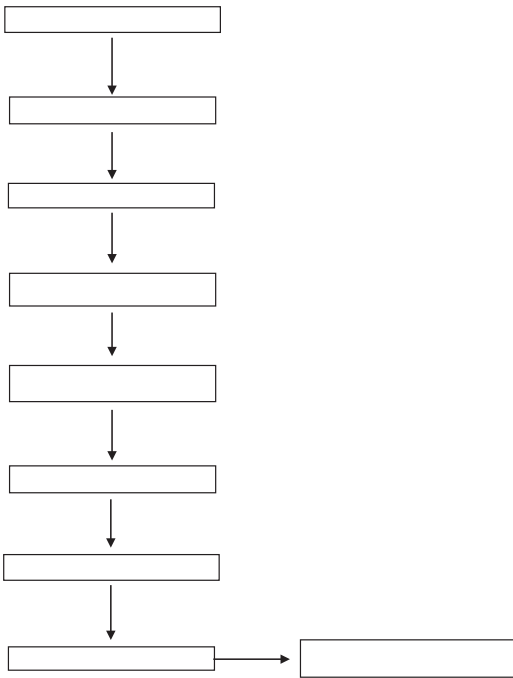
Figure 4: Integrity Checklist for DPICS Set-Up Task (Courtesy of Jessica Bonatakis)

Room Set-Up Fidelity

Item Number	Yes	No
1. One table present in the therapy room		
2. Two chairs at the table in the therapy room		
3. One time-out chair facing the corner in the therapy room		
4. Toy box or toy shelf present		
5. Two sets of toys spread out/strewn on the table		
6. Five sets of toys strewn out on the floor		
7. No extraneous furniture/items present in the therapy room		
TOTAL		
Fidelity [(# Yes/7 × 100)]		

Figure 5: Treatment Integrity Checklist for House Rules

ID #: _____ **Session Title**: <u>House Rules</u>
Coder Initials: _____ **Date Reviewed:** _____
   Integrity Checklist

ITEM NUMBER	✓	N/A	X
1. Types of behaviors that need a house rule			
2. How to set up a house rule			
3. Explaining the house rule to your child			
4. How to use the house rule			
5. Beginning another house rule			
TOTALS			

Integrity = <u>Yes's (✓'s)</u> = _____
Yes's (✓'s) + No's (**X**'s)
Integrity Checker Comments about Session
•

Figure 6: Treatment Integrity Checklist for Public Behavior

ID #: _____ **Session Title**: <u>Public Behavior</u>
Coder Initials: _____ **Date Reviewed:** _____
   Integrity Checklist

ITEM NUMBER	✓	N/A	X
1. Plan a practice outing			
2. Tell your child where you are going and how you want him/her to act			
3. Explain to your child that you will use time-out in public if needed			
4. Praise your child for appropriate behavior			
5. Don't push your child too hard			
6. Make the trip fun			
7. How to do time-out in public			
TOTALS			

Integrity = <u>Yes's (✓'s)</u> = _____
Yes's (✓'s) + No's (**X**'s)
Integrity Checker Comments about Session
•

Figure 7: Sample Treatment Integrity Checklist for CDI Coach 1

ID #: 9999 Session: <u>CDI Coach 1</u> **Rater Initials:** SOS **Date Reviewed: XX/XX/XX**

As you review the session, place a checkmark under the appropriate column.

List the totals in the appropriate blanks below the table. See expanded session outlines for more information on each item.

ITEM	✓	N/A	X
1. Spend a few minutes addressing parent stressors unrelated to the child's behavior			X
2. Review homework	X		
3. Orient the child to CDI	X		
With one parent in treatment			
4. Code parent and child in CDI for 5 minutes	X		
5. Give parent feedback on skills and set goals for coaching			X
6. Coach parent with child for at least 20 minutes	X		
With two parents in treatment			
4. Code one parent and child in CDI for 5 minutes			
5. Give first parent feedback on skills and set goals for coaching			
6. Coach first parent for at least 10 minutes			
7. Code second parent for 5 minutes			
8. Give second parent feedback on skills and set goals for coaching			
9. Coach second parent with child for at least 5 minutes			
With each parent			
7 or 10. Show CDI Skills Progress sheet data to parent(s)	X		
8 or 11. Introduce ECBI graph and show parents ratings			X
9 or 12. Give homework sheet and discuss what to emphasize	X		
TOTALS			

Note: Omit items not applicable (i.e. 1-parent items for 2-parent family and vice versa)

Integrity = <u>Yes's (✓'s)=</u> _____ **66** _____ **%**
Yes's (✓'s) + No's (**X**'s)
Length of session = ___45___ minutes
Evaluation of Coaching

1. Timing or frequency of coaching

Not Observed	Needs Improvement	Adequate	Very Good	Excellent
1	2	3	4	5

2. Therapist Enthusiasm

Not Observed	Needs Improvement	Adequate	Very Good	Excellent
1	2	3	4	5

3. Accurate Labeling of Pride Skills

Not Observed	Needs Improvement	Adequate	Very Good	Excellent
1	2	3	4	5

4. Appropriate ignoring of "don't skills"

Not Observed	Needs Improvement	Adequate	Very Good	Excellent
1	2	3	4	5

5. Provided appropriate redirection

Not Observed	Needs Improvement	Adequate	Very Good	Excellent
1	2	3	4	5

6. Appropriate Level of Guidance (specific vs. general)

Not Observed	Needs Improvement	Adequate	Very Good	Excellent
1	2	3	4	5

7. Correct Follow-Through for PDI Procedure (if applicable) Mark if _**N/A**_

Not Observed	Needs Improvement	Adequate	Very Good	Excellent
1	2	3	4	5

Integrity Checker Comments about Session

- This mother looks like she is having trouble processing this information about homework. I don't see a lot of head nodding or buy-in from mom—no questions about how to best do it. The girl, on the other hand, is really into this! She seems quite interested and invested!
- During check-in be sure to place a lot of emphasis on how the homework went the previous week. Bring out a blank sheet if mom didn't bring her sheet from last week and re-create it. Talk about what they did each day, what skill was easiest, what skill was harder, and how the girl liked the playtime. Guide mom through a discussion of how to problem solve the issue of other children wanting to be a part of the playtime.
- After you complete your DPICS coding, be sure to give mom a summary of her skills. "You did a great job with Labeled Praise today, we are going to really focus on Behavior Descriptions since they were on the low side today."
- Mom doesn't notice all her questions! You are doing a good job ignoring them during this CDI Coach 1.
- Be careful with your tone of voice—you used a question when you modeled a RF. Also, later you praised her for reflecting when she used a question a few times.
- Be sure to increase the frequency of your coaching statements. It is hard when the mom is not using the skills frequently—just find something positive that you still can comment on (tone of voice, following child's lead, sharing, sitting close to the child) after almost every parent statement.
- You can praise mom for ignoring the child's sassiness/bossiness when you see it in session. This was really the only misbehavior that I saw during the session.
- Also, try labeling your coaching statements. You said "great job" every so often. Be sure to tell mom what was a great job (i.e., label your coaching statements).
- Be sure to praise mom when she does follow your coaching directions. So if you say "find something to describe" and mom complies, be sure to say enthusiastically "Great description!!" as though she was the one who came up with it :)
- When you end the coaching, you want to be really positive. "What a great interaction!" You two are really having a great time in there! (insert the ending statement from the protocol) I'll be there in just a minute or two."

Basically, you want to end on a high note and have that parent feeling really confident when you finish the coaching.

- This is really hard to do—but try to use just PRIDE skills with the girl. A few questions snuck in, but overall great PRIDE skills with her :)
- For #7 above (giving feedback on the DPICS) you really want to go into great detail here. Show her the numbers for each skill, compare them to her baseline numbers, and praise her for any changes that you notice. Same thing with the ECBI graph. You want to make a big deal about the number coming down (if it did) and then talk about why it didn't (if that is what happened).
- This girl is a real firecracker. I am looking forward to seeing what she does with time-out in PDI. Although the session was missing some key elements, you provided mom with a very nice CDI Coach 1 session!

Exercise 8a: Common CDI Coach Session Questions/Themes to Look for in Supervision

- Does the trainee spend too much time talking to the parent about nonessential topics?
- Is the trainee using only PRIDE skills during interactions with the child?
- Does the trainee help the parent to generalize behavioral principles during check in and check out?
- How does the trainee deal with parental homework noncompliance?
- Does the trainee convey confidence and hope in the parent's ability to effect behavior change?
- Is the trainee talking to both caregivers equally (if there are two caregivers)?
- How does the trainee deal with a disruptive child during check in and check out?
- What is the rate/frequency of coaching statements?
- What feedback can be given about the quality of coaching statements?
- Is there too much line feeding or misapplication of coaching statements?

- How well does the trainee go over ECBI data and DPICS coding data in session?

Exercise 8b: Common PDI Coach Session Questions/Themes to Look for in Supervision

- Are the toys appropriate for this child during PDI?
- Does the therapist redirect coaching statements quickly, if needed?
- Does the parent provide praise to the parent for correct follow-through?
- Is the therapist giving no more than 5 s for compliance?
- Is the therapist following the PDI flow chart?
- Does the therapist talk to the parent during a time-out?
- Is the therapist watching whether or not the child gets off the chair and providing guidance to the parent?
- Is the homework given after a PDI session appropriate for the caregiver's skill level?

Figure 9: Sample PDI Feedback

Integrity Checker Comments About Session

- Good ignoring of that kiddo at the beginning…just as he was starting to escalate, he stopped briefly, and you slipped in a praise (so good!). He is really pushing buttons.
- She had complaints about the ECBI—that doesn't happen so much with other parents, but I see her point that he still needing a warning after praises and so she doesn't know how to rate him. Great ignoring while he is yelling "shut up!"
- He definitely needs a house rule for sassy talk….
- Your new sound system is really awesome, by the way.
- Your coaching is very good through some very challenging situations. Your timing was great and you provided just enough direction

to mom as you helped her through the command sequence.

- Mom keeps talking even when he is yelling at her to "shut up"—I would have her move her body away a bit and really give a big ignore (make it really obvious when she is ignoring him—it isn't so obvious right now). This kid isn't getting a lot of praise for the positive opposite and when he does he is still sassy back to her.
- He seems to really like the teaching parts of the play—or at least parts where he is learning something or has something to consider. I also heard him say "thank you" somewhere in there!
- Your feedback to her was so sensitive and nice. It was a hard interaction to watch in a way because he was so disrespectful to her.
- Good idea to focus on reflections during the coaching.
- The only problem with her first command sequence was that it was two commands together (take that off the mirror and bring it to me). You would want to give her some feedback on that—but he did comply and she did follow up with a LP.
- For the second command she actually just used two UPs instead of a LP after the compliance. She started the command by giving an IC (I need you to give me the X. Please hand me the X).
- Mom has a good mix of giving commands and then using PRIDE skills.
- She did not give LPs after the third compliance. Her habit it to give a string of Ups.
- "I want you to put the man on top…" is an IC rather than a DC (mom thinks it is DC).
- Things for mom to work on in PDI
  – Be sure to give one DC.
  – Use the specific Warning words.
  – Don't count to 5 out loud/No extra words after the command.
- For all his sassy talk, this boy is actually quite compliant! He was much more appropriate by the end of the session. I hope that mom is able to make the connection that her positive attention leads to more appropriate behavior for this boy.

- Excellent modeling the skills for mom during the checkout!!
- One small point about house rules…and this would help mom with her desire to have some response to the child after going to the chair for a house rule…she needs to watch him carefully afterwards and then give a huge praise when he is using respectful/nice language. This way he knows what she likes and it changes the contingencies.
- Wonderful session!

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Building Resilience Through PCIT: Assessing Child Adaptive Functioning and Parent–Child Relationship Quality

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Abstract

In contrast to the traditional pathology model that guides most clinical practice and policy, an emergent body of literature alternatively emphasizes a strengths-based paradigm. Protective factors—especially adaptive caregiving relationships and psychosocial competence—significantly cause or moderate cumulative, long-term developmental consequences that spread across functional domains, levels, and systems (i.e., developmental cascades).

Unfortunately, most child assessment measures and practices—including those used in PCIT—focus predominately if not exclusively on child pathology rather than
child resiliency, competence, or protective contextual factors.

Given the need for strength-based assessment tools and a more balanced understanding of children, this chapter presents three novel parent-report measures: (1) the Psychosocial Strengths Inventory for Children and Adolescents (PSICA; Niec et al., 2018), a multidimensional measure of child psychosocial competence; (2) the Child Relationship Development Questionnaire (CRDQ; Briegel, 2014); and (3) the Child Relationship Checklist (CRC; Briegel, 2014), which can be used independently or jointly to assess parent–child relationship quality. The CRDQ and the CRC together constitute the Child Relationship Behavior Inventory (CRBI). Each of these measures is appropriate for basic developmental research and early childhood interventions, but they are especially applicable to PCIT, which promotes the development of early child protective factors such as prosociality, secure attachment, compliance, affect regulation, and social awareness.

The Importance of Early Childhood Adaptive Functioning

In contrast to the traditional pathology model that guides most clinical practice and policy, an emergent body of literature alternatively empha-

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sizes a strengths-based paradigm (e.g., Bowman, 2013; Seligman & Csikszentmihalyi, 2000; Tedeschi & Kilmer, 2005). This new but growing shift includes (a) basic developmental research on protective intrapersonal and interpersonal factors linked to psychological resiliency and competency as well as (b) applied clinical research on interventions that incorporate these protective factors to promote resiliency in at-risk children and families (Bowman, 2013; Maton, Schellenbach, Leadbeater, & Solarz, 2004; Weissberg, Kumpfer, & Seligman, 2003). Both streams of research have identified three primary categories of protective factors: (1) intrapersonal characteristics (e.g., affect and attention regulation, average to high intelligence, internal locus of control, self-esteem, problem-solving skills, and positive future expectations), (2) interpersonal contexts involving caregiving and familial relationships (e.g., authoritative parenting with high demandingness, nurturance, and predictability; safe home), and (3) broader extra-familial contexts (e.g., positive nonfamilial resources and mentors, effective schools; access to prosocial organizations, and safe neighborhoods (Luthar, Cicchetti, & Becker, 2000; Masten, 2001; Masten & Coatsworth, 1998; Tedeschi & Kilmer, 2005; Wyman, Sandler, Wolchik, & Nelson, 2000). Intra- and interpersonal protective factors such as those named above tend to be related to risk factors; however, they are ultimately unique constructs. This suggests that early childhood protective factors such as psychosocial competencies (e.g., prosociality, affect regulation, sustained attention, and compliance with parents) are not merely mirror reflections of their negative opposites (e.g., child behavior problems; Carter, Briggs-Gowan, Jones, & Little, 2003; Eisenberg & Mussen, 1989).

These childhood protective factors—especially adaptive caregiving relationships and psychosocial competence—significantly cause or moderate cumulative, long-term developmental consequences that spread across functional domains, levels, and systems (i.e., developmental cascades; Cicchetti & Curtis, 2006; Masten & Cicchetti, 2010). That is, a protective factor such as psychosocial competence in a specific domain (e.g., peer relationships) during a particular period of the lifespan (e.g., school age) supports future competence in other developing domains and tasks (Masten & Cicchetti, 2010; Masten & Wright, 2009). Concurrently, deficits or failures in early key psychosocial competencies (e.g., affect regulation) can cause cumulative negative trajectories as more advanced developmental competencies fail to develop (Masten & Cicchetti, 2010; Masten, Long, Kuo, McCormick, & Desjardins, 2009). Indeed, prior reports demonstrate that deficits in early psychological competencies place children at risk for psychopathology (Carter, 2002; Masten & Coatsworth, 1995, 1998) and delays in the development of future competencies (Carter et al., 2003; Carter & Briggs-Gowan, 2006; Cicchetti, 1993).

The links between the parent–child relationship and the emergence, development, and generalization of child psychosocial competence and psychopathology are similarly robust and well known (e.g., Amato & Fowler, 2002; Baumrind, 1967; Morris, Cui, & Steinberg, 2013; Rinaldi & Howe, 2012). As a result, recent efforts have attempted to develop and evaluate child and family services that (a) interrupt negative developmental cascades by reducing risk-related behaviors and contexts and/or (b) promote positive developmental cascades by fostering protective psychosocial competencies and contexts (Cicchetti & Gunnar, 2008; Masten et al., 2009; Masten & Cicchetti, 2010). Findings from these evaluations indicate that developmental cascades typically begin with psychological competencies in early childhood, may be more common than originally thought, and may be targeted by early childhood interventions (like parent–child interaction therapy; PCIT) that provide significantly higher returns on investment compared to similar services administered in later childhood, adolescence, and adulthood (Heckman, 2006; Masten & Cicchetti, 2010; Reynolds & Temple, 2006;

Tedeschi & Kilmer, 2005). Yet, these clinical and preventative interventions, as well as the basic developmental research upon which they are founded, require psychometrically rigorous, feasible, and developmentally appropriate measures of resiliency, psychosocial competence, and related protective factors, both intrapersonal and interpersonal (Bowman, 2013; Prince-Embury, 2010; Seligman & Csikszentmihalyi, 2000).

A Need for Strength-Based Assessment Measures

Unfortunately, most child assessment measures and practices—including those used in PCIT—focus predominately if not exclusively on child pathology rather than child resiliency, competence, or protective contextual factors (Brazeau, Teatero, Rawana, Brownlee, & Blanchette, 2012; Snyder, Ritschel, Rand, & Berg, 2006; Tedeschi & Kilmer, 2005). This problem-based assessment approach provides an incomplete understanding of children and their contexts, which in turn can negatively impact families (Brazeau et al., 2012; Snyder et al., 2006). Within mental health settings, clients are notably vulnerable to the potency and pervasiveness of negatives, and problem-focused measures and assessment protocols may unintentionally reinforce parents' negative biases toward their children, particularly when problem-focused measures are repeatedly administered during treatment as is done in PCIT (Harniss, Epstein, Ryser, & Pearson, 1999; Rashid & Ostermann, 2009; Wright & Lopez, 2002).

In contrast, strengths-based measures (see Lopez, Synder, & Rasmussen, 2003; Ong & Van Dulmen, 2006) can lead to more positive engagement, expectations, collaboration, and outcomes with children and their parents (e.g., Brazeau et al., 2012; Brun & Rapp, 2001; Graybeal, 2001; Snyder et al., 2006) in mental health (Stroul & Friedman, 1996), child welfare (Saleeby, 1992), and family services (Dunst, Trivette, & Deal, 1994). Especially in contexts that provide therapy to children with severely disruptive behaviors (e.g., PCIT), assessing both strengths and

problems can redirect parents from focusing solely or mostly on their children's symptoms or behavior problems (Tedeschi & Kilmer, 2005). Further, strengths-based measures are particularly well-suited for preventive interventions, where short-term changes in normative or at-risk problem behaviors are often undetectable despite easily detected, large changes in protective factors and adaptive behaviors (e.g., Garbacz, Zychinski, Feuer, Carter, & Budd, 2014; Lyon et al., 2009). Within clinical settings, assessing positive child behaviors and contextual aspects allows service providers to incorporate strengths into treatment planning and progress (Duckworth, Steen, & Seligman, 2005; Radigan & Wang, 2013), which is important given that pretreatment child and parent strengths predict posttreatment improvements in mental health, functioning, and risk factors (Lyons, Uziel-Miller, Reyes, & Sokol, 2000). Moreover, research suggests that measuring strengths and problems may increase the acceptability and reliability of assessment processes and results (Briggs-Gowan & Carter, 1998; Carter, 2002; Cowger, 1994; Saleebey, 1996). Consequently, measures of intrapersonal protective factors may balance assessment protocols and better foster therapeutic alliance and outcomes (Brazeau et al., 2012; Harniss et al., 1999; Rashid & Ostermann, 2009; Tedeschi & Kilmer, 2005).

Particularly in infancy and early childhood, development is highly embedded in caregiving relationships, and these bidirectional attachments affect short- and long-term intrapersonal and interpersonal functioning, including capacities to form future relationships with peers, teachers, and others (Shonkoff & Phillips, 2000; Stadelmann, Perren, von Wyl, & von Klitzing, 2007). For instance, some children who are generally well behaved in one context (e.g., school) may exhibit major behavior problems with specific caregivers (e.g., with parents). Thus, best-practice assessment of young children entails measuring not only intrapersonal child functioning, but also the relative strengths and weaknesses of children's relationships, particularly their relationships with their primary caregivers

(Carter, 2002; Carter, Briggs-Gowan, & Davis, 2004; Glascoe, 2002; Tedeschi & Kilmer, 2005).

Measures of child relationships and psychosocial competence are also relevant to the screening of child functioning. Namely, screening measures can be a feasible, effective method to improve the quantity and quality of child mental health referrals and outcomes (Baird et al., 2000; Jellinek et al., 1999), as early identification of children with social-emotional, behavioral, and developmental delays is essential to providing optimal early intervention services (American Academy of Pediatrics, 2001; Radecki, Sand-Loud, O'Connor, Sharp, & Olson, 2011; U.S. Public Health Service, 2000). However, most psychosocial deficits in early childhood remain undetected, and thus unresolved, as there is a dearth of validated and feasible measures of child psychosocial competence and caregiving relationships (Carter et al., 2003, 2004; Tedeschi & Kilmer, 2005). Of the measures that do exist, even fewer have the necessary qualities for widespread use in screening and treatment settings, such as being psychometrically robust; brief; simple to administer (e.g., parents should be able to read and complete them independently), score, and interpret; economically feasible, developmentally appropriate, and clinically actionable (Carter, 2002; Glascoe, 2002; Rescorla & Achenbach, 2002). Instead, current instruments are prohibitively costly in time and/or money, unidimensional, and/or developmentally inappropriate for measuring psychological competence and caregiving relationships of school-aged children—particularly those within the PCIT age range (see Niec et al., 2018 for a review).

Therefore, a need exists for feasible, psychometrically rigorous, and multidimensional measures of psychosocial competence and caregiving relationships in early childhood. In particular, brief and publically available parent-report measures are necessary for widespread and regular implementation. Although parent-report measures are vulnerable to biases (e.g., distortions related to parent psychopathology or motivations to receive services; Briggs-Gowan, Carter, & Schwab-Stone, 1996; Carter et al., 2004), parents' perceptions of their children's behavior and relationships should be assessed for several reasons. First, the parent-perceived frequency of specific child behaviors impacts parent concerns and attitudes. For example, a parent who believes their child almost always shares and plays nicely with their siblings or alternatively almost always fights with their siblings is likely to have certain affective and cognitive reactions to their child, *regardless* of the actual frequency of positive and negative sibling interactions. Second, even when parents report similar frequencies of their child's behaviors, they can report significantly different levels of satisfaction or concern with those behaviors (McCain, Kelley, & Fishbein, 1999). Third, parent concerns related to the relative frequency and/or acceptability of child behaviors directly influence parents' behavioral responses, which in turn substantially affect their children's social-behavioral development (Carter et al., 2004; Fonagy, Target, Steele, & Gerber, 1995). Thus, children rated by their parents as having infrequent and/or unsatisfying levels of adaptive behaviors, regardless of more objective measurements, are at-risk for future psychosocial impairment (Carter, Garrity-Rokous, Chazan-Cohen, Little, & Briggs-Gowan, 2001). Finally, parent-report measures can overcome several problems of observational measures, including child reactivity to novel settings, prohibitive time demands to learn and administer a measure, and the relative unlikelihood of observing high-salience but low-base rate behaviors (e.g., aggression; Carter et al., 2004).

Given these benefits and the need for assessment tools, this chapter presents three novel parent-report measures: (1) the Psychosocial Strengths Inventory for Children and Adolescents (PSICA; Niec, Peer, & Courrégé, 2018), a multidimensional measure of child psychosocial competence; (2) the Child Relationship Development Questionnaire (CRDQ; Briegel, 2014b); and (3) the Child Relationship Checklist (CRC; Briegel, 2014a), which can be used independently or jointly to assess parent–child relationship quality. The CRDQ and the CRC together constitute the Child Relationship Behavior Inventory (CRBI). Each of these measures is appropriate for basic developmental research and early childhood

interventions, but they are especially applicable to PCIT, which promotes the development of early child protective factors such as prosociality, secure attachment, compliance, affect regulation, and social awareness (Eyberg & Funderburk, 2011; Howard, Sparkman, Cohen, Green, & Stanislaw, 2005; Remington et al., 2007). Especially in the Child-Directed Interaction (CDI) phase, PCIT aims to strengthen the parent–child relationship by creating a "mutually responsive orientation" (Harwood & Eyberg, 2006; Kochanska, 1997) that increases compliance in young children (Kochanska, Forman, Aksan, & Dunbar, 2005). The child-centered interaction skills ("Do Skills") of PCIT are intended to promote various child psychosocial competencies including prosociality, attention, and affect regulation (Eyberg & Funderburk, 2011). However, few studies have empirically tested whether PCIT actually leads to these hypothesized benefits (Hansen & Shillingsburg, 2016), in part due to a lack of assessment tools.

Nevertheless, results from existing studies have been promising. For instance, Eisenstadt, Eyberg, McNeil, Newcomb, and Funderburk (1993) examined 24 mother–child dyads receiving PCIT and reported significant pre- to mid- and posttreatment gains in self-reported child self-esteem (ds = 0.61–0.80), observed child proximity (ds = 0.31–1.60), and compliance to parents (ds = 1.38–2.43). Most recently, Ginn, Clionsky, Eyberg, Warner-Metzger, and Abner (2017) conducted a randomized controlled trial with 37 children with Autism Spectrum Disorder (ASD) and found that an adaption of PCIT improved parent-reported social awareness (d = 1.03). Hansen and Shillingsburg (2016) reported two case studies of children with ASD who received a modified form of PCIT and subsequently demonstrated significant pre- to posttreatment gains in observed child communication skills. Additionally, PCIT may improve affect regulation, as indicated by pre- to posttreatment gains in biological markers of emotion regulation capacity (i.e., respiratory sinus arrhythmia; Bagner et al., 2012; Rodríguez, Bagner, & Graziano, 2014). Most of these studies, however, involved costly rating scales, time-consuming

behavioral observation, or specialized medical instruments that are not feasible for widespread implementation in screening and/or progress monitoring.

Relatedly, PCIT has been increasingly adapted into prevention programs that seek to foster protective processes rather than solely reduce symptoms (Lieneman, Brabson, Highlander, Wallace, & McNeil, 2017). These adaptations include universal prevention (Allen, Timmer, & Urquiza, 2014; Gershenson, Lyon, & Budd, 2010; Lee, Wilsie, & Brestan-Knight, 2011) and targeted prevention for children at-risk for child behavior problems (Bagner, Rodríguez, Blake, & Rosa-Olivares, 2013; Berkovits, O'Brien, Carter, & Eyberg, 2010; Niec et al., 2014), child abuse (Chaffin, Funderburk, Bard, Valle, & Gurwitch, 2011; Thomas & Zimmer-Gembeck, 2011), and language and developmental delays (Allen & Marshall, 2011; Garcia, Bagner, Pruden, & Nichols-Lopez, 2015; Tempel, Wagner, & McNeil, 2009). To better evaluate these prevention programs, measures of child and family protective factors such as the PSICA and CRBI are necessary. Additionally, multicultural translation and validation of such instruments are required to facilitate widespread cross-cultural implementation of strengths-based assessment (Bowman, 2013; Carter et al., 2004).

To these ends, this chapter outlines these three new measures, including their initial development, validation studies, and proposed PCIT applications.

Psychosocial Strengths Inventory for Children and Adolescents

Instrument Description and Development

The PSICA is a 36-item parent-report measure of affective, attentional, and social competencies in school-aged children (Niec et al., 2018). Like the ECBI, the PSICA includes two scales: Frequency and Satisfaction. The Frequency Scale prompts parents to report how often their child engaged in specific behaviors during the past week. Response

options range from 1 (*Never*) to 7 (*Always*). The Satisfaction Scale prompts parents to respond whether they are currently satisfied with each behavior in their child (i.e., *YES* or *NO*). Four rationally derived subscales are included: Prosociality (9 items; e.g., *Shares*, *Helps other children*), Compliance with Parents (12 items; e.g., *Completes chores on time*, *Obeys house rules*), Attention (6 items; e.g., *Has good attention span*, *Can concentrate on one thing*), and Affect Regulation (8 items; e.g., *Is calm if doesn't get own way*, *Can use words to express being upset*).

The PSICA's items and subscales were developed using a rational-deductive approach (Burisch, 1978; Ruscio, 2015). Following a literature review of salient psychosocial competencies in school-aged children (e.g., attention regulation, compliance, emotional regulation, and prosocial play and peer interactions) and existing methods to assess them, the PSICA's creators collaboratively drafted, reviewed, and revised items to align with the above psychosocial domains as well as the "positive opposites" of disruptive behaviors relevant to PCIT (e.g., *Gets dressed promptly when asked* versus *Dawdles in getting dressed*; Eyberg & Pincus, 1999). Thereafter, the developers independently assigned items to the aforementioned subscales, compared results to assess convergence, and resolved the few disagreements that arose. Finally, the PSICA's format was designed to reflect a similarly formatted and established measure of conduct problems used before, during, and after PCIT: the Eyberg Child Behavior Inventory (ECBI; Eyberg & Pincus, 1999).

Presently, two studies have examined the PSICA's psychometrics, acceptability, and clinical utility. The first study (Niec et al., 2018) sampled 314 community parents in the United States, who completed the PSICA and three standardized measures of behavior problems, affect regulation, and learning problems in order to test the PSICA's internal consistency, construct validity, factor structure, and acceptability. The second study (Dell'armi & Niec, 2017) largely replicated the first, but with a community sample of 258 French mothers who completed a French-translated PSICA and a validated broadband measure of child psychological functioning. Both studies—and their main results—are reviewed below.

Initial Validation Study with a US Community Sample

Niec et al. (2018) recruited—via online social media outlets (e.g., Facebook, Twitter, parenting boards and blogs)—parents in the United States with at least one child between 4- and 16-years-of-age. Of the 314 parents who completed the PSICA and were included in analyses, most self-identified as white (97%), non-Hispanic/Latino (96%), middle-aged ($M = 38.53$ years) mothers (87%) with a few years of undergraduate education ($M = 14.39$; $SD = 2.23$). The children for whom these participants completed the PSICA were roughly equal in terms of gender (girls = 51%, boys = 49%), with an average age of 6.97 years ($SD = 3.69$). Despite comprising a community sample, participating parents reported that 20% of survey-targeted children had a learning or developmental disorder, 17% were receiving special education services, and 17% had been treated for behavioral problems.

Consenting participants completed an online survey that contained the PSICA, items assessing its readability and acceptability, and three other established measures to assess the PSICA's construct validity. These included the Emotional Regulation Checklist (ERC; Shields & Cicchetti, 1997), a narrow-band measure of child affect regulation and reactivity; the Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997), a broad-band parent-report of child hyperactivity, conduct problems, emotional symptoms, peer problems, and prosocial behavior; and the Colorado Learning Difficulties Questionnaire (CLDQ; Wilcutt et al., 2011), a parent-report measure of child academic problems (e.g., reading, math, spatial learning).

Results from this study validated the PSICA's internal consistency, construct validity, factor structure, readability, and acceptability. More specifically, results indicated that the PSICA has

excellent internal consistency, both overall (Frequency Scale α = .97; Satisfaction Scale *KR-20* = .95) and with its individual subscales (Compliance α = .91, Prosociality α = .92, Attention Regulation α = .91, Affect Regulation α = .90). Regarding construct validity, children with greater psychosocial competence–as measured by the PSICA Frequency Scale–were also described by their parents as having better affect regulation (ERC; r = .77, p < .001) and more prosocial behaviors (SDQ Prosocial Scale; r = .54, p < .001). Similarly as predicted, PSICA Frequency scores negatively correlated with child emotional-behavior difficulties, including conduct problems (SDQ Conduct Problems; r = −.64, p < .001), hyperactivity (SDQ Hyperactivity; r = −.61, p < .001), and social problems (SDQ Peer Problems; r = −.38, p < .001). Further, each PSICA subscale correlated as hypothesized with specific established measures (e.g., Affect Regulation and ERC r = .79, p < .001; Attention Regulation and SDQ Hyperactivity r = −.70, p < .001; Prosociality and SDQ Prosocial r = .58, p < .001; Compliance and SDQ Conduct Problems r = −.59, p < .001). Evincing the PSICA's discriminate validity, overall PSICA scores and academic problems, controlling for Attention Regulation, nonsignificantly correlated (i.e., CLDQ Reading; r = −.03, p = .63; Math; r = .07, p = .24; Spatial; r = .07, p = .19).

Principal axis factoring (PAF) with Oblimin rotation further demonstrated the PSICA's internal structure. Results from both a screen test (Cattell, 1966) with a parallel analysis plot (Horn, 1965; Humphreys & Montanelli, 1975) and a rational analysis of item loadings supported a three-factor solution. Specifically, results were consistent with three of the four rational factors, namely Prosociality, Compliance with Parents, and Attention Regulation. Collectively, these three factors accounted for approximately 60% of PSICA's variance. Items originally assigned to the Affect Regulation subscale (e.g., *Smiles or laughs*) instead loaded primarily on the empirically identified Prosociality factor.

Results also evinced the PSICA's general readability and acceptability comparable to other high-quality parent-report measures (e.g., ITSEA; Briggs-Gowan & Carter, 1998). Namely, most parents (86%) reported that the PSICA was "easy" or "very easy" to understand; whereas, few reported the PSICA was "hard" (3%) or "very hard" (>1%) to understand. Regarding acceptability, 48% reported being "likely" or "very likely" to recommend the PSICA to others, 44% were "neutral", and only 5% and 2% were respectively "unlikely" or "very unlikely" to recommend the measure.

Translation of the PSICA and Validation with a French Community Sample

Currently, no multidimensional instrument to evaluate the psychosocial competence of school-aged children and adolescents exists in France. To address this need, Dell'armi & Niec (2017) evaluated the reliability, validity, and factor structure of a French translation of the PSICA with a French community sample of 258 mothers.

Consistent with best practice back-translation (Brislin, 1970; Grunwald & Goldfarb, 2006), the PSICA was first translated into French by the study's authors (i.e., a native French and English speaker). Then, an independent bilingual and native English speaker completed a back-translation. Finally, both English versions of the PSICA (i.e., original and back-translated) were compared to inform several word adjustments and thereby finalize the French PSICA.

Thereafter, a validation sample for the translated measure was recruited to complete an online survey with the following inclusion criteria: parents of children between 4- and 16-years-of-age who were currently living in France. Participants were recruited online via parenting groups on social networks (e.g., Facebook). The survey contained the French versions of the PSICA and the Strengths and Difficulties Questionnaire (Goodman, 1997; validated by Shojaei, Wazana, Pitrou, & Kovess, 2009), and a sociodemographical questionnaire. All participants gave their informed consent online.

Of the 281 participants who completed the online survey, 14 were excluded from data analyses

as they resided outside of France. Also, as only nine fathers completed the survey, only maternal participants were retained for analyses. Thus, the final sample comprised 258 mothers (*M* age = 39.29 years; *SD* = 6.36 years) and their survey-targeted children (*M* age = 9.09 years; *SD* = 3.08 years), of whom 64% were boys. These children were mostly identified as gifted children (67%) with at least one sibling. Participating mothers had a range of educational backgrounds, from a high school degree (23%), to a bachelor or technology degree (each 20%), to a graduate degree (37%).

As with the original US validation sample, results supported the reliability, validity, and factor structure of the French PSICA. Specifically, the French PSICA demonstrated good to excellent overall internal consistency (Frequency Scale α = .93; Satisfaction Scale *KR-20* = .89). Its subscales also had good internal consistency (αs = .81–.87).

Like its English counterpart, the French PSICA showed evidence of good convergent validity, as PSICA and SDQ scores significantly correlated as hypothesized. Namely, child psychosocial competencies, as measured by overall and subscale PSICA scores, demonstrated significant negative associations with the SDQ Total Problems scale (Frequency: $r = -.28$, $p < 001$; Compliance with Parent: $r = -.27$, $p < 001$; Prosociality: $r = -.13$, $p = .03$; Attention Regulation: $r = -.25$, $p < .001$), the SDQ Hyperactivity scale (Frequency: $r = -.52$, $p < .001$; Compliance with Parent: $r = -.41$, $p < .001$; Prosociality: $r = -.31$, $p < .001$; Attention Regulation: $r = -.55$, $p < .001$) and the SDQ Conduct Problems scale (Frequency: $r = -.24$, $p < .001$; Compliance with Parent: $r = -.31$, $p < .001$). Additionally, positive associations could be shown between PSICA scales and the SDQ Prosocial Behavior scale (Frequency: $r = .21$, $p < .001$; Compliance with Parent: $r = .12$, $p = .05$; Prosociality: $r = .32$, $p < .001$; Attention Regulation: $r = .19$, $p = .002$).

Exploratory factor analysis indicated the French PSICA has a similar structure as its original counterpart. Specifically, eigenvalues and scree plot analysis supported a homologous three-factor solution: Prosociality, Compliance with Parents, and Attention Regulation. Collectively, these three factors accounted for 42% of the questionnaire's variance. Despite this overall similarity, there were small cross-cultural differences for certain item-factor loadings. Namely, for the French sample, the Compliance with Parents factor included 14 items (compared to 10 items from the US sample). Specifically, items (e.g., *Is relaxed*) loaded on the Compliance with Parents subscale instead of the Prosociality subscale (as in the US sample). The Prosociality subscale of the French version consisted of 12 items (unlike the corresponding 14-item American empirical scale). Finally, the Attention Regulation subscale of the French-translated PSICA comprised nine versus five items. Notwithstanding these differences, 75% of items loaded on the same empirically identified factors across samples.

In summary, these preliminary results suggest that the French version of the PSICA, like its original counterpart, is an adequate measure to evaluate psychosocial competencies of children aged 4–16 years. Further studies are needed, including validation of the French version for fathers, confirmatory factor analysis to assess cross-cultural invariance of items and subscales, and test-retest examination to evaluate the consistency of the PSICA over time.

Child Relationship Behavior Inventory

Instrument Description and Development

The CRBI consists of two separate questionnaires: (1) the Child Relationship Development Questionnaire comprising relationship-promoting child behavior aspects and (2) the Child Relationship Checklist representing relationship-disturbing child behaviors. Each questionnaire is a 14-item parent-report measure of observable child behaviors towards the parent. CRDQ items include: *Makes little gifts*, *Praises or compliments me*, and *Shares with me (e.g. food)*. Examples of CRC items are: *Threatens*

me, *Nags me,* and *Speaks to me in a bossy tone.* Like the ECBI, all items were designed to be rated on two scales: Intensity and Problem. While the Intensity scale prompts parents to report how often their child engaged in relationship-relevant behaviors towards the parent ranging from (1) *never* to (7) *always*, the Problem scale directs parents to report whether they perceive each of those behaviors to be "a problem" (*YES* or *NO*).

CRBI items were developed using a multistep approach consistent with recent guidelines for developing psychological tests (Bossuyt et al., 2003; Kottner, Audigé, Brorson, Donner, Gajewski, et al., 2011). Following a literature review and extensive observations of interactions between children aged 2–10 years and their parents in everyday situations, the measure items were drafted (Briegel, 2014a, 2014b). These items and their response formats were reviewed by a panel of experts in the field of child psychology and psychiatry. After a pilot study, the CRBI in its present form was established.

Presently, two studies have examined the CRBI's psychometric aspects: one with a German community sample and a second with a US community sample. We present preliminary results of the validation study from Germany. To date, the study comprises 795 children from a community sample from Schweinfurt, a rural region in Bavaria. About 1,300 parents completed questionnaires to assess sociodemographic characteristics, the German version of the ECBI, and the CRBI in order to test the CRBI's internal consistency, construct validity, and factor structure.

Initial Validation Study with a German Sample

After approval by an ethics committee, participating parents were recruited through day-care centers and elementary schools (1st to 4th grade). The study set was delivered by the participating institutions to the parents of each child enrolled from the age of two to ten years. All parents were asked to fill out materials anonymously and send them back to the participating institutions or the study sites.

In most cases, both mother and father provided information on their child's behavior (mothers: $n = 773$; fathers: $n = 528$). About 91 percent of mothers and fathers described themselves as of German nationality. Mean child age was 6.47 ($SD = 2.44$) years. At the time of the study, mothers' mean age was 37.06 ($SD = 5.67$) years, and fathers' mean age was 40.28 ($SD = 6.47$) years. Most of the children reportedly lived with both of their biological parents (84%), followed by children living with their biological mother but not biological father (14%), adoptive or foster parents (1%) or with their biological father but not biological mother (1%).

Preliminary results from this study revealed excellent homogeneity of both the CRDQ and the CRC with item-total correlations for all scales ranging from .40 to .67 for mothers and .35 to .71 for fathers. Results also indicated that across raters both CRBI questionnaires have good to very good internal consistency (CRDQ: Intensity Scale: mothers: $\alpha = .87$, fathers: $\alpha = .89$; Problem Scale: mothers: $\alpha = .87$; fathers: $\alpha = .81$; CRC: Intensity Scale: mothers: $\alpha = .87$; fathers: $\alpha = .85$; Problem Scale: mothers: $\alpha = .78$; fathers: $\alpha = .81$).

The positive and negative aspects of children's relationship-relevant behaviors appeared largely independent of one another (i.e., weakly correlated). Specifically, Intensity scale scores of both the CRDQ and the CRC had a small, negative association (i.e., mothers: $r = -.22$, $p < .001$; fathers: $r = -.27$, $p < .001$). The Problem scales of the CRDQ and the CRC showed a similarly small, but positive correlation (mothers: $r = .21$, $p < .001$; fathers: $r = .15$, $p < .001$). That is, even if children were rated as having negative behaviors related to their relationship with their parents, it does not suggest the absence of positive behaviors. This finding supports previous research that shows children's manifestation of problem behaviors is not merely a reflection of the lack of protective prosocial behaviors, and it reinforces the need to assess both psychopathology and competence in children's functioning.

The comparison of the CRBI ratings across mothers and fathers and across boys and girls (paired *t*-tests) also revealed interesting patterns. Specifically, both mothers ($d = 5.37$) and fathers

Table 1 Paired *t*-tests of Child Relationship Behavior Inventory (CRBI) scales by caregiver

Rater	CRDQ		CRC					
	M	*SD*	*M*	*SD*	*t*	(*df*)	*p*	*d*
Intensity scales								
Mothers	76.89	10.37	25.06	8.86	93.07	730	<.001	5.37
Fathers	69.69	12.25	25.26	8.26	55.61	426	<.001	4.25
Problem scales								
Mothers	0.31	1.29	1.51	2.53	−12.36	696	<.001	.60
Fathers	0.25	1.04	1.12	2.27	−7.60	401	<.001	.49

Note. CRDQ Child Relationship Development Questionnaire, *CRC* Child Relationship Checklist

Table 2 Paired *t*-tests of Child Relationship Behavior Inventory ratings by child and caregiver gender

Rater	Boys		Girls					
	M	*SD*	*M*	*SD*	*t*	(*df*)	*p*	*d*
CRDQ problem scale								
Mothers	0.39	1.50	0.18	0.89	2.25	641	.03	.17
Fathers	0.33	1.21	0.14	0.53	2.30	371	.02	.20
CRC problem scale								
Mothers	1.63	2.56	1.39	2.48	1.23	701	n.s.	–
Fathers	1.41	2.73	0.90	1.83	2.26	378	.02	.22

Note. CRDQ Child Relationship Development Questionnaire, *CRC* Child Relationship Checklist, *n.s.* not significant

(*d* = 4.25) reported significantly more positive relationship-relevant behaviors than negative behaviors. Unsurprisingly, negative behaviors were rated as significantly more problematic than positive behaviors by both mothers (*d* = .60) and fathers (*d* = .49; see Table 1). Additionally, both mothers and fathers generally rated boys as exhibiting significantly more problematic behaviors than girls on the CRBI Problem Scales (*d*s = .17–.22; see Table 2). Overall, mothers reported significantly more positive relationship-relevant behaviors on the CRDQ (*d* = .58) and more problems with negative relationship relevant behaviors on the CRC (*d* = .15; see Table 3) than fathers did. Yet, medium to large correlations between maternal and paternal ratings across all scales suggested good inter-observer reliability (CRDQ Intensity Scale: *r* = .57, Problem Scale: *r* = .76; CRC: Intensity Scale: *r* = .57; Problem Scale: *r* = .46; *p*s < .001.).

Regarding the discriminative validity of the CRBI, all scales were found to significantly discriminate between children with disruptive behavior problems (ECBI Intensity Scale score ≥ 111, *t*-score 60; Heinrichs, Bussing, Henrich, Schwarzer, & Briegel, 2014) and without such problems (mother and father ratings; *p* ≤ .01). Across raters, very large effect sizes (*d* = 1.23–1.32) could be found for the CRC Intensity Scale, whereas the CRDQ Intensity Scale showed small effect sizes (*d* = .42–.49). These results suggest that children with disruptive behavior problems show both fewer positive relationship relevant behaviors and more negative behaviors towards parents. Further analyses, especially confirmatory factor analysis, remain to be done after completion of data sampling.

Case Study: The Child Relationship Behavior Inventory

X. was a nine-year-old Caucasian female of German descent, with low to medium socioeconomic status and a rural upbringing. She was referred to an outpatient clinic by a child and adolescent psychiatry department specializing in the treatment of children with intellectual disabilities, where she had spent five weeks in inpatient care due to severe agitation and aggressive behavior towards others. Because of these problems, X's mother, her primary caregiver, was considering placing her daughter in institutional care.

The patient was born at 39 weeks of gestation via C-section due to cardiotocographic abnormalities. She suffered from severe postnatal asphyxia and needed intubation and mechanical ventilation. During her subsequent treatment in the pediatric intensive care department for nearly two months, numerous complications like hypoglycemia, unilateral facial paralysis, and bilateral pneumothorax occurred. A global developmental

Table 3 Paired *t*-tests of maternal and paternal ratings on CRDQ and CRC Scales

	Mothers		Fathers					
Scale	*M*	*SD*	*M*	*SD*	*t*	(*df*)	*p*	*d*
CRDQ intensity	76.49	10.27	70.02	12.15	13.64	496	<.001	.58
CRDQ problem	.24	.97	.24	.98	−.07	474	n.s.	–
CRC intensity	24.88	8.04	25.15	8.19	−.72	397	n.s.	–
CRC problem	1.47	2.40	1.12	2.30	2.30	376	.01	.15

Note. CRDQ Child Relationship Development Questionnaire, *CRC* Child Relationship Checklist, *n.s.* not significant

delay became apparent at the age of one year. She attended specialized daycare centers and a school for children with intellectual disabilities. Assessment of X.'s cognitive functioning with the German SON-R 5½–17 (Snijders-Oomen Nonverbal Intelligence Test-Revised; Snijders, Tellegen, & Laros, 1997) at the age of nine showed a Full Scale IQ below 55. From the age of five years, X. suffered from epilepsy and was treated with oxcarbazepine. When she presented at the child and adolescent psychiatry outpatient clinic, X. also showed concomitant strabismus convergent, bedwetting, and soiling.

X. lived together with her mother, her stepfather, and her younger half-sister. Her biological parents had separated when X. was three years old, and she had regular contact with her father. Both biological parents reported that they had no history of mental disorder.

Unstructured interviews with X.'s mother and her teacher, as well as the assessment of overall behavioral functioning (via the German version of the Developmental Behaviour Checklist; Einfeld, Tonge, & Steinhausen, 2007), revealed disruptive/antisocial behavior in the clinical range. X.'s mother filled out the ECBI (intensity score: 176; *t*-score: 90; Heinrichs et al., 2014) and the CRBI. Compared to the preliminary results of the CRBI evaluation study, the CRDQ intensity score of 82 was less than one SD above the mean, and the CRC intensity score of 41 was almost two standard deviations above the mean.

It was recommended that X. and her mother participate in PCIT to improve parent–child interactions and to decrease the child's behavior problems. X.'s mother was informed that no effectiveness studies on PCIT with older children had been done so far. Weekly clinic-based PCIT sessions were planned, but could not always be realized due to illness or holidays. The PCIT protocol guiding the case was the German translation of the 1999 PCIT manual (Eyberg & Members of the Child Study Laboratory, 1999). Coaching was conducted through a one-way mirror using a "bug in the ear" device. After eight CDI coaching sessions, ECBI intensity scores had dropped to below a *t*-score of 55. During the 15th CDI coaching session, X.'s mother demonstrated CDI mastery and felt able to manage X.'s behavior on her own. At that time, the ECBI intensity score had decreased to a *t*-score of 43 (raw score = 72), and X's mother was no longer considering an institutional placement for X. As the child's behaviors were within normal limits and her primary caregiver felt confident managing her behaviors, PCIT was ended. At the time of graduation, the parent–child relationship had significantly improved as was demonstrated by scores on the CRBI. This improvement was the result of both a significant decrease in negative relationship relevant behaviors (CRC intensity score = 18, almost 2.5 standard deviations below pretreatment assessment) and an increase of positive relationship behaviors towards her mother (CRDQ raw score = 92, about one standard deviation higher than at pretreatment assessment).

This case report suggests that CDI has an important influence on the quality of the parent–child relationship and that the Child Relationship Behavior Inventory has the potential to capture those changes. Not only did the child's negative relationship-relevant behaviors decrease across CDI sessions, but also her positive relationship-relevant behaviors increased. This case provides preliminary evidence that the CRBI is a useful tool to track treatment progress and outcome. Further stud-

ies are needed to elaborate and validate the findings of this case report.

Conclusions

The assessment of children's social-emotional functioning may often be better described as an assessment of psychopathology, as it neglects the systematic evaluation of early childhood protective factors such as psychosocial competence and parent–child relationship quality (Tedeschi & Kilmer, 2005). Failure to capture children's intra- and interpersonal strengths is problematic as it may lead to (1) negative biases in the perceptions of caregivers and clinicians, (2) missed opportunities to build upon resilience during treatment, and (3) the loss of important outcomes in the evaluation of child interventions. Psychosocial competence and positive parent–child relationships are two core protective factors that relate to positive developmental outcomes in later childhood and adolescence (Masten & Cicchetti, 2010). However, while the importance of understanding these factors is clear, assessment measures that are psychometrically sound, brief enough to use throughout treatment, and feasible to implement have been lacking (Niec et al., 2018).

This chapter describes two measures of social-emotional functioning that were designed to capture important dimensions of children's competence. The CRBI and the PSICA were developed to be used in research and clinical settings. Although the potential value of the measures extends broadly across child developmental and intervention science, both measures were developed specifically with the consideration of the goals of PCIT in mind.

Two studies among US and French families provide strong preliminary support for the PSICA as a measure of children's psychosocial competence, with a focus on prosociality (e.g., helping others), attention, compliance with parents, and affect regulation. A study of German families likewise demonstrated good support for the CRBI as a measure of parent–child relationship quality. Both measures show

adequate to excellent psychometric properties (e.g., internal consistency, inter-observer agreement). Further, both measures demonstrated good preliminary construct validity. In particular, the PSICA demonstrated consistent patterns of relationships across cultures (US and France), which suggests it has promise as a cross-cultural assessment tool. In a single case study, the CRBI demonstrated sensitivity to treatment change, which supports its promise as an outcome measure.

The CRBI and PSICA both show promise as useful measures in the implementation of PCIT. For example, they may be valuable to include in the assessment of a family at intake (prior to treatment), weekly during treatment to guide therapists' coaching, and at graduation to evaluate treatment gains. While the measures are likely to demonstrate some relationship to one another (i.e., children's psychosocial competence and parent–child relationship quality are linked), they are intended to also provide unique contributions to the understanding of children's functioning.

Next steps in the evaluation of the CRBI and the PSICA include investigating their (1) psychometric properties among clinical samples of families, (2) sensitivity to treatment change during PCIT, and (3) ability to provide predictive information regarding the development of later competencies. Parent–child interaction therapy is a strength-based intervention, and adding strength-based assessment measures to PCIT therapists' arsenal of tools has the potential to foster a more complete understanding of children and families in need of services.

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Part VI

**Innovations in Implementation
and Dissemination**

Training and Supervision Around the World

David T. Solomon and Rosaura E. Orengo-Aguayo

Abstract

Increasingly, evidence supports the utility of using parent–child interaction therapy (PCIT) to address childhood disorders in a number of populations. To increase the reach of PCIT to a greater number of families and insure the faithful application of PCIT with clients, effective dissemination efforts must also be investigated. This chapter describes the PCIT International training model and investigates the extant international research on PCIT training and supervision. Attention is paid to how training and training materials have been adapted for audiences outside the United States, although many studies have not fully described the training process used. The chapter also attempts to translate the current research findings into specific guidance in how trainers can address organizational (e.g., lack of agency support) and trainee (e.g., aversion to manualized treatments) barriers and increase trainee fidelity to the PCIT model. For example, it may be useful for trainers to have open discussions of trainees' personal views of the treatment, provide information on how PCIT can be applied to meet the unique needs of each family, work extensively with agency administrators to prepare the organization for implementing PCIT, and continue to follow-up on these issues throughout the supervision process. The chapter also describes how components of the PCIT model, such as an emphasis on in vivo practice and feedback and the integration of assessment, can be applied to the training process. Finally, a case scenario is provided to explicate how these suggestions can be used to meet the needs of specific trainees.

Parent–child interaction therapy (PCIT) is an adaptive treatment—both for individual clients and larger cultural groups—with the potential to improve the functioning of a multitude of children and families in need. While behaviorally based treatments in general are shown to yield greater improvements in child externalizing behavior than other types of child interventions (Comer, Chow, Chan, Cooper-Vince, & Wilson, 2013), PCIT in particular has some unique attributes that heighten its therapeutic potential. Specifically, a meta-analysis of 77 parent trainings by Kaminski, Valle, Filene, and Boyle (2008) indicated that treatments which included coaching with the parent's own child in session yielded larger effect

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sizes. In fact, a number of the components of PCIT were found in the Kaminski et al. (2008) meta-analysis to be related to larger effect sizes. These included promoting positive parent–child interactions, focusing on consistent parental responding, and the use of time-out as a discipline procedure. This may explain why another recent meta-analysis investigating both PCIT and Triple P (Positive Parenting Program, another widely used parent training for difficult child behavior) found that PCIT generally had large effect sizes on child behavior while Triple P generally resulted in moderate effect sizes (Rae & Zimmer-Gembeck, 2007). It is therefore not surprising that PCIT across studies results in decreases in child externalizing behavior, parenting stress (Thomas & Zimmer-Gembeck, 2012) and the potential for harsh or abusive parenting (Thomas & Zimmer-Gembeck, 2011), while also resulting in increases in positive parenting skills (Rae & Zimmer-Gembeck, 2007).

With the development of evidence-based treatments (EBTs) the need for empirically supported dissemination models are also needed to ensure that effective care reaches families experiencing dysfunction (Ruzek & Rosen, 2009; Southam-gerow, Marder, & Austin, 2008). While it is encouraging that PCIT and other evidence-based treatments exist that have the potential to positively impact the lives of children and families, such treatments will have limited impact if effective methods of dissemination are not in place to spread them more broadly (Fixsen, Naoom, Blase, Friedman, Wallace, 2005). In fact, despite the existence of evidence-based treatments for child externalizing behavior, coded recordings of actual treatment sessions within community-based clinics indicate that utilization of evidence-based techniques is quite low (Haine-Schlagel, Fettes, Garcia, Brookman-Frazee, & Garland, 2014), indicating a gap between best practices and what is actually being done in real-world settings. Pearl et al. (2012) note that few graduate students receive extensive, if any, training and mentorship in PCIT, despite the fact that it "has some of the strongest evidence for improving disruptive behaviors and parent–child relationships" (p. 212).

PCIT requires adept, in-the-moment application of theory and techniques during situations that may be stressful for both the caregiver and therapist (e.g., a child tantrum). This is compounded by the fact that many therapists will have no previous experience with in-vivo coaching, one of the cornerstone attributes of PCIT. For therapists to develop this skillset, they will require both extensive training and sufficient supervision to support the application of PCIT with initial clients. These tasks are paramount to the goal of increasing the reach of PCIT to those who need it. The purpose of this chapter is, therefore, to summarize the current state of the research on both EBT training and supervision in general and PCIT training specifically and discuss the implications of such research on the process of PCIT dissemination.

Training and Supervision Research

Unfortunately, very few studies have specifically focused on PCIT therapist training outcomes. However, the research on EBT trainings in general can still be informative, and are included here. Overall, the main goals of PCIT training and supervision include not only teaching skills necessary to conduct PCIT but also ensuring trainees can overcome barriers to implementing the treatment with fidelity with appropriate families. A strong training program is essential to meeting these goals, as research suggests that, although studying the PCIT manual itself is helpful, it is not enough for trainees to develop adequate PCIT competency (Herschell et al., 2009). Furthermore, Beveridge et al. (2015) have stressed that, beyond covering the specific components of PCIT, training also needs to address therapist and agency barriers (see below) to successful PCIT utilization, while Christian, Niec, Acevedo-Polakovich, and Kassab (2014) wrote that "the lack of effective communication [with agencies], agency readiness, as well as clinician factors, create[s] or maintain[s] barriers to completing [PCIT] training" (p. 15).

Although the research literature has not adequately delineated what trainee attributes (e.g., education level, clinical experience, caseload)

predict more successful training outcomes—and in many cases studies do not fully describe these characteristics in the training sample (Beveridge et al., 2015)—some trainee barriers are notable. While a recent survey found generally favorable views towards manualized treatments in child advocacy center workers (Staudt & Williams-Hayes, 2011), not all therapists (and thus not all trainees) will enter trainings with high levels of confidence in manualized, evidence-based treatments such as PCIT. Clinicians with more years of experience tend to have more negative attitudes towards manualized treatments (Barry et al., 2008; Becker, Smith, & Jensen-Doss, 2013), which may reflect shifting attitudes towards EBTs in treatment programs over time. Shafran et al. (2009) note that clinician attitudes which may be barriers to the dissemination of evidence-based practice include the belief that research studies do not sufficiently relate to the characteristics of actual clinical practice, that therapist attributes are more important to treatment outcomes than specific treatments, or that choosing specific components of treatments to match client needs is more valuable than following specific protocols. Clinicians may also incorrectly believe that comorbidity reduces the effectiveness of evidence-based protocols (Shafran et al., 2009). For PCIT specifically, trainees have described certain components of the PCIT protocol (e.g., the mastery criteria) as barriers to implement PCIT in their practice; in this same study, clinicians who dropped out of training or failed to meet mastery criteria were less likely to report positive views of core PCIT components such as coaching, mastery criteria, CDI and PDI teaching sessions, and co-therapy (Christian et al., 2014).

Conversely, clinicians with a cognitive-behavioral theoretical orientation tend to view EBTs more favorably (Gray, Elhai, & Schmidt, 2007) with a recent national survey of 756 clinicians indicating that those with a cognitive-behavioral orientation were the most frequent users of treatment manuals (Becker et al., 2013). Southam-Gerow et al. (2008) note the trainees will represent a number of fields and training programs with "different core beliefs about the etiology and maintenance of mental health problems as well as the best ways to treat clients" (p. 462). As such, PCIT trainees may have little experience with behavioral theories and techniques that form the basis of this treatment, or may even disagree about the utility of behavioral techniques. However, one study of PCIT training showed improvements in trainee skill, but theoretical orientation was not a significant predictor of skill acquisition (Herschell et al., 2009). Another study related to EBTs for trauma found that disbelief in the effectiveness of the treatment reduced from 20% to 0% following training, and the belief that the treatment did not fit within trainees' theoretical models dropped from 29% to 6% (Couineau & Forbes, 2011). Trainings therefore offer an important opportunity to reduce therapist barriers to implementing EBTs.

Thus, trainees who believe that empirically supported treatments are rigid and reductionistic may be less likely to utilize the PCIT protocol with fidelity. Untested alterations to the protocol could at best dampen the therapeutic effects of treatment and at worse lead iatrogenic exacerbation of symptoms. Kendall and Beidas (2007) propose a *flexibility within fidelity* model to address the concerns of such clinicians. This model suggests that the prescribed components of a given intervention can be applied to meet the individual needs of each client without impacting treatment fidelity. The PCIT manual specifies that most PCIT sessions involve in vivo coaching of the parent through interactions with the child, but the content of coaching can (and should) be tailored to the unique needs of the child and family (Eyberg & Funderburk, 2011). The PCIT protocol ensures that clinicians are aware of the specific strengths and needs of each family through the use of comprehensive assessment. Furthermore, while the 5-min observation period at the beginning of each observation session guides clinicians in which skills to coach, the application of those skills can be artfully applied to the needs of each family. An effective trainer can highlight the numerous ways in which PCIT is more than "a cookbook." For example, if a parent reports that her child is aggressive or plays roughly, coaching can help the parent attend to

gentle behavior. The trainer can highlight how the ECBI, in addition to being a useful indicator of treatment progress, can be used each week to identify specific areas that can be focused on each session (e.g., identifying which items are rated as occurring frequently and being seen as problems by caregivers). Specific discussions of how various problem areas and other unique needs of clients can be focused on in coaching can be an impactful part of training.

Recently trained community PCIT therapists also tend to have higher fidelity to the relatively straightforward teaching sessions than the coaching sessions, and more commonly fail to collect and review homework, discuss treatment progress/ECBI scores, and provide post-coaching feedback (Travis & Brestan-Knight, 2013). Whether these procedural omissions are due to the complexity of coaching sessions or due to therapists' personal views about these aspects of treatment, they represent a missed opportunity to provide clients with helpful feedback. This further highlights the need to stress these components in training, which may be achieved by framing them in a way that "makes sense" to trainees. For example, post-coaching feedback is an opportunity not only to help clients improve their skills but also to provide validation and to help clients plan on how to apply the skills to the unique needs of their families after they leave the therapy office.

In addition to framing the treatment in ways that make sense to trainees, open discussion is another away to deal with trainee-level barriers. Trainees may feel reluctant to bring up concerns or to say that they disagree with components of the program—and, actually, trainers may be uncomfortable having these conversations. However, it is always preferable for trainees to speak about their concerns than to leave them unaddressed, potentially increasing the likelihood that trainees leave out key components of the treatment when working with their own clients. Trainers can facilitate this process by frequently inviting questions or comments. Simply asking, "Any questions?" and allowing only a few moments before moving on to the next topic will not be sufficient. Trainers should be sure to

ask for responses from each trainee throughout the course of training. Asking neutral, open-ended questions such as "How is this similar to your usual way of working with families? How is it different?"; "What concerns do you have?"; or "what barriers might you foresee coming up when using PCIT with your typical client?" may be more helpful in facilitating a conversation. To validate concerns and model that it is okay to talk about them, statements such as, "some therapists wonder how manualized treatments such as PCIT can be used to meet the unique needs of clients, so we want to be sure that we talk about those concerns and answer any questions you have," can be helpful. Because some trainees may tend to over-exclude potential clients (i.e., believing that certain client attributes make the client "not right" for PCIT), questions such as, "are there any clients who you might be unsure of how to use PCIT with?" can provide an opportunity to assuage such concerns. Trainers can also show respect for the views and expertise of trainees by inviting them to help address the questions and concerns of colleagues. For instance, if a trainee brings up potential barriers to implementing PCIT with the types of clients they see, it is useful for the trainer to ask the group to help problem solve. Trainers may also ask questions such as "how might you all use the PCIT skills to address [insert particular client problem]."

Although providing empirical evidence of PCIT's effectiveness and having discussions may be useful, therapists with negative views towards manualized treatments tend to value clinical experience over research results (Staudt & Williams-Hayes, 2011). For this reason, it is helpful to illustrate the fidelity of treatment through actual case examples and incorporate practice with actual children into the training process. As is discussed below, these components are built into the standardized training process. In past trainings, we have selected families who have successfully completed PCIT who would be willing to serve as volunteers during trainings. While trainees will get to practice their coaching skills with these families, it is also helpful to have a very brief discussion with the caregivers beforehand about what their experiences were

going through PCIT and the impact PCIT had on the family. A common response is that treatment was a lot of work, but ultimately lead to a lot of positive, necessary change for the family. Prior to the practice coaching, it may also be helpful to discuss if there are any behaviors the caregiver wants to focus on in coaching. Briefly strategizing with trainees about how to work on the given behavior is another chance to model how PCIT can be adapted to meet specific family needs. During the practice coaching itself, the positive influence of the PCIT skills can also be highlighted by pointing out to trainees (and having trainees point out to the parent being coached) how the use of skills are impacting the child's behavior—"you had his mom praise him for sharing and now he is sharing a lot more things with her!"

In addition to trainee attributes, the social and work climate of trainees are also relevant to the training process, as research indicates that providers with colleagues who use EBTs, who perceived that the treatment program was supported by workplace administrators, or had opportunities for EBT trainings were more likely use EBTs themselves (Bride, Kintzle, Abraham, & Roman, 2012; Cunningham et al., 2012). Some research indicates that organizational factors may even outweigh helpers' personal views in predicting the utilization of EBTs following training (Segre, McCabe, Stasik, O'Hara, & Arndt, 2012). One qualitative study of PCIT training outcomes found that lack of agency support (e.g., reluctance to follow a co-therapy model, inadequate provision of resources towards necessary equipment) was a notable barrier to clinicians' implementation of PCIT following training (Christian et al., 2014). Institutional barriers may also include lack of technical support, too few appropriate referrals, and too little time for therapists to prepare for sessions (Beveridge et al., 2015). PCIT trainers can help to mitigate this barrier by working collaboratively with agencies, even prior to the beginning of training, insuring they are prepared to implement PCIT and able to support newly trained therapists (Beveridge et al., 2015). Organizations may also benefit from advice regarding the selection of candidates for training.

In a qualitative study of the barriers to training faced by PCIT trainees, all the clinicians who ended training unsuccessfully were those who had participated in the training involuntarily (Christian et al., 2014). Trainers can also incorporate discussions of possible agency barriers within the training process, such as discussing how to set up PCIT-appropriate treatment rooms at the agency, which trainees might have overlapping availability for co-therapy, which recent intakes might be appropriate for PCIT, and how to appropriately select time-out spaces within the agency specifically.

Finally, while the length of training may present a barrier to dissemination, it is important to note that short trainings are unlikely to sufficiently prepare clinicians for skillful practice of PCIT. Perhaps the most rigorous study specifically focused on PCIT training outcomes was conducted by Herschell et al. (2009), who examined two training formats—simple didactic versus an experiential group involving role-plays and additional, personalized feedback—both of which were part of a 2-day training. Trainee skill was assessed through both direct observation of coaching and knowledge-based quizzes, with only 5% of trainees meeting the study's criteria for mastery in all domains assessed. Furthermore, the highest percentage reaching mastery in any one domain was 31%. This suggests that, regardless of format, greater than 2 days of training may be necessary. Furthermore, in one quasi-experimental study, agencies that received more intensive training including discussion, demonstrations, and behavioral rehearsal were more likely to make changes to their work with families than agencies who received only didactic training (Dixon et al., 1999). At the same time, agencies may not have the resources or staffing to send a large number of trainees to long trainings. The PCIT international model discussed later in the chapter requires 40-h of training with a certified trainer. However, some trainers choose to mitigate the time commitment by splitting the training, such as having an initial 3-day workshop focused on CDI skills and 2-day training later focused on PDI skills. For agencies who already have certified PCIT therapists, it may be

financially more feasible to determine if one of their current therapists could complete additional training to become a Level 1 trainer (i.e., a person capable of training other therapists within the agency) to help sustain the program over time.

Unfortunately, dissemination research has often found that training alone does not lead to sufficient changes in trainee behavior or implementation of evidence-based practices, despite increases in trainee knowledge and skill (see Fixsen et al., 2005, for a review). Furthermore, the skills of new PCIT trainees are unlikely to be commensurate with the skills of more advanced practitioners (Herschell et al., 2009), and additional skill shaping and encouragement will be necessary. Despite the best efforts of agencies, trainees, and trainers, barriers to implementation of PCIT will also often arise following training. These may include difficulties identifying appropriate cases, inadequate spaces for conducting PCIT, and technical issues with equipment. For these reasons, continuing supervision and consultation is necessary for newly trained PCIT therapists. Unfortunately, there is little data on PCIT supervision and consultation, as they have rarely been examined separately from the training itself.

Multiple models of therapy supervision in general have been proposed. For example, Watkins and Scaturo (2013) proposed a model of supervision focusing on three components: an emotional/relational component (forming an alliance with the supervisee and providing moral support for the emotions that can arise from work with patients), a cognitive component (providing education, feedback, case conceptualization, and correcting supervisee cognitive biases) and a behavioral component (practicing skills). However, there are numerous other models, including Falender et al.'s (2004) supervision competencies framework focusing on knowledge (e.g., knowing about the specific area or type of therapy in which one supervises), skills (e.g., the ability to teach the necessary techniques of a given therapy) and values (e.g., accepting responsibility for both client and trainee outcomes). Despite the plethora of supervision models, there is a notable dearth of empirical investigation into

supervision outcomes (Falender, 2014). Thus, the suggestions below represent what can be gleaned from the current research base.

One role of supervisor is to provide support to new PCIT therapists, as implementing a new treatment is often stressful, and can lead trainees to doubt their ability to administer the treatment or the treatment's ability to help clients. In one study of a state-wide PCIT dissemination effort, 58.3% of trainees responding to an online survey reported that PCIT was moderately or very different from their usual treatment of child behavior problems (Beveridge et al., 2015). Furthermore, PCIT might bring added distress above what is typically encountered in traditional talk therapy, as therapists often need to react quickly and efficiently to escalated child behavior in session. While we suggest that providing supportive consultation is helpful for trainees to overcome these stressors, over-focus on emotional support can be detrimental. A study by Schoenwald, Sheidow, and Letourneau (2004) examined the impact of different consultation styles following therapist trainings in multisystemic therapy (MST)—another evidence-based treatment for child behavior problems. The clinical trainees rated their consultants in terms of how much support was provided (e.g., feeling that the consultant listened to them and gave positive feedback) and how much instrumental guidance was provided (e.g., by giving specific advice on applying MST principles to specific cases). Results indicated that there was a negative correlation between amount of support provided by consultants and both child outcomes and therapist fidelity to the MST model, while the opposite was true for instrumental guidance. Thus, PCIT consultants need to balance their support giving with specific practical guidance; it is also possible that practical guidance itself can help trainees feel more prepared for session and vicariously reduce distress.

It is also notable that client attrition tends to be higher for new PCIT trainees than is typically reported in controlled PCIT studies (Pearl et al., 2012). Although this is not necessarily atypical given that treatment clients may have more difficulties than those in research studies and are,

unlike research participants, not paid, a qualitative study with PCIT suggested that covering additional topics such as client engagement and motivation may also be useful for trainees (Christian et al., 2014). While this can be covered in training itself, issues of client engagement will often come to the forefront of continuing supervision as clinicians begin their work with new clients. Although beyond the scope of this chapter, trainers and supervisors need to be familiar with motivational techniques and literature. Supervisors can guide new PCIT therapists to increase engagement in several ways beyond additional motivation techniques as well. For example, clients who routinely neglect to bring in their homework forms can be instructed to fill out forms at the beginning of each session anyway. This models the importance of the forms for clients and shows that leaving their form at home will not let them "get out of it." Supervisors can also suggest that the trainee link homework completion with child outcomes by comparing weekly homework completion with client's ECBI graphs.

The PCIT International Training Model

As with any evidence-based treatment, effective training requires standardized procedures to ensure quality and consistent outcomes. As dissemination experts assert, "… systematic implementation practices are essential to any national attempt to use the products of science – such as evidence-based programs – to improve the lives of its citizens" (Fixsen et al., 2005, p. vi). Thus, it is not surprising that PCIT International, an organization which promotes PCIT practice and research and oversees PCIT certification, has developed a specific training system to promote fidelity in the dissemination of PCIT. The model also encompasses a tiered certification system for PCIT trainers including Level 1 Trainers (individuals certified to train other therapists within their own agencies), Level 2 Trainers (individuals certified to train other therapists within their own region) and Master Trainers (individuals certified

to train nationally or internationally). This chapter focuses on the initial PCIT therapist training, but additional information on trainer training can be found at www.pcit.org.

In their extensive review of the dissemination and implementation literature, Fixsen et al. (2005) noted that, while "the content of [EBT trainings] will vary considerably depending on the evidence based practice or program … [t]he methods of training seem less variable." (p. 39). Specifically, typical training components include lecture/didactic instruction, live or video demonstrations, role-plays and behavioral rehearsal, and personalized feedback. PCIT International (2013) incorporates each of these elements into the initial 40-h PCIT training, which can be completely face-to-face or as a 10-h online training with 30-h of follow-up face-to-face training. The training should cover "an overview of the theoretical foundations of PCIT, DPICS coding practice, case observations, and coaching with families, with a focus on mastery of CDI and PDI skills, and a review of the 2011 PCIT Protocol" (PCIT International, 2013, p. 2). An additional minimum of 1 year of consultation and supervision or co-therapy with a trainer is also required, during which time the trainee must complete two PCIT cases to graduation, at least one of those as the primary therapist. The trainer must also observe specific sessions conducted by the trainee throughout the course of PCIT.

In accordance with the PCIT model's emphasis on progress monitoring and calls by authors to integrate assessment into the EBT training process (e.g., McHugh & Barlow, 2010), PCIT training must also include several specific assessment procedures. For example, by the completion of training, the trainee must be able to meet the same CDI criteria as caregivers are required to meet to complete the CDI phase (ten each of labeled praises, behavior descriptions, and reflections and no more than three negative talks, questions, or commands) during a 5-min interaction with an actual child or during a 5-min standardized role-play. They must also display at least 80% agreement on the DPICS-IV with their trainer during a 5-min observation or a standard video recording. Though not a formal part of

trainee evaluation, we also recommend that trainees are asked to complete an inventory related to their opinions of EBTs and their knowledge of behavioral techniques, as such information may be informative to the trainer.

While additional research into the effectiveness of the PCIT international model is necessary, following the 40-h PCIT training clinicians in community settings displayed high levels of fidelity to the protocol, and fidelity levels were similar across both phases of treatment (Travis & Brestan-Knight, 2013). Similarly, although not investigating specific therapist-level outcomes, Pearl et al. (2012) found significant pre-to-post-treatment symptom and parental behavior improvement even within the initial PCIT clients of new trainees who attended five days of training (three initially and another two several weeks later). However, in a study of 143 trainees, only a quarter of participants completed all training requirements needed to become certified PCIT therapists for various reasons (Beveridge et al., 2015), indicating that some additional components related to reducing barriers or trainee motivation and retention may be helpful.

Training and Supervision Abroad

While recent years have seen increased efforts to disseminate PCIT globally (see chapter "Tailoring PCIT for Latino/a Families"), few studies have examined cultural adaptations of PCIT using rigorous research designs and even fewer studies specifically investigated dissemination and implementation (Baumann et al., 2015). Specifically, the international implementation of PCIT has increased over the past decade (see Gardner, Montgomery, & Knerr, 2016), yet relatively little is known about the therapists' training process abroad. The PCIT International website (www.pcit.org) provides descriptions of PCIT trainings across nine countries outside of the United States (Australia, Germany, Hong Kong-China, Japan, The Netherlands, New Zealand, Norway, South Korea, and Taiwan). Overall, international training has consisted of a "first generation" of therapists from each country undergoing an initial 5-day training and a subsequent advanced training (in the United States or in their home-country) provided by a PCIT expert/master trainer. Therapists have then received subsequent training on how to become "in-house" PCIT trainers, which has been followed up by site-visits by PCIT experts to ensure that the "second generation" of therapists are receiving the same quality training. Therapists have received ongoing consultation and supervision provided by PCIT experts/master trainers, and in some cases, the original therapist(s) have co-facilitated advanced PCIT trainings, "in-house", with master trainers such as Dr. Cheryl McNeil. All international sites currently have ongoing PCIT research studies (e.g., evaluating psychometric properties of the ECBI, assessing feasibility, effectiveness, and acceptability of PCIT within their country), as well as have actively participated (e.g., presented posters, given symposiums/workshops) at PCIT International conferences. A few sites (e.g., Japan, Germany) have translated PCIT materials/manual in their native language. There is no information provided as to whether these trainings have been conducted in English or with the use of an interpreter (or both).

The PCIT International website (www.pcit.org) provides a useful overview of international training efforts. In an effort to further understand the training process abroad, a literature search was conducted to identify published research studies which: (1) implemented PCIT internationally (i.e., in a country outside of the United States-including U.S. territories); (2) describe (even if minimally) the type of training the therapists have received; and (3) were available in English. This search yielded a total of 26 potentially relevant studies, 11 of which met all three inclusion criteria. Seven studies were excluded because they were written in a language other than English or the authors were not able to obtain a copy of the manuscript. Eight were excluded as their purpose was the validation of the Eyberg Child Behavior Inventory (ECBI) in languages other than English, not on the implementation of PCIT. The following countries are represented: The Netherlands (Abrahamse et al.,

2012; Abrahamse, Niec, Junger, Boer, & Lindauer, 2016); Taiwan (Chen & Fortson, 2015); Hong Kong (Leung, Tsang, Heung, & Yiu, 2009; Leung, Tsang, Ng, & Choi, 2017; Leung, Tsang, Sin, & Choi, 2015); Puerto Rico (Matos, Bauermeister, & Bernal, 2009); and Australia (Nixon, Sweeney, Erickson, & Touyz, 2003; Phillips, Morgan, Cawthorne, & Barnett, 2008; Thomas & Zimmer-Gembeck, 2011, 2012).

Table 1 compares the type of therapist training described in the 11 published studies, compared to the minimum training requirements for PCIT therapists set forth by PCIT International guidelines. All studies ($N = 11$) reported on and met the education criteria of at least a Master's degree or higher (or international equivalent) in a mental health services field (licensed or receiving supervision by a licensed provider). Only 27% ($N = 3$)

of the studies reported that therapists underwent the standard 40-h face-to-face training with a PCIT Trainer. Two studies reported that training was provided by an "in-house" PCIT therapist who had been previously trained by a PCIT Trainer. Of note, close to half of the studies did not provide a description of the type of training therapists received, although it was implied that the lead trainer had undergone prior PCIT training. None of the studies provided specific information as to what these trainings consisted of (e.g., theoretical foundations of PCIT, Case observations, CDI and PDI skills mastery). This may be a function of limited journal space, however, and the fact that training was not the primary focus of these studies. All studies reported successful treatment completion with at minimum two or more PCIT cases (given these were outcome

Table 1 Description of PCIT therapist training abroad

PCIT international training criteria	Published studies of international PCIT implementation ($N = 11$)		Adaptations
Education	Percent (N)	Countries represented	
Master's degree or higher/international equivalent in a mental health field (licensed or under supervision of licensed provider) OR doctoral student ≥third year under supervision of licensed provider	100% (11)	N, T, H, P, A[a]	One study based in Australia used nurses to deliver PCIT
Initial training[a]			
40 hours of face-to-face training OR 10 h of online training and 30 h of face-to-face contact with a PCIT Trainer	27% (3)	N; H	Two studies provided training "in-house" by previously trained PCIT Therapist
Description of initial PCIT training not provided	45% (5)	P, A	
Continuation of training			
Minimum of two PCIT cases (one being the primary therapist) that meet graduation criteria	100% (11)	N, T, H, P, A	
Twice a month consultation (e.g., telephone, live, telehealth) with a PCIT Trainer	91% (10)	N, T, H, P, A	
Skill Review—treatment sessions observed by a PCIT Trainer (live, telehealth, or video recording) to formally assess for competency	55% (6)	N, T, H, P, A	Treatment sessions assessed for fidelity by lead therapist/researcher with PCIT expertise. No articles provided information as to whether this was done to obtain official PCIT International Therapist certification
Description of type of consultation/ supervision received not provided	9% (1)	A	

[a]*N* Netherlands, *T* Taiwan, *H* Hong Kong, *P* Puerto Rico, *A* Australia
[b]One study was not included as therapists were the same whose training had been described in two previous studies

research studies) and 91% (*N* = 10) of studies reported that therapists received ongoing supervision and consultation. Over half (*N* = 6) assessed adherence to the PCIT model via fidelity checklists. All reported significant improvements in targeted symptoms at post-treatment, with large effect sizes comparable to PCIT studies conducted in the United States. These results suggest that the training and supervision that therapists received was conducive to achieving clinically meaningful improvements for children and their caregivers within their respective countries.

Challenges relevant to the training of therapists internationally included: (1) premature termination of the dyad (child's behavior was not yet within the normal range of functioning; Abrahamse et al., 2012); and (2) addressing caregiver concerns in a culturally sensitive manner (e.g., allotting additional time for check-ins with caregivers for treatment buy-in, addressing skepticism about skills such as labeled praises or child-led play; Chen & Fortson, 2015; Leung et al., 2009). These challenges suggest that, just as in the US, therapists conducting PCIT internationally would benefit from ongoing supervision with a focus on treatment fidelity. Furthermore, therapists would benefit from the inclusion of training in culturally sensitive ways to identify and address caregiver concerns about the PCIT skills (e.g., reluctance to give labeled praises, over-directiveness in child-led play, negative views of the ignoring technique) in a manner that is sensitive to caregivers' parenting values, beliefs, and practices (Chen & Fortson, 2015). Training should also focus on the ongoing assessment of caregivers' perceived barriers to engage in treatment, as well as consider the role that extended family members may play in the life of the child (Leung et al., 2009).

Case Example

Marilyn Crawford was a 48-year-old, African-American therapist working for a child advocacy center in an urban Midwestern setting and specializing in reactive attachment disorder. She had been working for her agency for over 15

years, but had gained some additional clinical experiences prior to that after earning her Master of Social Work. While she described her therapeutic orientation as eclectic, she drew primarily from attachment and Rogerian theories. She did most of her work directly with children through play therapy, but had a strong ability to establish rapport with parents and keep them engaged in therapy. She accomplished this with her effective communication abilities and her awareness of the intricate interplay of social, cultural, interpersonal, economic and other factors affecting families. Her years of experience were also an asset, making her comfortable with complex clinical presentations and severe child disruptive behavior. Another strength that was helpful to the training processing was her willingness to openly discuss her questions, concerns, and engage in active dialogue with trainers.

Marilyn also had a number of important factors that needed to be considered by her trainers, who included a PCIT Master Trainer and her team of graduate students. First, she was selected along with several other employees by her agency to receive the training and was uncertain as to whether she had any interest in using PCIT with her clients. In her pre-training assessment, her responses to an attitudes about evidence-based treatment inventory indicated that she had some skepticism about the utility of EBTs, and in particular she felt that manualized treatments failed to consider the unique attributes of each client. Similarly, she believed that assessment instruments can be reductionistic and that translating clients into "just numbers" does not capture the complexity of individuals. Her initial knowledge check also revealed that she was not as familiar with many behavioral principles, which was reflected in her belief that behavioral techniques are "Band-Aid treatments" that don't address deeper client issues.

The trainers addressed these barriers in several ways. At the beginning of training, part of the time allotted to providing the background and theoretical foundation was used to discuss how PCIT incorporates play therapy techniques and principles (e.g., teaching patents to engage in therapeutic play with their child, following the

child's lead, etc.) to help caregivers build a strong foundation of attachment before focusing on discipline later in therapy. The focus on attachment and the idea of helping parents to be play therapists for their child appealed strongly to Marilyn. The trainers also emphasized the ways in which PCIT, although using behavioral techniques, is informed by attachment theories and research on parenting styles. Reframing the use behaviorist techniques with language that made sense to Marilyn was instrumental in increasing her buy-in. The trainers also framed the use of assessment as a method to ensure that treatment is tailored to a family's specific needs. Throughout training, but especially during the early informational sections when engagement is especially important, trainers actively elicited questions and concerns. To prevent any single trainee from feeling singled out, trainers took care to specifically ask for the thoughts and contributions of each trainee throughout discussions. For trainees like Marilyn, *seeing is believing*. Her trainers found that the most useful training activities for Marilyn were experiential: when she saw the skills being used with children, both through viewing taped sessions and live. In particular, she reported enjoying the interactions with a family who had completed PCIT before and participated in the training by sharing how the therapy had worked for them and led to positive changes.

Trainers also worked to increase Marilyn's comfort with PCIT by helping her build her skills using reinforcement as much as possible, as too much correction is likely to cause frustration and discouragement with trainees who feel less confident with behavioral skills. When Marilyn first practiced CDI skills, the trainer who was coaching her initially focused on the things Marilyn already did well and had pride in. For example, the trainer was quickly able to praise Marilyn's warmth with the child and her ability to follow the child's lead. Although Marilyn, like most people new to CDI, asked several questions, the trainer chose to ignore questions initially in favor of praising any time Do Skills were used. The trainer was also very attuned to how Marilyn's use of skills impacted the volunteer child's behavior through statements such as "I can tell

she's really feeling comfortable with you because you're giving her lots of positive attention" or "you praised her for being gentle and now she's playing so nicely with the toys!" Connecting Marilyn's use of skills with child behavior in this way helped to increase her confidence that PCIT skills can help clients.

When coaching Marilyn's coaching, the trainer similarly focused on providing positive feedback and differentially reinforcing skill use (e.g., ignoring when Marilyn mislabeled or failed to praise a CDI skill during coaching). Because coaching is a skill that is often entirely new for trainees, some, such as Marilyn, feel nervous or pressured when being observed or coached during their coaching. The trainer addressed this by providing space for Marilyn to try to formulate coaching statements on her own since providing too many suggestions early on creates tension in some trainees who may feel like either they are not doing a good job or their trainer does not have any confidence in them. At same time, providing too little assistance can make trainees feel like they are floundering. Thus, when Marilyn appeared to be stuck, the trainer offered specific suggestions and modeled skills for her. As a rule of thumb, the trainer gave a suggestion within about 5–10 s of Marilyn making no coaching statements.

By the end of the 40-h training, Marilyn could easily reach CDI mastery criteria and felt comfortable coaching. She had even identified several clients on her caseload who would be good candidates for PCIT. She was eager to see how PCIT would work for her in practice, and, while she was less enthusiastic about use of assessment throughout treatment, she understood assessment was necessary to the process. In the consultant role, the trainer helped Marilyn to interpret assessment results and, more importantly, translate those results into actual work with clients.

One challenge came 3 months into the consultation process when one of Marilyn's new PCIT families came for their first CDI coaching with a "Crisis of the Week" (COW). In addition to not having brought in their homework sheets, the client's mother stated that, "this isn't working; my son has some issues he needs individual help

with." Specifically, during the last week the 5-year-old client had been physically fighting with his sister several times, often over toys. When his mother took one of the toys away, the client began screaming at her, telling her that nobody loved him. He then fell on the floor crying and screaming until she gave him the toy back. Marilyn responded by being very supportive. She let the couple spend the session talking about their feelings about what happened. The couple left feeling some relief, but with no new skills.

To her trainer, this situation represented a missed opportunity—first Marilyn did not address the client's view that her son needed individual help. Not understanding how PCIT can be used to address her son's problems could make such a parent less engaged or more likely to drop out early. It may have also been helpful for Marilyn to have had the parent fill out homework forms in session and discuss how homework completion did or didn't relate to the client's behavior. Were they doing homework? Was his behavior better on the days homework was completed? The answers to these questions were unknown, and asking these questions to Marilyn helped her see how this information was helpful instead of assuming that treatment "wasn't working."

The supervisor praised Marilyn for validating the client's concern, which is normally done during the 5 min prior to coaching, but framed coaching as the key to changing family behavior and reducing their stress: "When it comes to those child-related family crises, the goal of PCIT is not just to 'give a family a fish, but to teach them how to fish.' Coaching is a powerful way for parents to learn skills in real time with their children." The trainer posed questions with Marilyn about how the family might use the PCIT skills to prevent another similar crisis in the future and how coaching could have been used to build those skills. Marilyn was allowed time to brainstorm, increasing her confidence and competence in PCIT. The trainer let the clinician develop her own plan of action, but also helped "fill in the gaps" with some of her own thoughts and suggestions as needed. Following a year of consultation, Marilyn had completed her required number of cases and became a certified PCIT therapist.

Conclusions

PCIT is a well-validated and widely studied treatment for child behavior problems, parent–child conflict, and harsh parenting practices, but research into the mechanisms of PCIT training and dissemination has not yet reached a level commensurate with the treatment itself. We suggest that effective training will follow the PCIT international model, including active learning techniques such as role-plays and practice with actual children, illicit feedback and discussion with trainees, and insure that trainees not only develop the requisite skills for conducting PCIT but will also address community, institutional, and clinician barriers to implementing treatment. The contents of this chapter attempt to summarize and draw conclusions based on the extant literature, but additional research is needed, particularly with larger sample sizes (Travis & Brestan-Knight, 2013). Larger sample sizes would not only yield in more generalizable results but also provide additional power to determine, for example, what specific characteristics of training, trainees, and organizations lead to more successful implementation of PCIT. Questions worth exploring include: What makes coach coaching/role-playing/etc., most effective to maximize training outcomes? This information can inform the development of more specific, well-developed training guidelines (Travis & Brestan-Knight, 2013). Testing these questions will also require more advanced research methods than has typically been used in the dissemination literature; in the previously mentioned work by Fixsen et al. (2005) only 22 of the 377 implementation articles reviewed utilized experimental or meta-analytic methods to examine dissemination efforts. Studies of PCIT training have also tended to focus on either therapist knowledge and skills or client symptom improvement; it would be informative to investigate both outcomes simultaneously and determine their relationship to each other. As new and relevant instruments are developed such as the TPICS

(see chapter "Therapist-Parent Interactions in PCIT: The Importance of Coach Coding"), the range of variables to investigate can also be expanded. Because coaching specifically is related to client outcomes and is a unique component of PCIT, uncovering the methods by which trainees can improve their coaching skills are a paramount goal. Finally, as new technologies such as telemedicine (Funderburk, Ware, Altshuler, & Chaffin, 2008) and online viewing systems (Wilsie & Brestan-Knight, 2012) are incorporated in training and supervision, the impact of such technology on trainee and client outcomes warrants investigation.

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Using Technology to Expand the Reach of PCIT

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Abstract

Disruptive behavior disorders are the most common behavioral health referral for children. While numerous evidence-based behavioral parent training programs exist to ameliorate these problems, dissemination attempts have still fallen short of population need. Further, family barriers to treatment and low family retention rates have limited the effectiveness and reach of behavioral parent training programs. Technology-enhanced services and dissemination have been cited as potential solutions for increasing both parent training population reach and family engagement in services.

Parent–child interaction therapy (PCIT) lends itself naturally to the use of technology. Technology is already embedded in PCIT delivery as therapists live coach parent–child interactions from behind a one-way mirror or via live, secure video feed (in-office or home-based). The use of a live coaching model of treatment has led to innovations in dissemination, training, and supervision methods for training PCIT clinicians. The model has also led to advances in technology-based approaches to the delivery of PCIT and the augmentation of existing PCIT services. Within this chapter, we explore methods for how technology can expand the reach of PCIT. Specifically, we discuss technology-based PCIT training approaches and technologically enhanced delivery of services and consider future directions for other technologically driven formats of PCIT delivery or dissemination.

The Need for Technology in the Implementation of Behavior Parent Training Programs

Disruptive behavior disorder (DBD) can lead to a broad range of negative outcomes for children, including school problems, substance abuse, and criminality, among others (Sourander et al., 2016). Further, DBD is the most common reason children are referred for behavioral health care (Kazdin, 1995; Silverthorn, Frick, & Reynolds, 2001). However, while numerous evidence-based behavioral parent training (BPT) programs exist for the treatment of behavior disorders, behavioral health workforce shortages in both urban and rural regions along with a limited number of clinicians trained in evidence-based BPT drastically reduce the availability of care for families

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in need of service (Comer & Barlow, 2013; Crum & Comer, 2016; Flaum, 2013, Kazdin & Blase, 2011). Even when BPT programs are available within a family's community, a variety of treatment barriers can impact program access and engagement including transportation problems, lack of childcare, motivation for daily home practice of skills, and busy work schedules (Crum & Comer, 2016; Owens et al., 2002). Barriers to engagement in BPT are varied and complex, but include acute and chronic socioeconomic-related stressors that make navigating time-intensive and demanding clinic-based BPT services more challenging (see Eyberg, Nelson, & Boggs, 2008; Reyno & McGrath, 2006; Thomas & Zimmer-Gembeck, 2007, for reviews).

The use of technology has been cited as a potential solution for increasing dissemination, accessibility, and participant engagement, and reducing the cost of treatment programs (Sourander et al., 2016). As a result, more BPT programs are beginning to supplement face-to-face encounters with mobile technology (Comer et al., 2014; Jones et al., 2015; Whiteside, 2016). In fact, BPT programs were one of the early adopters of technology, as evidenced by Webster-Stratton's delivery of the Incredible Years Parenting Program via videotape (Webster-Stratton, Kolpacoff, & Hollinsworth, 1988) and the use of audiovisual coaching equipment in parent–child interaction therapy (PCIT; Eyberg & Matarazzo, 1980). Technology built into BPT programs for parents of children with disruptive behaviors can potentially improve the reach and outcomes of treatment (Baumel, Pawar, Kane, & Correll, 2016) through mechanisms for increasing efficient communication (e.g., phone calls, text messages, emails, secure app-based communications, video-conferencing, video recordings of skill practice, monitoring of skill acquisition) between BPT providers and families (Jones et al., 2015). Technology may increase families' access to educational resources that are available at any time (e.g., websites, apps, e-books, video demonstrations), and that may help families generalize skills outside of session (Jones et al., 2013, 2015). Providing fami-

lies with access to resources at the time of their choosing may also be helpful for parents with work-intensive or unpredictable schedules (Baumel et al., 2016).

One BPT that naturally lends itself to the use of technology is PCIT. Technology is already embedded in PCIT treatment delivery as therapists coach parent–child interactions from behind a one-way mirror or via live, secure video feed (in-office or home-based). Clinicians provide live coaching of parent skills via microphone and parent-worn bug-in-ear device, while parents practice using positive attention and effective discipline techniques. PCIT, along with other BPT programs, does not currently reach the majority of families in need of services (Eyberg et al., 2008). In 2018, PCIT International, the authorizing organization responsible for promoting training and certification, had over 700 certified therapists providing PCIT services across the United States and 11 other countries; 21 Master Trainers available to train clinicians around the world; 25 Level II (i.e., regional) trainers available to train clinicians within their own geographic region; and 212 Level I (i.e., in-agency) trainers. Relative to the thousands of families in need of services these numbers clearly fall short. In response to this significant unmet need, PCIT researchers, trainers, and clinicians are actively exploring ways to use technology to expand the reach of PCIT services.

In this chapter, we review the research and consider the applications for (1) technology-based PCIT training approaches, (2) technology-enhanced program delivery, and (3) technology-enhanced client progress monitoring.

Technology-Based Training Approaches

International, national, and state organizations and/or governments have called for the increased use of evidence-based treatments in practice (Glisson & Schoenwald, 2005; Jackson, Herschell, Schaffner, Turiano, & McNeil, 2017; Rieckmann, Bergmann, & Rasplica, 2011) which would require increased dissemination and provider

training. However, there is limited agreement regarding the most effective methods for training clinicians in evidence-based treatments (Jensen-Doss, Hawley, Lopez, & Osterberg, 2009; Novins, Green, Legha, & Aarons, 2013). Some research indicates that providing clinicians with treatment manuals or even training workshops without follow-up consultation is generally an ineffective dissemination strategy for increasing clinicians' knowledge and skill in implementing new evidence-based treatments (Herschell, Kolko, Baumann, & Davis, 2010). It has been suggested that these training methods are generally too brief or do not provide enough support for clinicians to effectively implement new skills or treatment approaches into their current clinical practices (Jackson et al., 2017). In a review of therapist training models, multicomponent training with the inclusion of ongoing consultation, supervision, and fidelity assessments after initial training may represent the most effective strategy for training clinicians and realizing the intended outcomes of evidence-based treatments (Herschell et al., 2010; Novins et al., 2013). Given that trainers typically do not work in the same settings as the clinicians being trained, the use of technology (e.g., phone-based, secure video conference) is likely required for completion of ongoing consultation. Further, the type and quantity of consultation, such as live video or phone consultation, may also impact the effectiveness of training approaches and ultimately client outcomes.

Remote live video and phone consultation. In a statewide PCIT dissemination project in Oklahoma, the effectiveness of PCIT live video consultation and post hoc phone consultations were evaluated to determine the relative effectiveness of the two training models on family outcomes (Funderburk et al., 2015). Following receipt of an initial PCIT training workshop, therapists ($n = 80$) were randomized to receive phone consultation only or approximately 4 months of live video consultation (trainer joining live sessions). After the 4-month period, therapists in both groups subsequently received phone consultation for the remainder of the study period.

In the live video group, consultation was made available to therapists weekly and could span across different cases (not just one-mentorship model case). Live video-conferencing consultation allowed a remote PCIT trainer to directly observe parent–child interactions during a PCIT session, observe the PCIT therapist coaching the parent, and provide live two-way communication and feedback with the therapist during actual coaching sessions. On rare occasions, consultants would take over a PCIT session and model coaching skills directly to the family (Funderburk et al., 2015). The diagram in Fig. 1 provides an example setup of how live video consultation was provided. The remote consultant/trainer joined a therapist's live session through secure, video-conferencing software that had the potential to be Health Insurance Portability and Accountability Act (HIPAA) compliant if used appropriately. Both the therapist and the remote consultant/trainer utilized a video web camera compatible with video-conferencing software. As demonstrated in Fig. 1, the video camera in the therapist's clinical space was directed toward the parent–child dyad being served so that the consultant could view the session and interact with the therapist in real time.

The live video consultation method was utilized by therapists in this group about half as much as planned. Barriers to utilizing the live video consultation model included: lack of access to the video consultation room when other therapists were using the room; family no shows and cancellations; session tardiness; no parent consent to live remote video consultation; and lack of functioning equipment and internet connection. Therapists received an average of eight video consultations or one video consultation every 14 days over 4 months.

In the phone consultation group, trainers conducted weekly conference calls with an average of six therapist participants per call. The phone consultation approach included review of PCIT sessions conducted in the past week, review of parent skill coding, and weekly ratings of child disruptive behaviors. Consultation was provided for each case with an emphasis on utilizing
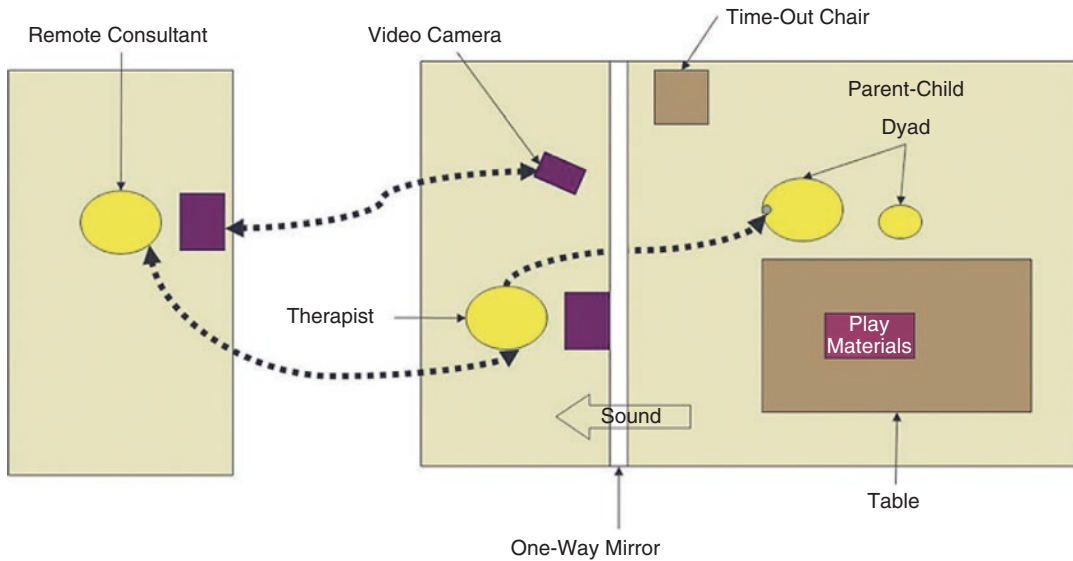
Fig. 1 Example diagram of PCIT setup for remote live video consultation

appropriate PCIT coaching techniques, tailoring coaching while maintaining fidelity, family progress monitoring, and establishing goals and areas of focus for the subsequent session. Therapists randomly assigned to the phone consultation group attended consultation conference calls approximately every 12 days during the consultation period.

Results from the statewide PCIT dissemination were highly encouraging with respect to child outcomes and consultation approach. Parents who received treatment as a part of the statewide dissemination effort reported clinically significant reductions in disruptive behaviors from pre- to post-treatment, which was comparable to findings of a PCIT meta-analysis (Thomas & Zimmer-Gembeck, 2007). There was a small but significant benefit in client outcomes if therapists received live video-based consultation after the initial training workshop. The phone consultation strategy did not have any effect on client outcomes. While this dissemination study demonstrated how training impacts clients, it did not examine therapist development related to establishing competencies for becoming a certified PCIT therapist.

In a separate statewide PCIT dissemination research trial in Pennsylvania examining a cas-cading model of training, consultation dosage was examined as a predictor of PCIT therapist skills and knowledge (Jackson et al., 2017). In a cascading model of training, senior clinicians within agencies were trained to deliver PCIT. Once these clinicians demonstrated proficiency in PCIT delivery, there was the expectation that they would receive additional training to be able to train other clinicians within their organization. Thirty-two clinicians were trained across 16 agencies by three trainers. Clinicians received initial training workshops in accordance with established PCIT International Training guidelines (PCIT International, 2018). Training included 40 h of face-to-face training; 16 h of training 6 months after initial training related to actual cases; and biweekly contact with PCIT trainers over 12 months. Clinicians were provided the opportunity to attend up to 24 one-hour phone consultation calls with one of the trainers. Consultation calls typically yielded coverage of five content areas including: reviewing cases, training topics, structuring the call, problem-solving implementation barriers, and building skills. Therapists' consultation call attendance significantly predicted greater perceptions of the acceptability of treatment, greater changes in PCIT knowledge, and greater PCIT post-training

skills (Jackson et al., 2017). Interestingly, clinicians with higher PCIT caseloads who attended a greater number of phone consultation calls reaped the most benefit in their PCIT skill competencies following the training period.

Advantages of technology-based training approaches. Initial PCIT-specific dissemination research provides encouraging findings related to unique benefits of consultation type and dosage on therapist and client outcomes. The use of follow-up consultation technologies (i.e., phone-based, live video-based) appear to allow for the dissemination of PCIT. Live video consultation allows trainers the opportunity to shape therapist behaviors by providing therapists brief and concise feedback similar to coaching statements for parents (e.g., "Great job using priority order with that coaching statement").

For therapists who received live video consultation, dosage of video consultation was related to significantly greater improvement in parent ratings of their children's disruptive behaviors. Findings indicated that video consultation may create better outcomes earlier in the PCIT trainer consultation process with fewer total consultation sessions. At an individual family level, this would mean that on average parents who worked with therapists who received the full dose of video consultation might rate their children as demonstrating subclinical disruptive behaviors approximately two sessions sooner than parents working with therapists who received only the full dose of phone consultation (Funderburk et al., 2015). Additionally, live video-based PCIT consultation potentially allowed trainers to observe if therapists were changing their coaching behavior as a result of consultation (Funderburk et al., 2015).

Phone-based consultation also provides unique strengths for dissemination and training. Phone consultations allow a trainer to provide ongoing consultation to several individuals simultaneously. In addition, those individuals do not have to practice in the same location. Phone consultation also allows the trainees to benefit from one another's dialogue and development, and is efficient in that it can simultaneously address questions that

are likely to be raised across trainees. Phone consultation may currently be more user friendly and accessible for therapists as it requires less complex technology to utilize.

Challenges of technology-based training approaches. Despite some initial promising findings related to the use of technology in PCIT training, there are limitations. Live video-based consultation requires one-on-one consultation time, which is more expensive than group phone consultation (Funderburk et al., 2015). However, those costs may be mitigated by the therapist's ability to bill during that consultation time. There are also fixed equipment costs for remote live video consultation that can be challenging. Live video-based consultation requires technological literacy which can be challenging for some therapists, but the development of written and/or video-based tutorials for setting up equipment/software may help minimize these technical difficulties.

Beyond challenges with current technology used for PCIT follow-up consultation, we have a limited understanding of how technology used during initial PCIT training workshops impacts therapist knowledge and skill acquisition. For example, PCIT International allows for clinicians to complete 10 of 40 initial training hours online with a certified trainer (PCIT International, 2018). However, no published research has examined the effectiveness of distance education or other uses of technology for initial PCIT training, though some online distance education research trials are currently being conducted (Jackson et al., 2017; M. Nelson, personal communication, May 30, 2017). In addition, post hoc video reviews of sessions to demonstrate therapist competency are a likely trainer consultation approach. However, the extent to which video review is an effective PCIT training method for skill acquisition has not been formally evaluated despite its widespread use as a consultation strategy.

Clearly, significant future work is still needed to better understand the most effective strategies for using technology to aid in PCIT dissemination and training. As part of expanding the reach of PCIT to the plethora of families who lack access to needed services, more studies have

begun to evaluate technologically augmented versions of PCIT as well as service delivery primarily through the use of secure video-conferencing.

Technology-Enhanced Program Delivery

Technology-based behavioral parent training programs provide a number of resources and mechanisms that may be particularly beneficial for families with children with disruptive behaviors, and can increase the reach of evidence-based parent training interventions that may not be regularly available near someone's home (Baumel et al., 2016). In fact, behavior parent training has infused technology into treatment for multiple decades (Jones et al., 2013). For example, The Incredible Years program (Webster-Stratton et al., 1988) utilizes videos as a part of service delivery, and the Helping the Non-Compliant Child program embeds phone calls in between sessions to maintain treatment adherence (McMahon & Forehand, 2003). Other innovations in parent training include telephone contacts, messaging, video demonstrations, social media or public media campaigns, self-directed digital parenting training models, videoconferencing, and mobile apps (de Graaf, Speetjens, Smit, de Wolff, & Tavecchio, 2008a, 2008b; Nixon, Sweeney, Erickson, & Touyz, 2003; Sanders, 2008; Sanders, Markie-Dadds, Tully, & Bor, 2000). Despite these innovations in how behavioral parent training is delivered, the effectiveness of each innovation must be evaluated before considering broader dissemination of technology-based programs. Timely evaluations of technology-based programs can be particularly difficult to complete as the innovations in technology far outpace the rate at which well-controlled research trials can be completed (Joint Task Force for the Development of Telepsychology Guidelines for Psychologists, 2013). The following section details innovations in PCIT service delivery, specifically, Abbreviated PCIT, Pocket PCIT, and internet-based PCIT (I-PCIT). A case example of I-PCIT is also presented.

Abbreviated PCIT. Abbreviated PCIT, a brief intervention, was developed because behavioral parent training is time-intensive and demanding, and many parents only attend for about ten sessions prior to dropping out (Nixon et al., 2003). Abbreviated PCIT is different from standard PCIT, where all sessions are conducted face-to-face, in that the sessions are delivered variously via video recording, face-to-face sessions, and phone consults. The Child-Directed Interaction (CDI) and Parent-Directed Interaction (PDI) Teach sessions are delivered via video recordings in which the skills are discussed and modeled. Five face-to-face PCIT coach sessions are alternated weekly with five 30-minute phone consultations. In addition, Abbreviated PCIT provides a 1-month face-to-face booster session. When the relative effectiveness of Abbreviated PCIT (9.5 h of treatment) was compared to Standard PCIT (15.5 h of treatment), parents in each group reported comparable effects in reducing children's disruptive behaviors and improvements in positive parenting skills (Nixon et al., 2003).

Pocket PCIT: Child-Directed Interaction. Pocket PCIT, a multimedia eBook, was developed to provide caregivers in treatment with a free, on-demand, always-available resource designed to increase the generalization of CDI skills (Jent, Weinstein, Simpson, Gisbert, & Simmons, 2014). Pocket PCIT includes expert video explanations of CDI skills, video skill demonstrations, text explanations of Do and Don't Skills, parent testimonies related to treatment engagement, and interactive widgets to help parents better understand PRIDE skills (e.g., quizzes, Labeled Praise Mixer, drawing pad). In a randomized controlled trial, caregivers were either assigned to receive standard PCIT or PCIT plus access to Pocket PCIT. Caregivers with access to Pocket PCIT were assigned sections of Pocket PCIT based on needs identified via weekly behavior observation coding results with the Dyadic Parent–Child Interaction Coding System—fourth edition (DPICS-IV; Eyberg, Nelson, Ginn, Bhuiyan, & Boggs, 2013). It was preliminarily found that families with access to Pocket PCIT achieved CDI mastery in fewer sessions, but not fewer sessions to completion of PCIT than families receiving standard PCIT (Jent, Weinstein, & Dandes, 2017).

Parents consistently reported high satisfaction with the resource and completed assigned Pocket PCIT homework at a higher rate than Special Time practice, suggesting that parents may be open to engaging in additional work if they find content to be engaging. Both groups reported similar significant reductions in disruptive behaviors and parenting stress from pre- to post-treatment, that were consistent with a recent meta-analysis of PCIT (Thomas, Abell, Webb, Avdagic, & Zimmer-Gembeck, 2017). While Pocket PCIT provides an on-demand resource for families, initial findings suggest that it provides only partial benefit to treatment-related outcomes.

I-PCIT. In I-PCIT, treatment is delivered via secure video-conferencing, and is designed to be identical to the service that would be provided within an office-based setting (Comer et al., 2015). Rather than receiving coaching from behind a one-way mirror, families receive live coaching of their parent–child interactions via a secure video feed and a parent-worn Bluetooth device. While the equipment setup may vary from agency to agency to provide I-PCIT, the therapist and the parent need to have video-conferencing devices (e.g., computers with webcams, tablets, smartphones), secure video-conferencing software that allows for screen sharing by the therapist (e.g., reviewing Family Treatment Tracker, Eyberg Child Behavior Inventory Summary Sheets, and PRIDE Skill summary sheets with parents), a Bluetooth earpiece that connects to the video-conference device for the parent so they can move around freely during Special Time, Wi-Fi or data service with sufficient bandwidth available in the home, and a secure electronic mechanism for parents to submit weekly homework and behavior checklists. In addition, therapists have less control over the environment (e.g., child leaving room during session) in which they deliver PCIT. Therefore, therapists and parents typically discuss how to best structure the physical environment for coaching during sessions.

In an initial randomized control trial comparing I-PCIT to traditional office-based PCIT, approximately 86% of treatment completers in the I-PCIT condition were "excellent treatment responders"

and approximately 79% of treatment completers in the office-based condition were "excellent treatment responders" (Comer et al., 2017). Families who received I-PCIT continued to maintain excellent treatment response at a higher percentage rate than families who received office-based PCIT at 6-month follow-up. Beyond child outcomes, Comer and colleagues found I-PCIT to be related to high treatment engagement and treatment satisfaction as well as reduced perceived barriers to participation relative to office-based PCIT. To illustrate what I-PCIT looks like in practice, a brief example is provided.

I-PCIT Case Example

The following section presents the treatment of Jonathan, a 3-year-old boy with significant oppositional behavior, who participated in I-PCIT. The following description provides a rationale for choosing I-PCIT, illustrates the use of the PCIT protocol with fidelity, and describes logistical considerations that should be taken into account when implementing I-PCIT. The advantages and challenges of I-PCIT are also discussed.

Background information. Jonathan presented for treatment with his parents, Mr. and Mrs. Washington, to address ongoing behavioral concerns at home and in public places. Specifically, Jonathan had difficulty following directions, regulating his emotions, exhibited frequent attention seeking behavior (e.g., whining, sassing adults, temper tantrums), and was aggressive towards his parents. At the time of intake, Jonathan's parents reported that discipline techniques such as removal of privileges, time-out, and spanking were ineffective. Both parents reported significant difficulties managing Jonathan's behavior; however, Mr. Washington had more concerns about his ability to manage Jonathan's behavior.

Screening and assessment. The family presented with several challenges that made them ideal candidates for I-PCIT. Most notably, the family lived approximately an hour away from the closest PCIT provider. When offered the option, the

family indicated a strong preference for I-PCIT during the referral and screening process. The family confirmed that they had a secure Wi-Fi internet connection with sufficient bandwidth in their home.

Before beginning I-PCIT the family attended two in-person assessment sessions at the PCIT clinic [some models of I-PCIT also conduct the assessment sessions via video-conference (Comer et al., 2017)]. During assessment sessions, Mrs. Washington completed pre-assessment measures, a clinical interview, and DPICS. The therapist provided a detailed description of I-PCIT and equipment was distributed. Family equipment included an iPad, three types of tripod mounts (i.e., traditional tripod mount, table mount, flexible grip tripod that can be attached to multiple surfaces), an over the ear Bluetooth earpiece with a microphone that extended out (to be able to hear child's verbalizations), written and video instructions on how to set up equipment, parent handouts, and homework sheets needed for the first phase of treatment. The therapist also provided the family with a tutorial on how to operate the equipment and discussed procedures in the event of an emergency or disconnection during session. Therapist equipment included a computer, webcam, and Skype for Business software.

Setting up I-PCIT at home. Prior to each session, Mrs. Washington set up the equipment and placed three sets of toys within the frame of the camera. During the check-in portion of the session, Jonathan typically played on his own and was visible to therapist.

Mrs. Washington wore the Bluetooth earpiece throughout the session (i.e., check-in, coaching, and review). The therapist was visible on screen during check-in and when reviewing the session. However, in order to replicate coaching behind a one-way mirror, the therapist turned off their camera during coaching. At the end of coaching, Jonathan typically continued to play on his own within the frame of the camera while therapist reviewed session and assigned homework.

Administration of measures. An online version of the Eyberg Child Behavior Inventory (ECBI) was

sent to Mr. and Mrs. Washington prior to each session. ECBIs were electronically scored, graphed, and then reviewed using the Family Treatment Tracker (described later in the chapter) during sessions using the share screen feature. Pre- and post-measures were administered and collected during assessment and graduation sessions.

Child-Directed Interaction (CDI). The first phase of treatment consisted of CDI Teach and six coaching sessions. CDI coaching sessions 1–3 were conducted in the family's living room. Unfortunately, due to a sudden death in the family, Mrs. Washington and Jonathan had to travel several hours away from home to be with family. In order to minimize disruptions in treatment, Mrs. Washington traveled with the I-PCIT equipment. As a result, sessions continued as planned with minor disruption. CDI coaching sessions 4–6 took place in a family member's living room. Due to the change in environment, the therapist had the opportunity to reinforce consistency across various settings. During CDI coaching, the therapist had the opportunity to make observations and suggestions about the setup of special time in the home setting (e.g. appropriateness of toys for Special Time). Additionally, the home environment allowed the therapist to coach Mrs. Washington on using skills in everyday situations (e.g., praising Jonathan for turning the television off and staying in the living room). Mrs. Washington was also coached on minimizing distractions during the play. Overall, the CDI coaching experience via I-PCIT was similar to office-based PCIT, but it allowed for the opportunity to troubleshoot live issues that emerged in the home.

Parent-Directed Interaction (PDI). The second phase of treatment consisted of PDI Teach and 11 PDI coaching sessions. During the PDI phase, Mrs. Washington and Jonathan returned home, and during the transition coaching focused on reinforcing the importance of consistency across home environments. In later sessions, coaching focused on reinforcing PRIDE skills and proper use of the time-out procedure. Additionally, the therapist and parents discussed

additional concerns related to Jonathan's behavior and consistency of skill use among parents.

The family attended their graduation session at the PCIT clinic. Mrs. Washington completed post-treatment measures and DPICS. Additionally, Mr. Washington was coached on his use of CDI and PDI skills. Lastly, Mr. and Mrs. Washington provided feedback about treatment, I-PCIT, and then returned the I-PCIT equipment.

The time-out procedure. During PDI coaching sessions, the time-out chair was placed within the frame of the camera. The designated time-out room was adjacent to the play area and not visible on camera. During time-out procedures requiring the time-out room, parents kept the Bluetooth earpiece on while the therapist continued to provide coaching. In order to provide accurate coaching during the time-out room portion of the procedure when the family was out of the view of the camera frame, the therapist often instructed Mrs. Washington to briefly describe her actions. Time-out coaching differed slightly with I-PCIT in that the therapist had to coach the parent through minimizing environmental distractions during the time-out procedures (e.g., other people in the home going up to talk to Jonathan during the time-out).

Homework. CDI homework sheets were provided during an earlier in-person assessment session. During the PDI Phase of treatment, appropriate homework sheets and handouts were emailed immediately following each session. Prior to each session, parents emailed completed homework sheets to the therapist and homework completion was reviewed in each session. While not actively involved in treatment due to his travel schedule, Mr. Washington, Jonathan's father, conducted special time with Jonathan via Skype or FaceTime several times a week.

Follow-up. Mrs. Washington and Jonathan attended a 1-month follow-up at the PCIT clinic. Mrs. Washington reported that Jonathan was continuing to exhibit less attention seeking behavior and consistently following commands. Additionally, Mrs. Washington demonstrated continued mastery of CDI skills learned in treat-

ment, and reporting ongoing consistent Special Time. In regards to time-out, Mrs. Washington reported that Jonathan was receiving time-out approximately two times per week.

Case example: challenges and advantages of I-PCIT. Overall, treatment was successful, and Mrs. Washington was able to maintain mastery level use of her skills at follow-up. However, I-PCIT came with several unique challenges for the Washington family. Challenges included occasional technical difficulties (e.g., poor internet connection, difficulties completing electronic ECBI, uncharged equipment), and distractions in the home environment (e.g., pets, family members). Despite these unique challenges, I-PCIT allowed the family to continue treatment during travel within the same state where the therapists were licensed to practice. Additionally, the therapist had the unique opportunity to provide coaching in Jonathan's natural environment, which aided in the generalization of skills. The Washington family would have had significant difficulties completing office-based treatment due to the family's distance to PCIT clinic and unexpected travel during the course of treatment, and Mr. Washington's travel schedule. Therefore, I-PCIT allowed the family to access services despite barriers to treatment. Similar to the positive outcomes of the case example, technology-enhanced program delivery likely has the potential to be beneficial to families who might otherwise not access services.

Advantages of technology-enhanced program delivery. Initial research trials of technologically enhanced program delivery suggest that Abbreviated PCIT and I-PCIT each uniquely reduce barriers to accessing treatment. Abbreviated PCIT may reduce logistical and time-related barriers associated with typically attending behavioral parent training. In addition, the shorter time requirement for treatment may result in therapists being able to provide services to more families. I-PCIT potentially provides multiple advantages over traditional PCIT with respect to treatment engagement, treatment barriers, and generalization of skills to the natural

environment. For families who may feel stigmatized about seeking treatment, the receipt of discreet services within their own homes may be preferable (Comer et al., 2015). Further, I-PCIT potentially addresses a number of barriers to treatment including: eliminating geographic barriers to accessing treatment within the therapist's licensed jurisdiction to provide services (e.g., state); traveling time and resources getting to and from sessions; and eliminating the need to secure childcare for other siblings during sessions (Crum & Comer, 2016). I-PCIT may also be better equipped than traditional PCIT to facilitate the learning of skills in the natural environments in which typical problem behaviors occur (Comer et al., 2015).

Challenges of technology-enhanced program delivery. Despite some noted advantages and promising treatment responses related to I-PCIT and Abbreviated PCIT, there continue to be challenges that may limit broader dissemination of these PCIT models. One of the most pressing barriers is the lack of a reimbursement model across insurance panels and/or legislation limiting the extent to which telepsychology services (e.g., live secure video feed, phone-based consultation) can be reimbursed (Weinstein et al., 2014). Until an insurance payer model is adopted for this model of care, delivery of telepsychology services may be limited to families who have the ability to pay out of pocket or families who are eligible for grant-funded services (Comer & Myers, 2016). This may keep families who are most in need of services from receiving PCIT.

Both Abbreviated PCIT and I-PCIT require the use of reliable internet and/or phone services. Reliable and/or available internet connection or phone service may not be consistently available to families living in poverty or in very rural areas. Further, treatment agencies may not have the fiscal resources to supply equipment and/or phones for these telepsychology services. Even if funding is available for equipment, lost or obsolete equipment may require therapists and/or families to replace equipment periodically over time (Crum & Comer, 2016).

In the event of emergencies or abrupt disconnections of the video-conference or phone consults, therapists are not physically present to provide assistance and support. Therefore, it is important for the therapist to go over guidelines for treatment provision and emergency management via telepsychology prior to initiating treatment (Gamble, Boyle, & Morris, 2015). For example, in the event of an emergency the therapist likely needs to know the location of the family and contact information for health providers or the law enforcement agency within the family's community.

There are also HIPAA related concerns that are unique to the delivery of I-PCIT services. It is imperative that the providers utilize a video-conferencing software package that maintains a level of encryption that provides an opportunity for communications to be HIPAA compliant. That is, no video-conferencing software by itself is HIPAA compliant. It is how therapists or trainers utilize the encryption offered by a video-conferencing software package for their interactions with families or other health professionals that make their usage HIPAA compliant.

A general challenge around technology-enhanced service delivery concerns augmenting existing services with supplemental materials that may not result in substantial benefit to traditional PCIT. In other words, the extent to which treatment supplements such as Pocket PCIT should be recommended for broad use, especially for families who already have limited available time, likely need to be done so cautiously.

Technology-enhanced Client Progress Monitoring. Software such as the Family Treatment Tracker (www.pcit.org) allows therapists to track specific family skill development, child behavior, and homework compliance. The formula-based spreadsheet can be utilized within traditional PCIT or via I-PCIT (shown to families via a shared screen) to provide a visual overall snapshot of how a family is progressing in treatment (see Fig. 2 for an example). However, no research to date has examined whether this progress monitoring mechanism impacts client adherence, attrition, and/or outcomes.
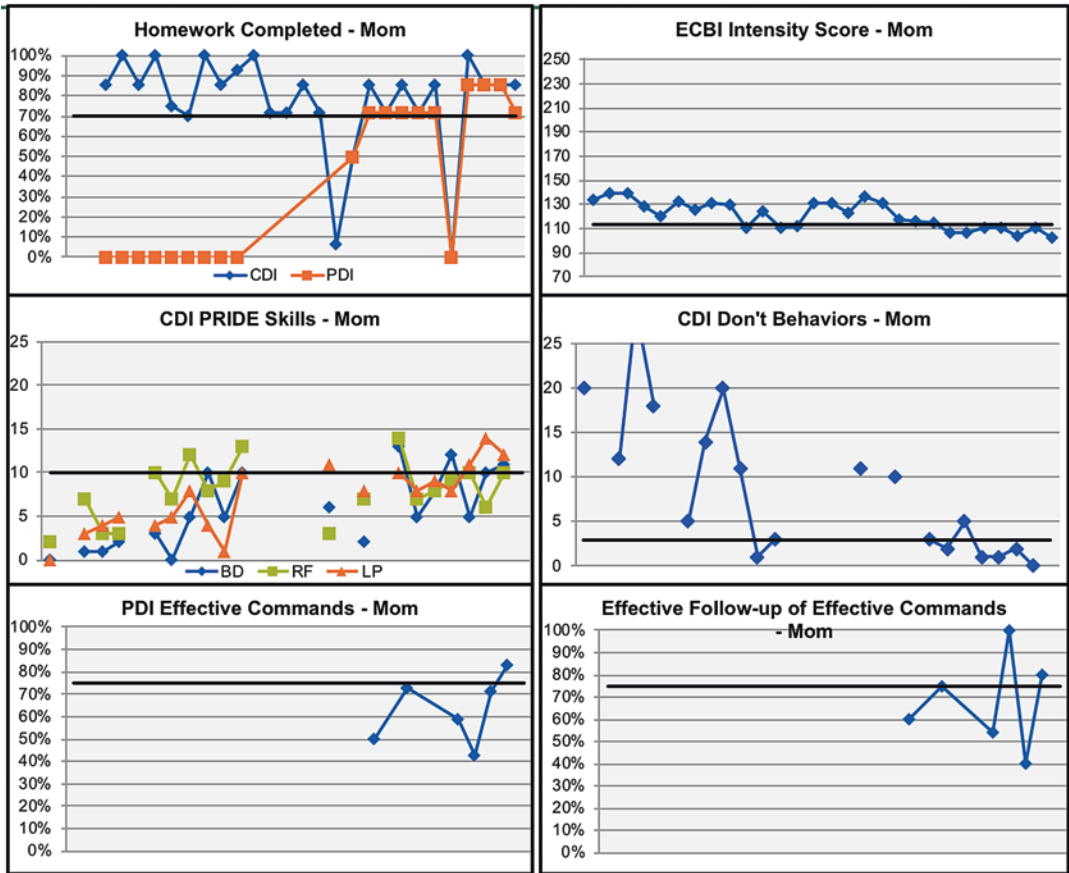
Fig. 2 Example Family Treatment Tracker

Summary

The incorporation of technology has had a significant positive impact on the development, dissemination, and efficiency of PCIT services and clinician training. Technology embedded in PCIT has resulted in more efficient service delivery (e.g., Abbreviated PCIT), increased availability of on-demand parenting education (e.g., Pocket PCIT), and increased accessibility of services regardless of geographic location (e.g., I-PCIT).

As these new technologies emerge, ongoing research is critically needed to evaluate the effectiveness of technological advances, with special attention to ethical considerations. However, the rate at which new technology develops far exceeds the rate that efficacy research can be completed and/or ethical guidelines can be updated (Joint Task Force for the Development of Telepsychology Guidelines for Psychologists, 2013). Before PCIT trainers or therapists adopt or pilot new technologies in training and/or clinical practice, they may want to consider the following questions to help guide development, evaluation, and implementation-based approaches to PCIT training and/or service delivery:

1. Is the new technology consistent with the PCIT protocol (Eyberg & Funderburk, 2011) and established PCIT international training guidelines (PCIT International, 2018)?
2. If evidence of effectiveness of the technology for PCIT is not available, has it been implemented with other evidence-based BPT

programs? If not, how will it be determined whether the use of the technology is beneficial to dissemination, training, and/or clinical services?

3. If the technology represents an adaptation to PCIT, is the model grounded in sound evidence-based clinical strategies or interventions?

4. Does the new technology add anything beneficial above and beyond traditional PCIT? PCIT is a robust intervention (Thomas et al., 2017) and augmenting it with technology supports and/or services may not result in improved treatment efficiency and/or outcomes.

   It is possible that new technologies (e.g., online, self-directed PCIT) may result in less effective treatment than traditional PCIT. However, therapists and researchers need to consider whether a new technology allows PCIT to reach populations in need that otherwise would not have received treatment at all. A smaller treatment effect than traditional PCIT may at times be an acceptable trade, if the technology has the potential to make a broader public health impact (Comer & Myers, 2016).

5. Is the technology to be implemented covered by insurance and/or allowable by the therapist's practicing jurisdiction?

   Insurance payer issues, reimbursement (e.g., lack of readily available Current Procedural Terminology codes for telepsychology), and limitations by governing entities remain as significant barriers to broader dissemination of technology-infused services like I-PCIT (Comer & Myers, 2016). As the research for technology-based services becomes more pronounced, these barriers will decrease. However, this does not provide a current solution for families in need, who otherwise would not receive an evidence-based BPT program such as PCIT. This suggests the need for a broader public health approach to the implementation of PCIT (e.g., statewide adoption of the dissemination of PCIT) or evaluations of the effectiveness of low cost/no cost self-directed educational models consistent with PCIT principles such as Anticipatory Guidance-PCIT (Berkovits, O'Brien, Carter,

& Eyberg, 2010), a mobile text messaging model of PCIT (Sarche & N'Zi, 2017), or Pocket PCIT (Jent et al., 2014).

6. If the technology requires third party software, to what extent is the technology to be used encrypted to protect users' privacy? Does the technology software company sell user information to third parties? Does the agency have a business associate's agreement with the technology company that establishes a security and confidentiality framework that users can expect?

7. How is the new technology to be implemented consistent with therapists' existing discipline-specific ethics codes? If communication between the therapist and the family is going to differ from traditional methods (e.g., face-to-face, phone calls), has the therapist addressed this during the informed consent process and/or considered adopting an electronic communication policy that provides guidelines for electronic communications during treatment (see The Trust Sample Electronic Communication Policy, 2017).

8. What additional technological literacy does the therapist or family need in order to successfully utilize the technology during services? To what extent can the therapist orient the family to the use of the technology before implementation within the PCIT service model? Ideally, PCIT therapists and/or trainers should consider using technology that does not require ongoing on-site information technology support (Baumel et al., 2016).

Conclusions

Policy and system changes, ongoing clinical research, and partnerships between PCIT researchers/innovators and technology companies are needed if PCIT is to continue to expand its reach through the use of technology. Unless there are policy and system changes at the governing entity and insurance payer level, the dissemination of telepsychology approaches (e.g., I-PCIT, video-conference check-ins) will be limited in scope. Research regarding the effective-

ness of various telepsychology health interventions needs to be readily shared with state chapters of discipline-specific associations to advocate for changes to state legislators. Further, large health organizations in which PCIT is prevalent need to advocate to insurance payer companies for opportunities to pilot technology-enhanced or augmented services with evaluations of cost-effectiveness and treatment outcomes. Pilot testing may provide the evaluation needed for insurance payers to allow for reimbursement at a broader public level.

Beyond the need for system change, it is expected that certified PCIT trainers and researchers will continue to explore how technology can increase the reach, quality, and efficiency of training and PCIT services while also attempting to reduce barriers (e.g., geographic, cost, loss of clinical productivity). As technology-based approaches are developed for PCIT, acceptability of the technology used with families or therapists needs to be carefully evaluated. Over time, families are dramatically increasing in technological literacy with many parents of young children now being considered "digital natives" (Prensky, 2001). Unlike previous generations, "digital natives" grew up regularly utilizing computers and the internet and view technology as a primary mechanism for communication and learning. Likewise, most PCIT therapists who graduated recently from master's-level or doctoral-level training are likely considered "digital natives." This suggests that both therapists and parents may now be more primed to technologically augment services and training than ever before. However, the extent that technological literacy impacts training, treatment, efficiency, and overall outcomes needs to be evaluated. This may lead to the development of protocol-driven technology orientation models that increase the acceptability of technology-enhanced services by individuals with lower levels of technological literacy.

Even with improvements in technological literacy, concern still exists that specific populations may not be able to be reached through technological advancements. Over 75% of adults in the US now utilize smartphones, suggesting that access to technology is more prevalent than ever before and will continue to grow over time (Pew Research Center, 2017). However, recent research indicates that minority group members, younger, lower income, and less educated users are more likely to exclusively use smartphones for accessing the internet relative to other sociodemographic groups (Tsetsi & Rains, 2017). Therefore, it is important for PCIT therapists to consider the use or development of technology that works across operating system platforms and on computers, tablets, smartphones, and/or other mobile devices (e.g., Mac, Windows, iOS, Android). Beyond consideration of development of cross-platform technology, researchers also need to focus on evaluation of the principles of PCIT delivery or training, systems of care, and/or adaptations to treatment with the caveat that the technology being used in the research will continue to be updated or even quickly become obsolete (Comer & Myers, 2016). Researchers should consider the development of content/tools/communication methods that have the ability to be modified or adapted as new technologies emerge (e.g., progression of VHS tapes to YouTube and other video streaming providers).

Researchers also have the opportunity to evaluate how technology can help PCIT effectively reach new treatment populations. For example, the use of augmented reality smart glasses which can project streaming video, may allow for a PCIT therapist to provide coaching via sign language to parents with hearing loss. While assistive communication flip books are currently available for use with PCIT, the use of tablet-based assistive communication board apps for children with significant language delays and/or intellectual disabilities would allow for much broader communication between a parent and child during treatment.

There are numerous opportunities to evaluate the effectiveness of emerging technology in the improvement and the efficiency and self-monitoring of PCIT training and clinical services. The Auburn PCIT lab directed by Elizabeth Brestan-Knight, Ph.D. in conjunction with the Intelligent Interactive Systems Group at Harvard University is developing an App-based DPICS coding system that codes

parent and child statements as they occur during special time practice. This tool may assist with parent self-monitoring of progress and may also serve as a training tool for new therapists who have just started to use the DPICS.

While the development of innovative ideas to improve the reach of PCIT training and treatment is potentially limitless, investment in technological developments can be both time-consuming and costly. Therefore, researchers and clinicians should communicate about the most pressing issues facing PCIT training and treatment. Strategic plans should be developed regarding how researchers and clinicians can best collaborate on the advancement, evaluation, implementation, and dissemination of the most impactful new technologies related to PCIT.

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Getting Parent–Child Interaction Therapy to Scale

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Abstract

The implementation of any evidence-based treatment (EBT) into community settings, especially at a broad scale, is a complex, dynamic process. Large-scale implementation requires consideration of factors at a variety of levels, including those related to the broader system, provider agencies, clinical and professional staff, as well as families. This chapter will explore the implementation of one EBT, parent–child interaction therapy (PCIT), across one state, the Commonwealth of Pennsylvania. The spread and implementation of the intervention will be discussed in light of the current literature related to dissemination and implementation. Specific examples and case

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discussions from the state will also be highlighted, including a review of specific facilitating factors and barriers, as well as strategies used to promote implementation with fidelity and ongoing sustainability of the model.

Rationale for Large–Scale Implementation of PCIT

Despite the potential of evidence-based treatments (EBTs) to better meet the needs of children and families and improve the quality of care, access to EBTs in community settings remains limited (President's New Freedom Commission on Mental Health, 2004; United States Department of Health and Human Services, 2009). In fact, a recent analysis of state behavioral health systems within all 50 states from 2001 to 2012 reported a decreasing or stable use of EBTs despite calls for increased implementation of these treatments (Bruns et al., 2016). Further, Bruns et al. reported higher use of adult-focused EBTs (65–80%) compared to youth-focused EBTs (25–50%). For the states that reported use of EBTs for children and adolescents, the median numbers of clients served was low, with EBTs estimated to reach only 1–3% of youths with serious emotional disturbance. Parent–child interaction therapy (PCIT) is an EBT with the potential to positively impact

young children and their families with one of the most common presenting problems in community behavioral health centers, disruptive behavior disorders (Kazdin, 1995; Schumann, During, Eyberg, & Boggs, 1996). The current challenge is to reach enough children to make a meaningful difference in their lives while having a broad public health impact.

The Diffusion of PCIT

The development of PCIT began in the mid-1970s by Dr. Sheila Eyberg at the University of Florida. However, like many other EBTs, PCIT remained in university (rather than community settings) for many years. As its evidence-base grew and graduate students studying with Dr. Eyberg completed their degrees, PCIT programs were developed by these students in other university graduate programs (e.g., West Virginia University, Auburn University) and university-affiliated medical centers (e.g., University of Oklahoma Health Sciences Center; University of Tennessee Health Sciences Center). In turn, as faculty continued to mentor additional students and graduates from these programs moved into new faculty positions, PCIT programs spread to additional universities (e.g., Central Michigan University) and university-affiliated medical centers (e.g., Duke Medical Center, University of Pittsburgh School of Medicine). This careful diffusion process that is influenced by social networks and communication is common, but slow (Rogers, 2003). It takes many years, some have estimated 17 years, for an innovation (like PCIT) to go from research to practice (Green, Ottoson, García, & Hiatt, 2009; Westfall, Mold, & Fagnan, 2007).

Beginning in the mid-1990s, the Society of Clinical Psychology's (Division 12) Task Force on Promotion and Dissemination of Psychological Procedures (APA, 1993), its 1995 report (APA Task Force on Promotion and Dissemination of Psychological Procedures, 1995), and subsequent 1996 and 1998 reports (Chambless et al., 1996; Chambless et al., 1998) increased the field's focus on EBTs. Essentially, these reports highlighted that the field of clinical psychology had

efficacious and effective treatments to offer, including PCIT. PCIT was featured on these early lists as well as subsequent reviews of EBTs (e.g., http://effectivechildtherapy.org), highlighting the potential for providing effective services to children and families if such interventions were more accessible beyond university-based settings.

Indeed, professional organizations and expert groups began to call for increased implementation and evaluation of EBTs in community settings (e.g., APA Task Force on Evidence-Based Practice for Children and Adolescents, 2008; Mental Health America, 2013; Tolan & Dodge, 2005). More recently, two billion dollars was allotted by public health authorities to promote increased access to EBTs (McHugh & Barlow, 2010). Importantly, there have since been a number of large-scale efforts to disseminate and implement evidence-based interventions (e.g., Sigel, Benton, Lynch, & Kramer, 2013; Tibbits, Bumbarger, Kyler, & Perkins, 2010), including PCIT (e.g., Beveridge et al., 2015). For example, PCIT has been implemented within systems of care (e.g., Franco, Soler, & McBride, 2005) as well as within numerous grant-funded initiatives (e.g., Duke Endowment Learning Collaborative). As such efforts have unfolded, researchers have become increasingly interested in how to best approach dissemination and implementation. A recent examination of PCIT sustainability during 12 large-scale or multi-system-level initiatives found PCIT was implemented and sustaining at mid-to-high levels (i.e., 83%; Scudder et al., 2017). Despite the potential impact of broadscale implementation of PCIT within community settings as well as the call for increased access to EBTs, there continues to be a lack of consensus in the field related to best practices in implementation, especially at large-scale (Herschell et al., 2015).

Training in PCIT

Historically, PCIT training has been conducted using an apprenticeship model. However, as PCIT has been implemented more broadly,

other training and supervision models have been utilized (Scudder & Herschell, 2015). For example, introductory workshops and presentations have been conducted at national, state, and regional conferences (e.g., American Psychological Association, Association for Behavioral and Cognitive Therapies, biennial PCIT International, Inc. convention, state- and regional-level conferences). Online platforms have also been established to provide both initial training (https://pcit.ucdavis.edu/pcit-web-course/) and continuing education (http://www.pcit.org/continuing-education1.html) opportunities. However, these brief trainings have served as introductions or supplements to more extensive trainings. In order to conduct PCIT, clinicians typically participate in a 12–18-month training process. Two common methods for training community-based clinicians in PCIT are a Learning Collaborative approach and a Train-the-Trainer approach.

A Learning Collaborative targets multiple levels within an organization (clinicians, supervisors, senior leaders) with the goal of supporting change at the organization and clinical levels. The Learning Collaborative approach was modeled after the Institute for Healthcare Improvement's Breakthrough Series Collaborative Model (Institute for Healthcare Improvement, 2003; Kilo, 1998) for use with topics related to behavioral health (Markiewicz et al., 2006) by the National Child Traumatic Stress Network (NCTSN; http://www.nctsn.org). Within behavioral health, the NCTSN has used the Learning Collaborative approach for approximately 15 years to implement several EBTs across the United States. Learning Collaboratives have supported improved engagement in behavioral health services (Cavaleri et al., 2006, 2010; Franco et al., 2007; Rutkowski et al., 2010), including initiating (Cavaleri et al., 2006, 2010) and sustaining (Franco et al., 2007) gains in initial appointment show rates.

Train-the-Trainer models involve an EBT expert providing extensive clinical training to a community-based clinician who in turn replicates that clinical training with other clinicians within his or her organization. This training approach is widely used in behavioral health (e.g., Hawkins & Sinha, 1998; Rogers et al., 1986), addictions (Hein et al., 2009; Martino et al., 2010), medicine (e.g., Coogle, 2002; Nyamathi et al., 2008) and prevention (e.g., Gadomski et al., 2001; Moon, Calabrese, & Aird, 2008). Although use of this training model is common, the outcome of the train-the-trainer model is not yet well understood. Within behavioral health, some studies have reported a "watering down" effect from supervisors to staff (Shore et al., 1995); however, others have reported no differences across supervisors to staff in client or role-play session assessments (Martino et al., 2010).

As PCIT expanded to community settings and various training methods emerged, PCIT International was created (http://www.pcit.org) with the goal of promoting high quality and high fidelity implementation of PCIT. PCIT International is the authorized professional organization for research and training in PCIT. Their mission is to: "(a) foster the growth and expertise of the network of local, regional, national, and international PCIT therapists, (b) highlight the research activities and clinical innovations developed by the PCIT community, (c) empower parents to make changes that will lead to a nurturing and secure relationship with their children, and (d) improve the lives of children and families worldwide through the provision of sound, empirically based assessment and treatment" (PCIT International, n.d.).

To accomplish this mission, PCIT International has developed training guidelines that detail preferred training participants, methods, and outcomes (e.g., training competencies) which are routinely updated and available at http://www.pcit.org. These guidelines emphasize the importance of: (a) including skillful clinicians in training (i.e., masters or doctoral level, licensed or licensed eligible), (b) balancing face-to-face training (at least 40 h) with clinical consultation over time (every other week for 1 year), (c) tracking participants' clinical competencies and progress within training and with families through video review, and (d) actively participating in training, including graduating at least two cases while in training.

Factors Influencing Large-Scale Implementation

When considering community implementation of EBTs more broadly, and PCIT specifically, simply providing training to clinicians may not be sufficient. First, community systems are continually changing with multilevel influences on implementation success (Bruns et al., 2016). Secondly, there is a lack of empirical evaluation of how best to train and support community clinicians implementing EBTs (Herschell, Kolko, Baumann, & Davis, 2010). Further, identifying effective interventions for families and training clinicians in EBTs are only first steps in a complex process to implement EBTs in community settings (Durlak & DuPre, 2008).

Researchers have identified a wide range of potential factors that could impact the success of EBT implementation. In a review of elements influencing community implementation of EBTs, Durlak and DuPre (2008) identified 23 contextual factors affecting the implementation process, and these were related to community characteristics (e.g., funding, policy), provider characteristics (e.g., self-efficacy, skill proficiency), characteristics of the innovation (e.g., adaptability), and organizational capacity (e.g., climate, integration, communication, staffing considerations). A review by Fixsen, Naoom, Blase, Friedman, and Wallace (2005) pointed to very similar factors, and highlighted the importance of taking a longer-term multilevel approach to implementation. Given the wide range of implementation models and theories in the literature, Damschroder et al. (2009) developed the Consolidated Framework for Implementation Research. In their review of 19 published models and theories, they identified five common domains influencing implementation: intervention characteristics, outer settings, inner setting, characteristics of individuals involved, and the process of implementation. Damschroder et al. (2009) also emphasize how the larger system context affects implementation, and the dynamic interplay between factors. Taken together, current findings point to a growing consensus regarding the importance of considering the multiple levels

of influences that could impact implementation (Durlak & DuPre, 2008; Fixsen et al., 2005; Southam-Gerow, Rodriguez, Chorpita, & Daleiden, 2012).

Consistent with large-scale implementation of EBTs in general, there are several factors to consider across the broader community context when implementing PCIT in particular (Scudder, Herschell, & McNeil, 2015). First, it is important to consider how PCIT fits within the existing service system and factors related to the initial adoption of the practice, including obtaining start-up support, building an appropriate referral base (i.e., young children with disruptive behaviors; families with a history of harsh parenting), considering the balance of treatment fidelity within the context of state and federal regulations, establishing billing, and appreciating the cost-benefit of the intervention at the level of the family, agency, and state. In addition to start-up funding to support the physical structure of a PCIT playroom (e.g., one-way mirror, sound equipment), initial implementation also requires infrastructure development, such as educating internal staff (e.g., administrators and intake personnel) about PCIT, appropriate populations, outcomes, and the format of treatment. Start-up may also include developing a referral and intake process to support nurturing a referral stream appropriate for PCIT.

Establishing and maintaining a referral base for PCIT includes both internal and external referral pathways. Within the agency, other professionals or service lines can become valuable referral sources. Likewise, community partners, such as child welfare agencies, schools, pediatrician's offices, often are receptive to the availability of PCIT for families, due to the high demand for services for disruptive behaviors in early childhood.

Pennsylvania—A Case Example

This chapter will consider the large-scale PCIT initiative within the state of Pennsylvania (PA), highlighting the dynamic process of implementation. Specifically, following a brief history of

PCIT within the Commonwealth, the case example will demonstrate how contextual factors facilitated the process of implementation, including financing, stakeholder involvement, and integration into the existing service system, as well as barriers to implementation, such as workforce turnover, competing services, attrition, and underutilization. As noted above, implementation of an EBT is a complex process. The initiative in PA is no exception; it is an ever evolving process, as those involved attempt to respond to the needs of individuals, agencies, and families across the Commonwealth, within the broader system context.

Notable is that PA is a Commonwealth, which means that the governing structure is state-administered, but county controlled. The practical implication of this is that policies many be determined at the state-level, but each of the 67 counties within PA are responsible for implementing those policies as they might apply to their community, including behavioral health services provision and funding.

A Brief History of PCIT in Pennsylvania

PCIT implementation began in PA in 2009 (see The Development of PCIT in Pennsylvania (2014) for a detailed description). A diversity of funding streams (i.e., university, county, state, managed care) were organized in an effort support PCIT implementation. While the support was generous, no one award was enough for broad-scale implementation. Instead, funding from each source was used to build upon each other for a more meaningful impact.

Initial implementation began through two pilot initiatives which were independently developed to address identified service needs in communities of Philadelphia and Allegheny Counties. In Philadelphia, the Annie E. Casey Foundation provided a grant to the Children's Hospital of Philadelphia in collaboration with the Departments of Human Services and Behavioral Health to pilot a collocated model of PCIT within two foster care agencies. In Allegheny County,

the Clinical Translational Science Institute at the University of Pittsburgh funded a pilot project to study the feasibility of delivering PCIT at a domestic violence shelter and partner behavioral health organization (Herschell, Scudder, Schaffner, & Slagel, 2017).

With these training initiatives, interest in PCIT began to grow. In 2010, the Staunton Farms Foundation provided funding to train 11 clinicians within Allegheny County, with the goal of involving additional service organizations and increasing capacity in a densely populated county. The Heinz Endowments awarded another grant to assist in providing training to 16 additional PCIT clinicians from eight service organizations in nine counties across the Commonwealth; a formal Request for Proposal process gave priority to agencies with prior experience implementing evidence-based practices, a commitment to sustaining PCIT, and spanning additional geographic areas of the Commonwealth. Following PCIT training, established PCIT clinicians were trained as within-agency trainers for their agencies.

In 2011, Starting Early Together, a grant-funded System of Care project, funded six agencies and 12 clinicians to participate in PCIT training in Allegheny County with the goal of building additional PCIT playrooms to be located in areas of need throughout Allegheny County. Also in 2011, the Behavioral Health Alliance of Rural Pennsylvania collaborated with Community Care Behavioral Health, a behavioral health managed care organization, and the state Office of Mental Health and Substance Abuse Services to use reinvestment funds to provide PCIT training, lodging, meals, $2000 equipment costs, and up to $4000 for required renovations to five organizations serving rural communities. Value Behavioral Health of Pennsylvania, a behavioral health managed care organization, also funded training during this time.

Similarly, stakeholders were organized. For example, in the fall 2011 and 2012, two statewide PCIT Network meetings were held to bring together state PCIT stakeholders (e.g., policy makers from Department of Public Welfare programs, representatives of managed care

organizations, licensed behavioral health outpatient facility administrators, behavioral health clinicians, and the PCIT research and training team). This networking allowed for sharing of successes and challenges as well as encouraged momentum and growth.

Because of these early efforts, in 2012, the University of Pittsburgh received a 5-year National Institute of Mental Health (NIMH) grant to evaluate the effectiveness of three training models (Learning Collaborative, Train-the-Trainer, and Web-Supported Self-Study) in the implementation of PCIT in community outpatient settings (see Herschell et al., 2015 for description). The project recently finalized data collection which was guided by three specific aims: (1) to build knowledge about training outcomes, (2) to build knowledge about implementation outcomes, and (3) to understand the impact of training clinicians using Learning Collaborative, Train-the-Trainer, and Web-Supported Self-Study models on key family outcomes. Randomization to one of the three training conditions occurred by county or mental health joinder. In total, 111 clinicians in 50 licensed outpatient behavioral health agencies in 36 counties across Pennsylvania participated in four waves of training over 2 years. Since this large research trial, ongoing clinical training contracts have funded training of an additional 51 clinicians. In total, PCIT programs were developed in 62 of 67 counties across the Commonwealth, with over 100 agencies and 300 clinicians trained to provide PCIT.

Facilitating Implementation

Stakeholders involved in PCIT implementation within PA recently participated in a project examining large-scale PCIT implementation initiatives across the United States (Scudder et al., 2017). This study gathered information on a wide range of factors related to dissemination, implementation, and the sustainability of PCIT, with an effort to better understand the most common barriers faced and strategies used to promote sustainability of the EBT. In the following sections, we will review factors that appeared to be most influential with regard to the successful implementation and sustainment of PCIT across PA. Currently (as of 2017), there are PCIT providers practicing in 93% (62 of 67) of counties across the Commonwealth, including over 100 agencies and 300 clinicians. PA was very quick to scale, with a large number of clinicians being trained over a relatively short period of time (2009–2017). As a point of comparison, only a handful of states (e.g., California, Oklahoma, Washington) have trained as many PCIT clinicians, and all began implementing PCIT prior to 2000; nearly a decade before such efforts were undertaken in PA.

Community and stakeholder involvement. It has been argued that in order to sustain a program (e.g., an EBT), the program must first become routinized within an organization. In turn, institutional standards such as state-level rules and policies influence organizational routines so any new program must be "backed up by some form of organized action" (Pluye, Potvin, & Denis, 2004, p. 123). Thus, community and stakeholder involvement to support change a multiple levels (e.g., organization, state) is critical to promote sustainability. In PA, broad stakeholder involvement was present since the early PCIT implementation efforts, and became increasingly structured and organized as efforts unfolded. This organized action has led to substantial changes in system-wide procedures and policies, as we discuss below.

Early implementation efforts in PA evolved from grassroots movements, as community behavioral health providers recognized a need for a higher quality of care for families, particularly those with very young children. Due, in part, to existing relationships between community providers and academics, when PCIT was identified as a treatment option that could address the needs of the community, collaborations with PCIT trainers in the region naturally flourished. Further, as early training initiatives yielded successful outcomes, word of mouth and interest in PCIT began to spread among community members, providers, and larger systems.

As the momentum continued to build for PCIT, initiatives also began to grow in size and spread. In turn, the involvement of community members and stakeholders became more intentional. For instance, between 2011 and 2012, grant funding allowed for two PCIT Network meetings to be hosted in the central part of the state. These early meetings continued to engage stakeholders and community partners in the process of ongoing implementation, adoption, and sustainability of PCIT within community settings across Pennsylvania. In addition to community-based clinicians, individuals representing larger systems, including state officials from various child-serving systems, representatives from payer organizations, and agency-level administrators, were invited to attend.

These structured, organized meetings, served to promote ongoing communication and collaboration. Simultaneously, the PCIT training team in PA continued to build and nurture relationships with systems, individuals, providers, and families across the state to promote ongoing dialogue, interest, and enthusiasm about the implementation. For example, during these networking meetings, the PCIT community across the state participated in think-tank activities and collaborative problem-solving to address common barriers, such as treatment attrition. The sessions also included testimonials from PA clinicians, reflecting on how PCIT has impacted their professional practice to continue to foster momentum and enthusiasm surrounding the model. Agenda topics (e.g., using PCIT with trauma; implementing time-out within the state's policies on seclusion and restraint) were intentionally chosen to address concerns identified by the community.

Finally, in 2012, led by Dr. Amy Herschell, the PA PCIT Implementation Statewide Steering Committee was created in order to guide PCIT implementation in the state, and promote sustainable high-quality implementation over time. The committee included representatives from several stakeholder groups such as state policy makers, payers, consumers, service providers and academics from diverse but complementary areas (e.g., public health, social work, psychiatry). Meetings were held regularly at a central loca-

tion. Among the first tasks of this steering committee was to inform the research design of the NIMH grant described above, including providing input and feedback on which measures to include in the study, methods and audiences for reporting results, and input on study procedures (Jackson, Macphee, Hunter, Herschell, & Carter, 2017). Throughout the course of the PCIT Across PA Study, the steering committee continued to meet quarterly, and provided valuable feedback regarding the ongoing implementation of PCIT. In turn, as preliminary study outcomes emerged or relevant information was learned through the project, these findings were presented to the steering committee, and often influenced state and community systems.

For example, in response to the growing number of clinicians being trained and concerns raised by the steering committee regarding monitoring fidelity, a statewide referral list of trained clinicians in each county was developed. Second, the steering committee prompted the development of subsequent research projects. For example, in response to members' questions regarding how best to sustain PCIT following implementation, the PCIT Across PA Study Team initiated an investigation into other large-scale PCIT initiatives, resulting in a mixed-methods study recently submitted for publication (Scudder et al., 2017). In turn, preliminary findings from this study were shared with the steering committee, and used to guide thinking about how to promote sustainability across the Commonwealth.

One significant outcome of stakeholder involvement in Pennsylvania was the development of a Time-Out Policy Clarification. The Policy Clarification, was the result of a collaboration between the primary PCIT Trainer for the state and the PA Department of Human Services' Office of Mental Health and Substance Abuse Services. In response to clinician and agency concerns about implementing the PCIT time-out procedure with high fidelity while also following the state's policies on seclusion and restraint, the Policy Clarification addressed frequently asked questions and concerns related to the use of the time-out procedure in the context of state regulations on seclusion and restraint. The document

also provided guidelines for the designing of PCIT time-out rooms in accordance with not only the regulations but also the state's focus on trauma-informed care. This Policy Clarification is an example of a change in institutional standards that likely will promote broad implementation and sustainability of PCIT, beyond what any single agency or organization could (Pluye et al., 2004).

Funding support. The degree to which initiatives are able to allocate funding for costs associated with implementing *and sustaining* an EBT is critically important (Scudder et al., 2017). The implementation of PCIT within the state has also benefitted from careful consideration of how cost and funding impact adoption and ongoing implementation of an evidence-based intervention. Throughout the history of PCIT in PA, resources have been identified and allocated to alleviate costs associated with initial implementation and training. For instance, through collaboration with local foundations, research funders, and payers (i.e., managed care organizations), several early training initiatives were provided at no direct cost to agencies. Further, some funding sources provided compensation for start-up costs, including construction of PCIT playrooms, technology, and appropriate toys. Growth from early efforts in the state culminated in a large research grant through the NIMH as described above. Within this larger trial, training was also provided at no direct costs to agencies, including the direct face-to-face training, biweekly consultation calls, necessary equipment to implement PCIT with fidelity (i.e., a bug-in-the-ear device and sound system), as well as "starter" materials (e.g., required assessment materials).

While these initial implementation costs likely enabled PA to scale quickly, the cost of implementation of an EBT extends well beyond the training period. For PCIT in particular, ongoing costs associated with implementation include both direct cost (e.g., purchasing assessments and toys, maintaining equipment) and indirect costs (e.g., decreased productivity to attend training and consultation calls, participate in clinical supervision, and conduct co-therapy sessions).

Based on the findings of Scudder et al. (2017), service reimbursement appears to be among the most important contributors to the sustainability of an EBT in community settings. Within PA, PCIT services been reimbursable through not only typical mechanisms but also one particularly important strategy in which three out of five behavioral health managed care organizations now offer an enhanced rate for PCIT service provision; providers are reimbursed more than the standard outpatient rate when they provide PCIT services. The three behavioral health managed care organizations are particularly notable because they manage HealthChoices funding, medical assistance from the state, which means they insure a large number of families in need. These three funders also cover a large number (53 of 67) and wide variety of Pennsylvania Counties (e.g., urban, rural; two largest counties—Allegheny and Philadelphia). Among the large-scale PCIT initiatives included in the study conducted by Scudder et al. (2017), at the time of interviews, PA was the sole initiative with managed care organizations paying an enhanced rate, although several other initiatives were working to secure an enhanced rate for PCIT.

Integration into existing systems. When considering the initial adoption of a new EBP, as well as the success of sustaining the initiative over time how embedded it is in the existing system is an important factor to facilitate success (Scudder et al., 2017). In PA, the implementation of PCIT included efforts to educate other professionals and stakeholders about the model. Specifically, several statewide networking meetings provided initial education and collaboration across providers, systems, and community partners. In addition, the training team provided numerous information meetings and presentations to counties and service organizations, local conferences, pediatric providers, and special interest groups. Through these efforts, PCIT became a familiar acronym across several child-serving systems, helping to facilitate the integration of the service into routine practice.

Integration into existing systems in PA also included, and continues to expand upon, the

implementation of PCIT within novel settings. Across the Commonwealth, there are several PCIT playrooms located in community settings beyond standard outpatient clinics. For example, several early childhood and elementary schools, foster care agencies, and at least one domestic violence shelter are equipped with PCIT playrooms. Family Support Centers are an especially innovative setting (http://www.alleghenycounty-familysupport.org/). These centers are community-based entities developed to promote stability and healthy growth of families. This goal is met by providing an array of services to families in geographic locations identified as underserved communities, including supports addressing child development, parenting, and goal planning. PCIT has also been offered to populations with an emerging evidence base (e.g., Autism Spectrum Disorders) as well as in families' homes.

Barriers to Implementation

Although there have been several processes and factors which have facilitated the spread of PCIT across the Commonwealth, challenges to implementation have been present as well. As the work in PA continues, the PCIT community continues to respond through adaptation and innovation to meet the ever changing needs of the system, provider organizations, and families. In order to continue to scale and sustain the PCIT initiative, the community and training team remained responsive to factors impeding adoption of the EBT, as outlined below.

Workforce turnover. Rates of turnover for community behavioral health providers are consistently reported to be 30% or greater (e.g., Aarons, Sommerfeld, Hecht, Silovsky, & Chaffin, 2009; Beidas et al., 2016; Bukach, Ejaz, Dawson, & Gitter, 2017; Rollins, Salyers, Tsai, & Lydick, 2010). These high rates of turnover often contribute to significant organizational challenges and difficult work environments. For example, organizations must pay to recruit and train new employees; employees who remain often have to take on additional responsibilities and adjust to new team members; and consumers must adjust to a new clinician.

Turnover is especially problematic in organizations that are implementing an EBT. Implementing an EBT can be a costly endeavor for an organization, including investments of staff time, resources (i.e., initial training and start-up costs), and productivity losses (e.g., billable time and accompany revenue is lost when clinicians are in training). Continued investments must be made in quality assurance and fidelity monitoring for clinicians administering EBTs (Bjorklund, Monroe-DeVita, Reed, Toulon, & Morse, 2009). If an individual trained in an EBT leaves their organization, their knowledge of and skill in that EBT is lost, resulting in a poor return on their investment for the organization.

Although the challenge is not unique to this intervention (PCIT) or state (PA), workforce turnover continues to be a challenge for providers implementing EBTs. To date, there have been several strategies utilized in Pennsylvania to combat workforce turnover. First, some agencies have incentivized PCIT by offering increased wages or benefits to PCIT-trained clinicians; this has been possible, in large part, due to the enhanced rate for PCIT in many counties. Similarly, several agencies reduce productivity requirements for clinicians in training, and some continue to pay clinicians for their time on consultation calls. Multiple training opportunities have been offered across the state. Many PA agencies also have identified and supported internal PCIT trainers so that they can more easily train others within their organization. Some have created "PCIT Coordinator" positions; not only has this emphasized the value the organization places on PCIT, it also has added a step on a career ladder, which has been shown to buffer against workforce turnover.

Competing services. As PCIT implementation began in PA and continued to grow across initiatives, the service was introduced into the existing structure, culture, and climate of behavioral health service delivery within the state. One challenge to the adoption and implementation of

PCIT is the presence of competing services, which manifests across various levels of the system, including at the system or organizational level, as well as at the clinician and family level.

One of the largest behavioral health programs servicing children in PA, Behavioral Health Rehabilitation Services (BHRS), is a community-based service provided to children and families (Community Data Roundtable, 2015). The program emerged as part of the wrap-around movement throughout the 1980s and 1990s in the United States, but in PA, its effectiveness has been variable (Community Data Roundtable, 2015). Throughout the course of expansion of PCIT in the Commonwealth, community-based services provided through BHRS are often considered to "compete" with the provision of PCIT for several reasons. First, due to the culture and climate of behavioral health services in the state, families often seek services with the expectation of home-based delivery. Similarly, upon intake and evaluation, providers may be more likely to recommend services which are more familiar. Finally, cost also may influence the decision of recommended services. In many instances, billing for BHRS services produced more revenue for the agency than outpatient PCIT. This dynamic has been especially challenging given billing limitation precluding a family from receiving outpatient PCIT and community-based services through BHRS simultaneously.

To respond to these dynamics, the implementation of PCIT across the state included strategies to educate and promote informed decision making related to the most appropriate level of care for children and families as well as expected outcomes of PCIT. The PCIT training and research team as well as clinicians and provider organizations became active participants in considering how to promote appropriate referrals to PCIT, especially for those populations in which PCIT has particularly strong evidence such as child-welfare involved cases. Further, as discussed above, the PCIT community advocated for additional incentives at the agency level to implement a new EBT through an enhanced rate.

In addition to supporting the integration of PCIT into existing service lines, while providing incentives and support for implementation, community stakeholders in the state also began exploring how to expand the reach of PCIT through innovative service delivery. A recent initiative in PA included a managed care sponsored pilot of a home-based model of intensive family coaching modeled on principles of PCIT. This initiative allowed for the service delivery of PCIT to work in collaboration with PA's home-based service delivery framework. In fact, in this pilot project, providers included were required to have existing PCIT outpatient programs to facilitate a continuum of care for families.

Attrition. Attrition, the act of leaving therapy prematurely, is a pervasive problem within behavioral health, and is particularly problematic in outpatient settings (Barrett et al., 2008). Given that treatment completion is strongly related to therapeutic change (Kazdin & Wassell, 1998), particularly in PCIT, treatment effectiveness is likely limited when families leave PCIT early (Barrett et al., 2008). A recent meta-analysis by de Haan, Boon, de Jong, Hoeve, and Vermeiren (2013) found high and variable rates of attrition in child and adolescent therapies—from 28% to 75%. Similarly, high and variable rates (33–69%) have been reported for PCIT in the four published studies of attrition in PCIT (Harwood & Eyberg, 2004; Lanier et al., 2011; Lyon & Budd, 2010; Werba, Eyberg, Boggs, & Algina, 2006).

Consistent with the literature, PCIT clinicians in PA certainly face attrition, although based on informal data collected during consultation calls, rates of attrition are typically reported to be similar to or slightly better than rates in other outpatient treatment services. One of the most frequently cited factors related to attrition in PA has to do with providing services in rural settings. Within rural communities, behavioral health agencies are often the sole provider for a wide catchment area, which may limit the availability of services. In addition, families often face difficulties with transportation, either due to the cost of needing to drive long distances, additional challenges traveling during inclement weather, or poor access to public transportation. Moreover, given the primary population seeking PCIT treat-

ment, there is often the added burden of traveling with a child exhibiting disruptive behaviors that may impact a parent's willingness to attend treatment regularly. As noted above, the delivery of PCIT in PA has grown to include innovative settings and delivery models in hopes of increasing access to service.

Underutilization. Despite this expansion, PCIT serves a relatively low number of children and families in Pennsylvania, especially in relation to the need. Several factors likely contribute to this. First, funding has been targeted at expanding the number of clinicians able to provide PCIT and measuring the impact of type of training. Relatively less attention has been spent on "marketing" PCIT, expanding to different payers, and developing productive referral processes. Second, PCIT remains largely an outpatient service across PA. As a result, clinicians providing PCIT often are generalists, managing a variety of responsibilities with diverse caseloads. In other words, it is rare that clinical staff time is dedicated to the delivery of only one EBT. This is not surprising, given provider agencies need to maximize clinical staff time. However, this often results in challenges related to the ability to maximize the use of EBTs within the community. For example, if clinicians are assigned cases based solely on openings and availability, PCIT trained clinicians may not always be matched with cases appropriate for the EBT or vice versa. There has been greater utilization in agencies where there are staff that are primarily providing PCIT.

Lessons Learned

Money matters. The most consistent finding related to sustainability (Scudder et al., 2017) has been that money does matter when it comes to implementation. Resources are necessary for start-up as well as for maintaining the practice over time. Although funding is essential, though not sufficient, to successful EBT implementation, the ability to plan long-term is often limited by the reality that many state or local budgets do not extend beyond a fiscal year (Scudder et al., 2017).

As a result, the nature of large-scale implementation of EBTs requires patience and forethought. For example, as noted by one initiative noted in the interviews conducted by Scudder et al. (2017) "You need longitudinal measurement in order to know the value of it [the EBT]. And that's the hard thing to sell in an economy that's operating on a year-to-year budget. At the end of the day, what we have to prove [to insurance companies or other payers] is that evidence-based is actually something that makes money." As highlighted by this example, one strategy to promote ongoing investment is increase awareness of the long-term benefit of use of the EBT on the system, such as through evidence that the EBT is cost-effective (e.g., Washington State Institute for Public Policy, 2017).

Further, as discussed above, ongoing financial supports can be provided to the agency or provider level, such as the provision of an enhanced rate to offset the increased cost to provide an EBT (e.g., assessment tool, specialized materials) and sustain the practice with fidelity. Throughout the process of initial implementation into sustaining the practice, it remains essential to consider the ongoing funding need, acknowledging that funding for initial training may not be sufficient.

Start with the end in mind. As Pluye et al. (2004) have articulated, implementation and sustainability are fluid processes rather than discrete, linear activities. In order for training and implementation to result in meaningful, sustained change, it is important to have a plan for the short- and long-term efforts that will be necessary for the system to absorb a practice change. Although the path to implementing an EBT in a system may not be as expected, it remains imperative to consider how current goals and objectives meet a larger end. Specifically, as outlined in the description above, the process in PA highlights how several small, coordinated efforts can facilitate larger system change. Through use of diversified funding streams, the involvement of multiple stakeholders, and building smaller community-based initiatives into broad-scale efforts, the momentum of the implementation

can help drive larger goals and systems-level change. Implementing change, especially system-level changes on a broad scale, is not an easy venture. Due to this, it is imperative to not only acknowledge but also celebrate incremental change and small successes, moving toward larger goals.

Strike while the iron is hot. As noted above, several contextual factors influence the initial implementation, dissemination, and eventually sustainability of an EBT in community settings. The culture and expressed needs by the community and systems in PA at the time of initial implementation of PCIT produced fertile soil for growing the initiative. Further, at the start of an initiative, there is increased excitement, optimism, and momentum which can propel efforts. This initial enthusiasm is essential to capitalize on. As noted above, PA was quick to scale in disseminating PCIT across the state, training a large number of professionals in a relatively short period of time.

Through efforts to highlight how the intervention met the needs of various systems within the state (e.g., addressing referral concerns and goals of families, supporting organizations in implementing more effective treatments, potential cost-savings to multiple systems), the initiative was able to not only maintain early momentum but also build upon it. As families graduated from treatment, organizations and clinicians implemented the model, and payers and stakeholders began to note outcomes, enthusiasm and advocacy for the model continued to grow from the "bottom up."

It takes a village. Although large social change may benefit from the drive of an individual leader, great gains come from combined effort, vision, and energy. The term "PCIT Champion" is common phrase utilized within the community of PCIT practitioners to describe those individuals who are dedicated to the sustainability of PCIT and proceed with conviction to ensure the program flourishes. In PA, the state has benefitted from establishing a strong community network of champions, who are housed across various geographic regions as well as across various systems, including clinicians, state administrators, and family members. This community results in a powerful voice for PCIT across the Commonwealth.

When considering the rapid spread of PCIT in PA, an important persistent theme is that of connection and ongoing partnership as well as the magnitude of the group. The presence of an in-state PCIT training team and support network has been important for sustaining the workforce as well as keeping therapists connected. In order to nurture the PCIT initiative in PA, the training and research team held flexible roles to continue to meet the needs of the community, such as developing and maintaining a referral list for the state, supporting agency-level advocacy, networking, and communicating research findings to key stakeholders in the state.

Conclusion

Beginning any new practice, including the implementation of an EBT, can be a long, costly, and complex process (Durlak & DuPre, 2008; Fixsen et al., 2005; Green et al., 2009; Southam-Gerow et al., 2012; Westfall et al., 2007). These complexities are highlighted in the above case example of the implementation of PCIT across the state of PA. Although the work of broad-scale implementation can be challenging, the potential for broad impact is great. PCIT is an intervention with promise to positively impact children and families, with empirical trials noting moderate to large effect sizes pre- to post-treatment for parent behavior (d = 1.11–3.11), child behavior (d = 0.61–0.94), and for parent report of child behavior (d = 1.31–1.45; Thomas & Zimmer-Gembeck, 2007). Notably, treatment gains have been maintained for 1 (Boggs et al., 2004) to 6 years (Hood & Eyberg, 2003). Further, PCIT has especially strong potential for families with a history of child physical abuse (Chaffin et al., 2004; Lanier, Kohl, Benz, Swinger, & Drake, 2014; Thomas & Zimmer-Gembeck, 2012). Implementing an EBT like PCIT on a broad scale

not only affords the opportunity to benefit the well-being of children and families but also results in long-term gains to the family system as well as the broader society. Despite the challenges and barriers to large-scale implementation, dissemination of effective treatments like PCIT is critical to fulfilling the motto of the "PCIT Across PA" project—happier kids and healthier families.

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Part VII

Next Steps

Parent–Child Interaction Therapy: Taking the Next Steps

Larissa N. Niec

Abstract

Parent–child interaction therapy is not only an effective treatment for childhood conduct problems but also a highly versatile intervention, readily tailored or adapted to meet the needs of families (1) from a diverse range of backgrounds and cultures, (2) with a wide range of presenting problems, and (3) in need of services in a variety of settings or formats. The variety of PCIT adaptations that have been investigated is not typical of most parenting interventions. This tremendous versatility raises the question, What components allow PCIT to be so frequently and successfully adapted? This chapter reviews answers to the question and considers steps that must still be taken in order for PCIT to reach the many families in need of services who do not receive them.

PCIT Has Gone Far

As demonstrated by the extensive breadth of the research and clinical work described in this volume, parent–child interaction therapy (PCIT) is not only an effective treatment for childhood conduct problems but also a highly versatile intervention, readily tailored or adapted to meet the needs of families (1) from a diverse range of backgrounds and cultures, (2) with a wide range of presenting problems, and (3) in need of services in a variety of settings or formats. Based on the investigations of PCIT for Latino/a families and families of Native American heritage, as well as on the effectiveness research that spans Australia, Asia, and Europe, PCIT can be provided successfully across cultures, often without adaptation. The investigations of PCIT for maltreating families, military families, children with behavioral inhibition and anxiety, callous-unemotional traits, developmental delay, and children at risk for obesity suggest that with tailoring or adaptation, PCIT can address many childhood behavioral health concerns. The explorations of PCIT delivered beyond the traditional mental health care setting (e.g., in the home, in the classroom, in a group) and in various formats (e.g., universal, selective prevention) suggests that PCIT can be transported into the places where it is most needed. The variety of PCIT adaptations that have been investigated is not

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typical of most parenting interventions. This tremendous versatility raises the question, what components allow PCIT to be so frequently and successfully adapted?

What Makes PCIT So Versatile?

Strengthening parenting effectiveness is foundational. If there is only one thing that can be done to improve a child's well-being, building the caregiver's healthy, effective parenting ability is that thing. Effective parenting reduces childhood risk for a variety of negative outcomes (e.g., conduct problems, anxiety, depression; Carpenter, Puliafico, Kurtz, Pincus, & Comer, 2014; Chronis-Tuscano et al., 2015; Schuhmann, Foote, Eyberg, Boggs, & Algina, 1998;) and has been shown to buffer against adverse childhood experiences (ACES; e.g., Brody et al., 2017; Masten & Cicchetti, 2010). Notably, recent work has demonstrated that participation in a parenting intervention can buffer against the negative impact of poverty on children's brain development (Brody et al., 2017). Thus, increasing healthy parenting is universally important to the treatment of young children. As has been comprehensively established across 40 years of research, PCIT makes *meaningful* and *lasting* improvements in parents' warmth, responsiveness, and effectiveness (chapter "Parent–Child Interaction Therapy: A Transdiagnostic Intervention to Enhance Family Functioning").

Assessing actual behavior makes the treatment goal flexible. The assessment of parents' and children's behaviors is embedded in the PCIT model because it is through the identification of actual behavior that therapists can tailor the intervention to a family's needs. In standard PCIT, a primary goal is for parents to learn to support and increase children's prosocial behaviors (e.g., sharing, following directions, gentle play). However, using the same principles, PCIT models adapted for other presenting problems (e.g., behavioral inhibition) teach parents to increase other child behaviors (e.g., social behavior). As described by Nelson and colleagues in chapter "Dyadic Parent–Child Interaction Coding System (DPICS): An Adaptable Measure of Parent and Child Behavior During Dyadic Interactions", required in PCIT, is a flexible instrument that can be adapted to assess parent–child behaviors related to a range of presenting problems. That is, whatever behaviors are the focus of the intervention—conduct problems, anxiety symptoms, excessive use of screen time—they can be readily addressed within the context of the PCIT model.

Coaching is a powerful way to learn. One of the most effective ways to learn a new skill is to receive immediate, in vivo feedback while rehearsing it (Shanley & Niec, 2010). The in vivo coaching paradigm is flexible in that it allows a therapist to provide each family with feedback based on the family's existing level of skill, whatever the target skill may be. Coaching is also flexible in that it reduces the need for extensive didactic sessions (Shanley & Niec, 2010), making it a valuable means of learning for parents from diverse socioeconomic and ethnic backgrounds, with a range of levels of education and cognitive ability.

Treatment phases are modules. PCIT is consistent with the modular concept of interventions (e.g., Weisz & Chorpita, 2011) in that the phases of treatment are discrete units with defined end points (i.e., parent skill mastery; Eyberg & Funderburk, 2011). As demonstrated in the work on PCIT-CU (chapter "PCIT for Children with Callous-Unemotional Traits"), PCIT-Health (chapter "PCIT-Health: An Innovative Intervention for Childhood Obesity Prevention"), The Turtle Program (chapter "The Turtle Program: PCIT for Young Children Displaying Behavioral Inhibition"), and PCIT-CALM (chapter "Adapting PCIT to Treat Anxiety in Young Children: The PCIT CALM Program"), new modules can be developed that target the underlying mechanisms of a particular problem or diagnosis (e.g., increasing emotional expression and empathy in children with callous-unemotional traits; reducing screen time use in children at risk for obesity). These modules can then be included or not, as necessary for a particular child.

Metaphors are malleable. Throughout PCIT, therapists use metaphors to help parents to understand the reason certain skills are important, the way that homework helps to increase children's positive behaviors, why CDI skills are important to master prior to PDI, and many other treatment issues. As evidenced in the tailoring of PCIT for military families (chapter "Parent–Child Interaction Therapy for Military Families: Improving Relationships"), Native American families (chapter "Cultural Enhancement of PCIT for American Indian Families: Honoring Children, Making Relatives"), and Latina/o families (chapter "Tailoring PCIT for Latino/a Families"), these metaphors can be readily exchanged in order to better fit the world view of families within different cultures.

All caregivers are welcome. Whether the primary caregivers are biological parents, stepparents, foster parents, aunties and uncles, an adult sibling, or any combination of all of these individuals, PCIT encourages and welcomes their participation. The flexibility of working with all of the people who play key roles in a child's care helps PCIT to cross cultures within the United States and to cross borders globally to work with families in which the biological parents may not be the primary caregivers. It also allows PCIT to address the needs of children in the welfare system who may be in out-of-home care. Finally, as described in chapter "Teacher-Child Interaction Training", the flexibility to work with all caregivers influential in a child's life allows PCIT to be adapted to interventions that go beyond the home environment and into the classroom.

Still a Long Way to Go

Much impressive work has been accomplished in the area of PCIT; much of it conducted by the contributors to this volume. However, significant work remains to be done. A theme echoed frequently across chapters is the failure of behavior parent training programs (BPT) to reach the majority of families in need of services. The estimate that over two-thirds of families in need of

behavioral health care do not access it is evidence that we must extend the reach of PCIT to underserved populations (Kazdin & Blase, 2011). Mental health care provider shortages are one systemic issue that can prevent families from accessing care (Kazdin & Blase, 2011; Satcher, 2000). As of early in 2018, there were fewer than 1000 certified PCIT therapists across the US, highlighting the need for additional PCIT therapists to be trained to fidelity. Another issue related to reach is treatment attrition: although the retention rate for PCIT tends to be higher than for child psychotherapy in general, many families still discontinue treatment prematurely, particularly in community settings (Lyon & Budd, 2010).

Thus, as we look at taking the next steps in the area of PCIT, we should choose the directions that will increase access to evidence-based treatment and address the extensive needs of families of young children. Three directions are recommended below.

Dissemination is key. Good treatment development requires that the evaluation of the efficacy of a treatment model must come before the evaluation of its dissemination. However, despite the fact that behavior parent training has been considered a best practice treatment for children with conduct problems for more than two decades (Brestan & Eyberg, 1998), research on the process and outcomes of dissemination and implementation continues to lag behind treatment outcome research (Baumann et al., 2015). This remains true of the research in PCIT as well. Only recently has attention turned to determining the factors that may facilitate or impede taking PCIT to scale in state or regional dissemination projects (chapters "Training and Supervision Around the World" and "Getting Parent–Child Interaction Therapy to Scale"). The work of Herschell and others has helped to move us closer, but as of yet, we cannot describe all the components that make up best-practice PCIT training. We do not know what the gold standard dissemination model should be. We cannot identify all the factors that make a program sustainable over time. For us to move our dissemination

efforts forward—and make it possible for more PCIT therapists to help families—we must put additional effort and funding into seeking the answers to these questions and others.

Even as we begin to answer those questions, limited resources and other barriers will make it unfeasible to bring the standard model of PCIT to every region that needs it. Alternative solutions, therefore, will likely go in two directions. Future models of training and program delivery are likely to be enhanced by technology (chapter "Using Technology to Expand the Reach of PCIT") and are likely to include prevention models that are suitable for implementation by lay health workers (chapter "PCIT: Conceptualizing a Continuum of Prevention"). Both of these directions are in need of additional research, but offer promising means of helping PCIT to go further.

Advocacy as an obligation. System-related issues can also slow PCIT from getting to scale. For instance, when government and agency policymakers create policy without consideration or understanding of developmental and intervention science, the children and families who are most vulnerable may be prevented from receiving effective treatment. Ongoing controversy about the use of time-out as a consequence for young children (Quetsch, Wallace, Herschell, & McNeil, 2015) is one example where misinformation has sometimes led administrators to dilute evidence-based interventions or select interventions with little or no evidence base rather than use models, such as PCIT, that include a safe, effective, and developmentally appropriate time-out protocol. Thus, another critical step we must take toward extending the reach of PCIT is to advocate for families at the agency and governmental levels to ensure that service disparities are not perpetuated through a misunderstanding of the science.

Research remains critical. Given the vast unmet need for effective parenting interventions, the temptation exists to allow ideas to outstrip the research and to disseminate adaptations that have not been properly evaluated. When tempted, researchers and clinicians must answer three questions similar to those posed by Eyberg

(2005) regarding the *development* of adaptations: (1) In the face of the robust effects of standard PCIT, is an adaptation necessary? (2) Will the adaptation extend the public health impact of PCIT? (3) What iatrogenic effects might an untested (or under-tested) adaptation cause? Depending on the answers, it might be necessary to take the adaptation back to the research lab for the most rigorous evaluation (i.e., a randomized controlled trial in which the adaptation is compared to standard PCIT) or the possibility may exist to collaborate with community partners to conduct a controlled effectiveness trial. In either case, it is important not to do a disservice to the families in need of help by offering interventions that have been inadequately evaluated.

Onward and Upward

In the course of 40 years of development and dissemination, PCIT has crossed geographic, cultural, and diagnostic borders. Much good work has been done and much remains to be done. PCIT has great potential to reach more families from underserved populations, but it is important that we turn additional resources toward accomplishing that goal. What remains clear is that the large treatment effects and high flexibility of the PCIT model make it a good investment for therapists and for systems seeking to make meaningful and lasting changes in the lives of children and families.

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