

Preparing Families for Evidence-Based Treatment of ADHD: Development of Bootcamp for ADHD

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Objective: Many families of children with attention-deficit/hyperactive disorder (ADHD) do not initiate evidence-based treatments (EBTs), placing these children at risk for poor outcomes. Bootcamp for ADHD (BC-ADHD) is a novel, four-session, group intervention designed to prepare parents as informed consumers to engage in multimodal EBTs for ADHD. This paper describes the theory of change and the development of BC-ADHD, outlines its components, and provides an initial proof of concept of the program. **Method:** Participants were 11 families of children with ADHD (ages 5–11; 55% male; 91% non-Hispanic; 55% White, 27% Black, 18% more than one race) who were the initial participants receiving BC-ADHD during a small-scale, randomized controlled trial. Parent-report outcome measures assessed parental empowerment, treatment preferences, affiliate stigma, intention to pursue treatment, and treatment initiation at baseline, posttreatment, and 6-week follow-up. **Results:** Parent engagement was high, as indicated by an 86% session attendance rate and high ratings of program satisfaction. Parents reported an increase in empowerment to access systems of care. Ratings of acceptability for behavior therapy increased at posttreatment and follow-up with minimal or no concerns about feasibility. The acceptability of medication was high at each assessment, although parents expressed increased concerns about stigma and adverse effects of medication at posttreatment and follow-up. Nonetheless, there was a marked increase in parental intention to use medication at posttreatment and follow-up. Accounting for ceiling effects, parents reported substantial increases in intention to use medication, behavioral parent training (BPT), and school services. Changes in treatment initiation were in the expected direction. **Conclusions:** BC-ADHD has the potential to promote family empowerment in seeking services and increase their intent to initiate EBTs, as well as actual initiation of these treatments.

ATENTION-DEFICIT/HYPERACTIVITY DISORDER (ADHD) is a chronic neurodevelopmental disorder characterized by impaired executive functioning and self-regulation manifesting in elevated levels of inattention and/or hyperactivity/impulsivity (Barkley, 2018). An estimated 10% of children and adolescents are diagnosed with this condition (Danielson et al., 2018a; Visser et al., 2014). Children with ADHD show impairments at school, at home, and with peers (Power et al., 2017), and are at increased risk for premature death

and comorbid physical and mental health conditions (e.g., eating disorders, substance abuse, antisocial personality disorder, depressive disorders, and anxiety disorders; Barbaresi et al., 2013; Barkley et al., 2008; Brook et al., 2013; Chung et al., 2019). These impairments result in a high cost to families and society (Matza et al., 2005). Research conducted over the past 50 years has firmly established that there are highly effective psychosocial and pharmacological interventions for this condition (Johnston & Park, 2015), and clinical practice guidelines affirm that psychosocial and educational interventions are critical for the treatment of ADHD (Wolraich et al., 2019), including complex ADHD (referring to the presence of ADHD with one or more comorbid conditions, and/or moderate

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to severe impairment, and/or inadequate response to initial attempts to intervene; [Barbareasi et al., 2020](#)).

Scope of the Problem and Barriers to Evidence-Based Care for ADHD

Although ADHD is highly impairing and able to be treated effectively, families often do not engage in evidence-based treatments (EBTs), particularly psychosocial approaches, to treat this condition ([Cuffe et al., 2009](#); [Danielson et al., 2018b](#)). With regard to psychosocial care, it is estimated that fewer than 50% of children with ADHD have received some form of behavior therapy in the past year ([Visser et al., 2014](#)), and only 30% of families of children with this condition have ever received behavioral parent training (BPT; [Danielson et al., 2018b](#)). With regard to pharmacological treatment, it is estimated that 67% of children and adolescents with ADHD are currently on medication for ADHD and 91% have ever taken medication ([Danielson et al., 2018a](#)). Regarding school services, 80% of students with ADHD and school-based problems received school services at some point, whereas an estimated 62% of students with ADHD currently receive any school-based interventions, and only 32% received classroom behavior management ([DuPaul et al., 2019](#)). Together, these results indicate that a large proportion, if not the majority, of children with ADHD do not receive comprehensive, multimodal, EBT for ADHD, including behavioral, pharmacological, and school-based components.

Like all chronic conditions first identified in childhood, parents are responsible for initiating the process of seeking care for ADHD, and they often encounter substantial barriers in doing so. [Eiraldi and colleagues \(2006\)](#) have identified three types of barriers associated with the utilization of EBTs for ADHD: public policy barriers (e.g., fragmentation in services, racial discrimination, educational policies), health insurance/administrative barriers (e.g., eligibility for public insurance, reimbursement for medication and psychosocial care), and direct service barriers (e.g., perceived stigma of the diagnosis and its treatment, acceptability of treatments, and social support). These barriers contribute to substantial disparities in the diagnosis and treatment of ADHD. Lower rates of ADHD diagnosis and utilization of EBTs are especially noteworthy among children and adolescents who are Asian and Pacific Islanders, those of Hispanic ethnicity, and those with lower parental education level ([Chung et al., 2019](#); [Danielson et al., 2018b](#); [Visser et al., 2014](#)). Barriers at the direct service level generally are more amenable to change in the context of treatment, in contrast to policy and insurance/administrative issues ([Eiraldi et al., 2006](#)). Further, given the relatively

high heritability of ADHD, it is not surprising that an estimated 25–50% of families in which there is a child with ADHD have at least one biological parent with this condition ([Faraone et al., 2005](#); [Takeda et al., 2010](#)). Parental ADHD may contribute to inconsistent adherence to EBTs for child ADHD and difficulty sustaining gains in response to psychosocial care ([Chronis-Tuscano et al., 2017](#)). Parental ADHD may also contribute to difficulties pursuing and implementing recommendations offered at the time of evaluation feedback.

Justification and Origins of Bootcamp for ADHD

Because of the substantial barriers families often experience in seeking care for their child's ADHD, researchers have advocated for the development of programs to promote family engagement in and adherence to EBTs for ADHD ([Wolraich et al., 2019](#)). Several such programs have been developed to improve family engagement (i.e., increasing session attendance and completion of between-session homework) in the context of family-based psychosocial treatment. For example, [Nock and Kazdin \(2005\)](#) included an intervention module, Participation Enhancement Intervention (PEI), at the outset of BPT to promote family engagement. [Sibley and colleagues \(2016\)](#) included motivational interviewing techniques to engage teens and their parents in the first module of the Supporting Teens Autonomy Daily (STAND) intervention. In addition, [Chacko and colleagues \(2009\)](#) included an extended intake process using motivational interviewing strategies, as well as engagement strategies embedded in BPT as part of the Strategies to Enhance Positive Parenting (STEPP) program, with a goal of engaging single-parent families in treatment and improving outcomes. These programs generally address the problem of engagement and adherence to EBTs among parents who have already decided to initiate treatment for their child's ADHD. In addition, these efforts have focused on engagement in family-focused psychosocial approaches in contrast to comprehensive, multimodal, evidence-based care, which requires that parents be assertive in accessing and initiating services from mental health, school, and health professionals.

Building on engagement approaches that have been integrated into family-based psychosocial treatments (e.g., [Chacko et al., 2009](#); [Nock & Kazdin, 2005](#); [Sibley et al., 2016](#)), Bootcamp for ADHD (BC-ADHD) was developed as a brief (four-session), engagement and psychoeducation program for families in the early stages of learning to cope with their child's ADHD. The program was designed to prepare

parents as informed consumers of multimodal, evidence-based care for ADHD and address barriers to initiating and engaging in multimodal treatment. BC-ADHD is described to parents as an extended diagnostic feedback session to help them learn more about ADHD, process their questions about the diagnosis, and decide on next steps for treatment.

We initially developed BC-ADHD in 2010 in response to three considerations. First, our experience administering a psychoeducation and parent support program in prior studies (Power et al., 2012; Mautone et al., 2012) showed that families rated the program as having a high level of acceptability; they appreciated the opportunity to learn more about ADHD, address questions about the diagnosis and potential stigma, and obtain support from other parents coping with this condition. Second, research has demonstrated that parental deficits in executive functioning, often linked with the genetics of this condition, can serve as barriers to implementing evidence-based strategies for ADHD (Chronis-Tuscano et al., 2017). For example, these deficits may manifest in inconsistencies in parental follow-through with treatment recommendations for their child and a pattern of arriving late to behavior therapy and medication follow-up sessions. Our experience providing BPT to parents of youth with ADHD suggested that parents would benefit from strategies for organizing and planning routines to help them initiate and follow through with treatment for their child's ADHD (Dawson, et al., 2016). Third, a review of research on motivational interviewing suggested that this approach likely would help parents of children with ADHD by addressing their ambivalence about the diagnosis and treatment of this condition and promoting their empowerment to seek and initiate evidence-based strategies for their children (Miller & Rollnick, 2013; Wagner & Ingersoll, 2012).

Between 2011 and 2015, BC-ADHD was offered as a clinical service within Children's Hospital of Philadelphia. During this time, the team developed the program manual through an iterative process and conducted quality improvement projects to refine the program. In 2015–2016, BC-ADHD was disseminated to colleagues at two other institutions, the Institut du Savoir Montfort and Boston Children's Hospital. Clinical researchers across the three sites began collaborating on a regular basis to develop the program's theory of change and measurement procedures. In addition, the multisite team revised the program manual to align it with the theory of change and developed process and content fidelity coding procedures to facilitate standardization of implementation across sites.

The Current Study

The purpose of this paper is to describe the theory of change and development of BC-ADHD, outline the components of the program, and provide an initial proof of concept by presenting findings for the first two cohorts of families that received BC-ADHD as an in-person multifamily group intervention as part of a small-scale randomized controlled trial (RCT). We present evidence of program feasibility, acceptability, and potential effectiveness at posttreatment and short-term follow-up. Targeted outcomes included parental empowerment to access services, ADHD treatment preferences, affiliate stigma, intention to pursue EBTs, and treatment initiation. We tested intervention effects at posttreatment and at a follow-up 6 weeks later to explore short-term maintenance and possible sleeper effects.

Method

Participants

Participants described in this report were families randomly assigned to the first two BC-ADHD groups (and attended at least one session) in the context of a larger RCT of this program that was conducted within a specialty care ADHD Center. Families were referred to the program by psychologists, physicians, and clinical social workers in the Departments of Pediatrics and Child and Adolescent Psychiatry and Behavioral Sciences of Children's Hospital of Philadelphia, a children's hospital located in a large metropolitan area of the United States. Interested families were referred to the study using intake procedures already in place for receiving clinical referrals. A research coordinator called referred families to provide information about the project and conduct a screening interview to determine eligibility. Parents of children with ADHD were invited to participate in the RCT if (a) their child was between 5 and 11 years old; (b) the child had received an initial diagnosis of ADHD from a psychologist, physician, or clinical social worker within the institution in the past 24 months; and (c) at least one English-speaking parent/legal guardian agreed to participate in the study because intervention materials and measures have not yet been translated into other languages. Although all primary caregivers (i.e., parents, stepparents, grandparents) were welcome to attend sessions, one parent was designated as the primary participant and this individual was asked to complete the measures. For ethical reasons, our team accepted referrals of children who were receiving medication, special education or 504 accommodations/interventions, and/or psychosocial interventions at the time of enrollment. Parents and children were excluded from partic-

ipating in the study if the child had an intellectual disability or autism spectrum disorder or demonstrated evidence of psychosis, active suicidal or homicidal ideation and/or behavior, or self-harm behaviors at the time of initial screening. Conduct disorder, anxiety disorder, depressive disorder, and posttraumatic stress disorder were exclusionary only if the study team determined that these conditions required clinical attention with a different type of treatment. Parents gave consent to participate and all procedures were approved by the Institutional Review Board.

During the recruitment period, a total of 65 families were referred to the study. Of those, 46 were determined to be eligible, and 23 consented to participate. Following the screening and consent process, families were placed on a list of participants awaiting assignment to study condition. Once a cohort of at least 10 families enrolled, parents were randomly assigned to either BC-ADHD or a wait-list control condition at a 1:1 ratio. Of the 23 consented families, 12 were assigned to BC-ADHD and 11 to the wait-list control condition. One family assigned to BC-ADHD dropped out immediately after randomization because they could not attend any of the scheduled sessions, so this report describes findings for 11 families. BC-ADHD was administered via in-person groups.

Theoretical Foundation and Theory of Change for BC-ADHD

BC-ADHD is grounded in several complementary theoretical models. The help-seeking behavior model has particular relevance in that it asserts that individuals navigate multiple stages in preparing for, investing in, and sustaining behavioral health interventions (Andersen, 1995). This model was originally developed for adults seeking care and has been adapted to apply to parents pursuing help for their children with ADHD (Eiraldi et al., 2006). The four stages of the help-seeking model for ADHD include (a) recognizing that the symptoms of ADHD are contributing to a significant problem for the child/family, (b) deciding to initiate treatment, (c) identifying service options and selecting interventions, and (d) working through barriers to service utilization and adherence during the course of intervention.

BC-ADHD is also rooted in the transtheoretical model, a well-established model for understanding individual movement through stages of change (Prochaska et al., 2008a, 2008b). In Stage 1, precontemplation, individuals do not have any plans to take action to change their behavior in the foreseeable future. In Stage 2, contemplation, individuals think about changing sometime in the near future and are considering the benefits and costs of change but are

ambivalent about changing. In Stage 3, preparation, individuals have a plan of action and are intending to take action in the near future. In Stage 4, action, individuals have taken steps toward behavior change. In Stage 5, maintenance, individuals are working to sustain behavior change and prevent relapse. With some noteworthy recent exceptions (Andrade et al., 2015), this framework has received little attention with respect to parenting interventions, especially for ADHD.

In addition, BC-ADHD is grounded in self-determination theory (Deci & Ryan, 1985; Ryan & Deci, 2018). Self-determination theory is a framework for studying an individual's motivation to change and suggests ways in which the social environment (therapists, groups) can foster self-determined motivations and actions. According to self-determination theory, motivation to change is associated with (a) an individual's sense of autonomy in being able to identify options and determine the best course of action, (b) their sense of competence in being able to accomplish tasks that will be required to make a change, and (c) the extent to which they are related to others and can obtain support in the desired direction for change. Self-determination theory provides a useful framework for understanding how motivational interviewing can be effective (Ryan & Deci, 2008), and interventions incorporating motivational interviewing (e.g., STAND; Sibley, 2016) are increasingly being used with youth who have ADHD and their families.

Intervention strategies incorporated into BC-ADHD are based upon these theories and can be grouped into five main components. The theory of change (see Figure 1) illustrates proposed mechanisms through which these intervention components contribute to family outcomes. First, BC-ADHD includes psychoeducation regarding ADHD, its functional impairments and co-occurring conditions, as well as EBTs for the disorder. The goals of the psychoeducational components of the program are to (a) help parents understand the impact of ADHD on their children/families and identify options for addressing the problem (help-seeking model), and (b) address questions parents have about the diagnosis and pursuing help for their child (trans-theoretical model). Second, motivational interviewing techniques are used by the group leader to promote parent autonomy in generating solutions that are consistent with their goals and values (self-determination theory) and support parental movement through the stages of change (transtheoretical model). Third, BC-ADHD provides implementation supports for between-session homework assignments (i.e., review of parental homework completion to identify barriers to implementation and proposed solutions to address barriers) that give parents opportunities to practice

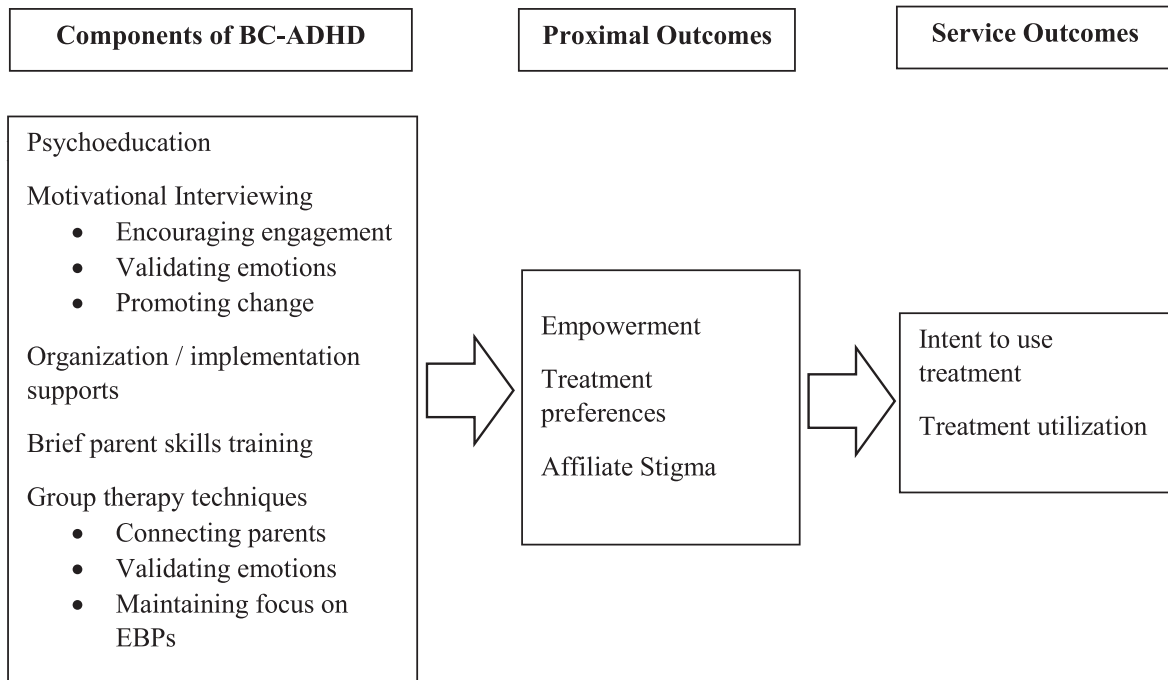


Figure 1. BC-ADHD Theory of Change. Note. BC-ADHD has five components. This program is designed to influence proximal outcomes, intent to use treatments, and ultimately actual treatment utilization.

parenting skills and address their own organizational challenges, thereby improving parents’ sense of empowerment and promoting the sustained use of evidence-based strategies (help-seeking model, trans-theoretical model). Fourth, BC-ADHD introduces parents to BPT by providing brief skills training in positive parenting practices, which is designed to promote parental competence (self-determination theory) and help them better understand what BPT would involve—thereby making them informed consumers of treatment choice. Fifth, group therapy techniques are used to connect parents with one another and offer emotional validation of each participant, thereby reducing parents’ sense of isolation and stigma (self-determination theory) and helping them overcome barriers to obtaining care (help-seeking model). These five components are designed to improve proximal outcomes (parental sense of empowerment to navigate the health and educational systems, treatment preferences, and affiliate stigma). Improvements in these proximal outcomes are proposed to increase service-level outcomes (intent to initiate and actual utilization of EBPs; see Figure 1).

Intervention Protocol for BC-ADHD

The content of the four-session BC-ADHD program is presented briefly in this section and described in

more detail in Table 1. Session 1 focuses on helping parents understand the ADHD diagnosis, introduces the heritability of ADHD, and offers parents an opportunity to talk about the potential impact of parental ADHD. Parents are given the opportunity to express questions and concerns about the diagnosis and how to help their child. In addition, parents are introduced to a straightforward way of assessing factors contributing to behavior change (antecedent–behavior–consequence [ABC] framework; Kazdin, 2012). During Session 1, group process focuses on connecting parents with one another and highlighting shared experiences, as well as validating their concerns and emotional experiences. At the end of the session, parents are given a homework assignment to help them recognize how often they respond to their children with positive reinforcement, verbal correction, and neutral statements.

Session 2 begins with a review of homework designed to help parents examine the extent to which they are using positive parenting practices. In addition, homework review helps parents identify challenges to implementing behavioral strategies at home and how to overcome challenges. Session 2 focuses on helping parents understand and connect with one another about the challenges ADHD presents in the home setting, understand the key principles and components of

Table 1
BC-ADHD Content

Session	Topic	Session content	Session homework
1	Overview of ADHD: diagnosis, developmental course, and comorbidities; introduction to the ABC model of behavior assessment	<ul style="list-style-type: none"> • Build connections among parents • Provide psychoeducation regarding ADHD symptoms, comorbidities, and impairments • Provide psychoeducation about genetic basis for ADHD • Help parents explore questions about diagnosis • Introduce evidence-based treatments for ADHD • Help parents examine the antecedents and consequences of behavior: ABC model • Assign homework (track positive, negative, and neutral statements), addressing anticipated implementation barriers 	<ul style="list-style-type: none"> • Track positive, negative, and neutral statements parents make during parent–child interactions
2	Family-based treatment of ADHD	<ul style="list-style-type: none"> • Homework review: lessons learned, review of ABC model and implementation challenges • Discuss how ADHD impacts home—affects entire family system, impact of parental ADHD • Provide psychoeducation regarding BPT • Introduce parents to the attention grid and use it to teach “catch ‘em being good” and “strategic ignoring” strategies • Discuss how parents can access BPT • Assign homework (catch ‘em being good), addressing anticipated implementation challenges 	<ul style="list-style-type: none"> • Use catch ‘em being good on several occasions during the week to reinforce a specific behavior
3	Medication treatment for ADHD	<ul style="list-style-type: none"> • Homework review (catch ‘em being good): lessons learned, review of ABC model and implementation challenges • Provide psychoeducation about the neurological basis of ADHD • Discuss parents’ experiences and questions about medication • Provide psychoeducation regarding ADHD medications • Discuss whether parents are considering medication • Discuss how to talk to children about having ADHD • Discuss an individualized plan for follow-up care • Assign homework (strategic ignoring, plan for follow-up care), addressing anticipated implementation challenges 	<ul style="list-style-type: none"> • Use strategic ignoring on several occasions during the week to extinguish a specific behavior • Develop plan for evidence-based care for BPT and medication

Table 1 (continued)

Session	Topic	Session content	Session homework
4	School-based interventions for ADHD	<ul style="list-style-type: none"> • Homework review (strategic ignoring and plan for follow-up care): lessons learned, review of ABC model and implementation challenges • Discuss how ADHD affects children at school • Explain how medication can help children in school • Discuss strategies for building partnerships with teachers • Discuss how to design an individualized school plan using the ABC model • Introduce parents to the daily report card • Discuss whether parents are considering school-based interventions, helping them decide on next steps • Assign homework (refine and implement plan for follow-up care), addressing anticipated implementation challenges 	<ul style="list-style-type: none"> • Draft plan for follow-up care for school services • Implement plan for follow-up care for all services (behavioral, medication, and school)

Note. BC-ADHD = bootcamp for ADHD; ADHD = attention-deficit/hyperactivity disorder; ABC = antecedent–behavior–consequence; BPT = behavioral parent training.

BPT and their role in being agents of change for their child, engage in decision making to address their child’s home-based challenges, and initiate the use of positive parenting strategies (e.g., “Catch them being good”). The clinician leads parents in a discussion about initiating BPT for their child while affirming parents’ motivation to change. Group process focuses on identifying parents’ efforts to change and validating parents’ emotions related to parenting a child with ADHD. At the end of the session, parents are given a homework assignment to practice using selective attention to preferred behavior (the “Catch them being good” strategy).

Session 3 uses homework review to help parents further understand what BPT entails, foster the use of positive parenting strategies, and to help parents identify and address potential implementation barriers. In addition, homework review serves as a catalyst for a discussion about how to incorporate active ignoring strategies to reduce unwanted behaviors. Session 3 reviews the neurodevelopmental basis of ADHD, teaches parents about pharmacological interventions for the disorder, and helps parents consider whether they will initiate pharmacological treatments for ADHD,

while understanding that psychosocial approaches are foundational for the treatment of this condition (Barbarese et al., 2020). Clinicians engage parents in a discussion about how to speak with their child about ADHD in a way that supports children in becoming self-aware and increasingly independent in coping with ADHD. Clinicians continue to focus on using motivational interviewing strategies to promote change talk and building connections among parents to address barriers to future intervention initiation. For homework, parents are asked to draft a care plan of services they believe would be beneficial for their child and practice active ignoring strategies.

Session 4 uses homework review to offer parents an opportunity to refine their individualized plan of care, address additional questions about medication, and discuss challenges in implementing active ignoring strategies. Session 4 focuses on the impact of ADHD at school and school-based interventions for ADHD. The session engages parents in a discussion about the importance of building collaborative relationships with school professionals and provides brief psychoeducation about designing a daily report card (Volpe & Fabiano, 2013) and planning school-based accommo-

dations and interventions for their child. Group process focuses on validating frustrations parents may experience in working with their child's teacher and school, while using motivational interviewing techniques to promote movement toward building collaborative partnerships with schools and designing evidence-based intervention strategies to be incorporated into Section 504 or individualized education plans (IEPs). The homework assignment is for parents to further develop the plan of care to include strategies to support their child in school.

BC-ADHD was intentionally designed to include strategies to support parental completion of between-session homework assignments. For example, homework assignments are structured to facilitate easy completion and prompt parents to think of how they will remember to implement strategies. In addition, when reviewing homework during the following session, parents are asked to think of ways to remind themselves to use the parenting strategies. Parents are informed that a goal of the program is to help them develop systems to enable them to implement strategies on a consistent and ongoing basis.

A key part of BC-ADHD is the process by which it is delivered by clinicians. In fact, process is considered as essential to the program as the content itself. The process of delivering BC-ADHD, which includes elements of motivational interviewing and supportive group dynamics, is critically important to addressing barriers to treatment implementation and supporting family empowerment. Five key processes are used in every session of BC-ADHD: (a) encouraging parent active engagement, (b) eliciting and strengthening change talk, (c) providing emotional validation, (d) keeping parents focused on foundational principles and evidence-based practice, and (e) building connections among parents. [Table 2](#) describes these process fidelity items, which capture the key components of the proposed process of the BC-ADHD program.

BC-ADHD Clinicians

The BC-ADHD groups were led by advanced trainees in school psychology (postdoctoral fellow and fourth-year doctoral student). Both group leaders had previously learned the program by cofacilitating at least one BC-ADHD group with one of the developers. Consistent with recent advances in clinical supervision, clinicians were provided live supervision for each session, including coaching to provide feedback regarding their implementation of the prior session and consultation regarding administration of the next session ([Eiraldi et al., 2018](#)). Consultation and coaching focused on both content and process fidelity with an

emphasis on being responsive to the unique, culturally determined circumstances of each family.

Treatment Fidelity

To ensure intervention components were delivered as intended, treatment fidelity was examined during each program session. To assist with monitoring content fidelity, a checklist consisting of 11–14 items was developed for each BC-ADHD session. Content fidelity items specified components to implement during sessions and were rated as 0 (*not implemented*) or 1 (*implemented*). Ratings for each session were scored to determine the percentage of intervention components implemented per session.

Process fidelity procedures were developed based on strategies used by [Dumas et al. \(2001\)](#) to examine clinician adherence to key processes in parent group intervention. The process dimensions highlight the importance of delivering BC-ADHD in a manner that is responsive to the unique, culturally influenced circumstances of each participating family and that promotes adaptation to individual family situations. Process items for BC-ADHD sessions were rated on a scale from 1 (*rarely*) to 4 (*all or almost all of the time*); see [Table 2](#) for further details. Process fidelity was coded twice for each session: once during the initial introduction and homework review portion of the session and once during the new content portion of the session.

Content and process fidelity were assessed by an independent observer. Fidelity for 7 of the 8 sessions (3 sessions for one cohort and 4 for the second cohort) was assessed by a fellow in developmental and behavioral pediatrics who was trained by one of the codevelopers of BC-ADHD. The remaining session was coded by one of the codevelopers. A second, independent observer coded 62.5% of the sessions, and agreement between the ratings of the two observers was calculated.

Method

Measures

The measures used in this study included those administered to describe the sample, those used to examine parental engagement and satisfaction with the program, and those given to examine proximal and service-level outcomes.

Measures Describing the Sample

Demographic Measures

We conducted a chart review for each child participant to extract demographic and clinical information from the electronic medical record (EMR) to charac-

Table 2
BC-ADHD Process Fidelity Items

Process fidelity item	Description showing low levels of this item	Description showing high levels of this item
Encouraging parent active engagement	Facilitator's presentation was didactic with the majority of the talking being done by the facilitator; the facilitator did not make an effort to adapt the material to individual parent situations	Facilitator used open-ended questions, affirmations, reflections, and summaries to encourage parent engagement; facilitator adapts material to individual parent situations
Eliciting and strengthening change talk	Facilitator focused on sustain talk or status quo (e.g., reasons parents can't accept their child's diagnosis or available treatments, or why they can't do the homework) without evoking and reflecting the parents' own efforts or stated reasons to change	Facilitator affirmed parents' desire, ability, reasons, and need for change (e.g., accepting their child's diagnosis or treatment, completing homework)
Providing emotional validation	Facilitator was not responsive to or was critical of concerns voiced by parent	Facilitator provided social support, emotional reassurance, or validation of parent's feelings
Keeping parents focused on foundational principles and evidence-based practice	Facilitator did not keep parents focused on foundational principles and evidence-based practices during off-topic discussions or when parents suggest something that would be contraindicated by BC-ADHD (e.g., procorporal punishment, negative parenting)	Facilitator kept parents focused on foundational principles and evidence-based practices during off-topic discussions or when parents suggest something that would be contraindicated by BC-ADHD (e.g., procorporal punishment, negative parenting)
Building connections among parents	Facilitator did not attempt to connect parents to one another	Facilitator built connections among parents and built on shared parents' experiences

Note. BC-ADHD = bootcamp for ADHD.

terize the sample. Demographic data included insurance status and type (commercial or public). Clinical data included current and past mental health diagnoses. In addition, parents completed a brief demographic form providing information about their families (i.e., single-/two-parent family, parents' education level) and their child (i.e., age, gender, race, ethnicity).

Ratings of Child ADHD Symptoms

The Swanson, Nolan, and Pelham (SNAP) questionnaire parent version (Swanson et al., 2001) was administered to assess child ADHD symptoms. The 18 items of the SNAP correspond to the symptom descriptions for ADHD in the *Diagnostic and Statistical Manual of Mental Disorders—Fourth Edition* (DSM-IV): 9 symptoms of inattention and 9 symptoms of hyperactivity/impulsivity. Each item is rated for its frequency of occurrence on a 4-point scale ranging from 0 (*not at all*) to 3 (*very much*). A score of ≥ 2 on an item is used as an indication that the symptom is present. Number of symptoms endorsed for each ADHD symptom dimension (inattention and hyperactivity/impulsivity) was used to characterize the sample with a total of 9 symptoms possible for each symptom dimension.

Measures of Family Engagement and Program Acceptability

Parent Attendance

Group leaders recorded family attendance for each session and an independent observer confirmed this information. If parents did not attend a session, group leaders documented whether there was a makeup session conducted in person or by phone and the length of the makeup.

Parent Satisfaction

Parent satisfaction with BC-ADHD was assessed with a program evaluation scale. Parents were asked to evaluate the helpfulness of each of the four sessions, as well as five aspects of the program (organization of sessions, information provided, opportunity to share with other families, parent handouts, and between-session homework assignments). Each item was rated on a 7-point Likert scale (1 = *not helpful*, 4 = *medium* [helpful], 7 = *very much* [helpful]). The mean item score was used as a measure of overall satisfaction with the program.

Qualitative Feedback From Parents

After each BC-ADHD session, parents were asked to complete a form with three items: (a) Please share

“comments, questions, or suggestions for group leaders”; (b) “What might get in the way of you being able to complete the task that was assigned for homework this week?”; and (c) “What can you foresee being a problem with regard to your attending the next group meeting?” In addition, after the final session, parents were asked about the follow-up care they intend to pursue for their child with ADHD.

Proximal Outcome Measures

Parental Empowerment

The Family Empowerment Scale (FES; [Koren et al., 1992](#)) assesses parent empowerment across three domains (Family, Children’s Service System, and Community/Political Environment). We included the Children’s Service System subscale (12 items) in this study, which assesses parental empowerment to access and work effectively with systems of care for children. Each item is rated on a 5-point scale (1 = *not at all true*, 3 = *somewhat true*, 5 = *very true*). The mean item score was used as an index of parent empowerment. The internal consistency of the Children’s Service System subscale is high (alpha = .87; [Koren et al., 1992](#)), and research supports the validity of this measure ([Resendez et al., 2000](#); [Singh et al., 1995](#)).

Parents’ Treatment Preferences

The ADHD Preference and Goal Instrument assesses parents’ preferences for medication (16 items) and behavior therapy (14 items), as well as their goals for intervention. The Preferences subscales, which were used for this study, include subscales related to Acceptability, Feasibility Concerns, and Adverse Effects for both treatments, and stigma for medication only. Each item was rated on a 5-point scale to indicate respondents’ degree of agreement with statements about preferences (0 = *not at all*, 2 = *somewhat*, 4 = *completely*). Mean item scores were computed for each subscale. Higher scores on the Acceptability subscale are more favorable, and high ratings on Feasibility Concerns, Adverse Effects, and Stigma are less favorable. The Preferences subscales have been shown to have adequate to high levels of internal consistency (range of alphas = .74–.87; [Fiks et al., 2012](#)).

Affiliate Stigma

We used an adapted version of the Affiliate Stigma Questionnaire (ASQ; [Mak & Cheung, 2008](#)) specific to ADHD symptoms (12 items: 6 pertaining to stigma regarding inattention and 6 pertaining to stigma regarding hyperactivity and impulsivity; [Mikami et al., 2015](#)) to assess parental sense of being stigmatized and isolated due to child ADHD. Responses ranged from 1 (*not at all*) to 4 (*very much*). Following the pro-

cedure used by Mikami and colleagues, the mean score of all 12 items was calculated and used as an indicator of the overall level of concern about the stigma associated with ADHD. The internal consistency of this scale has been shown to be strong (alpha = .83) and research supports the predictive and concurrent validity of the measure ([Mak & Cheung, 2008](#); [Mikami et al., 2015](#)).

Service-Level Outcome Measures

Intention to Pursue Treatments for ADHD

A brief questionnaire was used to assess parental intention to pursue treatments for ADHD, based on a standardized item stem that has been used to predict a range of health and mental health behaviors ([Fishbein & Ajzen, 2010](#); [Fishbein & Cappella, 2006](#)). The items asked, “How likely is it that you will pursue or continue to . . .” (a) “use behavior therapy for your child and family to treat symptoms of ADHD?”, (b) “obtain medication for your child to treat symptoms of ADHD?”, and (c) “collaborate with school professionals to obtain school services for your child?” Each item was rated by parents on a 7-point Likert scale (1 = *very unlikely*, 4 = *unsure*, 7 = *very likely*).

Receipt of EBT for ADHD

Following procedures used by [Fiks et al. \(2013\)](#), parents were requested to indicate whether their child had ever taken medication or ever received behavior therapy for ADHD. In addition, they were asked whether their child is currently receiving special education services and/or currently has a 504 plan, given significant concerns raised about children with ADHD who are not receiving educational services ([DuPaul et al., 2019](#)).

Assessment Procedures

Measures related to theoretically driven outcomes were collected at baseline, posttreatment, and follow-up, which occurred 6 weeks after posttreatment. Additional demographic and clinical measures were administered only at baseline. Program evaluation and participant satisfaction measures were administered only at posttreatment. Parent-report outcome measures were administered using a REDCap survey ([Harris et al., 2009](#)).

Data Analyses

Data were extracted from REDCap and imported into SPSS for analysis. Using an intent-to-treat approach, we included all baseline, postintervention, and 6-week follow-up data available. Of the 11 families included in the sample, 11 provided baseline data, 10 had posttreatment data, and 11 had 6-week follow-up

data. Given its small sample size, the current proof-of-concept study was not powered for significance testing. Descriptive statistics were used to examine demographic characteristics of the sample, attendance at sessions, participant satisfaction with the program, and clinician level of content and process fidelity. To estimate potential treatment effects, effect sizes (ES) were calculated to determine the change from baseline to posttreatment and from baseline to follow-up for both proximal outcome variables and service-level variables. Following the procedures used in other proof-of-concept reports and recommended for small sample size analyses (e.g., Busk & Serlin, 2005; Fabiano et al., 2011), ES were calculated by subtracting the baseline mean from the posttreatment (and follow-up) mean and then dividing by the baseline standard deviation. ES were interpreted using guidelines suggested by Cohen (1988): 0.2, 0.5, and 0.8 indicate small, medium, and large effects, respectively. Because substantial ceiling and floor effects were found on service-level outcome measures, follow-up analyses were conducted to determine the impact of the ceiling/floor effects on the findings.

Results

Participant Characteristics

Participants were parents of 11 children (55% boys) between the ages of 5 and 11 ($M = 8.29$, $SD = 1.83$). The majority of the children were of non-Hispanic descent (91%). Children's racial identity was 55% White, 27% Black, and 18% more than one race. At baseline, children displayed an average of 5.75 ($SD = 2.83$) inattentive symptoms and 5.83 ($SD = 3.04$) hyperactive/impulsive symptoms by parent report. A review of the EMR indicated that all children had a diagnosis of ADHD, 18% had a co-occurring learning disorder, 9% had an oppositional defiant disorder (ODD), 45% had an anxiety disorder, and 9% had a depression diagnosis. Caregivers who completed assessments generally were biological mothers (82%). The majority of parents had at least a college degree (82%), and most children were insured with commercial insurance (91%). Eight parents (72%) indicated they lived in two-parent families, one parent (9%) reported being divorced and involved in coparenting with two parents, and two parents (19%) reported being single parents.

Clinician Implementation Fidelity

Clinicians were able to implement BC-ADHD with a high level of fidelity. Content fidelity was excellent across all sessions (100% of session content was implemented for both groups). Process fidelity was also high across sessions ($M = 3.70$, $SD = 0.51$, range = 2–4 on a 4-

point scale with a maximum score of 4). Ratings of acceptability demonstrated acceptable levels of inter-observer reliability ($\kappa = 1.0$ for content fidelity, ICCs = 0.70 for process fidelity).

Family Engagement in BC-ADHD

Attendance rates were computed for the 11 participants who attended at least one session. Attendance was relatively high across all four BC-ADHD sessions ($M = 86%$). All of these families attended at least three sessions. All families (100%) attended Session 1, 82% attended Session 2, 100% attended Session 3, and 64% attended Session 4. Parents completed a make-up session, consisting of a brief review of session content for the session not attended, for 33% of missed sessions. Group participants included 11 mothers and 6 fathers, and 6 families had both parents in attendance for at least one BC-ADHD session.

Family Satisfaction With BC-ADHD

Overall satisfaction with the program was high (rating of 4 = *medium*, 7 = *very much*, $M = 5.4$, $SD = 1.3$). Satisfaction with each of the four sessions ranged from $M = 4.9$ (Session 3 on medication) to $M = 5.4$ (Session 4 on school-based intervention). Satisfaction with various aspects of the program were all positive (information provided, $M = 5.2$; handouts, $M = 5.4$; homework, $M = 5.7$; organization of sessions, $M = 5.9$; opportunity to share with others, $M = 6.1$).

Qualitative feedback confirmed high levels of satisfaction with the program. Examples of comments shared included "I'm very happy with all the information that I got and will use it," "Great to hear other parents' perspectives and makes us feel like we are not alone," and "I really loved the group discussions. They allowed us to learn tips and hear success stories." Barriers to attending sessions included the need to leave work early to attend sessions and the need to find babysitting. Barriers identified in completing between-session homework included difficulty finding time due to work demands and/or the demands of caring for siblings, difficulty remembering to do the homework, and difficulty implementing the homework due to child misbehavior. Barriers to engaging in follow-up care included difficulty finding clinicians in their area who provide BPT and specialize in medication management, and school resistance to providing accommodations because ADHD symptoms were not impacting their child academically. At the end of the program, only one parent indicated being unsure which interventions to pursue as a next step for their child.

Changes in Proximal Outcomes

Means and standard deviations for each proximal outcome measure at baseline, posttreatment, and follow-up are reported in [Table 3](#). In addition, this table presents ES for comparisons between baseline and posttreatment and between baseline and 6-week follow-up. As indicated, there was a substantial increase in parental empowerment to access and work with systems of care with a medium to large positive effect at posttreatment ($ES = 0.68$) and a small to medium positive effect at follow-up ($ES = 0.36$).

With regard to parental preferences for behavior therapy, there was a small to medium positive change in ratings of acceptability from baseline to posttreatment ($ES = 0.35$) and from baseline to follow-up ($ES = 0.49$). There was a small increase in feasibility concerns at posttreatment ($ES = 0.27$), which was attenuated at follow-up (ES for baseline to follow-up = -0.12). In addition, there was a small increase in concerns about the adverse effects of behavior therapy at posttreatment ($ES = 0.19$), but this effect was attenuated at follow-up (ES for baseline to follow-up = 0.00). It was noted that a relatively large proportion of participants demonstrated little to no concerns about feasibility or adverse effects at baseline (feasibility concerns: 30% of participants scored within 0.5 of the minimum score at baseline; adverse events concerns: 70% of participants scored within 0.5 of the minimum score at baseline).

With regard to parental preferences for medication, there was no change in parents' views about medication acceptability from baseline to posttreatment ($ES = 0.00$) and a small increase in acceptability at follow-up ($ES = 0.31$). There was essentially no change in feasibility concerns about medication over time. An unexpected finding was that there were greater concerns about stigma related to medication at posttreatment ($ES = 0.81$) and follow-up ($ES = 0.62$). In addition, there was evidence of an increase in concerns about adverse effects at posttreatment ($ES = 0.53$), which was lower at follow-up ($ES = 0.17$). It was noted that a relatively large proportion of participants demonstrated little to no concerns about feasibility and stigma at baseline (feasibility concerns: 60% of participants scored within 0.5 of the minimum score at baseline; stigma concerns: 70% of participants scored within 0.5 of the minimum score at baseline).

The findings pertaining to changes in affiliate stigma demonstrated essentially no change at posttreatment and follow-up. A potential concern about this measure was that a relatively large proportion of participants demonstrated little to no concern about affiliate stigma at baseline (60% of participants scored within 0.5 of the minimum score at baseline indicating essentially no concern about stigma).

Changes in Service-Level Outcomes

The change in parent report of intent to pursue or continue to use BPT was small to medium at posttreatment ($ES = 0.38$) and small at follow-up ($ES = 0.28$). In contrast, the magnitude of change in intent to pursue or continue to use medication was medium at posttreatment ($ES = 0.53$) and follow-up ($ES = 0.62$). There was little change in intent to pursue or continue to use school services at posttreatment ($ES = 0.11$) and follow-up ($ES = 0.09$). An examination of the distribution of scores at baseline suggested potential ceiling effects that may have suppressed the degree of improvement (50% of families were at the ceiling score of 7 at baseline for BPT, 20% of families were at the ceiling for medication, and 60% for school services). When families with maximum scores were excluded from the analyses for each of these items, the degree of change at posttreatment and follow-up demonstrated a large effect for BPT (posttreatment $ES = 0.99$, follow-up $ES = 0.85$), medication (posttreatment $ES = 0.91$; follow-up $ES = 1.06$), and school services (posttreatment $ES = 0.70$; follow-up $ES = 1.04$). The findings controlling for and not controlling for ceiling effects are illustrated in [Figure 2](#).

Changes in treatment initiation were in the expected direction. Two children had received BPT prior to the start of BC-ADHD and three additional families initiated BPT prior to 6-week follow-up. Five children had received medication for ADHD prior to the start of BC-ADHD and one additional family initiated medication prior to follow-up. Two children were receiving school services (special education or 504 plan) at the start of BC-ADHD and no additional families had school services by follow-up. When families with the maximum scores were excluded from analysis, 33% of families that never had BPT at baseline had initiated BPT prior to the end of the follow-up period and 17% of families that had never initiated medication at baseline had initiated medication treatment prior to the end of the follow-up period.

Discussion

The BC-ADHD is a brief engagement and psychoeducational program for families in the early stages of learning to cope with their child's ADHD. BC-ADHD is a theoretically grounded program based on the help-seeking behavior model ([Andersen, 1995](#)), the transtheoretical model of change ([Prochaska et al., 2008a](#)), and self-determination theory ([Ryan & Deci, 2018](#)). The program was designed to prepare parents as informed consumers of multimodal, evidence-based care for ADHD and address barriers to initiating and engaging in multimodal treatment. BC-ADHD is

Table 3
Means, Standard Deviations, and Effect Sizes for Each Outcome Measure

Measure	BL Mean (SD)	PT Mean (SD)	6-week FU Mean (SD)	Effect size BL to PT*	Effect size BL to FU
Proximal outcomes family empowerment FES (family services)	4.04 (0.58)	4.44 (0.55)	4.25 (0.50)	0.68	0.36
Treatment preferences					
BT preferences—acceptability	3.02 (0.48)	3.11 (0.70)	3.25 (0.54)	0.35	0.49
BT preferences—feasibility concerns	1.37 (1.10)	1.63 (1.53)	1.23 (1.12)	0.27	−0.12
BT preferences—adverse events	0.36 (0.47)	0.49 (0.58)	0.36 (0.47)	0.19	0.00
Med. preferences—acceptability	2.83 (0.70)	2.89 (0.75)	3.05 (0.96)	0.00	0.31
Med. preferences—feasibility concerns	0.60 (0.85)	0.67 (0.88)	0.55 (0.73)	0.00	−0.06
Med. preferences—stigma	0.30 (0.43)	0.67 (1.09)	0.57 (0.74)	0.81	0.62
Med. preferences—adverse events	1.40 (0.95)	1.85 (1.45)	1.57 (1.05)	0.53	0.17
Affiliate stigma					
Affiliate stigma	1.64 (0.69)	1.66 (0.64)	1.56 (0.58)	−0.05	−0.12
Service outcomes					
Intent to initiate BPT	6.00 (1.41)	6.44 (1.13)	6.40 (0.84)	0.38	0.28
Use of BPT	0.20 (n = 2)	0.20 (n = 2)	0.50 (n = 5)	N/A	N/A
Intent to initiate med. treatment	4.60 (1.78)	5.56 (1.51)	5.70 (1.34)	0.53	0.62
Use of med. treatment	0.50 (n = 5)	0.50 (n = 5)	0.60 (n = 6)	N/A	N/A
Intent to initiate SS	6.30 (1.06)	6.56 (1.01)	6.40 (0.70)	0.11	0.09
Use of SS	0.20 (n = 2)	0.20 (n = 2)	0.30 (n = 3)	N/A	N/A

Note. BL = baseline; PT = posttreatment; FU = follow-up 6 weeks after the end of treatment; SD = standard deviation; FES = Family Empowerment Scale; BT = behavior therapy; med = medication; BPT = behavioral parent training; SS = school services. Higher scores for BT and med. feasibility concerns, BT and med. adverse effects, med. stigma, and affiliate stigma indicate greater levels of concern. Higher scores for FES, BT, and med. acceptability, intent to initiate, and use of BT, med., and SS reflect more favorable ratings.

* The baseline mean and SD for this calculation does not include the score for one participant who did not complete measures at posttreatment.

described to parents as an extended diagnostic feedback session to help them learn more about ADHD, process their questions about the diagnosis, and decide on next steps for treatment. The purpose of this paper is to describe the theoretical foundation, theory of change and the development of BC-ADHD, outline the components of the program, and provide an initial proof of concept by presenting findings for the first two cohorts of families that received BC-ADHD as part of a small-scale RCT. Key aspects of the BC-ADHD program include both the content delivered and the processes used to conduct sessions.

The findings support the acceptability and feasibility of BC-ADHD. Family engagement in the program was high: the overall attendance rate was 86%. Parents were pleased with each session and all aspects of the program, as reflected in high ratings of program satisfaction. They were especially pleased to have the opportunity to share experiences with other parents. Given the established connection between parent completion of homework assignments and outcomes (Clarke et al., 2015; Rooney et al., 2018), it was noteworthy that parents viewed between-session homework assignments as a helpful aspect of the program.

The BC-ADHD program was implemented by clinicians with a high level of fidelity. Clinicians delivered virtually all components of the program during each session. Further, they implemented each process dimension of BC-ADHD with high fidelity, indicating effective use of motivational interviewing and group process strategies in delivering the program. The use of a manualized curriculum, the systematic training and supervision provided by a program expert, and the selection of clinicians who were highly trained and invested in providing evidence-based services likely contributed to the high level of fidelity.

A goal of BC-ADHD is to increase the likelihood parents will become involved in multimodal EBTS for ADHD. The findings indicated that there was a substantial increase in the use of BPT over time: At baseline, only two families (20%) reported that they had ever received BPT, but this increased to five (50%) at follow-up. It should be noted that parents in BC-ADHD were informed about the availability of group BPT services through our institution’s ADHD Center although some of them did not have the option to begin this intervention within the 6-week follow-up period. Only one additional family initiated medication by

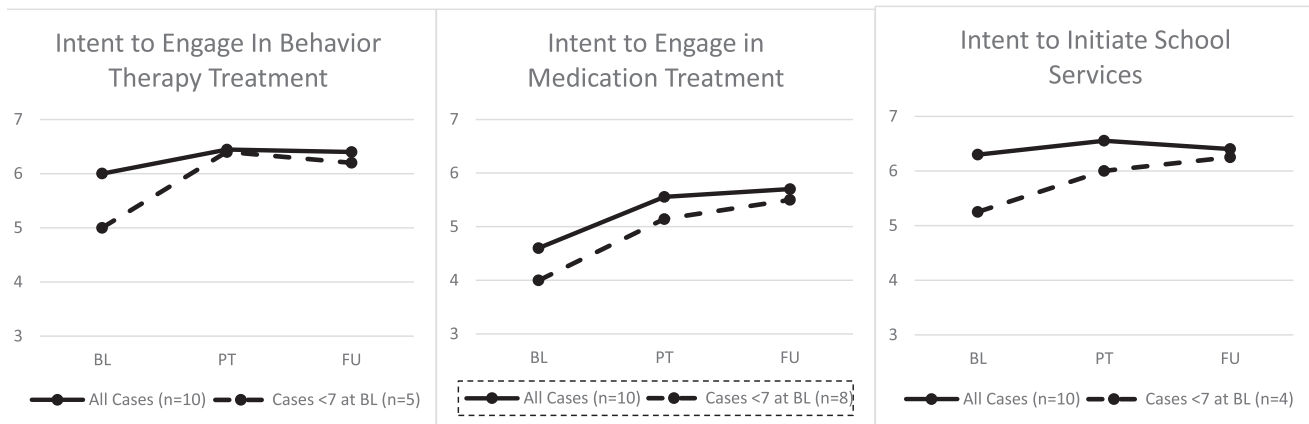


Figure 2. *Intent to Engage in Follow-up Treatment with Adjustments for Ceiling Effects.* Note. BL refers to baseline, PT refers to post treatment (or post intervention), and FU refers to 6-week follow up. These graphs show the mean intent to use BPT, medication and school services score at each timepoint for all evaluable cases (bold line) and the subgroup with participants who scored at the ceiling (rating of 7) at baseline removed (dashed line).

the 6-week follow-up assessment. The modest improvement in starting medication may have been due in part to the emphasis placed in BC-ADHD on psychosocial care as a foundation for treatment, although the fact that almost half the group was on medication at baseline limited the amount of change possible on this metric. No additional families were able to get school services (504 plan or IEP) instituted by follow-up, which is not surprising given the length of time it can take to initiate and complete the process of getting these supports.

Because of the limitations imposed by the brief duration of the follow-up period, we were interested in determining whether the program could change intent to pursue and continue to use intervention, which has been demonstrated to be predictive of actual changes in service use (Fishbein & Ajzen, 2010; Fishbein & Cappella, 2006). There was a noteworthy increase (medium effect) in intent to use medication in response to BC-ADHD, whereas the increase in intent to use BPT and school services was lower (small effect). However, when ceiling effects were accounted for, the change in intent to use all forms of intervention was large. The findings suggest that among parents who are unsure about whether to pursue one or more EBT for their child, BC-ADHD may be successful in improving their motivation for these treatments.

The findings offer some preliminary evidence regarding possible mechanisms of action for the BC-ADHD program. In particular, the results demonstrated that BC-ADHD has the potential to improve parental sense of empowerment to connect with systems and service providers to help their child, which was a key target for intervention. The effective care of children with ADHD requires that families establish

strong working partnerships with mental health clinicians and school providers to implement BPT, classroom behavior management, and behavioral homework interventions (Power et al., 2013). In addition, it is essential for families to have close, ongoing relationships with their children's primary care clinicians to encourage health-promoting behaviors (i.e., healthy eating, sleeping, and exercise routines), address health problems when these arise, and manage medication for ADHD when indicated (Barbarese et al., 2020; Wolraich et al., 2019). The findings suggest that parents may have a stronger sense of efficacy in being able to work effectively with school, mental health, and health professionals in response to this program.

Parents generally viewed BPT as acceptable, and this perception improved as a result of the intervention with gains maintained at the follow-up period. Parents expressed a small increase in concerns about the feasibility of obtaining BPT at posttreatment, apparently due to the time commitment involved, but these concerns seemed to abate by follow-up. It should be noted that the BC-ADHD groups described in this paper were offered to parents in person. It is possible that parents' concerns about the feasibility of obtaining BPT may be ameliorated when they have the option of receiving this service using telepsychology methods (Fogler et al., 2020).

Parents generally viewed medication as an acceptable intervention for ADHD, and there was evidence of a small improvement in ratings of acceptability by follow-up. An unexpected finding was that there was a noticeable increase in concerns about their child or family being viewed negatively for taking medication. This finding suggests that the discussion about medication during BC-ADHD may raise questions about

potential stigma and adverse effects of medication that are not addressed sufficiently during the program. Medication is discussed during about one half of Session 3 of BC-ADHD. Parents are given opportunities to learn about medication, ask questions, and share their experiences with other parents. It may be that more time is needed to address parental questions and afford them opportunities to obtain the support of peers. In addition, it may be helpful for clinicians to support parents in identifying their specific questions about medication and identify helpful ways to address these outside of sessions (e.g., confer with child's primary care clinician, attend parent support groups, engage in independent reading). However, to put these findings in context, parents generally demonstrated an increase in their intent to pursue or continue to use medication even though their participation in the program seemed to raise questions about medication-related stigma and adverse effects. Although parents expressed some concerns about stigma related to medication, overall they did not express a sense of stigma or isolation about having a child with ADHD. However, floor effects on the measure of affiliate stigma at baseline precluded it from being useful as an outcome indicator in this pilot.

This small-scale, proof-of-concept pilot had several limitations. First, the sample was small and not representative of the diversity of the U.S. population with regard to race/ethnicity and socioeconomic status. Future research is needed to determine how to adapt the program to families from diverse cultural and socioeconomic backgrounds. Second, the project was conducted in a specialty-care ADHD Center and may not reflect practice in the community, including primary care, community mental health, and schools. Third, only one of the children in the study had ODD, raising questions about the generalizability of the findings to children with this common co-occurring condition. However, the presence of comorbidities was determined by a health record review, which might underestimate the presence of a condition like ODD. Fourth, the follow-up period was short (6 weeks), which likely was not enough time for some participating families to initiate BPT and medication. In addition, 6 weeks did not afford sufficient time to determine whether schools were responsive to parental requests for school services. In future research, a longer follow-up period is recommended. Fifth, although BC-ADHD targeted service use and barriers to care and not changes in child outcomes, it is possible that this brief program could have an effect on a child's behavior and functioning. Quite frankly, it is possible that BC-ADHD may produce child-level effects in some cases that are sufficient to address parental

concerns, resulting in temporary stabilization of the child's functioning. In the future, it is important to examine whether and to what extent BC-ADHD can have an effect on child functioning and whether certain subgroups achieve stabilization in child functioning in response to intervention. Sixth, outcome measures used in this study were limited to the reports of parents, who may be biased to perceiving favorable outcomes. In the future, the use of additional methods of measurement, such as teacher reports of school service use and medication data extracted from electronic health records, is recommended. Finally, the study was conducted in a context in which follow-up BPT generally was accessible to families, although not necessarily within the follow-up time frame. The potential for BC-ADHD to improve use of BPT obviously depends on the availability of this service.

It should be acknowledged that there are numerous challenges to making this program accessible to a high proportion of families coping with ADHD. First, in order to bill public and private payers in many regions of the United States, it may be necessary to provide this group program with the child present during sessions. Incorporating children requires numerous adaptations of the program curriculum to make sessions meaningful to children and minimize barriers to sharing among parents. Second, offering the program in clinic-based sessions likely will be a barrier to many families. Providing the program in community settings (e.g., school, primary care), as well as via telehealth, may increase access for many families. Third, providing program sessions on a fixed schedule using a fixed sequence may be a disadvantage for families that have limited flexibility in scheduling. Offering the program at different times of the day, providing in-person and video options, and adapting sessions so they can be offered in variable sequences may be helpful in overcoming scheduling barriers. Finally, recruiting clinicians or family peer advocates who understand the cultural backgrounds of participating families likely will enhance the acceptability of the program and responsiveness of providers to family priorities and values (Chacko et al., 2020).

Conclusion

Preliminary evidence suggests that BC-ADHD is effective in helping parents feel empowered to seek needed services for their child with ADHD and increases their intent to initiate follow-up behavioral treatment, medication, and school services for their child. There was also evidence that BC-ADHD may increase actual initiation of such treatments. Future research on BC-ADHD is needed with a larger, more representative sample to improve the generalizability

of the findings and increase the power of analyses to detect moderate to small ES and examine effectiveness for subgroups based on demographic variables (e.g., child gender, race/ethnicity, socioeconomic status) and clinical characteristics (e.g., presence of comorbid child conditions, presence of parental ADHD). A longer follow-up period is needed to allow for sufficient time to assess BC-ADHD's impact on actual use of EBTS. In addition, research is needed to examine ways to expand program access while achieving acceptable outcomes.

References

- Andersen, R. M. (1995). Revisiting the behavioral model and access to medical care: Does it matter? *Journal of Health and Social Behavior, 36*(1), 1–10.
- Andrade, B. F., Browne, D. T., & Naber, A. R. (2015). Parenting skills and parent readiness for treatment are associated with child disruptive behavior and parent participation in treatment. *Behavior Therapy, 46*(3), 365–378. <https://doi.org/10.1016/j.beth.2015.01.004>.
- Barbaresi, W. J., Campbell, L., Diekroger, E. A., Froehlich, T. E., Liu, Y. H., O'Malley, E., Pelham, W. E., Power, T. J., Zinner, S. H., & Chan, E. (2020). Society for Developmental and Behavioral Pediatrics clinical practice guideline for the assessment and treatment of children and adolescents with complex attention-deficit/hyperactivity disorder. *Journal of Developmental and Behavioral Pediatrics, 41*(Suppl. 2S), S35–S57.
- Barbaresi, W. J., Colligan, R. C., Weaver, A. L., Voigt, R. G., Killian, J. M., & Katusic, S. K. (2013). Mortality, ADHD, and psychosocial adversity in adults with childhood ADHD: A prospective study. *Pediatrics, 131*(4), 637–644. <https://doi.org/10.1542/peds.2012-2354>.
- Barkley, R. A. (2018). *Attention-deficit hyperactivity disorder: A handbook of diagnosis and treatment* (4th ed.). Guilford Press.
- Barkley, R. A., Murphy, K. R., & Fischer, M. (2008). *ADHD in adults: What the science says*. Guilford Press.
- Brook, J. S., Brook, D. W., Zhang, C., Seltzer, N., & Finch, S. J. (2013). Adolescent ADHD and adult physical and mental health, work performance, and financial stress. *Pediatrics, 131*(1), 5–13.
- Busk, P. L., & Serlin, R. C. (2005). Meta-analysis for single-case research. In T. R. Kratochwill & J. R. Levin (Eds.), *Single-case research design and analysis: New directions for psychology and education* (pp. 187–212). Erlbaum.
- Chacko, A., Hopkins, K., Acri, M., Mendelsohn, A., & Dreyer, B. (2020). Expanding attention-deficit/hyperactivity disorder service provision in urban socioeconomically disadvantaged communities: A pilot study. *Clinical Practice in Pediatric Psychology, 8*(2), 189–194. <https://doi.org/10.1037/cpp0000321>.
- Chacko, A., Wymbs, B. T., Arnold, F. W., Pelham, W. E., Swanger-Gagne, M., Girio, E. L., & O'Connor, B. (2009). Enhancing traditional behavioral parent training for single-mothers of children with ADHD. *Journal of Clinical Child and Adolescent Psychology, 38*, 206–218. <https://doi.org/10.1080/15374410802698388>.
- Chronis-Tuscano, A., Wang, C. H., Woods, K. E., Strickland, J., & Stein, M. A. (2017). Parent ADHD and evidence-based treatment for their children: Review and directions for future research. *Journal of Abnormal Child Psychology, 45*(3), 501–517.
- Chung, W., Jiang, S.-F., Paksarian, D., Nikolaidis, A., Castellanos, X., Merikangas, K. R., & Milham, M. P. (2019). Trends in the prevalence and incidence of attention-deficit/hyperactivity disorder among adults and children of different racial and ethnic groups. *JAMA Network Open, 2*(11), e1914344.
- Clarke, A. T., Marshall, S. A., Mautone, J. A., Soffer, S. L., Jones, H. A., Costigan, T. E., Patterson, A., Jawad, A. F., & Power, T. J. (2015). Parent attendance and homework adherence predict response to a family-school intervention for children with ADHD. *Journal of Clinical Child and Adolescent Psychology, 44*, 58–67.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. Routledge Academic.
- Cuffe, S. P., Moore, C. G., & McKeown, R. (2009). ADHD and health services utilization in the National Health Interview Survey. *Journal of Attention Disorders, 12*(4), 330–340.
- Danielson, M. L., Bitsko, R. H., Ghandour, R. M., Holbrook, J. R., Kogan, M. D., & Blumberg, S. J. (2018a). Prevalence of parent-reported ADHD diagnosis and associated treatment among U.S. children and adolescents. *Journal of Clinical Child and Adolescent Psychology, 47*(2), 199–212.
- Danielson, M. L., Visser, S. N., Chronis-Tuscano, A., & DuPaul, G. J. (2018b). A national description of treatment among United States children and adolescents with attention-deficit/hyperactivity disorder. *Journal of Pediatrics, 192*, 240–246. <https://doi.org/10.1016/j.jpeds.2017.08.040>.
- Dawson, A. E., Wymbs, B. T., Marshall, S. A., Mautone, J. A., & Power, T. J. (2016). The role of parental ADHD in sustaining the effects of a family-school intervention for ADHD. *Journal of Clinical Child and Adolescent Psychology, 45*, 305–319. <https://doi.org/10.1080/15374416.2014.963858>. PMID: 25496523.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. Springer.
- Dumas, J. E., Lynch, A. M., Laughlin, J. E., Phillips Smith, E., & Prinz, R. J. (2001). Promoting intervention fidelity. Conceptual issues, methods, and preliminary results from the EARLY ALLIANCE prevention trial. *American Journal of Preventive Medicine, 20*(1 Suppl.), 38–47.
- DuPaul, G. J., Chronis-Tuscano, A., Danielson, M. L., & Visser, S. N. (2019). Predictors of receipt of school services in a national sample of youth with ADHD. *Journal of Attention Disorders, 23*(11), 1303–1319. <https://doi.org/10.1177/1087054718816169>.
- Eiraldi, R., Mautone, J. A., Khanna, M. S., Power, T. J., Orapallo, A., Cacia, J., Schwartz, B. S., McCurdy, B., Keiffer, J., Paidipati, C., Kanine, R., Abrams, M., Tulio, S., Swift, L., Bressler, S. N., Bressler, B. C., & Jawad, A. F. (2018). Group CBT for externalizing disorders in urban schools: Effect of training strategy on treatment fidelity and patient outcomes. *Behavior Therapy, 49*(4), 538–550.
- Eiraldi, R. B., Mazzuca, L. B., Clarke, A. T., & Power, T. J. (2006). Service utilization among ethnic minority children with ADHD: A model of help-seeking behavior. *Administration and Policy in Mental Health and Mental Health Services Research, 33*(5), 607–622.
- Fabiano, G., Hulme, K., Linke, S., Nelson-Tuttle, C., Pariseau, M., Gangloff, B., Lewis, K., Pelham, W., Waschbusch, D., Waxmonsky, J., Gormley, M., & Gera, S. (2011). The Supporting a Teen's Effective Entry to the Roadway (STEER) program: Feasibility and preliminary support for a psychosocial intervention for teenage drivers with ADHD. *Cognitive and Behavioral Practice, 18*, 267–280. <https://doi.org/10.1016/j.cbpra.2010.04.002>.
- Faraone, S. V., Perlis, R. H., Doyle, A. E., Smoller, J. W., Goralnick, J. J., Holmgren, M. A., & Sklar, P. (2005). Molecular genetics of attention-deficit/hyperactivity disorder. *Biological Psychiatry, 57*(11), 1312–1323. <https://doi.org/10.1016/j.biopsych.2004.11.024>.
- Fiks, A. G., Mayne, S., DeBartolo, E., Power, T. J., & Guevara, J. P. (2013). Parental preferences and goals regarding ADHD treatment. *Pediatrics, 132*(4), 692–702.

- Fiks, A. G., Mayne, S., Hughes, C. C., DeBartolo, E., Behrens, C., Guevara, J. P., & Power, T. J. (2012). Development of an instrument to measure parents' preferences and goals for the treatment of attention deficit-hyperactivity disorder. *Academic Pediatrics, 12*(5), 445–455.
- Fishbein, M., & Ajzen, I. (2010). *Predicting and changing behavior: The reasoned action approach*. Psychology Press.
- Fishbein, M., & Cappella, J. (2006). The role of theory in developing effective health communication. *Journal of Communication, 56*, 1–17.
- Fogler, J. M., Normand, S., O'Dea, N., Mautone, J. A., Featherston, M., Power, T. J., & Nissley-Tsiopinis, J. (2020). Implementing Group Parent Training in Telepsychology: Lessons Learned During the COVID-19 Pandemic. *Journal of Pediatric Psychology, 45*(9), 983–989. <https://doi.org/10.1093/jpepsy/jsaa085>.
- Harris, P. A., Taylor, R., Thielke, R., Payne, J., Gonzalez, N., & Conde, J. G. (2009). Research electronic data capture (REDCap)—a metadata-driven methodology and workflow process for providing translational research informatics support. *Journal of Biomedical Informatics, 42*(2), 377–381.
- Johnston, C., & Park, J. L. (2015). Interventions for attention-deficit hyperactivity disorder: A year in review. *Current Developmental Disorders Report, 2*, 38–45. <https://doi.org/10.1007/s40474-014-0034-2>.
- Kazdin, A. E. (2012). *Behavior modification in applied settings* (7th ed.). Waveland Press.
- Koren, P. E., DeChillo, N., & Friesen, B. J. (1992). Measuring empowerment in families whose children have emotional disabilities: A brief questionnaire. *Rehabilitation Psychology, 37*(4), 305–321. <https://doi.org/10.1037/h0079106>.
- Mak, W. W., & Cheung, R. Y. (2008). Affiliate stigma among caregivers of people with intellectual disability or mental illness. *Journal of Applied Research in Intellectual Disabilities, 21*(6), 532–545. <https://doi.org/10.1111/j.1468-3148.2008.00426.x>.
- Matza, L. S., Paramore, C., & Prasad, M. (2005). A review of the economic burden of ADHD. *Cost Effectiveness and Resource Allocation, 3*, 5. <https://doi.org/10.1186/1478-7547-3-5>.
- Mautone, J. A., Marshall, S. A., Sharman, J., Eiraldi, R. B., Jawad, A. F., & Power, T. J. (2012). Development of a family-school intervention for young children with attention deficit hyperactivity disorder. *School Psychology Review, 41*(4), 447–466.
- Mikami, A. Y., Chong, G. K., Saporito, J. M., & Na, J. J. (2015). Implications of parental affiliate stigma in families of children with ADHD. *Journal of Clinical Child and Adolescent Psychology, 44*(4), 595–603.
- Miller, S., & Rollnick, W. R. (2013). *Motivational interviewing: Helping people change* (3rd ed.). Guilford Press.
- Nock, M. K., & Kazdin, A. E. (2005). Randomized controlled trial of a brief intervention for increasing participation in parent management training. *Journal of Consulting and Clinical Psychology, 73*(5), 872–879. <https://doi.org/10.1037/0022-006X.73.5.872>.
- Power, T. J., Mautone, J. A., Soffer, S. L., Clarke, A. T., Marshall, S. A., Sharman, J., Blum, N. J., Glanzman, M., Elia, J., & Jawad, A. F. (2012). A family-school intervention for children with ADHD: Results of a randomized clinical trial. *Journal of Consulting and Clinical Psychology, 80*(4), 611–623. <https://doi.org/10.1037/a0028188>.
- Power, T. J., Blum, N. J., Guevara, J. P., Jones, H. A., & Leslie, L. K. (2013). Coordinating mental health care across primary care and schools: ADHD as a case example. *Advances in School Mental Health Promotion, 6*, 68–80. <https://doi.org/10.1080/1754730X.2013.749089>.
- Power, T. J., Watkins, M. W., Anastopoulos, A. D., Reid, R., Lambert, M. C., & DuPaul, G. J. (2017). Multi-informant assessment of ADHD symptom-related impairments among children and adolescents. *Journal of Clinical Child and Adolescent Psychology, 46*, 661–674.
- Prochaska, J. O., Butterworth, S., Redding, C. A., Burden, V., Perrin, N., Lea, M., Flaherty, R. M., & Prochaska, J. M. (2008). Initial efficacy of MI, TTM tailoring, and HRI's in multiple behaviors for employee health promotion. *Preventive Medicine, 46*, 226–231.
- Prochaska, J. O., Wright, J. A., & Velicer, W. F. (2008). Evaluating theories of health behavior change: A hierarchy of criteria applied to the transtheoretical model. *Applied Psychology, 57*(4), 561–588. <https://doi.org/10.1111/j.1464-0597.2008.00345.x>.
- Resendez, M. G., Quist, R. M., & Matshazi, D. G. (2000). A longitudinal analysis of family empowerment and client outcomes. *Journal of Child and Family Studies, 9*(4), 449–460.
- Rooney, M., Hinshaw, S., McBurnett, K., & Pfiffner, L. J. (2018). Parent adherence in two behavioral treatment strategies for the predominantly inattentive presentation of ADHD. *Journal of Clinical Child and Adolescent Psychology, 47*(Suppl. 1), S233–S241.
- Ryan, R. M., & Deci, E. L. (2008). A self-determination theory approach to psychotherapy: The motivational basis for effective change. *Canadian Psychology, 49*, 186–193.
- Ryan, R. M., & Deci, E. L. (2018). *Self-determination theory: Basic psychological needs in motivation, development, and wellness*. Guilford Press.
- Sibley, M. H. (2016). *Parent-teen therapy for executive function deficits and ADHD: Building skills and motivation*. Guilford Press.
- Sibley, M. H., Graziano, P. A., Kuriyan, A. B., Cox, S., Pelham, W. E., Rodriguez, L., Sanchez, F., Derefinko, K., Helseth, S., & Ward, A. (2016). Parent-teen behavior therapy + motivational interviewing for adolescents with ADHD. *Journal of Consulting and Clinical Psychology, 84*(8), 699–712. <https://doi.org/10.1037/ccp0000106>.
- Singh, N. N., Curtis, W. J., Ellis, C. R., Nicholson, M. W., Villani, T. M., & Wechsler, H. A. (1995). Psychometric analysis of the Family Empowerment Scale. *Journal of Emotional and Behavioral Disorders, 3*, 85–91.
- Swanson, J. M., Kraemer, H. C., Hinshaw, S. P., Arnold, L. E., Conners, C. K., Abikoff, H. B., Clevenger, W., Davies, M., Elliott, G. R., Greenhill, L. L., Hechtman, L., Hoza, B., Jensen, P. S., March, J. S., Newcorn, J. H., Owens, E. B., Pelham, W. E., Schiller, E., Severe, J. B., Simpson, S., Vitiello, B., Wells, K., Wigal, T., & Wu, M. (2001). Clinical relevance of the primary findings of the MTA: Success rates based on severity of ADHD and ODD symptoms at the end of treatment. *American Academy of Child and Adolescent Psychiatry, 40*(2), 168–179. <https://doi.org/10.1097/00004583-200102000-00011>.
- Takeda, T., Stotenberg, K., Power, T. J., Ambrosini, P., Beretini, W., Hakonarson, H., & Elia, J. (2010). Parental ADHD status and its association with proband, ADHD subtype and severity. *Journal of Pediatrics, 157*, 995–1000.
- Visser, S. N., Danielson, M. L., Bitsko, R. H., Holbrook, J. R., Kogan, M. D., Ghandour, R. M., Perou, R., & Blumberg, S. J. (2014). Trends in the parent-report of health care provider-diagnosed and medicated attention-deficit/hyperactivity disorder: United States, 2003–2011. *Journal of the American Academy of Child and Adolescent Psychiatry, 53*(1), 34–46.
- Volpe, R. J., & Fabiano, G. A. (2013). *Daily behavior report cards: An evidence-based system of assessment and intervention*. Guilford Press.
- Wagner, C. C., & Ingersoll, K. S. (2012). *Motivational interviewing in groups*. Guilford Press.
- Wolraich, M. L., Hagan, J. F., Jr., Allan, C., Chan, E., Davison, D., Earls, M., Evans, S. W., Flinn, S. K., Froelich, T., Frost, J., Holbrook, J. R., Lehmann, C. U., Lessin, H. R., Okechukwu, K., Pierce, K. L., Winner, J. D., Zurhellen, W., & Subcommittee on children and adolescents with attention-deficit-hyperactivity disorder (2019). Clinical practice guideline for the diagnosis, evaluation, and treatment of attention-deficit/hyperactivity

disorder in children and adolescents. *Pediatrics*, 144(4), e20192528. <https://doi.org/10.1542/peds.2019-2528>.

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