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Preliminary Investigation of the Influence of Treatment Regimen on Outcomes in Behavioral Parent Training

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Caregiver engagement and implementation of behavioral strategies are essential to effective interventions targeting childhood behavior problems. The aim of this preliminary investigation was to better understand caregiver decision-making when selecting different treatment regimens in an open trial format. Treatment packages included: (1) an intensive treatment program (ITP), involving a compressed 20-hour intervention occurring 2 hours per day for 10 days; and (2) a standard dosage treatment as usual (TAU) behavioral treatment program, involving weekly 50-minute appointments. Sixty-seven families with a child between 4–11 years old (M age = 5.82) with clinically significant problem behaviors self-referred to a hospital-based outpatient behavior therapy program. Results suggest that while caregivers chose a standard treatment regimen at a ratio of 2:1, compressed treatment (ITP) was associated with increased caregiver engagement and more significant reductions in child target behavior using both direct and indirect measures. Findings provide preliminary support for the use of high dosage treatment regimens as a means of increasing caregiver engagement and in the reduction of problem behavior in young children.

Caregiver engagement in the treatment of childhood disruptive behavior disorders is of vital importance to the overall success of the intervention (Haine-Schlagel et al., 2018). As most evidence-based treatment programs focus on the caregiver themselves as the change agent (Eyberg et al., 2008), participation and retention of families is often seen as a crucial predictor of treatment success (Becker et al., 2015). Attending a scheduled treatment session (Nock & Ferriter, 2005) has been among the most studied variables in the treatment engagement literature (Baydar et al., 2003), and numerous intervention strategies have been implemented toward increasing it (e.g., appointment reminders, navigating attendance barriers, incentives for attendance; Ingoldsby, 2010). However, other researchers have pointed to the importance of participation in addition to presence at a given session (Lindsay et al., 2019), given the skills-based nature of most behavioral treatment programs.

Treatment adherence (i.e., implementation of intervention strategies by nonprofessionals, such as caregivers; Gilroy & Kaplan, 2020) is another metric by which to measure engagement. Adherence to behavioral recommendations has been studied in great detail (e.g., Chacko et al., 2016), with an emphasis on identification of predictor variables. The results of these studies have largely been mixed, with some suggesting that demographic characteristics can contribute either positively or negatively to these variables (Armbruster & Kazdin, 1994). Gilroy and Kaplan (2020) examined caregiver decision-making as a predictor of adherence, with results suggesting that their decisions largely discounted delays to optimal outcomes in favor of immediate, less durable treatment approaches (e.g., favoring immediate suppression of challenging behavior in punishment procedures over more systematic reinforcement programs).

While caregiver decision-making around individual behavioral strategies has been the subject of recent inquiry, far less is known about impact of decision-making around treatment structure itself. Investigations into the use of high-dosage regimens (e.g., daily treatment sessions) for obsessive-compulsive disorder (OCD; Abramowitz et al., 2003), posttraumatic stress

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disorder (PTSD; Bryan et al., 2022; Foa et al., 2018) and phobias (Öst et al., 2001) suggest that outcomes in exposure-based treatments may benefit from short between-session intervals. For instance, Abramowitz and colleagues (2003) compared an intensive exposure and ritual prevention (ERP) therapy regimen (i.e., 10 daily sessions over 2 weeks) with a leaner regimen (i.e., 16 sessions twice weekly over 8 weeks). The intensive ERP produced more significant short-term improvements; however, differences between groups diminished at follow-up.

The use of intensive, or compressed, treatment programs has not been limited to the treatment of anxiety. Behavioral Parent Training (BPT) is a well-studied approach to targeting problem behaviors of childhood by training caregivers as change agents (Eyberg et al., 2008). While BPT refers to a broad category of treatment programs (e.g., Parent-Child Interaction Therapy [Eyberg et al., 1995]; The Incredible Years [Webster-Stratton & Spitzer, 1996]; Strategies to Enhance Positive Parenting [Chacko et al., 2008]), most have been found to be effective in reducing parent-reported rates of childhood problem behavior (Hood & Eyeberg, 2003; Larsson et al., 2009). However, these programs have been criticized for having high dropout rates, ranging from 47% to 51% of participants (e.g., Chacko et al., 2016; Fernandez & Eyberg, 2009; Werba-DeRosa et al., 2006). In an effort to address this criticism and improve the outcomes of BPT programs, some researchers have compressed the treatment length (e.g., Brief Behavioral Intervention [BBI; Axelrad & Chapman, 2016]; Intensive Parent-Child Interaction Therapy [iPCIT; Graziano et al., 2020]), ranging from 5 to 7 one-hour weekly appointments (BBI), to daily 90-minute appointments over the course of 2 weeks (iPCIT). Preliminary results suggest that a fixed treatment length may have a positive impact on caregiver treatment engagement and reduce dropout (Graziano et al., 2020; Thomas & Zimmer-Gembeck, 2012). However, additional research is needed to evaluate the outcomes of high-dosage behavioral parent training programs relative to more traditional treatment courses.

The current preliminary study sought to better understand caregiver treatment selection and corresponding outcomes when presented with options for two distinct regimens: a high dosage, daily intervention program versus a standard weekly intervention program. While previous research has established the effectiveness of BPT in reduction of childhood behavior problems, the relatively high attrition rates reported among these programs warrants continued attention. In the present study, the following research questions were posed: first, when caregivers are presented with both a high- and low-intensity treatment regimen to address their child's behavior problem, which would they select? Second, would caregiver selection have any impact on their treatment attendance and engagement? Third, given caregiver selection, are there differences on relevant clinical outcomes?

Method

Participants

The first 67 families eligible to receive treatment services between July 1, 2021, and August 30, 2022, were included in the current study. Eligibility criteria included a referral for the assessment and treatment of pediatric problem behavior, child ages ranging from 2–12 years old, no prior diagnosis of developmental or intellectual disability, as well as the absence of a history of psychosis, suicidal ideation or intent. To ensure uniformity among participants, target behaviors were limited to include only aggression, tantrums, and noncompliance. Additional inclusion criteria involved a commitment from at least one caregiver to attend each treatment appointment. Participant demographic data are separated by treatment type and included in Table 1. All services were covered by insurance, with nominal out-of-pocket copays required for some families. Across treatment dosage types, appointments were overwhelmingly attended by a single caregiver (88%), which was typically the child's mother. Clinicians endeavored to include as many relevant caregivers as feasible into the treatment process, including family members from multigenerational households.

Table 1
Participant Characteristics

	ITP	TAU
n (Received Treatment)	19	39
Age: Mean (SD)	6.4 (2.0)	5.16 (1.59)
Range	4-11	3-9
Self-Identified Race, *n* (%)		
White	11 (58%)	14 (30%)
Black or African American	8 (42%)	23 (65%)
Other	0 (0%)	2 (4%)
Distance from Clinic:		
Mean (SD), miles	23.7 (23.6)	20.5 (19.8)
Range, miles	3.6–93.7	1.4–89.5
Insurance Type		
Medicaid *n* (%):	9 (47%)	30 (83%)
Commercial *n* (%):	10 (52%)	9 (23%)
Other *n* (%):	0	0

Treating clinicians ($n = 7$) included doctoral interns and postdoctoral fellows in clinical or school psychology completing a final year of training in-residence at a large outpatient program in an academic medical center in the mid-Atlantic region of the United States. The program serves a diverse population of families, including those from inner-city, suburban, and rural backgrounds. The same clinicians provided care to families in both dosage groups as a part of their regular caseloads. Trainees received weekly supervision from two licensed psychologists who divided cases according to the first letter of patients' last names (i.e., one supervised last names beginning with A–K, and the other supervised L–Z).

Procedure

Prior to starting treatment, caregivers were provided information about either the (a) standard or (b) intensive treatment course and were permitted to self-select which service type they wanted to participate in. Twenty-one families (20%) selected the intensive treatment program, commonly citing reasons including a high level of concern for the identified problem behavior. Forty-six families (80%) selected a standard treatment course, with the most common reason being that they wanted to try a less intensive course before committing to a higher level of care.

Both treatments were delivered in an individual format, with at least one caregiver present for all appointments. All families received a semistructured functional interview designed to identify the corpus of problem behaviors, identify target behaviors, and develop initial functional hypotheses. Following the interview, clinicians taught caregivers to conduct a synthesized contingency analysis (e.g., Slaton et al., 2017) to confirm the hypothesized function of the child's target behavior. Data obtained from test conditions of the contingency analyses served as baseline for subsequent treatment evaluations. Study procedures were considered exempt from Institutional Review Board (IRB) approval as it involved benign behavioral interventions and data collection and analysis that was consistent with routine clinical practice at the clinic, but informed consent was obtained from all families. Clinicians were doctoral interns and postdoctoral fellows in clinical psychology, practicing under the license of two clinical psychologists.

Treatment Programs

Intensive Program Structure

The Intensive Treatment Program (ITP) involved a 2-week course of treatment that occurred each weekday from 8:30 a.m to 10:30 a.m. Each admission was planned in advance to allow family members time to arrange their schedules to accommodate daily appointments, as families were not permitted to schedule outside of designated time slots. In order to facilitate participation in ITP across socioeconomic status, arrangements were made for complementary lodging for families needing to travel 50 miles or more to receive services. Missed appointments were not rescheduled due to the condensed nature of the program, but families were allowed to continue in the program provided they did not miss more than two appointments. Two-hour appointments allowed for more opportunities to engage in learning trials, with the first 30 minutes typically consisting of a review of caregiver-provided data from the prior day's skills practice followed by approximately 60 to 75 minutes spent in skills practice. See Table 2 for additional data regarding dosage characteristics.

Standard Program Structure

The TAU regimen involved a more customary outpatient treatment dosage. Appointment length was 50 minutes in duration, and occurred every 2 to 3 weeks on average (with a range of 1 to 4 weeks). Appointments were scheduled according to shared availability between caregivers and their clinician, with appointments generally available from 9:00 a.m. to 6:00 p.m. during the weekdays. Clinicians communicated to caregivers the standard treatment regimen was also designed as a time-limited intervention, with most goals typically reached between 12–15 appointments.

Table 2
Treatment Group Characteristics

	ITP	TAU
Treatment Sample	19	39
% Attrition	10.5	54
% Appointment Attendance; *M*(SD)	*93.2*(16.2)	*77.1*(26.2)
Total Time in Treatment (hrs.); *M*(SD)	*15.2*(4.60)	*4.2*(2.61)
# Appointments; *M*(SD)	*9.2*(0.80)	*6.5*(2.93)
# Trials per Appointment; *M*(SD)	*13*(8.40)	*4.2*(3.98)
Days between Appointments; *M*(SD)	*1.4*(0.33)	*16.3*(8.41)

Missed appointments were rescheduled, provided caregivers contacted the clinicians within 2 weeks of the scheduled appointment. Families that did not attempt to reschedule within the 2-week timeframe were considered dropouts and included in the attrition data set. Standard treatment appointments typically involved 10–15 minutes of data review of between-appointment homework followed by approximately 30 minutes of skills practice.

Description of Treatment Approach

Child-Based Skills Training

A wait training protocol served as the intervention in both treatment regimens. It was developed based on the behavior analytic literature on delay and denial training (e.g., Ghaemmaghami et al., 2016; Hanley et al., 2014), and contained three phases delivered by caregivers with in-vivo coaching by clinicians. Prior to the start of treatment, clinicians conducted structured observations of child-caregiver interactions in order to create operational definitions of target behaviors. These definitions were then reviewed with caregivers throughout treatment to ensure reliability of continuous behavior collection and coding. Training on implementation of treatment procedures involved instruction, modeling, rehearsal, and feedback (i.e., behavioral skills training; Miles & Wilder, 2009).

Phase 1 of the treatment procedure involved reinforcing adaptive communicative behavior that served as a functional replacement for problem behavior (i.e., functional communication training; Carr & Durand, 1985). This phase ended after the child emitted three consecutive independent appropriate communication responses. Phase 2 involved systematically thinning the schedule of reinforcement by introducing delays (i.e., "wait training"). Specifically, following a child's appropriate request, the child was required to wait appropriately for a set duration before delivery of the putative reinforcer. Following three consecutive trials with both independent requesting and appropriate waiting behavior, the wait duration was increased. Terminal wait criteria were established collaboratively with caregivers a priori, and ranged from 60 seconds to 3 minutes. Finally, Phase 3 of treatment involved introducing a denial program, wherein the child was required to tolerate instances where their requests for preferred items were denied. For instance, when a participant requested a particular activity, the caregiver was coached to say, "thank you for asking, but that is unavailable now." Contingent on 3–5 seconds of appropriate behavior following the denial statement, participants were offered access to alternate, lesser preferred activities. Once an item or activity was denied, it would be unavailable for the duration of the appointment. Experimental control over dependent variables in the wait training procedure was demonstrated using a changing criterion design (e.g., Klein et al., 2017). All instances of participant challenging behavior were ignored by the clinician and caregiver. Practice sessions were trial based, with each trial lasting approximately 5 minutes in duration. See Table 3 for a detailed description of treatment procedures, along with rationale. The following case vignette illustrates typical presenting issues as well as a general overview of the treatment procedure.

Case Vignette

Mason was a 5-year-old neurotypical African American boy who was referred by his parents for the assessment and treatment of tantrum behaviors, which included dropping to the floor, screaming, crying, and flailing. At baseline, episodes of tantrums ranged from 15 to 45 minutes and occurred three to four times per day. Mason's caregivers reported that he becomes frustrated when they are unavailable to provide their "undivided attention." His tantrums caused significant family impairment, as caregivers were unable to complete basic household and personal routines (e.g., putting away laundry, showering, or working from home). Results of the functional interview and functional analysis indicated that Mason's tantrum behaviors were evoked when access to preferred caregivers is restricted and were maintained by adult attention (see Figure 1, trials 1–7). Due to Mason's difficulty tolerating caregiver unavailability, it was determined that the wait training treatment procedure would be useful to teach him the necessary skills to mitigate the negative impact on his family. His caregivers worked collaboratively with their therapist to determine a terminal wait criterion of 3 minutes, noting that amount of time would be sufficient for them to complete simple tasks such as using the bathroom or answering a phone call. The therapist explained that wait intervals longer than what is practiced in the appointment should include planned access to a preferred activity.

Mason was taught to use the functional communication phrase "excuse me," as it was a functionally equivalent replacement behavior for his tantrums. He was able to use it independently following only 3 trials of physical prompting (Figure 1, trials 6–11). During the wait training procedure, Mason tolerated the initial 5-second wait time without engaging in tantrum behavior, as his caregivers were coached to attend to him while counting down on their fingers (i.e., "5…4…3…" etc.). Tantrum behaviors occurred in subsequent wait trials where caregiver attention was systematically removed (Figure 1, trials 15–17), but his

Table 3
Detailed Description of Wait Training Procedure

Phase	Purpose	Description	Rationale
1 – Functional Communication Training (FCT)	To shape appropriate alternative communication behaviors	**Step 1**: Clinician introduces the procedure to the participant by presenting a card with a phrase or picture communicating an adaptive alternative communicative behavior (e.g., for participants whose functional assessment revealed a tangible function, the functional phrase may include "my turn").	Use of a card exchange allows for a visual reminder about the behavioral expectation to access reinforcement.
		Step 2: Clinicians contrive participants' motivation to communicate their needs by "taking a turn" with the functional reinforcer (e.g. tablet device).	Restricting access replicates baseline conditions and creates the "need" for the participant to communicate.
		Step 3: Clinicians guide participants to use their communication card by prompting them using most-to-least prompting procedures (i.e. first physical prompting, then gestural prompting, then vocal prompting). Appropriate behavior is promptly reinforced.	Use of hand-over-hand prompting procedures allows the clinician to ensure quick and efficient reinforcement for the replacement behavior.
		Step 4: After mastery of prompted requests (in the absence of challenging behavior), physical prompting is withdrawn and only vocal or gestural prompting is used.	Clinicians emphasize independent requesting by limiting their use of prompts. The functional reinforcer remains restricted until the child appropriately communicates.
2 – FCT + Wait Training	To teach tolerance for delays to reinforcement	**Step 1:** Clinicians contrive participants' motivation to communicate their needs by "taking a turn" with the functional reinforcer (e.g. tablet device).	All practice "trials" begin with the delivery of the identified "trigger" for challenging behavior. This serves to increase tolerance for limit setting.
		Step 2: Participant must independently request their preferred item or activity (i.e. functional communication response)	Following mastery in the Functional Communication Training phase, only independent participant requests are honored by clinicians.
		Step 3: Beginning with a relatively brief delay (e.g. typically 5 seconds), clinicians communicate when the item will be available again by counting down with the participant. Participant must "wait" appropriately for the duration of the countdown in order to regain access to their preferred item or activity. Waiting is broadly defined as any appropriate behavior other than challenging behavior (e.g., quiet hands, calm body, and quiet voice).	Use of a very brief delay is meant to promote success; adult attention is helpful to minimize the difficulty of this initial delay practice. Appropriate waiting behavior is kept loosely defined in order to increase generalizability.

(*continued on next page*)

Table 3 (*continued*)

Phase	Purpose	Description	Rationale
		Step 4: As participants demonstrate appropriate waiting at the pre-identified delay criterion (e.g., 5 seconds), the wait time is gradually increased to facilitate tolerance for delays (e.g., 30 seconds, 60 seconds, 90 seconds). These wait durations are visually signaled using a digital or visual countdown timer. Instances of challenging behavior require that the practice trial is restarted.	Systematic increases in the response requirement for participants to earn their access to preferred items increase generalizability while facilitating procedural fidelity.
3 – FCT + Denial Training	To teach tolerance for instances where access to preferred items or activities is denied	**Step 1:** Clinicians contrive participants' motivation to communicate their needs by "taking a turn" with the functional reinforcer (e.g. tablet device). **Step 2:** Participant must independently request their preferred item or activity (i.e. functional communication response). **Step 3:** Clinician provides the denial statement along with a redirection contingent on 5 seconds of the participant's appropriate behavior (e.g., "I'm sorry, the tablet is no longer available. But if you can show a safe body and quiet voice, you can play with something else.") **Step 4:** Denial practice trials remain unsignaled and occur on a variable schedule, alternating with wait practice trials. Participants do not know when they request for an item or activity whether it will be available after a brief wait, or unavailable.	The beginning of this next phase of treatment is unsignaled to participants in order to minimize their reactivity. At this time, participants are still unaware that the item they are requesting will be unavailable. The item or activity that is unavailable cannot be accessed for the remainder of the treatment appointment, but remains in the room. Participants may choose to play with other, lesser preferred items or activities provided they are not engaging in challenging behavior. Participants learn that when they are told to wait there are predictable durations and expectations for their behavior. When they are told that an item is unavailable, they learn that there will be follow-through from their caregivers.

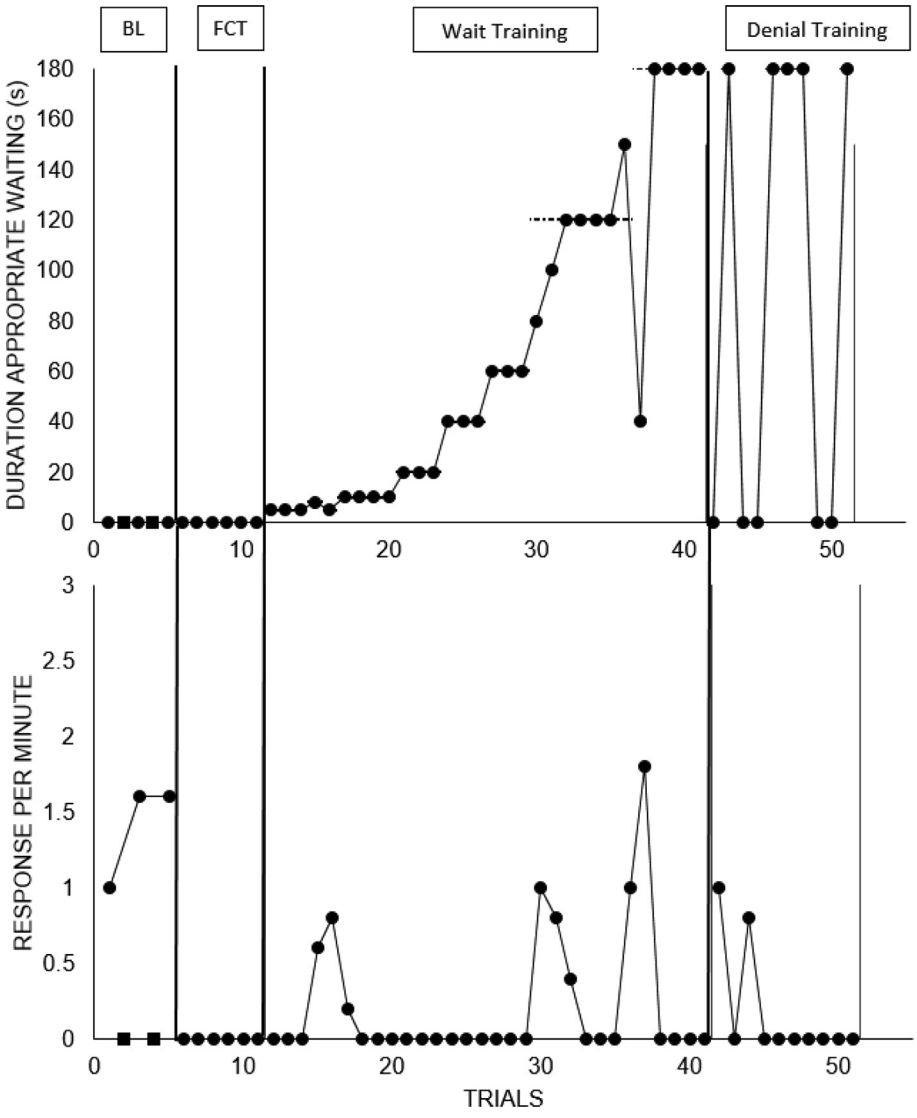

Figure 1. *Case Vignette Single Case Design Treatment Graph. Note.* Top panel refers to demonstration of Mason's functional replacement behavior, appropriate waiting. Bottom panel refers to Mason's rate of challenging behavior, expressed as responses per minute. BL = baseline phase, generated via synthesized contingency analysis. Closed circles refer to test conditions and closed squares refer to control conditions; FCT = functional communication training phase.

challenging behavior quickly reduced as his caregivers demonstrated consistency in their responding.

Mason was then taught to tolerate instances where he wanted a specific form of attention that would not be available (e.g., playing outside with caregivers on a rainy day). Therapists modeled for caregivers how to say "no" to an unavailable request and offer alternatives contingent on Mason's tolerance and appropriate behavior. The introduction of this new skill occasioned some of Mason's tantrum behavior (Figure 1, trials 42 and 44), but again his reactivity quickly reduced through caregivers' effective use of differential reinforcement.

In order to help caregivers achieve procedural consistency in the presence of Mason's challenging behavior, therapists used a fading procedure to gradually transfer their instructional control. This strategy involved providing caregivers one specific role in the procedure at a time, starting with the delivery of reinforcement contingent on Mason's appropriate behavior. In other words, the therapist started with the "heavy lifting" (e.g., restricting access to preferred items by taking a turn, differentially attending to appropriate behavior and ignoring inappropriate behavior), enabling the caregiver to be the "provider of the good things" (i.e., reinforcement). Ultimately

using these strategies, Mason reached his treatment goals and increased his tolerance for delays which generalized to home and community settings.

Caregiver-Based Skills Training

Concurrent with child-based skills training, caregivers learn to implement skills related to differential reinforcement, delivering effective commands, and contingency management, consistent with other BPT programs (Forehand et al., 1981; Kazdin, 2017). Sessions included psychoeducation about functions of problem behavior, contingency management techniques, and principles of effective instruction delivery. Clinicians used a behavioral skills training approach (e.g., Conklin & Wallace, 2018) to teach caregivers differential reinforcement in order to deliver behavior specific praise for desired behaviors and ignore unwanted behaviors. Training on implementation of treatment procedures involved instruction, modeling, rehearsal, and feedback. Caregivers were required to complete both in-session and between-session practices in order to facilitate skill acquisition and generalization. See Table 4 for a detailed description of caregiver skills training procedures.

Primary Outcome Measures

Attrition was measured based on predetermined criteria defined at the onset of each treatment course. Families receiving ITP services met criterion for attrition following a second missed appointment within the 10-day treatment program. Families receiving TAU services met criterion for attrition following a two-week lapse of services with no contact from the family.

Caregiver Engagement, measured as appointment attendance and participation, was calculated as the number of sessions attended divided by the total number of sessions scheduled and multiplied by 100. Expectations for caregiver engagement were established at the onset of each treatment course, and included both within- and between-session practice of skills with their child regardless of dosage type. While it did not occur in the course of the current study, any instance where a caregiver was unwilling to participate in a treatment session would result in the termination of the session and not count as an attended appointment. An appointment was counted and scored as "attended" if the family arrived within 15 min of their scheduled appointment time and participated for the scheduled duration of the appointment.

Secondary Outcome Measures

Within-Session Problem Behavior was measured by trained observers (i.e., the clinicians) via pencil-and-paper data. Definitions were individualized to each participant; however, all participants engaged in tantrums, noncompliance, or aggression as a primary target behavior. Tantrums were broadly defined as being some combination of screaming, crying, property destruction, or dropping to the floor. Aggression was broadly defined as being any instance of hitting, kicking, biting, or throwing objects at others. Verbal aggression (i.e., profanity, verbal threats, etc.) was also included in the definitions of aggression. Noncompliance was broadly defined as failure to initiate a prompted task or task sequence within 5 seconds of the directive.

Between-Session Problem Behavior was measured by caregivers using either pencil-and-paper data collection or an automated text messaging system. The text message rating was a one-item question sent to parents via text message every day at a time of their choosing. The purpose of this tool was to prompt caregivers to provide a frequency count of target problem behavior at the end of each day. Text prompts queried the frequency of occurrence of each patient's individualized

Table 4
Detailed Description of Caregiver Skills Training Procedure

Skill	Teaching Phase	Description of Teaching Procedure
Reinforcing Appropriate Alternative Behavior (i.e. sitting appropriately)	Instruction	Clinician provides a written and verbal description of procedures, including specific operational definitions of child behaviors.
	Modeling	Clinician works with identified patient, using the procedure while narrating the specific strategies aloud while the caregiver observes.
	Role Play	Clinician and caregiver practice the procedure together, first with the clinician acting as the therapist and the caregiver acting as their child. Both then switch roles to allow the caregiver to practice the strategies themselves under a controlled context.
	Feedback	Caregiver implements differential reinforcement procedure with their child, with clinician providing feedback in-vivo throughout.

target behavior (e.g., "how many times did your child engage in aggression today?"). Caregivers responded by texting the number that corresponded to their daily observations of their child's behavior, which was automatically recorded and graphed on a de-identified database. As an alternative for families who opted out of the text message system, a paper data collection system was provided. Specifically, caregivers were provided with an individualized data sheet and asked to report on the frequency of target behavior.

Daily Behavior Rating Scale (BRS) was a one-item question measured on a 0-to-10 Likert scale (0–3 = *mild issues*, 4–7 = *moderate issues*, 8–10 = *severe issues*). At the beginning of each appointment, parents rated their impression of the functional impairment caused by their child's problem behavior since the previous appointment.

Eyberg Child Behavior Inventory (ECBI; Eyberg & Pincus, 1999) is a validated 36-item caregiver rating measure used to capture problematic behaviors of childhood. The Intensity Scale measures the frequency of behavior problems and the Problem Scale measures the degree to which the caregiver perceives a specific behavior as a problem. For both subscales, *t*- score cutoff for clinical significance is ≥60. The test-retest reliability on both scales has been found to be acceptable (alpha = 0.86 for Intensity Scale; 0.88 for Problem Scale), and the discriminative validity has been shown to identify significant differences between non-referred and conduct-disordered children (Eyberg et al., 2008).

Results

Baseline Group Comparisons

In order to compare participants' characteristics between groups in baseline, a one-way ANOVA was conducted followed by a least significant difference test (LSD). With regard to baseline rates of in-session problem behavior, results of the analysis suggest significant differences between the groups, $F(2, 58) = 3.50$, $p = .036$, partial $\eta^2 = .09$. Problem behavior was significantly lower for ITP participants ($M = 1.39$) than TAU ($M = 3.30$; $p = .022$) participants. However, there were no significant differences between caregivers' reports of the daily frequency of between-session problem behavior, $F(2, 58) = 1.88$, $p = .160$, partial $\eta^2 = .05$. Similar calculations were conducted to determine whether there were baseline differences among demographic variables (see Table 1). Results suggest that participants across groups differed with regard to age and insurance type, $\chi^2(2, N = 58) = 9.73$, $p = .008$. Specifically, the ITP group had more participants with commercial or military insurance (57.9%) than TAU (22.6%; $p = 0.002$).

Regarding participants' age, results suggested significant differences across groups, $F(2, 58) = 3.60$, $p = .032$, partial $\eta^2 = .09$. ITP participants ($M = 6.42$) were significantly older than TAU ($M = 5.18$; $p = .011$). There were no statistically significant differences between participants' race, $\chi^2(2, N = 58) = 5.06$, $p = .080$, or the distance that families traveled to the clinic, $F(2, 58) = 0.92$, $p = .403$; partial $\eta^2 = .02$.

Caregiver-reported scores on the ECBI were also analyzed for baseline differences between the groups. Results suggest significant differences between groups on both the ECBI Problem and Intensity Subscales. Specifically, participant scores in TAU ($M = 63.60$) were lower in baseline than ITP ($M = 68.79$; $p = .025$) on the Problem Subscale. Regarding the Intensity Subscale, participants in TAU did not significantly differ from ITP ($M = 68.47$), but it did approach significance ($p = .058$).

Treatment Outcomes

Primary Outcomes— Treatment Effects on Caregiver Engagement

Characteristics of participant participation are included in Table 2. Caregiver engagement was highest in the high-dosage ITP, which had the lowest percentage of attrition ($M = 10.5\%$) and highest percentage attendance ($M = 93.2\%$, $SD = 16.2$). For participants that engaged in standard dosage treatment, levels of engagement were significantly lower. Table 2 highlights rates of dropout, which averaged 54% in TAU. Analysis of treatment group characteristics show that caregivers who participated in the ITP dosage engaged the most in treatment ($M = 15.2$ hours; SD = 4.6), completed the most practice per appointment ($M = 13$ trials; SD = 8.4), and had the least amount of time between appointments ($M = 1.4$ days; SD = 0.33) as compared to those in TAU ($M = 4.2$ hours and $M = 4.2$ trials). A one-way ANOVA was conducted with LSD follow-up to determine whether differences in group characteristics were statistically significant. Results suggested that there was a significant difference between groups in the number of treatment hours completed, $F(2, 58) = 7.03$, $p = .002$, partial $\eta^2 = 0.16$]. Significantly more treatment hours were completed for ITP participant ($M = 18.63$) than TAU ($M = 11.95$; $p < .001$). A chi-square test was used to determine whether there were statistically significant differences in rates of attendance and attrition between the groups, with pairwise correlations calculated as follow up. Results suggest that there was a significant difference between groups in attrition, $\chi^2(2, N = 58) = 10.09$, $p = .006$, as well as attendance,

$\chi^2(2, N = 58) = 9.53$, $p = .008$. Overall, more participants dropped out in TAU (53.8%; $p = .001$) than ITP (10.5%).

Secondary Outcomes—Treatment Effects on Problem Behavior

Pre- and posttreatment data were analyzed for statistical significance using paired-sample *t*-tests (see Table 5). In addition, Cohen's *d* (Cohen, 1988) effect sizes were calculated to determine the sizes of any statistically significant effects. Results suggest that participants receiving the ITP had statistically significant improvement across all outcome variables with large effect sizes. TAU participants also had statistically significant reductions in problem behavior as measured by observers within session ($p < 0.001$). Differences between pre-post intervention scores were also significant with caregivers reporting on the BRS ($p < 0.05$). The TAU group had no statistically significant differences from pre- to posttreatment on any of the other dependent variables.

A mixed ANOVA was conducted to determine whether there was a significant interaction between the change in problem behavior observed in-session and participants' intervention group, along with a least significant difference test (LSD). Results suggest that there was not a significant interaction between the change in in-session problem behavior and the intervention group, $F(1, 58) = 50.25$, $p < .001$, partial $\eta^2 = .41$ (time only); $F(2, 58) = 2.72$, $p = .073$, partial $\eta^2 = .07$ (interaction). Problem behavior was significantly reduced across both groups with a large effect size. Similar analyses were conducted to determine whether there were significant interactions between reductions in problem behavior between session and participants' intervention group. Again, results suggest that there were no significant differences between the change in problem behavior and participants' intervention groups, $F(1, 58) = 9.56$, $p = .003$, partial $\eta^2 = .11$ (time only); $F(2, 58) = 0.12$, $p = .892$, partial $\eta^2 < .01$ (interaction).

BRS

There was a significant interaction between change in BRS reported by parents and participants' group assignment, $F(1, 58) = 68.67$, $p < .001$, partial $\eta^2 = .49$ (time only); $F(2, 73) = 0.12$, $p = .001$, partial $\eta^2 = .17$ (interaction). Despite starting with a lower mean BRS, ITP participants had a significantly larger improvement in BRS ($M\Delta = -3.65$) than TAU ($M\Delta = -1.16$). BRS was significantly reduced across both groups with a large effect size.

Standardized Measure—ECBI

A mixed ANOVA with LSD pairwise follow up was used to determine whether there were statistically significant differences between the changes of scores on the ECBI subscales and treatment groups, $F(1, 34) = 9.19$, $p = .005$, partial $\eta^2 = .21$ (time only); $F(2, 34) = 4.99$, $p = .013$, partial $\eta^2 = .23$ (interaction). For the Intensity Subscale, ITP participants had a significantly larger improvement ($M\Delta = -9.69$) than TAU ($M\Delta = -1.34$). ITP participants, on average, had baseline scores above the clinical cutoff ($M = 68.47$) and reduced to a subclinical level ($M = 58.79$). TAU participants were below the clinical threshold at baseline ($M = 59.77$) and posttreatment ($M = 58.39$). ECBI-

Table 5
Treatment Results

5a. *Results of Paired Samples t-Test Analyses - ITP*

	Pre *M* (SD)	Post *M* (SD)	Paired Samples *t*-Test	*d*
In-Session Problem Behavior	*1.39*(.80)	*.034*(.054)	t(18) = 7.63***	2.37
Problem Behavior per Day	*3.21*(1.4)	1.39(0.92)	t(18) = 3.08***	0.87
Behavior Rating Scale (BRS)	*6.16*(2.7)	*2.51*(1.75)	t(18) = 5.64***	1.60
ECBI - Problem	*68.6*(8.1)	*59.2*(10.4)	t(18) = 3.85**	1.01
ECBI - Intensity	*68.4*(8.8)	*58.8*(9.9)	t(18) = 3.56**	1.03

5b. *Results of Paired Samples t-Test Analyses – TAU*

	Pre *M* (SD)	Post *M* (SD)	Paired Samples *t*-Test	*d*
In-Session Problem Behavior	*2.98*(2.4)	*0.11*(0.11)	t(38) = 4.65***	1.65
Problem Behavior per Day	*5.89*(5.7)	4.24(5.1)	t(37) = 1.33	
Behavior Rating Scale (BRS)	*7.18*(2.0)	*5.98*(2.0)	t(38) = 3.84**	0.59
ECBI - Problem	*63.6*(9.5)	*58.2*(9.7)	t(38) = 1.32	
ECBI - Intensity	*63.6*(9.8)	*58.3*(11.2)	t(38) = 1.6	

** $p < 0.05$.
*** $p < 0.001$.

Intensity scores were significantly reduced across both groups with a moderate effect size. There was not a significant interaction between change in scores on the ECBI-Problem subscale and participants' group assignment, $F(1, 34) = 7.07$, $p = .012$, partial $\eta^2 = .17$ (time only); $F(2, 34) = 2.54$, $p = .094$, partial $\eta^2 = .13$ (interaction). Problem Subscale scores were significantly reduced across both groups with a moderate effect size. Similar patterns in means of the Problem subscales were observed as the Intensity subscales. In addition, a reliable change index (RCI) was calculated to determine whether the changes between standardized scores could be expected due to the reliability of the ECBI. The average RCI score for the Intensity subscale was found to be reliable for ITP participants, but not for TAU participants ($M = 2.78$, range = 0 to 8.95; $M = 0.67$, range = 0.29 to 2.89, respectively). The average RCI score for the Problem subscale was also found to be reliable for ITP but not TAU participants ($M = 2.78$, range = 0.29 to 8.25; $M = 1.15$, range = 0 to 3.75).

Visual Analysis

In an effort to examine the impact of dosage on relevant outcome variables at specific points in the timelines of each treatment type, data were depicted visually using line graphs. Figure 2a depicts the mean percentage of in-session reduction of problem behavior from baseline, Figure 2b depicts the mean between-session reductions of problem behavior collected by caregivers in relevant contexts (i.e., home, community), and Figure 2c reflects mean percent of attrition across the two programs. The timeline of each intervention is on the x-axis and is divided into 2-hour segments that reflect the end of either one ITP session or two TAU sessions.

Figure 2a highlights the mean reductions in problem behavior relative to baseline across the two independent variables. In the ITP, participants consistently demonstrated in-session reductions of problem behavior above 90% across the course of treatment. For the TAU group, in-session reductions of problem behavior averaged at or below 80% for the first 8 hours of treatment. Participants appeared to improve only after hour 12 of treatment, where reductions in problem behavior looked more similar to the ITP group.

Figure 2b reflects the mean between-session reductions from baseline across the two treatment groups. Participants in the ITP were observed to have significant initial gains, with an average of 87% reduction between appointments through treatment hour 4. These gains did not maintain by treatment hour 6, though between-session reductions in the ITP group were consistently higher than the TAU regimen until hour 14 of treatment. The TAU group had low to modest between-session reductions from baseline, with the most significant improvement occurring around treatment hours 10 and 16.

Figure 2c reflects attrition across the two treatment groups. Participants in the ITP group overwhelmingly remained in treatment for the majority of the treatment course, with a small uptick in dropout occurring in treatment hour 18 (32%). The TAU group had relatively high percentages of attrition from the start at 10%, with averages nearly tripling at hours 6 and 8. By treatment hour 10, the level of attrition in the TAU group began to stabilize, though it continued to increase incrementally through the treatment timeline.

Discussion

The current study was a preliminary investigation into the relationship between treatment dosage and a variety of clinical outcomes. Specifically, we sought to answer the following questions: first, when provided options regarding compressed (i.e., daily, 2-week) vs. standard (i.e., weekly, 12–15 week) treatment regimens to address their child's behavior problems, what would caregivers select? Second, given the selection bias inherent in the current preliminary investigation, would caregiver adherence and engagement remain comparable to what is reported in the literature? Third, within a given treatment dosage, what are the differences on relevant clinical outcomes?

With regard to the first question, results suggested that caregivers selected standard treatment at a ratio of approximately two-to-one. When queried about their choices, they overwhelmingly cited scheduling difficulties or a desire to try a less intensive program first. Interestingly, caregiver-rated ECBI-Intensity scores did not significantly differ between ITP and TAU, suggesting that at least on some measures child problem behavior was comparable in both groups. Caregiver decisions were also different than what might have been expected from the literature on caregiver delay discounting on treatment strategy implementation (e.g., Gilroy & Kaplan, 2020).

Regarding the second and third questions, results suggested that the ITP, with the most structured requirements, had both the lowest attrition and the best in-session attendance. Similarly, the ITP produced the fastest behavior reductions across both treatment types, with all secondary outcome variables demonstrating statistically significant results with large effect sizes. Finally, participants returning for follow-up demonstrated maintenance of these behavior reductions, with caregivers reporting mild levels of functional impairment.

A potential relationship between speed of treatment gains and caregiver engagement variables can be inferred from the analysis of attrition trends across hours of treatment (e.g., Figure 2c). When compared with the outcomes across treatment timelines (Figures 2a and 2b), visual analysis suggests a relationship between the rates of reductions in problem behavior and caregiver dropout from services. There appears to be strong correspondence between the speed of treatment gains and the rate of attrition. Data from the current study suggest that there may be a critical window relatively early in treatment (i.e., around treatment hours 2–4) where progress toward behavior reduction goals both within and between sessions have a direct relationship with caregiver engagement and retention. After this period, caregivers may be less inclined to allocate resources toward accessing services, which was evident in the TAU treatment course (Figure 2c).

Alternatively, the self-selection of a high-dosage program may have in and of itself been sufficient to inoculate caregivers against attrition. As part of the scheduling process for ITP, caregivers worked with clinic staff to identify the exact days and times of their entire course of treatment. Given the demands of the program, many families needed to rearrange much of their regular schedules in order to accommodate high-dosage treatment. Thus, families may have had a greater tendency to continue participating in treatment as result of this investment in time and resources

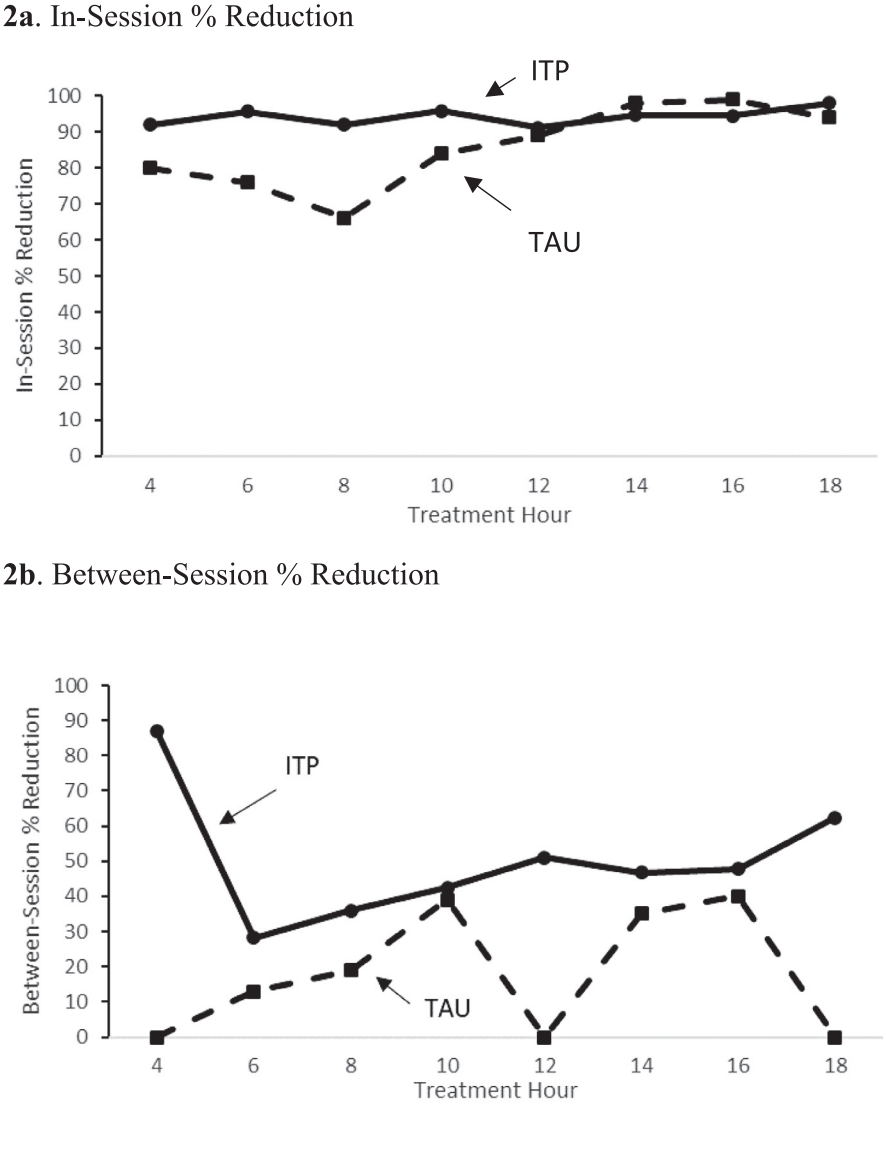

Figure 2. Treatment Outcomes by Hour of Intervention

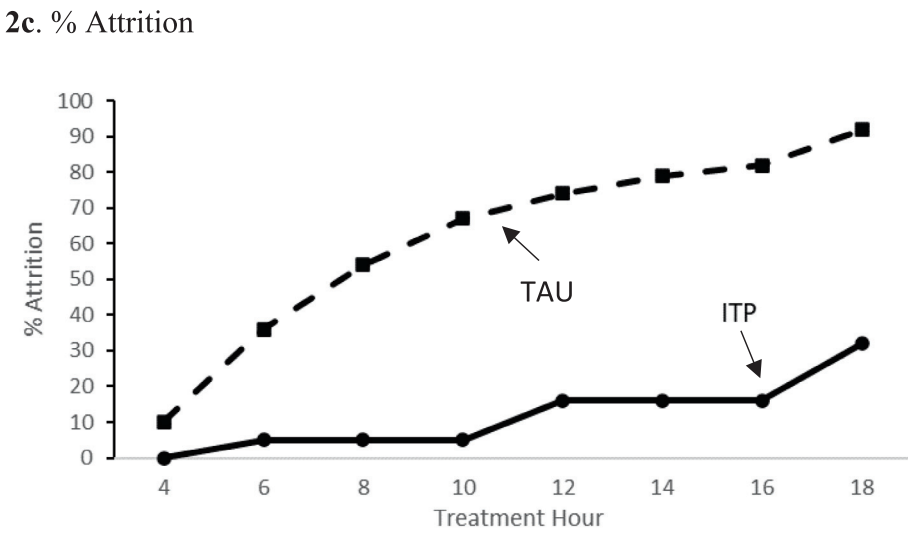

Fig. 2 (*continued*)

(i.e., the sunk cost effect; Arkes & Blumer, 1985). Future studies should examine whether pre-set scheduling expectations moderated engagement variables in standard treatment dosages.

Although the results of the current study are promising, there are several noteworthy limitations that limit the generality of its conclusions. Most notably, participants were not randomized to specific treatment conditions in the current evaluation. Instead, the design of the current study permitted families to self-select their treatment regimen in order to better understand the impact of these choices. Further, descriptions of the differences between dosage types were not standardized, leading to a potential unequal description of treatment options. As a result, differences between both groups limit the conclusions that can be drawn from comparisons in the current study. Another example of differences between groups include insurance type; participants in the ITP program were more likely to have commercial or military insurance than the other two groups. While insurance type is only a proxy for categorizing families into socioeconomic groups, it may be an indicator of the overall feasibility of the intensive treatment program for families with complex social barriers.

The current study contributes to the body of literature examining procedural modifications to improve caregiver-mediated treatment of childhood behavior problems. Despite their effectiveness, behavioral parent training programs have been criticized for low caregiver engagement and high attrition (Chacko et al., 2016). The present study is limited by a small sample, examination of a single intervention, and a nonrandomized design. However, results of this preliminary study suggest that while caregivers may initially opt for less intensive interventions in favor of a more flexible schedule, BPT interventions focused on quick acquisition of skills (i.e., compressed treatment regimen) distributed over a relatively short period of time (i.e., 2 weeks) may serve to increase both treatment engagement and efficacy.

Implications for Clinicians

While preliminary, the results of the current study suggest that clinicians may be able to bolster the impact of their treatment programs by considering a modification of treatment dosage. Although the use of extended treatment hours or multiple sessions per week is typically only considered for more severe psychopathology, participants and their caregivers in the ITP group appeared to benefit from the use of massed trial instruction and compressed scheduling. While the open trial design of the current study limits conclusions that can be drawn about caregiver choice of dosage, anecdotal feedback from families suggested that preference was highly idiosyncratic. Rationales for participating in intensive programming included concern about the intensity or severity of the child's problem, scheduling barriers that created very small windows for accessing care, and previous treatment failures in standard treatment dose densities. Despite this variability, an overarching theme from caregivers is that they appreciated the choice in dosage. Importantly, families of all socioeconomic backgrounds, family constellations, and distances from our clinic appeared able to access the intensive program with sufficient notice. Consideration of treatment regimen as a

moderator for treatment outcomes has great promise for the field of psychological service delivery, both as a means of accountability for the clients that we serve and in response to the potential for outcome-based reimbursement from third party payers.

References

Abramowitz, J. S., Franklin, M. E., Schwartz, S. A., & Furr, J. M. (2003). Symptom presentation and outcome of cognitive-behavioral therapy for obsessive compulsive disorder. *Journal of Consulting and Clinical Psychology, 71*(6), 1049–1057. https://doi.org/10.1037/0022-006X.71.6.1049.

Arkes, H. R., & Blumer, C. (1985). The psychology of sunk cost. *Organizational Behavior and Human Decision Processes, 35*(1), 124–140. https://doi.org/10.1016/0749-5978(85)90049-4.

Armbruster, P., & Kazdin, A. E. (1994). Attrition in child-psychotherapy. In T. Ollendick & R. Prinz (Eds.). *Advances in Clinical Child Psychology* (Vol. 16, pp. 81–106). Springer. https://doi.org/10.1007/978-1-4757-9041-2_3.

Axelrad, M. E., & Chapman, S. G. (2016). The brief behavioral intervention for preschoolers with disruptive behaviors: a clinical program guide for clinicians. *MedEdPORTAL, 12*, 10376. https://doi.org/10.15766/mep_2374-8265.10376.

Baydar, K., Reid, M. J., & Webster-Stratton, C. (2003). The role of mental health factors and program engagement in the effectiveness of a preventative parenting program for head start mothers. *Child Development, 74*(5), 1433–1453. https://doi.org/10.1111/1467-8624.00616.

Becker, T. K., Bartels, S., Hansoti, B., Jacquet, G. A., Lunney, K., Marsh, R., ... Levine, A. C. (2015). Global emergency medicine: a review of the literature from 2014. *Academic Emergency Medicine.* https://doi.org/10.1111/acem.12733.

Bryan, C. J., Russel, H. A., Bryan, A. O., Rozek, D. C., Leifker, F. R., Rugo, K. F., ... Asnaani, A. (2022). Impact of treatment setting and format on symptom severity following cognitive processing therapy for posttraumatic stress disorder. *Behavior Therapy, 52*(4), 673–685. https://doi.org/10.1016/j.beth.2022.01.014.

Carr, E. G., & Durand, V. M. (1985). Reducing behavior problems through functional communication training. *Journal of Applied Behavior Analysis, 18*(2), 111–126. https://doi.org/10.1901/jaba.1985.18-111.

Chacko, A., Wymbs, B. T., Flammer-Rivera, L., Pelham, W. E., Walker, K. S., Arnold, F. W., & Herbst, L. (2008). A pilot study of the feasibility and efficacy of the Strategies to Enhance Positive Parenting (STEPP) program for single mothers of children with ADHD. *Journal of Attention Disorders, 12*(3), 270–280. https://doi.org/10.1177/1087054707306119.

Chacko, A., Jensen, S., Lowry, L. S., & Cornwell, M. (2016). Engagement in behavioral parent training: review of the literature and implications for practice. *Clinical Child and Family Psychology Review, 19*(3), 204–215. https://doi.org/10.1007/s10567-016-0205-2.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Lawrence Erlbaum Associates.

Conklin, S. M., & Wallace, M. D. (2018). Pyramidal parent training using behavioral skills training: training caregivers in the use of a differential reinforcement procedure. *Behavioral Interventions, 34*, 377–387. https://doi.org/10.1002/bin.1668.

Eyberg, S. M., Boggs, S. R., & Algina, J. (1995). Parent-child interaction therapy: a psychosocial model for the treatment of young children with conduct problem behavior and their families. *Psychopharmacological Bulletin, 31*(1), 83–91. PMID: 7675994.

Eyberg, S. M., Nelson, M. M., & Boggs, S. R. (2008). Evidence-based psychosocial treatments for children and adolescents with disruptive behavior. *Journal of Clinical Child and Adolescent Psychology, 37*(1), 215–237. https://doi.org/10.1080/15374410701820117.

Eyberg, S. M., & Pincus, D. (1999). *ECBI Eyberg child behavior inventory.* Psychological Assessment Resources.

Fernandez, M. A., & Eyberg, S. M. (2009). Predicting treatment and follow-up attrition in parent-child interaction therapy. *Journal of Abnormal Child Psychology, 37*(3), 431–441. https://doi.org/10.1007/s10802-008-9281-1.

Foa, E. B., McLean, C. P., Zang, Y., Rosenfield, D., Yadlin, E., Yarvis, J. S., ... Peterson, A. L. (2018). Effect of prolonged exposure therapy delivered over 2 weeks vs 8 weeks vs. present-centered therapy on PTSD symptom severity in military personnel: a randomized clinical trial. *Journal of the American Medical Association, 319*(4), 354–364. https://doi.org/10.1001/jama.2017.21242.

Forehand, R., Rogers, T., McMahon, R. J., Wells, K. C., & Greist, D. L. (1981). Teaching parents to modify child behavior problems: and examination of some follow-up data. *Journal of Pediatric Psychology, 6*(3), 313–322. https://doi.org/10.1093/jpepsy/6.3.313.

Ghaemmaghami, M., Hanley, G. P., & Jessel, J. (2016). Contingencies promote delay tolerance. *Journal of Applied Behavior Analysis, 49*(3), 548–575. https://doi.org/10.1002/jaba.333.

Gilroy, S. P., & Kaplan, B. A. (2020). Modeling treatment-related decision-making using applied behavioral economics: caregiver perspectives in temporally-extended behavioral treatments. *Journal of Abnormal Child Psychology, 48*, 607–618. https://doi.org/10.1007/s10802-020-00619-6.

Graziano, P. A., Ros-Demarize, R., & Hare, M. M. (2020). Condensing parent training; a randomized trial comparing the efficacy of a briefer, more intensive version of parent-child interaction therapy (I-PCIT). *Journal of Consulting and Clinical Psychology, 88*(7), 669–679. https://doi.org/10.1037/ccp0000504.

Haine-Schlagel, R., Martinez, J. I., Roesch, S. C., Bustos, C. E., & Janicki, C. (2018). Randomized trial of the parent and caregiver active participation toolkit for child mental health treatment. *Journal of Clinical Child and Adolescent Psychology, 47*(1), 150–160. https://doi.org/10.1080/15374416.2016.1183497.

Hanley, G. P., Jin, C. S., Vanselow, N. R., & Hanratty, L. A. (2014). Producing meaningful improvements in problem behavior of children with autism via synthesized analyses and treatments. *Journal of Applied Behavior Analysis, 47*(1), 16–36. https://doi.org/10.1002/jaba.106.

Hood, K. K., & Eyeberg, S. M. (2003). Outcomes of parent-child interaction therapy: mothers' reports of maintenance three to six years after treatment. *Journal of Clinical Child and Adolescent Psychology, 32*(3), 419–429. https://doi.org/10.1207/S15374424JCCP3203_10.

Ingoldsby, E. M. (2010). Review of interventions to improve family engagement and retention in parent and child mental health programs. *Journal of Child and Family Studies, 19*(5), 629–645. https://doi.org/10.1007/s10826-009-9350-2.

Kazdin, A. E. (2017). Addressing the treatment gap: a key challenge for extending evidence-based psychosocial interventions. *Behaviour Research and Therapy, 88*, 7–18. https://doi.org/10.1016/j.brat.2016.06.004.

Klein, L. A., Houlihan, D., Vincent, J. L., & Panahon, C. J. (2017). Best practices in utilizing the changing criterion design. *Behavior Analysis in Practice, 10*(1), 52–61. https://doi.org/10.1007/s40617-014-0036-x.

Larsson, B., Fossum, S., Clifford, G., Drugli, M. B., Handegard, B. H., & Morch, W. T. (2009). Treatment of oppositional defiant and conduct problems in young Norwegian children. *European Journal of Child and Adolescent Psychiatry, 18*, 42–52. https://doi.org/10.1007/s00787-008-0702-z.

Lindsay, M. A., Romanelli, M., Ellis, M. L., Barker, E. D., Boxmeyer, C. L., & Lochman, J. E. (2019). The influence of treatment engagement on positive outcomes in the context of a school-based intervention for students with externalizing behavior problems. *Journal of Abnormal Child Psychology, 47*, 1437–1454. https://doi.org/10.1007/s10802-019-00525-6.

Miles, N. I., & Wilder, D. A. (2009). The effects of behavioral skills training on caregiver implementation of guided compliance. *Journal of Applied Behavior Analysis, 42*(2), 405–410. https://doi.org/10.1901/jaba.2009.42-405.

Nock, M. N., & Ferriter, C. (2005). Parent management of attendance and adherence in child and adolescent therapy: a conceptual and empirical review. *Clinical Child and Family Psychology Review, 8*(2), 149–166. https://doi.org/10.1007/s10567-005-4753-0.

Öst, L. G., Svensson, L., Hellstrom, K., & Lindwall, R. (2001). One-session treatment of specific phobias in youths: a randomized clinical trial. *Journal of Consulting and Clinical Psychology, 69*(5), 814–824. https://doi.org/10.1037//0022-006X.69.5.814.

Slaton, J. D., Hanley, G. P., & Raftery, K. J. (2017). Interview-informed functional analysis: a comparison of synthesized and isolated components. *Journal of Applied Behavior Analysis, 50*(2), 252–277. https://doi.org/10.1002/jaba.384.

Thomas, R., & Zimmer-Gembeck, M. J. (2012). Parent-child interaction therapy: an evidence-based treatment for child maltreatment. *Child Maltreatment, 17*(3), 253–266. https://doi.org/10.1177/1077559512459555.

Webster-Stratton, C., & Spitzer, A. (1996). Parenting a young child with conduct problems: New insights using qualitative methods. In T. H. Ollendick & R. J. Prinz (Eds.). *Advances in clinical child psychology* (Vol. 18, pp. 1–62). Plenum Press. https://doi.org/10.1007/978-1-4613-0323-7_1.

Werba-DeRosa, B., Eyberg, S. M., Boggs, S. R., & Algina, J. (2006). Predicting outcome in Parent-Child Interaction Therapy Success and Attrition. *Behavior Modification, 30*(5), 618–646. https://doi.org/10.1177/0145445504272977.

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