Parent–Child Care as a Brief Dyadic Intervention for Children With Mild to Moderate Externalizing Problems: A Case Study

Brandi N. Hawk[1] [iD] **and Susan G. Timmer[1]**

Abstract

Although many parenting interventions have been shown efficacious in reducing externalizing behavior problems in young children, they often take months to implement and tend to target children with moderate to severe behavior problems. Parent–Child Care (PC-CARE) was designed to be an engaging, brief (six-session) dyadic intervention to reduce mental health symptoms even for children with few behavior problems and/or parents who are unable to commit to lengthy treatments. We present an evidence-based case study of a 5-year-old child with mild externalizing problems and his biological parents, who participated in PC-CARE. Standardized measures were collected, and the child's and parents' emotional availability were assessed at pre- and posttreatment. Weekly codings of parent–child interactions and parent-reported measures of child behaviors were also collected. This child's behavioral symptoms improved from pre- to posttreatment (per parents' reports and observation), and he maintained this improved behavior 1 month after treatment. The parents similarly demonstrated improvement in their use of parenting skills and emotional availability. Aspects of treatment that may affect effectiveness are discussed.

1 Theoretical and Research Basis for Treatment

Although as many as one in five children in the United States are reported to have mental health problems (Houtrow & Okumura, 2011; Merikangas et al., 2010; Simon, Pastor, Reuben, Huang, & Goldstrom, 2015), many children remain untreated due to issues with access to and participation in mental health services. Specifically, inadequate provider capacity (Substance Abuse and Mental Health Services Administration, 2013) and lack of insurance (Bethell et al., 2011) can be barriers to treatment access. Even when families gain access to a mental health provider, a third never attend their first appointment (Harrison, McKay, & Bannon, 2004). Among those who do begin services, high attrition rates suggest that keeping families engaged is one of the greatest

[1]University of California, Davis, Sacramento, USA

Corresponding Author:
Brandi N. Hawk, University of California, Davis, 3671 Business Drive, Sacramento, CA 95820, USA.
Email: bhawk@ucdavis.edu

challenges to providing effective treatment (Tully & Hunt, 2017). One strategy to increase engagement and maximize the effectiveness of interventions with the largest number of people is to develop briefer interventions that are less intensive and able to be provided in a variety of settings (Sanders & Kirby, 2010).

Among young children, externalizing disorders (i.e., disruptive behavior disorders and attention-deficit hyperactivity disorder) are common reasons to seek mental health treatment. In a recent meta-analysis, the most efficacious treatments for children 12 years of age and younger with disruptive behavior disorders were parent-focused treatments that incorporated behavioral elements (Kaminski & Claussen, 2017). Unfortunately, only 14 of the 47 randomized control studies of such parenting interventions reported retaining the full sample size, and the others reported attrition rates ranging from 2% to 44%, with over half reporting attrition rates greater than 15% (Kaminski & Claussen, 2017). In community mental health effectiveness studies, researchers have reported attrition rates as high as 40% to 70% (Kazdin, 1996, 2008; Nowak & Heinrichs, 2008), with attrition rates of 27% to 67% for behavioral parenting interventions (Boggs et al., 2005; Pearl et al., 2012). As these treatments are highly effective but struggle to keep families engaged, some researchers have adopted Sanders and Kirby's (2010) strategy to create brief (i.e., fewer than eight sessions) parenting interventions. A review of these brief treatments reported that families receiving treatment showed significant improvements in child behavior problems, parenting skills, and parent self-efficacy compared with comparison groups, as well as much lower attrition rates of only 9% to 27% (Tully & Hunt, 2016). The findings from this review suggest that brief parenting interventions are a promising avenue for engaging families in services for children with externalizing problems. The current study presents a new brief parenting intervention, Parent–Child Care (PC-CARE; Timmer et al., 2016), and demonstrates how one family progressed through treatment.

PC-CARE Intervention

We designed PC-CARE to be a brief dyadic intervention for children aged 1 to 10 years with mild to moderate externalizing problems that incorporates many aspects of effective parent behavior management therapies, such as Helping the Noncompliant Child (McMahon & Forehand, 2003), the Incredible Years (Linares, Montalto, Li, & Oza, 2006), Parent–Child Interaction Therapy (PCIT; Timmer, Urquiza, & Zebell, 2006), and Triple P—Positive Parenting Program (Sanders, Cann, & Markie-Dadds, 2003), but that presents the information in a briefer, more streamlined manner. Similar to these treatments, we used concepts derived from social learning theory (e.g., parental operant reinforcement, consistency, limit setting, and modeling) and attachment theory (e.g., parental sensitivity and reciprocity, positive and protective interactions) to develop PC-CARE. Indeed, the goals, assumptions, and therapeutic techniques in PC-CARE are conceptually quite similar to these more traditional approaches. The primary distinguishing characteristic is that PC-CARE involves only six treatment sessions, hypothetically making the program more palatable for busy families or those whose insurance will not cover lengthy treatments, increasing the rate of treatment completion and making it possible to provide this service in a variety of settings and/or as a preventive intervention.

Consistent with other parent behavior management therapies, a primary assumption of PC-CARE is that parenting skills deficits are related to the development and/or maintenance of children's externalizing problems, and that improvements in parenting behaviors (both during positive and difficult interactions) should lead to improvements in children's behaviors (Miller & Prinz, 1990). Some such treatments involve specific parenting skills criteria that determine how long treatment takes and when the family is ready to graduate. For example, in Helping the Noncompliant Child and PCIT, certain quantitative behavioral criteria must be observed by the therapist before teaching new skills or completing treatment. In case studies of PCIT, parents

tend to need 6 to 11 (Armstrong & Kimonis, 2012; Fleming, Kimonis, Datyner, & Comer, 2017) relationship enhancement-focused treatment sessions prior to discussing behavior management strategies. In contrast, programs like The Incredible Years and Triple P—Positive Parenting Program—consist of a specified number of sessions, during which parenting skills are presented, observed, and discussed with the goal of parents using these skills at home, but which do not require quantitative behavioral criteria before teaching additional skills. Even without quantitative behavioral criteria, these time-limited programs have demonstrated significant improvements in parents' use of skills and reductions in children's problem behaviors (Leijten et al., 2018; Sanders, Kirby, Tellegen, & Day, 2014). Indeed, even some case studies of PCIT have noted benefits of providing compliance-focused strategies in response to parents' request for help with discipline prior to the parents meeting PCIT's relationship enhancement behavioral criteria (Gordon & Cooper, 2015). PC-CARE falls in the latter category: Treatment is completed in six treatment sessions with an emphasis on improving parenting skills but no quantitative behavioral criteria required for treatment completion.

Therapists expose caregivers and children to many different skills, teach new skills each week, and help caregivers gain confidence with the skills. Caregivers work with therapists to discover how best to engage children in play, improve the caregiver–child relationship, and manage difficult behaviors. The positive parenting and behavior management strategies are emphasized uniquely for each caregiver–child dyad, depending on the skills the caregiver brings to the relationship and how the child reacts to their use. For example, the clinical decision to encourage a caregiver to present a child with choices to encourage compliance would depend on the caregiver's comfort in using the strategy, developmental appropriateness, and the child's response to the strategy. Similarly, a caregiver might report that transitions at the playground resulted in the child running away, and instead, the therapist and caregiver would determine which other skills would be more effective.

The process of PC-CARE is highly structured and involves one pretreatment and six treatment sessions. Each session is 50 min long. A session-by-session description of session components and topics taught and coached is presented in Table 1. During a pretreatment session, the therapist observes and assesses the caregiver and child during a 12-min semi-structured play scenario, orients the dyad to treatment, and provides situation-specific psychoeducation about the child's behavioral concerns. In Sessions 1 to 5, the therapist checks in with the caregiver and child about current behavior, teaches that week's skills, observes the caregiver and child in play, coaches the caregiver and sometimes the child to use skills effectively, and provides a review of treatment gains and homework to practice the skills over the coming week. In Session 6, therapist reviews all the skills, including which worked best for the family, helps parents develop a plan for managing future behavior problems, conducts a 12-min observation, and has a shorter period of coaching. Caregivers are then contacted 1 month following treatment completion so the therapist can obtain an update on the child's behaviors and offer an optional booster session.

We originally designed PC-CARE in response to primary care and feeding clinic physicians' requests for brief services for their patients with disruptive behaviors. Since then, children at our clinic with autism spectrum disorders, trauma histories, and sexual behavior problems have successfully completed PC-CARE with their caregivers, whether biological, foster, or adoptive (Hawk & Forte, 2017). Children have received PC-CARE as a stand-alone intervention and as an adjunct treatment to occupational therapy and individual therapies (e.g., cognitive behavior therapy and trauma-focused cognitive behavior therapy). Although PC-CARE was developed as an intervention, it is also currently being used as a secondary prevention measure when children first enter a foster home (Timmer, Hawk, Forte, & Boys, 2017). Because of these many populations, we created appendices that offer additional psychoeducation and strategies for treatment sessions that are specific to very young children (i.e., 1-2 years), reactions to traumatic experiences, sexual behavior problems, autism spectrum disorders, and intellectual/developmental disabilities.

Table 1. Session-by-Session Description of Session Components and Topics Taught and Coached.

Session	Session components	Teaching and coaching tasks
Pretreatment	Collect measures; orientation to treatment; 12-min observation; didactic	Teaching on factors underlying child behavior problems (e.g., trauma and autism)
Session 1	Weekly behavior assessment; didactic; 4-min observation; coach; review gains and assign homework	PRIDE skills; transitions; creating a compliance-friendly environment
Session 2	Weekly behavior assessment; didactic; 4-min observation; coach; review gains and assign homework	Selective attention; redirect; modeling; calming; review earlier material during coaching
Session 3	Weekly behavior assessment; didactic; 4-min observation; coach; review gains and assign homework	Rules; choices; when-then and if-then statements; review earlier material during coaching
Session 4	Weekly behavior assessment; didactic; 4-min observation; coach; review gains and assign homework	Effective commands; removal of privileges; review earlier material during coaching
Session 5	Weekly behavior assessment; didactic; 4-min observation; coach; review gains and assign homework	Redoing; hand-over-hand; recovery; review earlier material during coaching
Session 6	Collect measures; weekly behavior assessment; didactic; 12-min observation; coach and review gains	Review all earlier material and discuss plans for managing future behavior problems

The manual has also been translated to Spanish and used effectively with Spanish-speaking families in our clinic.

A model for training other clinicians to provide PC-CARE has also been developed. Thus far, PC-CARE training (i.e., weekly meetings with the trainer, live training or video review of each session for two clients, and demonstration of treatment competencies) has been provided to licensed and unlicensed psychologists, marriage and family therapists, clinical social workers, master's level developmental psychologists with no prior clinical training, and bachelor's level behavioral support clinicians.

Current Study

The current study aims to demonstrate the effectiveness of PC-CARE for one family. A review of the child's presenting problems, progress through treatment, and treatment outcomes are presented.

2 Case Introduction

The family in treatment was a 5-year-old Caucasian boy, "Jeff," and his biological mother and father (both 38 years old with doctoral degrees), "Mr. and Mrs. Reid." Jeff, also had a 1-year-old sister, who was not involved in treatment. Jeff was referred for services by his pediatrician due to externalizing problems that impaired Jeff's functioning at home and at school. Jeff had a history of frequent medical interventions for a gastrointestinal condition and hearing difficulties, but he had never received mental health services.

3 Presenting Complaints

During interviews, Mr. and Mrs. Reid reported that Jeff was easily angered, resulting in tantrums (3-4 days per week), yelling, and physical aggression (i.e., hitting, kicking, and spitting). In

addition, Jeff had difficulty with transitions and was noncompliant 50% to 75% of the time. Jeff's parents reported that these behaviors had been a daily struggle for approximately 9 months. Mr. and Mrs. Reid further reported feeling overwhelmed with these behaviors and expressed a strong motivation to learn more effective parenting strategies.

4 History

Mr. and Mrs. Reid denied any history of trauma for Jeff; however, the family had moved 4 times since Jeff's birth, and three of Jeff's grandparents died during his lifetime. Jeff also had a gastro-intestinal condition that required visits to the hospital for enemas and other procedures. As an infant and toddler, Jeff experienced significant hearing difficulties and subsequent language delays. Approximately 9 months before treatment, Jeff began wearing hearing aids. Although he was minimally verbal prior to the hearing aids, Jeff began speaking in short phrases soon after receiving the hearing aids and speaking in full sentences approximately 2 months before treatment. Otherwise, Jeff met all developmental milestones on time.

5 Assessment

Before the first and final treatment session, Mr. and Mrs. Reid completed the Eyberg Child Behavior Inventory (ECBI; Eyberg & Pincus, 1999) and Parenting Stress Index, 4th ed.–Short Form (PSI-SF4; Abidin, 2012). At the final treatment session, they also completed the Therapy Attitude Inventory (TAI; Brestan, Jacobs, Rayfield, & Eyberg, 1999). In addition, at pre- and posttreatment, the therapist conducted a 12-min observational assessment of each parent–child dyad as they played together in three semi-structured play situations that were analogs of typical parent–child interactions. Each play situation lasted 4 min and varied in the amount of parental control required. In the first situation, the parent was directed to follow the child's lead in play. In the second situation, the parent was instructed to choose an activity and have the child play according to the parent's rules. In the third and final situation, the parent was instructed to have the child clean up without the parent's assistance.

In addition to the pre- and posttreatment assessments, the therapist conducted brief assessments at each weekly treatment session. Upon arrival, Mr. and Mrs. Reid completed the weekly Assessment of Child Behavior–Negative (WACB-N; Timmer, Forte, Boys, & Urquiza, 2015). After the therapist checked in with the family and briefly taught the skills for the week, the therapist conducted a 4-min observation of child-directed play with each parent individually. The therapist provided a verbal prompt then remained silent while coding parent verbalizations and child responses to commands. Finally, Mr. and Mrs. Reid were contacted 1 month following treatment completion to obtain an update on the child and to complete a WACB-N.

Measures

Parent-report measures. This case study used two parent-report measures of child behavior problems at pre- and posttreatment, a brief weekly parent-report measure of child behavior problems, and a parent-report measure of treatment satisfaction at posttreatment. Self-report measures were not available due to the child's age.

ECBI. The ECBI (Eyberg & Pincus, 1999) was used to assess the frequency and severity of Jeff's externalizing behavior problems at pre- and posttreatment. The ECBI was chosen because one of the goals of PC-CARE is to reduce children's disruptive or noncompliant behaviors. On the ECBI, caregivers respond to 36 behavioral prompts (e.g., dawdles in getting dressed and whines) with how often the behavior occurs on a 7-point Likert-type scale (1 = *never* to 7 = *always*) and whether that behavior is a problem for the caregiver (yes or no). Scores are summed

Table 2. Standard Measures for Pretreatment and Posttreatment.

	Mother		Father	
Measure	Pretreatment	Posttreatment	Pretreatment	Posttreatment
Eyberg Child Behavior Inventory (*T* scores)				
Intensity score	59[a]	42	54	38
Problem score	62[b]	49	59[a]	47
Parenting Stress Index–Short Form (*T* scores)				
Parental distress	57	52	53	47
Parent–child dysfunction	41	43	51	49
Difficult Child	58	41	58	56
Total stress	53	45	55	51
Therapy Attitude Inventory (total score)				
Total score		45		41

[a]Borderline range.
[b]Clinical range.

and transformed into *T* scores to create separate intensity and problem scores, both of which are considered clinically elevated at $T = 60$ and borderline at $T = 55$. The ECBI has been standardized on a number of populations (Eyberg & Robinson, 1983; Eyberg & Ross, 1978). Test–retest correlations after 3 weeks on the Intensity and Problem scales were .86 and .88, respectively (Robinson, Eyberg, & Ross, 1980).

On the ECBI pretreatment assessment, Mrs. Reid indicated clinically significant numbers of behavior problems, and Mr. Reid reported severity within the borderline range (problem score; see Table 2). Mrs. Reid rated the intensity of Jeff's problem behaviors on the ECBI in the borderline range, whereas Mr. Reid's intensity rating was just below the borderline range (intensity score). This pattern of results suggests that both parents viewed Jeff's behaviors as occurring at only mildly elevated frequencies but viewed these behaviors as problems that needed to change.

PSI-SF4. The PSI-SF4 (Abidin, 2012) was also completed at pre- and posttreatment. This measure assesses the amount of stress a parent feels as a result of insecurities in the parenting role, the child's difficult behaviors, and difficulties within the parent–child relationship. The PSI-SF4 was chosen because PC-CARE goals include building parents' knowledge of and ability to use behavior management techniques, reducing children's difficult behaviors, and improving the quality of parent–child relationships. These goals align well with the PSI-SF4 subscales. Parents respond to 36 questions with a 5-point Likert-type scale (1 = *strongly agree* to 5 = *strongly disagree*). Scores are summed and then transformed into *T* scores for a total stress score and three subscale scores (Parental Distress, Parent–Child Dysfunction, and Difficult Child). *T* scores are considered clinically significant at $T = 60$. Internal consistency analyses revealed alpha coefficients of reliability $\alpha = .90$ for the Parental Distress scale, $\alpha = .89$ for the Parent–Child Dysfunctional Relationship scale, and $\alpha = .88$ for the Difficult Child scale.

At pretreatment, both parents' responses on the PSI-SF4 were within normal limits (see Table 2). Results suggest that Jeff's parents did not feel overly stressed in their role as parents or in their relationship with Jeff.

TAI. The TAI (Brestan et al., 1999), a consumer satisfaction measure, was administered at posttreatment. The TAI assesses how pleased caregivers are with treatment and whether they believe they have learned skills to better manage their children's behaviors, which is important in a behavioral treatment. It consists of 10 questions with a 5-point Likert-type scale. Although each scale has different anchors, lower scores indicate dissatisfaction and higher scores indicate more satisfaction. Items are summed to create a total score.

Observational measures. Each PC-CARE session was videotaped and coded using two observational coding systems by trained coders. One measure assessed the parents' use of specific verbalizations and the child's response to questions and commands during weekly 4-min observations. The other measure assessed the quality of interactions between parents and child at pre- and posttreatment.

PC-CARE coding system. The PC-CARE coding system (Boys, Timmer, Hawk, Forte, & Urquiza, 2016), adapted from the Dyadic Parent–Child Interaction Coding System (DPICS, 4th ed.; Eyberg, Nelson, Ginn, Bhuiyan, & Boggs, 2013), was used to code parent verbalizations and behaviors during weekly 4-min observations of child-directed play. The PC-CARE coding system is a microanalytic behavioral coding system developed to code parenting skills associated with PC-CARE, as well as the child's responses to some of these skills. The PC-CARE coding system has a total of 15 different codes, distinguishing among different kinds of verbalizations (e.g., PRIDE skills, questions, and commands), parent behaviors (e.g., modeling and ignoring), and child responses (e.g., answering and complying). Coding of parent verbalizations is essential to PC-CARE because it allows therapists to observe whether parents are able to independently use the skills taught and to observe the child's response to their use of these skills. The therapist's codes are used in this study; however, each observation was, in addition, coded by one of the coding system developers, with interrater reliability ranging from .80 to .95.

In this study, we focused on the parent's use of PRIDE skills (i.e., praise, reflection, imitation, description, and enjoyment), verbalizations to avoid during playtime (i.e., questions, commands, and critical statements), as well as the child's response to commands. Primary goals of treatment are to increase the parent's use of PRIDE skills; to decrease the parent's use of questions, commands, and critical statements; and to increase the child's responsiveness to commands when they occur. PRIDE skills could include any of the following elements:

- Praise—A positive evaluation of attributes, behaviors, or products of the child, including both nonspecific (e.g., "Nice!") and specific praise (e.g., "Nice work playing gently with the toys!").
- Reflections—Repetition or rephrasing of the child's verbalizations, including both statements (e.g., Child: "I'm building a house." Parent: "You are building a house.") and questions (e.g., Child: "I'm building a house." Parent: "You're building a house?").
- Imitation—An overt statement indicating that the parent is following along with the child's lead (e.g., "I'm driving my car just like you.").
- Behavioral descriptions—A nonevaluative description of the child's behavior or action (e.g., "You are drawing a rainbow.").
- Enjoyment—A verbal expression of positive feelings about the current situation that would not be considered praise (e.g., "I am so happy to be here with you.").

Verbalizations to avoid during playtime were coded as follows:

- Questions—Any parental verbal inquiries distinguished from declarative statements by having a rising inflection at the end or by having the structure of a question (e.g., "What are you building?").
- Commands—Any verbal directions the parent gives to the child that the child should do something (e.g., "Sit down"). Questions suggesting that the child should do something (i.e., commands in the form of questions: "Can I have that?") were coded as commands.
- Critical statements —Any verbalizations that contain the words no, don't, stop, quit, or not (e.g., "Don't be so rough with the toys."), as well as negative evaluations of the child's attributes, behaviors, or products (e.g., "You're being a brat."). A "no" response to a child's question is not included in this category but is considered neutral information.

Child compliance with commands was coded in the following way:

- Comply (e.g., child completed the directed behavior).
- Not comply (e.g., child did not comply or begin to comply within 5 s of the command).
- No opportunity to comply (e.g., parent gave a second command less than 5 s after the first, gave a command with no obvious way to determine whether it was followed—"look," or completed the task for the child).

During training, therapists code with an expert coder until they have demonstrated 80% reliability at least 10 times.

At pretreatment, Mrs. Reid used 23 statements to avoid (primarily questions) and 10 PRIDE skills, and Mr. Reid used 53 statements to avoid (primarily questions) and 12 PRIDE skills. Both parents remained calm and displayed their desire to engage with Jeff in their smiles and active involvement in play. However, both parents also asked frequent questions about what Jeff was doing and asked Jeff to name colors, animals, and so on. Jeff answered the majority of his parents' questions and reflected their statements periodically.

Emotional Availability. We elected to use the EA scales (3rd ed.; Biringen, Robinson, & Emde, 1998) to measure the quality of parents' and young children's relationships. The EA scales' strong links to parents' and children's attachment styles (Biringen, 2000; Easterbrooks, Biesecker, & Lyons-Ruth, 2000) and ability to be used in any assessment setting made them an ideal choice for this study. The EA scales consist of four global parent scales and two child scales that measure specific dimensions of the caregiver–child relationship. Parent scales measure their sensitivity to the child, their nonhostility, nonintrusiveness, and ability to structure the interaction. Child scales measure their responsiveness to the parent and the degree to which they involve the parent in their activities. For this study, all videos were coded by both an expert coder and another experienced coder, who agreed on 85% of codes. All nonmatching codes were resolved by discussion between the coders.

At pretreatment, both parents showed some difficulties with intrusiveness and sensitivity to Jeff's cues. Specifically, they asked many questions and attempted to lead the activities, giving Jeff little time to initiate his own interactions. Jeff made minimal eye contact with his parents, responded minimally to their questions and bids for interaction, and responded to requests for compliance with dawdling and whining. Jeff's overall emotional tone and responsiveness were less positive with Mr. Reid than with Mrs. Reid.

6 Case Conceptualization

Jeff and his family had a history of multiple transitions and life stressors, including multiple moves, the death of his grandparents, the birth of his sister, medical problems, and hearing problems. According to Mr. and Mrs. Reid, Jeff's behavioral problems began approximately 9 months earlier, the same time that he first received hearing aids and when his mother returned to work after his sister's birth. While receiving hearing aids was a positive event, it was also likely overwhelming for Jeff and likely coincided with more demands and expectations from his parents as he learned to speak and to understand spoken language. The birth of a sibling is another common stressor that often leads to increased noncompliance and disruptive behavior in the older sibling. In addition to Jeff's need to adjust to new circumstances, his parents likely experienced an increase in stress from these events, possibly making them less able to respond effectively to Jeff's needs.

As Jeff's presenting problems were primarily externalizing symptoms and he was only 5 years old, the assessment team recommended a parent behavior management intervention to provide his parents with more skills and to help Jeff adjust to his new circumstances. Both PCIT and

PC-CARE were considered; however, Jeff's externalizing behaviors were relatively mild, and his parents were both high functioning and motivated to learn. In addition, Jeff's insurance did not allow for long-term treatment, and Mr. Reid's occupation was highly demanding of his time, making it difficult for him to commit to active involvement in a long-term treatment. Thus, the team decided to offer PC-CARE services for Jeff and his parents.

7 Course of Treatment and Assessment of Progress

Although PC-CARE is a dyadic intervention, both parents wanted to be involved. Thus, treatment sessions were modified slightly to accommodate two parents, including elongating sessions from 50 to 75 min. The therapist completed check-in, didactics, and check-out with both parents and Jeff together, but conducted observational assessments and coached the child separately with each parent. Target coaching time was decreased from the typical 20 min to 15 min per parent. Every session was video recorded and reviewed for treatment fidelity, including the time spent conducting the didactic, whether the specified didactic topics were provided, and the amount of time spent coaching. For Jeff's treatment, all specified didactic topics were taught and coached in the appropriate session, didactic time ranged from 4.33 to 10 min ($M = 8.49$; $SD = 2.35$; target time = 10), coaching of Mrs. Reid ranged from 13.8 to 19 min ($M = 16.33$; $SD = 2.4$; target time = 15), and coaching of Mr. Reid ranged from 15 to 17.5 min ($M = 15.9$; $SD = 1.2$; target time = 15).

Parent-Report Measures

Changes from pre- to posttreatment. Table 2 shows parental ratings of Jeff's behavioral problems (ECBI) and parenting-related stress (PSI-SF4) pre- and immediately posttreatment, as well as treatment satisfaction (TAI) at posttreatment. A comparison of Mr. and Mrs. Reid's pre- and posttreatment scores on these measures showed improvement in nearly all subscales after only 8 weeks (including six treatment sessions and two nontreatment weeks for canceled appointments). At posttreatment, none of the scales on the ECBI or PSI-SF4 were elevated, and many of those scores that were within normal limits at pretreatment were lowered by at least one standard deviation at posttreatment. These results indicate that Mr. and Mrs. Reid no longer felt that Jeff's behaviors were more severe than typical for a child of his age. In addition, on the TAI, both Mr. and Mrs. Reid indicated high levels of satisfaction with services and a belief that they had learned many skills that had improved their relationship with Jeff.

Weekly assessments. The WACB-N (Timmer et al., 2015) is a brief adaptation of the ECBI using nine types of behaviors represented in the 36-item ECBI. It is used in PC-CARE to show parents and children how treatment participation relates to decreases in problem child behaviors. The WACB-N yields two scales: Severity and Need to Change. The Severity score yields a maximum of 63 points, with scores greater than 30 considered at-risk and 40 considered clinically significant. The Need to Change scale yields a maximum of nine points. Initial analyses in a sample of 114 showed an alpha coefficient of reliability $\alpha = .87$ for the Severity scale and Kuder–Rich (KR) coefficient of reliability KR = .79 (Timmer et al., 2015). Mr. and Mrs. Reid completed a WACB each week of treatment to assess changes in disruptive behaviors throughout treatment.

Consistent with ECBI results, Mr. and Mrs. Reid's WACB-N scores also decreased throughout treatment (see Figure 1). At the beginning of treatment, both parents reported the Severity or frequency of externalizing behaviors was just below the at-risk cutoff. However, Mrs. Reid reported that four of the behaviors were significant problems for their family, and Mr. Reid reported that five of the behaviors were significant problems. Although there were some weeks in which reported behavior problems increased slightly (i.e., Session 3 for Mrs. Reid and Session
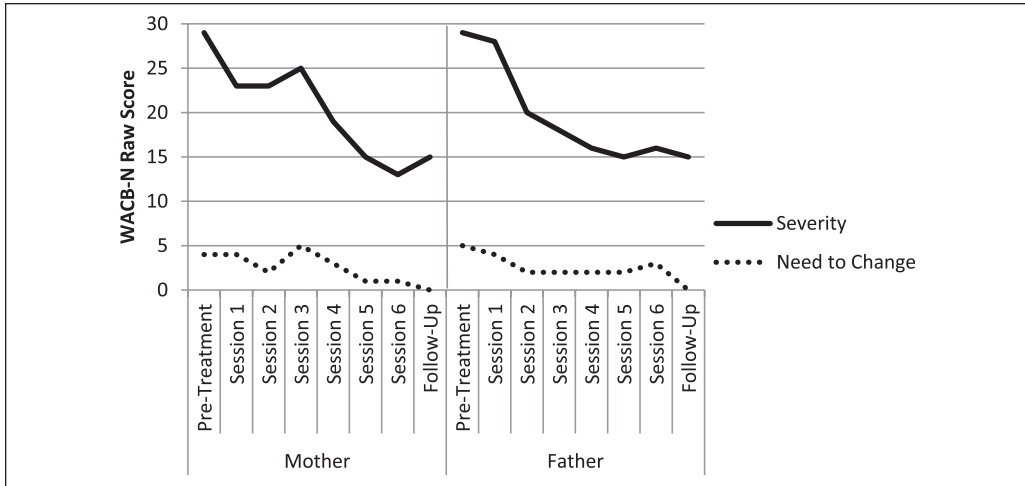
Figure 1. Parent-reported WACB-N scores at each weekly treatment session and at 1-month follow-up.
Note. Severity scores above 30 are considered to be in the at-risk range (maximum = 63). Maximum need to change score is 9. WACB-N = Weekly Assessment of Child Behaviors–Negative.

6 for Mr. Reid), the overall trend of the data suggests consistent improvement in behaviors throughout treatment.

Each week, Mr. and Mrs. Reid also reported the number of days that they spent the recommended 5 min of play with Jeff, as well as which PRIDE skills and strategies to manage behavior they used. On average, each parent spent 5 min in play with Jeff between 3 and 6 days per week over the course of treatment. Each parent had 1 week in which he or she only completed play on 2 days; however, Jeff had playtime at least 6 times every week. In addition, both parents reported incorporating the PRIDE skills and strategies to manage behavior throughout the day.

Observational Data

PC-CARE coding system. Figure 2 shows the number of PRIDE skills and statements to avoid during playtime Mr. and Mrs. Reid used during the 4-min child-directed play observation each week of treatment. After just 1 week, both parents' use of PRIDE skills increased, while their use of statements to avoid decreased dramatically. Both parents continued to use more PRIDE skills and fewer statements to avoid as treatment progressed, until by the end of treatment they both used many more PRIDE skills than statements to avoid while playing with Jeff.

Jeff's responses to commands during the weekly 4-min observations are presented in Figure 3. Responses are presented as a percentage of commands to account for variability in the number of commands given at each session. Although Jeff was generally compliant, even at pretreatment, the percentage of commands with which he complied increased during interactions with both parents as his parents used fewer commands and waited for compliance rather than repeating commands (i.e., decreased no opportunity to comply). At the final session, Jeff was 100% compliant with both parents.

Emotional availability. Figure 4 shows the percentage of possible points Jeff and his parents could receive for EA codes, summed across the three analogs, pre- and posttreatment. The graph shows that Mr. and Mrs. Reid's overall EA increased from pre- to posttreatment, as did Jeff's availability to the parents (particularly to Mr. Reid). More specifically, both parents' sensitivity to the child's cues and nonintrusiveness improved, particularly with respect to increased spaciousness, giving Jeff time to initiate his own interactions instead of constantly having to respond to his parents'
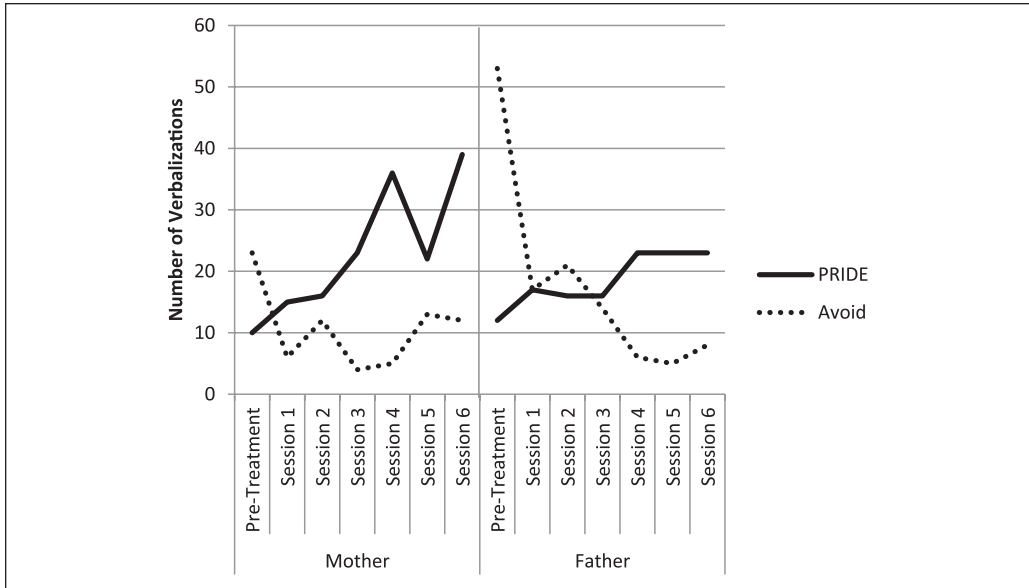
Figure 2. Total number of PRIDE skills (i.e., praise, reflection, imitation, description, and enjoyment) and statements to avoid (i.e., questions, commands, and critical statements) used by Mr. and Mrs. Reid during weekly 4-min child-directed free play observations.
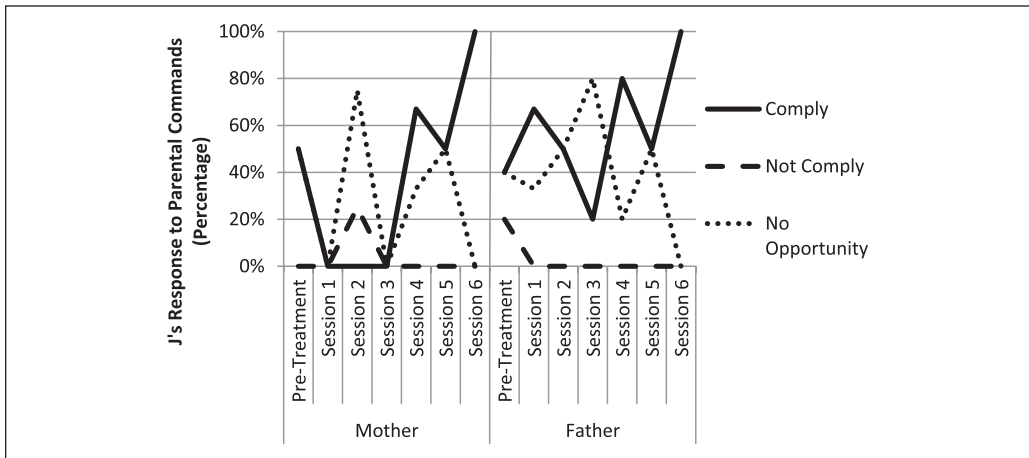

Figure 3. Jeff's responses to commands during weekly 4-min observations with each parent.

questions. In addition Jeff's responsiveness to his parents' bids for interaction improved. He made more eye contact, and his interactions were more positive in tone posttreatment compared with pretreatment. He also spoke more, engaging his parents in conversation, responding to their questions and comments, and maintaining conversations. In addition, his responses to compliance requests shifted from dawdling and whining to more immediate compliance.

8 Complicating Factors

No complicating factors were identified. Jeff had a history of medical difficulties, including gastrointestinal and hearing difficulties, for which he received extensive medical intervention. There was some concern that he would be uncomfortable in a clinic setting due to these experiences;
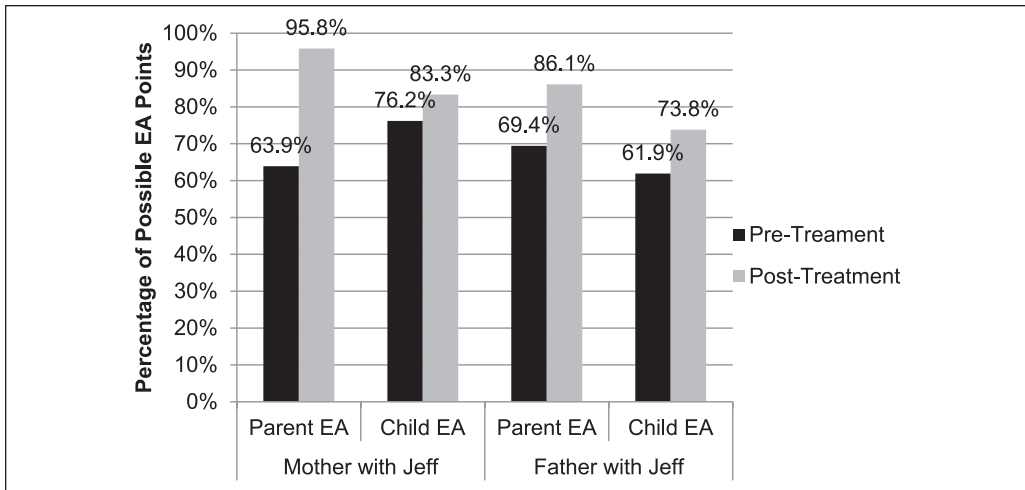
Figure 4. Percentage of possible points Jeff and his parents could receive for EA coding at pre- and posttreatment.
Note. Scores indicate the degree of EA exhibited by each parent and by Jeff during 12-min one-on-one interactions.

however, Jeff enjoyed playing with the toys and especially having his parents' attention during these sessions. An additional potential complication was that Jeff had only begun wearing a hearing aid 9 months prior to this highly verbal treatment; however, Jeff's receptive language abilities were very good by the time treatment began, and his expressive language abilities improved greatly as treatment progressed.

9 Access and Barriers to Care

Mr. Reid's occupation was highly demanding of his time, and he would occasionally have to leave treatment early. Although this meant he was not able to participate in check-out, coding and coaching was always arranged so that he would be first on the weeks he needed to leave. In addition, there were 2 weeks in which the family canceled due to illness or vacation, thereby making the 6-week treatment last 8 weeks. Otherwise, there were no barriers to care for this family.

10 Follow-Up

During a follow-up interview 1 month after treatment ended, both parents reported minimal frequency of behavior problems (both parents' WACB Severity score = 15) and no behaviors that were problematic for the family (both parents' WACB Need to Change score = 0). The parents reported being pleased with treatment and did not feel that they needed additional mental health services for Jeff.

11 Treatment Implications of the Case

In the case presented in this article, Jeff, a young child with mild externalizing behavior problems, a history of gastrointestinal problems, and language delays, was referred to PC-CARE for treatment with his father and mother. Over the course of treatment, Mr. and Mrs. Reid were taught communication and behavioral skills to help improve Jeff's externalizing problems, while also improving his language skills. In addition, Jeff was taught skills to enhance his relationship with his parents. By the end of the six-session treatment, Jeff's parents reported that his

externalizing behaviors had improved, his parents' use of positive communication skills increased, Jeff was more compliant, his parents were more sensitive to Jeff's cues, and Jeff's responsiveness to his parents improved. Moreover, the improvements in externalizing behaviors were sustained 1 month after treatment ended.

PC-CARE falls within the category of parent-focused treatments that incorporate behavioral elements, which was the most efficacious treatment category in Kaminski and Claussen's (2017) meta-analysis of treatments for disruptive behavior disorders. As demonstrated in the meta-analysis, there are many highly effective parenting interventions; however, these treatments are often time intensive and target children with moderate to severe disruptive behaviors. For many reasons, these treatments also tend to have very high attrition rates (e.g., 40%-70%; Kazdin, 2008; Nowak & Heinrichs, 2008). Thus, while these treatments are highly beneficial for those who complete them, a new approach may be necessary to provide effective services to individuals who cannot complete or may not need such an intensive treatment. Researchers have called for the development of briefer, less intensive treatments that can be provided to a larger number of families in various settings (Sanders & Kirby, 2010). PC-CARE answers this call by drawing on certain effective content and process components of traditional parenting treatments but providing services in only seven total sessions with less intensive requirements for progressing in treatment. Although the current case study by nature of the design is unable to answer many questions regarding treatment completion or effectiveness, it provides an initial demonstration of the benefits of this brief treatment for one family and preliminary support for conducting additional research on PC-CARE's effectiveness.

To increase families' regular attendance, participation, and treatment completion, PC-CARE does not require quantitative behavioral criteria to determine treatment progress but teaches new skills weekly and seeks only to encourage the acquisition of skills that will benefit each parent–child dyad. Although some highly effective treatments like PCIT require quantitative behavioral criteria be met prior to progressing in treatment, most of the research evidence for PCIT is conducted with standardized (12 coaching session) protocols that do not require this behavioral criteria, and other highly efficacious treatments, like Triple P, do not require parents to meet specific behavioral criteria (Thomas & Zimmer-Gembeck, 2007). Because other highly effective parenting interventions show positive results without requiring parents to meet specific behavioral criteria and because our goal was to keep treatment brief, we chose not to base treatment completion on quantitative behavioral criteria. Instead, therapists work to motivate parents to use the positive parenting skills and behavior management strategies by pointing out the effectiveness of the skills in the moment and by documenting behavioral change as evidence of effectiveness. If appropriate, therapists can refer children to additional services after PC-CARE. Due to the constraints of a case study design, it is not possible to draw conclusions related to treatment attendance, participation, or completion from this study. However, analyses from a larger open trial of PC-CARE at our clinic demonstrate a treatment completion rate of 93% in a sample of 43 children.

Because of the case study design, it is also impossible to determine whether characteristics of the treatment versus of the participants had a greater impact on observed improvements. On one hand, results of this case study could support the hypothesis that relying on specific quantitative behavioral criteria may not be necessary to have a successful treatment (treatment characteristics). On the other hand, these results could also support the hypothesis that bright, motivated parents (like Mr. and Mrs. Reid) may require fewer training trials to acquire adequate behavior management skills than outlined in traditional parent-training programs (participant characteristics). Future research using a diverse sample of participants should be conducted to address these questions.

To maximize effectiveness, PC-CARE therapists provide live, in-the-moment coaching of parenting skills, similar to other highly effective parent-training programs (e.g., Helping the Noncompliant Child, PCIT). Within parent-training programs, live coaching has been associated with larger effect sizes (Kaminski, Valle, Filene, & Boyle, 2008). With live coaching, parents

receive additional practice with the behavior management skills and receive positive reinforcement on their use of skills. This extra practice and positive reinforcement are related to better skill acquisition and treatment engagement (Barnett, Niec, & Acedvedo-Polakovich, 2013; Barnett et al., 2015; Shanley & Niec, 2010). While it is difficult to determine whether repeated exposure to ideas or the addition of coaching promoted skill acquisition for Mr. and Mrs. Reid, results showing the parents' improved skill use during behavioral observations over the course of treatment suggest that the strategies used in PC-CARE are related to positive change. Future research will be needed to determine the added benefits of live coaching.

Of note, both of Jeff's parents participated in live coaching, which is not a requirement for treatment (i.e., one parent can participate). In result, each parent received somewhat less coaching (approximately 15 min rather than 20 min) at each session, and Jeff received somewhat more coaching (approximately 30 min rather than 20 min). This modification may have had many effects, including slower parent skill acquisition due to less individual coaching, faster child improvements due to more time in coaching, faster improvements because both parents worked together to learn and practice the skills, and/or more parent frustration due to competition between parents. Future research should investigate treatment effects that may arise from having two versus one parent participant.

As homework is related to improved treatment completion and treatment satisfaction in parent-training treatments (Danko, Brown, Van Schoick, & Budd, 2016), PC-CARE also requires parents to practice using the skills at home daily. By completing "Daily CARE" sheets, parents are reminded of the skills every day, are reminded to use the skills, and are encouraged to reflect on factors that make certain skills more or less effective for their children. Each of Jeff's parents consistently spent the recommended 5 min in play with Jeff 3 to 6 times per week; however, future research will be needed to determine whether homework completion is related to enhanced skill acquisition and decreases in child behavior problems in PC-CARE.

Finally, children are actively involved in the didactic components of PC-CARE. This is a marked contrast to most other parenting interventions, which generally teach skills to parents alone, either in individual sessions or in group formats (Linares et al., 2006; McMahon & Forehand, 2003; Sanders et al., 2003; Timmer et al., 2006). In PC-CARE, children are taught the PRIDE skills so that they not only understand why their parents will be speaking to them differently but also can use the PRIDE skills with their parents to improve the relationship. For example, Jeff frequently reflected and praised his parents in play, and the EA of both Jeff and his parents improved with treatment. The current case study could not assess whether Jeff's use of PRIDE skills with his parents and improvements in EA were related to his inclusion in didactics versus other aspects of the intervention. Additional research will be necessary to determine whether including the child enhances treatment outcomes relative to teaching only parents.

12 Recommendations to Clinicians and Students

The results of this case study provide initial support for the use of PC-CARE in the treatment of children with mild to moderate externalizing problems. The positive outcomes observed in Jeff's family are revealed in parent-reported behavioral measures, observations of parents' use of treatment skills, and observational coding of the parents' and child's EA. All of these forms of assessment showed similar improvements from pre- to posttreatment, reducing the possibility of erroneous findings based on parent report. These results suggest that it may be possible for clinicians and students working with children with externalizing behaviors to improve child behaviors and parent–child relationships in as little as 6 weeks.

On the contrary, case studies have inherent limitations that warrant caution in interpreting and generalizing results. Specifically, it is possible that something else in Jeff's environment changed during the course of treatment, contributing to positive outcomes, or that simply meeting with a

professional would have provided enough support to create similar outcomes. Thus, further research with larger samples is needed to determine the effectiveness of PC-CARE with children of different ages and presenting problems. In addition, research directly comparing PC-CARE with groups of children not receiving treatment and/or receiving other evidence-based treatments for externalizing disorders is needed to determine the efficacy of PC-CARE and whether it meets the goal of improved treatment retention. Based on the results of this case study, PC-CARE appears to be a promising brief treatment for children with externalizing problems that would benefit from additional research.

Declaration of Conflicting Interests

Funding

ORCID iD

Brandi N. Hawk https://orcid.org/0000-0002-6891-324X

References

Abidin, R. R. (2012). *Parenting stress index, fourth edition: Professional manual*. Odessa, FL: Psychological Assessment Resources.

Armstrong, K., & Kimonis, E. R. (2012). Parent-child interaction therapy for the treatment of Asperger's disorder in early childhood. *Clinical Case Studies*, *12*, 60-72.

Barnett, M. L., Niec, L. N., & Acevedo-Polakovich, I. D. (2013). Assessing the key to effective coaching in parent–child interaction therapy: The therapist–parent interaction coding system. *Journal of Psychopathology and Behavioral Assessment*, *36*, 211-223.

Barnett, M. L., Niec, L. N., Peer, S. O., Jent, J. F., Weinstein, A., Gisbert, P., & Simpson, G. (2015). Successful therapist–parent coaching: How in vivo feedback relates to parent engagement in parent-child interaction therapy. *Journal of Clinical Child & Adolescent Psychology*, *46*, 895-902.

Bethell, C. D., Kogan, M. D., Strickland, B. B., Schor, E. L., Robertson, J., & Newacheck, P. W. (2011). A national and state profile of leading health problems and health care quality for US children: Key insurance disparities and across-state variations. *Academic Pediatrics*, *11*(Suppl. 3), S22-S33.

Biringen, Z. (2000). Emotional availability: Conceptualization and research findings. *American Journal of Orthopsychiatry*, *70*, 104-114.

Biringen, Z., Robinson, J., & Emde, R. N. (1998). *The Emotional Availability Scales* (3rd ed.). Unpublished manuscript, Department of Human Development & Family Studies, Colorado State University, Fort Collins.

Boggs, S. R., Eyberg, S. M., Edwards, D. L., Rayfield, A., Jacobs, J., Bagner, D., & Hood, K. K. (2005). Outcomes of parent-child interaction therapy: A comparison of treatment completers and study dropouts one to three years later. *Child & Family Behavior Therapy*, *26*, 1-22.

Boys, D., Timmer, S., Hawk, B., Forte, L., & Urquiza, A. (2016). *The PC-CARE coding system manual*. Unpublished manuscript, University of California, Davis.

Brestan, E., Jacobs, J., Rayfield, A., & Eyberg, S. M. (1999). A consumer satisfaction measure for parent-child treatments and its relationship to measures of child behavior change. *Behavior Therapy*, *30*, 17-30.

Danko, C. M., Brown, T., Van Schoick, L., & Budd, K. S. (2016). Predictors and correlates of homework completion and treatment outcomes in parent-child interaction therapy. *Child & Youth Care Forum*, *45*, 467-485.

Easterbrooks, A. M., Biesecker, G., & Lyons-Ruth, K. (2000). Infancy predictors of emotional availability in middle childhood: The roles of attachment security and maternal depressive symptomatology. *Attachment & Human Development*, *2*, 170-187.

Eyberg, S. M., Nelson, M. M., Ginn, N. C., Bhuiyan, N., & Boggs, S. R. (2013). *Dyadic parent-child inter-action coding system*. Gainesville, FL: PCIT International.

Eyberg, S. M., & Pincus, D. (1999). *ECBI & SESBI-R: Eyberg Child Behavior Inventory and Sutter-Eyberg Student Behavior Inventory-Revised: Professional manual*. Odessa, FL: Psychological Assessment Resources.

Eyberg, S. M., & Robinson, E. A. (1983). Conduct problem behavior: Standardization of a behavioral rating. *Journal of Clinical Child & Adolescent Psychology*, *12*, 347-354.

Eyberg, S. M., & Ross, A. W. (1978). Assessment of child behavior problems: The validation of a new inventory. *Journal of Clinical Child & Adolescent Psychology*, *7*, 113-116.

Fleming, G. E., Kimonis, E. R., Datyner, A., & Comer, J. S. (2017). Adapting internet-delivered parent-child interaction therapy to treat co-occurring disruptive behavior and callous-unemotional traits: A case study. *Clinical Case Studies*, *16*, 370-387.

Gordon, H. M., & Cooper, L. D. (2015). A case study of parent-child interaction therapy: Flexible client-centered adaptation of an EST. *Clinical Case Studies*, *15*, 126-142.

Harrison, M. E., McKay, M. M., & Bannon, W. M. (2004). Inner-city child mental health service use: The real question is why youth and families do not use services. *Community Mental Health Journal*, *40*, 119-131.

Hawk, B., & Forte, L. (2017, June). *Adapting EBTs: Can a 6-week parenting intervention really help?* Presentation at the 2017 APSAC Advanced Training Summit, Portland, ME.

Houtrow, A. J., & Okumura, M. J. (2011). Pediatric mental health problems and associated burden on families. *Vulnerable Children and Youth Studies*, *6*, 222-233.

Kaminski, J. W., & Claussen, A. H. (2017). Evidence base update for psychosocial treatments for disruptive behaviors in children. *Journal of Clinical Child & Adolescent Psychology*, *46*, 1-23.

Kaminski, J. W., Valle, L. A., Filene, J. H., & Boyle, C. L. (2008). A meta-analytic review of components associated with parent training program effectiveness. *Journal of Abnormal Child Psychology*, *36*, 567-589.

Kazdin, A. E. (1996). Dropping out of child psychotherapy: Issues for research and implications for practice. *Clinical Child Psychology and Psychiatry*, *1*, 133-156.

Kazdin, A. E. (2008). Evidence-based treatments and delivery of psychological services: Shifting our emphases to increase impact. *Psychological Services*, *5*, 201-215.

Leijten, P., Gardner, F., Landau, S., Harris, V., Mann, J., Hutchings, J., & Scott, S. (2018). Research review: Harnessing the power of individual participant data in a meta-analysis of the benefits and harms of the Incredible Years parenting program. *The Journal of Child Psychology and Psychiatry*, *59*, 99-109.

Linares, L. O., Montalto, D., Li, M., & Oza, V. S. (2006). A promising parenting intervention in foster care. *Journal of Consulting and Clinical Psychology*, *74*, 32-41.

McMahon, R. J., & Forehand, R. (2003). *Helping the noncompliant child: Family-based treatment for oppositional behavior* (2nd ed.). New York, NY: Guilford Press.

Merikangas, K. R., He, J. P., Brody, D., Fisher, P. W., Bourdon, K., & Koretz, D. S. (2010). Prevalence and treatment of mental disorders among US children in the 2001–2004 NHANES. *Pediatrics*, *125*, 75-81.

Miller, G.E., & Prinz, R.J. (1990). Enhancement of social learning family interventions for childhood conduct disorder. *Psychological Bulletin*, *108*, 291.

Nowak, C., & Heinrichs, N. (2008). A comprehensive meta-analysis of Triple P-Positive Parenting Program using hierarchical linear modeling: Effectiveness and moderating variables. *Clinical Child and Family Psychology Review*, *11*, 114-144.

Pearl, E., Thieken, L., Olafson, E., Boat, B., Connelly, L., Barnes, J., & Putnam, F. (2012). Effectiveness of community dissemination of parent–child interaction therapy. *Psychological Trauma: Theory, Research, Practice, and Policy*, *4*, 204-213.

Robinson, E. A., Eyberg, S. M., & Ross, A. W. (1980). The standardization of an inventory of child conduct problem behaviors. *Journal of Clinical Child & Adolescent Psychology*, *9*, 22-28.

Sanders, M. R., Cann, W., & Markie-Dadds, C. (2003). The Triple P-Positive Parenting Programme: A universal population-level approach to the prevention of child abuse. *Child Abuse Review*, *12*, 155-171.

Sanders, M. R., & Kirby, J. N. (2010). Consumer involvement and population based parenting interventions. *Administration*, *58*, 33-50.

Sanders, M. R., Kirby, J. N., Tellegen, C. L., & Day, J. J. (2014). The Triple P-Positive Parenting Program: A systematic review and meta-analysis of a multi-level system of parenting support. *Clinical Psychology Review*, *34*, 337-357.

Shanley, J. R., & Niec, L. N. (2010). Coaching parents to change: The impact of in vivo feedback on parent's acquisition of skills. *Journal of Clinical Child & Adolescent Psychology*, *39*, 282-287.

Simon, A. E., Pastor, P. N., Reuben, C. A., Huang, L. N., & Goldstrom, I. D. (2015). Use of mental health services by children ages six to 11 with emotional or behavioral difficulties. *Psychiatric Services*, *66*, 930-937.

Substance Abuse and Mental Health Services Administration. (2013) Behavioral Health, United States, 2012. HHS Publication No. (SMA) 13-4797. Rockville, MD: Substance Abuse.

Thomas, R., & Zimmer-Gembeck, M. J. (2007). Behavioral outcomes of parent-child interaction therapy and Triple P-Positive Parenting Program: A review and meta-analysis. *Journal of Abnormal Child Psychology*, *35*, 475-495.

Timmer, S. G., Forte, L., Boys, D., & Urquiza, A. (2015). *Using the Weekly Assessment of Child Behaviors (WACB) in PCIT*. Presentation at the Biennial PCIT-International Conference, Pittsburgh, PA.

Timmer, S. G., Hawk, B. N., Forte, L. A., & Boys, D. (2017, November). *Fostering secure transitions with PC-CARE*. Presentation at the Zero to Three Annual Conference, San Diego, CA.

Timmer, S. G., Hawk, B. N., Lundquist, K., Forte, L., Aviv, R., Boys, D., & Urquiza, A. (2016). *PC-CARE: Course of treatment manual*. Unpublished manuscript, University of California, Davis.

Timmer, S. G., Urquiza, A. J., & Zebell, N. (2006). Challenging foster caregiver–maltreated child relationships: The effectiveness of parent–child interaction therapy. *Children and Youth Services Review*, *28*, 1-19.

Tully, L.A., & Hunt, C. (2016). Brief Parenting Interventions for Children at Risk of Externalizing Behavior Problems: A Systematic Review. *Journal of Child and Family Sutdies*, *25*, 705-719.

Tully, L. A., & Hunt, C. (2017). A randomized controlled trial of a brief versus standard group parenting program for toddler aggression. *Aggressive Behavior*, *43*, 291-303.

Author Biographies

Brandi N. Hawk earned her PhD in Clinical and Developmental Psychology from the University of Pittsburgh. She is currently a psychologist at the UC Davis CAARE Center, where she conducts internal and external PCIT and PC-CARE training as well as conducts research on the effectiveness of dyadic interventions for traumatized children. She is a co-developer of PC-CARE.

Susan G. Timmer is the director of Mental Health Research at the UC Davis CAARE Center, and Director of Training at the UC Davis PCIT Training Center. Her primary research interests include the effectiveness of PCIT with high-risk populations, including maltreating families, families experiencing domestic violence, foster and adoptive families, and when mothers are depressed, as well as testing and evaluating training models to disseminate and implement PCIT and PC-CARE. She is a co-developer of PC-CARE.