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Research to Practice: Implementation of Family School Success for Parents of Children With ADHD

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"Family-School Success" (FSS) is an efficacious intervention improving the home and school functioning of children with ADHD in grades 2–6. An extension of this intervention designed for a younger population also showed positive effects for kindergarten and first grade students in a pilot study. Following the completion of these trials, FSS was implemented in a fee-for-service tertiary care ADHD center. The implementation process included adapting the manual and treatment procedures to be feasible outside the structure and support of a federally funded randomized control trial (RCT). The current study examines the process of adapting the treatment protocol and examines the acceptability and effectiveness of the adapted FSS, as well as predictors of family treatment response including parent engagement in treatment (as measured by attendance and homework adherence). A case study illustrates the adaptations to the intervention and its implementation in the clinic-based setting. In line with findings from clinical trials, families reported high satisfaction with the adapted FSS intervention and showed significant improvement in parental self-efficacy, child academic homework performance, and reduction in child impairment. Additionally, as in the initial FSS RCT, parental attendance in the adapted FSS program predicted child attention to academic homework, controlling for parental adherence to between-session homework. Furthermore, controlling for attendance at FSS sessions, parent adherence to between-session homework assignments predicted improvements in parent self-efficacy as well as child's homework productivity. These results replicate those of the original RCT and confirm that both session attendance and between-session homework completed are important for improvement during the program. Overall, this study provides support for the acceptability and effectiveness of this treatment model and suggests that future work toward dissemination to community-based settings would be worthwhile.

Attention-deficit/hyperactivity disorder (ADHD) is one of the most commonly diagnosed mental health concerns and is often the primary reason children are referred for behavioral health care (Barkley, 2006). Young children who exhibit the behavioral difficulties associated with ADHD (i.e., inattention, hyperactivity, impulsivity) demonstrate early academic difficulties that persist throughout their education (Loe & Feldman, 2007). Consequently, these children are at an increased risk of being expelled or dropping out of school. The behavioral problems of children with ADHD are also associated with an increased level of interpersonal relationship difficulties in peer and family domains (DuPaul, McGoey, Eckert, & VanBrakle, 2001). Given the chronic nature of the disorder, management and treatment of ADHD symptoms within the home as well as school setting is essential to ensure positive developmental outcomes. To this end, the consensus guidelines developed by experts in pediatrics (American Academy of Pediatrics, 2011) and psychology (American Psychological Association, 2006) recommend behavioral parent training to address challenges at home and involving the school, as integral components of evidence-based biopsychosocial care.

In an effort to address the unique needs of children and families coping with ADHD, we developed the Family-School Success (FSS) program, which is a manualized intervention designed to improve parenting practices, family involvement in education, and child academic performance (Mautone, Marshall, Costigan, Clarke, & Power, 2012; Power et al., 2012). The original FSS program, evaluated in the context of a federally funded clinical trial, includes core elements of behavioral parent training and components focused on family-school behavioral consultation, development of daily report cards, and strategies to support family involvement in education. Content is delivered in 12 weekly sessions including 6 group meetings (concurrent parent and child groups), 4 individualized family sessions including the parents, child, and a therapist, and 2 school-based family-school consultations including the parents, the

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child's teacher, and a therapist. After the conclusion of the clinical trial, the program was modified to increase feasibility of delivery in a tertiary care, fee-for-service clinic. The modified program includes 7 to 9 parent group sessions with between-session phone calls to parents and teachers to support intervention adherence.

Prior evaluations of the FSS program conducted in the context of grant-supported randomized controlled trials (RCTs) have demonstrated the efficacy of this program in improving parenting practices, student homework performance, and the student-teacher relationship (Mautone et al., 2012; Power et al., 2012). However, it is not yet clear whether this evidence-based program can be feasibly implemented in the applied context of community-based settings. In line with clinical scientists' call for studying treatments under "progressively more genuine circumstances" (Chorpita & Nakamura, 2004; Southam-Gerow, Silverman, & Kendall, 2006; Weisz, Sandler, Durlak, & Anton, 2005), the aims of this investigation are to: (a) adapt the FSS program to make it feasible to offer it outside of an RCT in a fee-for-service clinical setting and examine whether the adapted version of the FSS program is feasible to implement outside the structure and support of a federally funded RCT, (b) determine whether families participating in the adapted version of FSS show improvement on key outcomes, and (c) determine whether variables found to be predictive of outcomes in the grant-supported version of FSS are also related to outcomes when this intervention is delivered in the context of a fee-for-service outpatient clinic.

Program adaptations were made based on clinical experience during the RCT and feedback from clinicians and families involved in the first several clinic-based FSS groups. Modifications were based on several factors, including scheduling and billing requirements of providers, and primarily included changes to the session structure and program length, parental engagement strategies, and the means through which parts of the intervention were delivered. Details about these modifications and how they aimed to increase feasibility are provided below.

In order to evaluate feasibility, we examined family attendance at sessions and parent completion of between-session homework assignments. To evaluate program acceptability, we assessed parent satisfaction upon completion of the FSS program. We hypothesized that the program would be feasible and acceptable to parents. As an initial indicator of clinical outcomes, we examined change in parental self-efficacy, child's academic homework performance, and child's impairment over the course of the program. Consistent with findings from the clinical trial, we hypothesized that families and children would show significant improvement in these three areas. Additionally, consistent with the federally funded RCT, we examined whether parent attendance at sessions and completion of between-session homework assignments were significant predictors of outcomes, including parental self-efficacy, child's inattention to homework and homework productivity, as well as parenting practices (Clarke et al., 2015). We hypothesized that parental attendance and parental homework completion would independently predict outcomes in these areas.

Method

The study was approved by the Institutional Review Board with a waiver of written consent for retrospective extraction of data from patients' electronic health records.

Participants

Retrospective chart reviews were conducted for patients whose families participated in the adapted FSS program within a 3-year period ($N = 115$). Patients were children in kindergarten through 6th grade (M age = 7.71 years, $SD = 1.36$; 76.6% male) whose parents self-referred to a tertiary care specialized ADHD center located within a large pediatric hospital in the Northeast. Families were referred to the FSS program following a diagnostic evaluation by a psychologist, child and adolescent psychiatrist, licensed clinical social worker, or developmental behavioral pediatrician if the clinician felt the family might benefit from the group treatment program and the family expressed interest in participating. While participating in FSS, families were permitted to pursue any additional services that they thought their child needed. If the child had comorbid anxiety, for example, the family could pursue individual treatment if it were warranted. Demographic and diagnostic data for the sample are presented in Table 1.

Adaptation Process

After completion of the clinical trial, the FSS program was modified for delivery in the fee-for-service clinic over the course of several years prior to data collection for this study using feedback from clinicians and participating families. Changes were made in order to ensure that the program, originally supported by a large research grant, was feasible to implement in a naturalistic clinical setting. Specifically, modifications took into account clinicians' limited time, billing requirements, and scheduling constraints. By addressing these barriers we hoped to improve feasibility and ensure sustainability of the FSS program in this fee-for-service context.

Session Structure and Program Length

The format of sessions was altered for feasibility purposes and to align with billing requirements. Specifically, the program was modified to be fully delivered through group sessions for parents only; it was not feasible to include child

Table 1
Demographic Information for Target Children in Participating Families

Race	Percentage of Sample
Hispanic	2.61
African American	13.04
White	65.23
Asian	2.61
Multicultural	4.35
Other	12.17
ADHD Diagnosis Type	
ADHD Combined presentation	46.09
ADHD Inattentive presentation	13.04
ADHD, Hyperactive-Impulsive presentation	20.00
ADHD, presentation not specified in chart	17.39
Other (i.e., executive function deficit; hyperkinetic syndrome of childhood; unspecified hyperkinetic disorder of childhood	3.35
Comorbidities	
Comorbid Learning Disability	23.48
Comorbid Disruptive Behavior Disorder	23.48
Comorbid Internalizing Disorder	31.30
Tic Disorder	6.96
Autism Spectrum Disorder	3.48

groups because staff were not available to conduct the child groups and it was not possible to bill separately for the child groups. The duration of the group sessions (90 minutes) remained the same as in the original protocol. The individual family meetings and in-person school consultation sessions were eliminated because they were not feasible to schedule due to clinicians' other patient care responsibilities. Instead, FSS therapists contacted teachers by telephone to facilitate formation of a collaborative family-school partnership and to support development of the daily report card. This initially resulted in a 10-session program. Further program modifications were made based on discussions with clinicians and feedback from parents; the version evaluated in this study was a 9-session program. In 5 out of the 18 cohorts, the program was condensed from nine sessions to eight or seven in order to fit within scheduling constraints of participating families (for example, late spring cohorts were sometimes shortened because of changes in family schedules at the beginning of summer break).

Engagement Strategies

Similar to the original FSS program, participating families received homework assignments at each session designed to encourage parents to implement and practice skills taught during each session. See Table 2 for a comparison of session

Table 2
Comparison of Session Content Between the Version of FSS Evaluated With Grant Funding and the Version Implemented in the Clinic

FSS – Original	*FSS – Clinic Version*
Session 1: Introduction to Family School Success	Session 1: Introduction to Family School Success Phone call to teacher (Introduction to Family School Success)
Session 2: Individual Session: Preparing for Home-School Collaboration	See Session 4 below
	Session 2: Strengthening Family Relationships
Session 3: School Meeting: Promoting Home-School Collaboration	
Session 4: Individual Session: Understanding the Basics of Behavior Management	Session 3: Understanding the Basics of Behavior Management Session 4: Preparing for Home-School Collaboration Phone call to teacher (Preparing for Home-School Collaboration
Session 5: Introducing the Token Reinforcement System	Session 5: Introducing the Token Economy
Session 6: Understanding the Function of Behavior and Establishing the Homework Ritual	Session 6: Understanding the Functioning of Behavior and Establishing the Homework Ritual
Session 7: Individual Session: Managing Time and Goal Setting	Session 7: Managing Time and Goal Setting
Session 8: Individual Session: Mastering Time Management and Goal Setting	
Session 9: Using Punishment Successfully	Session 8: Using Punishment Successfully
Session 10: School Meeting: Collaborating with Teachers to Refine Strategies and Resolve Additional Problems	
Session 11: Developing Effective Study Skills	
Session 12: Integrating Skills and Planning for the Future	Session 9: Review and Application of FSS Strategies, Integrating Skills and Planning for the Future

Note. In addition to session content, the clinic version of FSS includes regular (weekly or every-other-week) phone calls to parents to support effective implementation of strategies. Additionally, practice supports were enhanced in the clinic version of FSS, as detailed above.

content between the version of FSS evaluated with grant funding and the version implemented in the clinic.

Based on our experiences during the clinical trial (including subsequent research showing that parental adherence to between-session homework assignments is associated with improved FSS outcomes; Clarke et al., 2015) as well as the shift to a fully group-based format, we enhanced the practice supports provided to families engaged in the clinical service in an effort to encourage family engagement in the FSS program and parental completion of between-session homework assignments. First, in order to provide a rationale for each component of the program, during the first session, FSS clinicians explained the proposed theory of change underlying the FSS intervention (see Figure 1). The theory of change was reviewed at the start of each subsequent session to provide a rationale for the specific strategy being discussed. Second, each participating family was provided with a "care binder" as a means of organizing materials distributed during the FSS program (i.e., program handouts and between-session assignment worksheets). Families were also encouraged to use the binders to organize child health and educational materials (e.g., evaluation reports, special education documentation). Third, at each session, FSS clinicians reviewed extensively parents' efforts to complete assigned homework, making connections to the theory of change and with a particular focus on addressing barriers to implementation. Families were encouraged to support one another in considering strategies to overcome implementation challenges. Finally, FSS clinicians contacted families by telephone between sessions to discuss challenges and provide support.

Intervention Delivery

For this study, 18 cohorts of FSS were delivered by three licensed psychologists, and each group was co-facilitated by predoctoral psychology interns or advanced graduate students in clinical or school psychology utilizing the FSS intervention manual (masked for review). The psychologist and trainee therapists for each group met for weekly supervision to discuss cases within the current FSS cohort as well as engage in ongoing training in FSS strategies and theory. The trainee co-therapists were responsible for contacting families by telephone between sessions to answer questions and support engagement in the intervention. They also provided telephone-based consultation to teachers (see Table 2). Additionally, trainee therapists were available for brief (~20–30 minutes) review meetings prior to FSS sessions when a family was unable to attend the previous session.

Measures of Engagement

Attendance

Attendance for each participating family was computed as the percentage of all scheduled sessions attended by at least one caregiver from the family, based on information available in the child's electronic health record.

Between-session homework adherence. Assessment of parent adherence to between-session homework assignments was conducted via a review of permanent products. At each FSS session, a clinician made photocopies of all completed homework assignments (i.e., permanent products). A research assistant independently rated the extent to which each homework worksheet was completed and calculated the total of these ratings, using homework adherence procedures developed for the original FSS RCT (Clarke et al., 2015). Each worksheet was rated using a 3-point scale (0 = *not attempted or submitted*, 1 = *assignment was attempted but incomplete*, 2 = *assignment was completed as directed*). As indicated above, the number of FSS sessions per cohort varied from 7 to 9, so the number of possible between-session homework assignments also varied. Therefore, for purposes of the present study, percentage of total possible points was used in analyses. Independent rating of the permanent products by a second research assistant of 23.5% of randomly selected cases indicated excellent interrater reliability (ICC = .989).

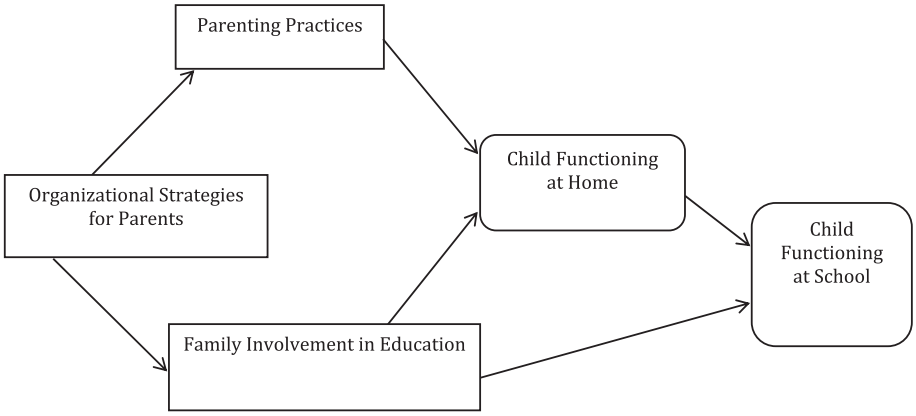

Figure 1. Theory of Change for the Family School Success Program

Measures of Clinical Outcomes. The following measures were administered to all families in order to monitor clinical progress during participation in the program:

Parent as Educator Scale (PES; Hoover-Dempsey, Bassler, & Brissie, 1992). The PES is a 10-item scale used to assess the extent to which parents/caregivers believe themselves to be competent in assisting with their children's education. Parents respond to each item on a 5-point scale ranging from 1 = *strongly disagree* to 5 = *strongly agree*. The alpha coefficient for this scale has been found to be greater than .85 (Hoover-Dempsey et al., 1992). The alpha coefficient for this study was .82. The mean item score for all 10 items was used in analyses.

Impairment Rating Scale (IRS). The 7-item IRS is a parent-report measure used to assess impairment related to the child's relationships with peers, siblings, and parents, academic progress, classroom behavior, self-esteem, functioning in the family, and overall impairment. This measure has been shown to have acceptable temporal stability and concurrent validity (Fabiano et al., 2006). The alpha coefficient for this study was .86. Mean item score for the 8-item scale was used in analyses.

Homework Problem Checklist (HPC; Anesko, Schoiock, Ramirez, & Levine, 1987). The HPC is a measure used to assess parents' perceptions of their child's homework performance. Each item is rated on a 4-point scale (0 = *never*, 3 = *very often*), indicating how frequently the child manifests common homework problems. The HPC has two factors, Homework Completion (e.g., child procrastinates and has trouble completing assignments) and Materials Management (e.g., child does not know assignments and child does not return assignments to class (Langberg et al., 2010; Power, Werba, Watkins, Angelucci, & Eiraldi, 2006). Mean item scores for each factor were used in analyses.

Parent Satisfaction

Parent satisfaction with the FSS program was obtained at the last FSS session using a 27-item rating scale (each item rated on 5 point scale; 1 = *not helpful*, 3 = *helpful*, and 5 = *extremely helpful*) created for use with the clinic version of the FSS program. Mean item scores were computed.

Data Analytic Approach

Paired-samples *t*-tests were used to examine change from pre- to posttreatment on dependent variables. The dependent variables were the following three outcome measures: PES (Hoover-Dempsey et al., 1992), IRS (Fabiano et al., 2006), and HPC (Anesko et al., 1987). The magnitude of these values was evaluated using standards established by Cohen (1988), with *d* of .2, .5, and .8 corresponding to small, medium, and large effects, respectively.

To examine predictors of outcome on each of these measures, multiple linear regressions were utilized. The two primary independent variables were parent adherence to between-session homework and parent attendance at scheduled sessions. Baseline levels of the dependent variable were accounted for in each analysis. Effect sizes were determined using f^2, a function of partial R^2 divided by 1 minus partial R^2. The magnitude of these values was evaluated using standards established by Cohen (1992), with f^2 of .02, .15, and .35 corresponding to small, medium, and large effects, respectively.

Results

Overall, the results showed that the revised version of the FSS program was feasible for implementation in a fee-for-service clinic-based setting. On average, families (N = 115) attended 77.8% (SD = 23.7; range 11% – 100%) of total sessions. The number of families per cohort ranged from 4 – 10. If families were unable to attend a regularly scheduled session, they were invited to arrive early before the next scheduled session to review missed content. Make-up sessions were not documented in the electronic health record, so we are unable to report on the number of times this occurred; however, based on clinician report, the majority of families that missed sessions attended brief make-up sessions. For 2 of 18 cohorts, homework was not collected by clinicians and thus between-session homework data were not available for families in those cohorts (n = 20). This left 95 families for whom between-session homework data were available. Based on this sample, on average, families earned 29.5% (SD = 29.6; range 0% – 95%) of possible points on the homework adherence rating. The correlation between homework adherence and parent attendance was .55 ($p < .01$). Twenty-one families (22.1%) developed a daily report card (DRC) by Session 5 (1 week after the tool was introduced). Although DRC completion and implementation was not documented following Session 5, families were encouraged to continue to work on creating and implementing a DRC in collaboration with their child's teacher, with the understanding that development and implementation of the DRC might be a process that needs to take place over a period of several weeks. Sixty-eight families (59.1%) completed ratings of satisfaction with the program, and indicated that they found the program very to extremely helpful (Mean item score = 4.30 on a 1–5 Likert scale, SD = 0.45).

Due to the retrospective nature of the current study, pre- and postoutcome measures were not available for approximately half of the sample. At the time of service, pre- and post-outcome measures were not being uniformly collected and measures were not administered for some cohorts. In certain cases, families did not return every measure administered, and therefore, the sample size differs across outcome measures (see Table 3). There was no significant difference in attendance rates between families who completed at least one pre- or post-treatment outcome measure (n = 84; M = .78, SD = .23) compared

Table 3
Mean Scores of Clinical Outcome Measures at Baseline and Posttreatment

	Baseline	Post			
Measure	*M (SD)*	*M (SD)*	*t-value*	*p-value*	*Effect Size (Cohen's d)*
PES (n=44)	3.19 (0.55)	3.88 (0.50)	$t(43) = 8.48$	.00	1.30
HPC (n=50)					
Factor I	1.93 (0.67)	1.45 (0.61)	$t(49) = -5.88$	.00	-0.84
Factor II	0.67 (0.50)	0.51 (0.43)	$t(49) = -3.02$	.00	-0.45
IRS (n = 47)	3.64 (0.43)	2.96 (1.06)	$t(46) = -5.58$	.00	-1.11

Note. PES = Parent as Educator Scale; HPC = Homework Problem Checklist; HPC Factor I = Homework Completion; HPC Factor II = Materials Management; IRS = Impairment Rating Scale. Higher scores on the PES reflect higher levels of parental self-efficacy. Higher scores on the HPC factors and IRS reflect more problems.

to families that did not complete any measures ($n = 31$; $M = .76$, $SD = .26$; $t\,[113] = -.46$, $p = .65$).

Based on available data, our hypotheses regarding improvements in parental self-efficacy and child academic homework performance and reduction in child impairment after participation in FSS were confirmed. There were significant changes (medium to large effect sizes) on all three variables pre- to post-intervention. Means and standard deviations for each time point and outcome measure are presented in Table 3.

Parental Session Attendance and Between Session Homework Adherence as Sole Predictors of Outcomes

Controlling for baseline scores, attendance at regularly scheduled FSS sessions was not a significant predictor ($p < .05$) of posttreatment outcome measures (see Table 4). Controlling for baseline scores, homework adherence was a significant predictor of two out of three outcome measures. Specifically, higher homework adherence predicted better scores for parental self-efficacy (PES; medium effect size; $f^2 = .215$) and child materials management for homework (HPC II; small effect size; $f^2 = .081$).

Relative Contribution of Parental Attendance and Between Session Homework Adherence as Predictors of Outcomes

Controlling for baseline scores and homework adherence, attendance at regularly scheduled FSS sessions was a significant predictor of posttreatment outcomes ($p < .05$) on one of three measures (see Table 5). Specifically, higher attendance, controlling for homework adherence, predicted better scores on factor I of the HPC (Homework Completion). The magnitude of this effect was small ($f^2 = .09$). Controlling for baseline scores and parental attendance, parental between-session homework adherence was a unique, significant predictor of posttreatment outcomes ($p < .05$) for two of three measures. Higher adherence, controlling for parental attendance, predicted better scores for parental self-efficacy (PES; medium effect size; $f^2 = .24$) and homework materials management (HPC Factor II; small effect size; $f^2 = .09$).

Case Example

The following is an example of one family's progress through FSS, including an illustration of practice supports provided by clinicians; the support families provide to one another during group sessions; and the role of parent engagement, both homework completion and attendance, as part of the FSS group process. Additionally, this case example highlights the ways in which challenges associated with a shift from a program that included some individual family sessions and in-person school consultation to a fully parent-only group-based format were addressed within the modified FSS protocol.

Initial Presentation and Introduction to Proposed "Theory of Change for FSS"

In this case, the identified patient is an 8-year-old boy, Alex (a pseudonym), who was diagnosed with ADHD, Combined Presentation. Baseline scores on outcome measures were the following: PES = 2.90 (between "disagree" and "neutral;" lower scores indicate lower parental self-efficacy); HPC Factor I = 2.00 ("often;" higher scores are indicative of more significant problems); HPC Factor II = .71 (between "never" and "at times"); IRS = 2.63 (indicates mild problem). Both parents presented for the initial group session. At this session, Alex's parents described stressful interactions with Alex at home, indicating that they often lectured him about inappropriate behavior, and he always reported that he would "do better next time." Both parents appeared tired and frustrated, particularly with the fact that they frequently received negative notes from school about Alex's behavior in the classroom. They expressed ambivalence about being in the group, noting that they were unsure how Alex could get better if they, rather than Alex, were the ones attending treatment sessions. This concern was common among parents and relates to one of the major modifications made to the original FSS program—the removal of the child

Table 4
Results of Regression Analyses With Homework Adherence and Attendance as Sole Predictors of Outcomes at Posttreatment Controlling From Baseline Scores

Measure	*Predictor*	*df*	*F*	*p*	*Adj R^2*	*Beta*	*t*	*p*	*Part R^2*	*f^2*
PES		2, 43	12.15	.000	.342					
	Intercept					2.01	5.13	.00		
	Time I					0.47	4.20	.00		
	HWAdherence					0.74	2.90	.01	.17	.22
PES		2, 43	6.60	.003	.207					
	Intercept					2.39	3.40	.00		
	Time I					0.45	3.62	.00		
	Attendance					0.08	0.12	.90	.00	.00
HPC I		2, 49	13.20	.000	.332					
	Intercept					0.44	1.80	.08		
	Time I					0.55	5.13	.00		
	HW Adherence					-0.09	-0.33	.74	.00	.01
HPC I		2, 49	15.50	.000	.372					
	Intercept					-0.55	-.94	.35		
	Time I					0.53	5.15	.00		
	Attendance					1.09	1.75	.09	.06	.07
HPC II		2, 49	27.54	.00	.520					
	Intercept					0.26	2.44	.02		
	Time I					0.62	7.26	.00		
	HW Adherence					-0.34	-1.96	.06	.08	.08
HPC II		2, 49	23.72	.00	.481					
	Intercept					0.16	0.43	.67		
	Time I					0.61	6.87	.00		
	Attendance					-0.06	-0.15	.88	.00	.00
IRS		2, 46	19.35	.000	.444					
	Intercept					0.45	0.90	.37		
	Time I					0.79	6.15	.00		
	HW Adherence					-0.73	-1.64	.11	.06	.06
IRS		2, 46	16.98	.000	.410					
	Intercept					0.25	0.26	.80		
	Time I					0.76	5.80	.00		
	Attendance					-0.06	-0.06	.95	.00	.00

Note. PES = Parent as Educator Scale; HPC = Homework Problem Checklist; HW = Homework; IRS = Impairment Rating Scale.

group sessions. The "Theory of Change for the FSS Program" (see Figure 1) was introduced and discussed to describe the rationale for how the FSS program's direct work with parents can lead to an improvement in their child's functioning. Specifically, enabling parents to improve their parenting practices and enhancing family involvement in education can improve their child's functioning at home and school. Further, strengthening parents' organizational strategies can enable them to be more consistent in using effective parenting practices and effective strategies for being involved with the school.

FSS Group Process

At the second session, having completed the "noticing positive behavior" worksheet, Alex's parents remarked that they had not realized how much attention they had been giving to undesired behaviors and noted that they had seen a tendency for Alex to repeat an appropriate behavior shortly after being praised for it. Through the ensuing discussion, Alex's parents were able to receive validation from other parents and participate in a productive group conversation about the extent to which parents' behavior impacts that of their children during the day. This discussion helped set the stage for understanding the importance of adherence to recommended behavioral strategies—both organizational strategies for parents as well as parenting practices.

Adherence

The family's adherence to FSS strategies was variable throughout the program, but it was clear that the parents were making a concerted effort. Alex's father was very engaged and open with the group. Based on repeated discussion of the proposed "Theory of Change," Alex's

Table 5
Results of Regression Analyses With Attendance and Homework Adherence Predicting Outcomes at Posttreatment Controlling for Baseline Scores

Measure	*Predictor*	*df*	*F*	*p*	*ADj R^2*	*Beta*	*t*	*p*	*Part R^2*	*f^2*
PES		3, 43	8.55	.000	.345					
	Intercept					2.56	4.01	.00		
	Time I					0.46	4.10	.00		
	Attendance					-0.66	-1.11	.28	.03	.03
	HW Adherence					0.86	3.11	.00	.19	.24
HPC Factor I		3, 49	10.76	.000	.374					
	Intercept					-0.66	-1.12	.27		
	Time I					0.54	5.25	.00		
	Attendance					1.37	2.03	.05	.08	.09
	HW Adherence					-0.33	-1.19	.28	.03	.03
HPC Factor II		3, 49	18.26	.000	.514					
	Intercept					0.05	0.13	.90		
	Time I					0.62	7.15	.00		
	Attendance					0.27	0.64	.53	.01	.01
	HW Adherence					-0.38	-2.04	.05	.08	.09

Note. PES = Parent as Educator Scale; HPC = Homework Problem Checklist; HW = Homework

father shared his own insight that though he had known organization was a challenge for him in other areas of his life, he had never understood how it may impact parenting and, thus, Alex's functioning. He was open to suggestions from other parents about how to find time to use the strategies at home. Eventually, Alex's parents were able to identify effective methods of reminding themselves to implement FSS strategies (e.g., hanging the worksheets on their refrigerator, setting reminders on their smartphones, keeping the care binder by the front door), and they were eager to share their ideas with the other group members during the homework review portion of the session. Whenever they shared, the FSS clinician affirmed their implementation efforts at home and willingness to share with the other families. In this case, use of enhanced practice supports developed for the modified FSS program seemed to be helpful in increasing Alex's parents' adherence to FSS strategies.

Attendance

About halfway through the program, Alex's father attended a session without his wife; their childcare plan for group evenings was no longer feasible, and he had to begin attending sessions on his own while his wife stayed home with Alex and his sister. The father expressed concern that their progress would diminish as a result. This obstacle highlighted one of the challenges of shifting from individual sessions throughout the FSS program, which have the potential to be scheduled more flexibly to accommodate families' schedules, to a fully group-based format that relies on regular attendance and is not amendable to schedule changes.

Other group members and the FSS clinicians provided support and engaged in problem solving to discuss session content with his wife, to ensure that Alex's parents remained on the same page. Although this took some extra effort at home, Alex's father noted that they were able to find times most weeks to review the session materials and engage Alex in discussions related to FSS content. Alex's mother was able to utilize between-session phone calls with the trainee co-therapist to enhance her understanding of weekly content and get feedback regarding the family's implementation of FSS homework assignments.

Home-School Collaboration

It was initially difficult to reach Alex's teacher at a time she was available to talk by phone, highlighting one of the challenges in shifting from in-person school consultation meetings utilized in the original FSS protocol to relying on phone calls with teachers. Despite this initial challenge, the trainee co-therapist was able to connect with the teacher by planning a brief call during one of her prep periods. The trainee described the goals of the FSS program and expressed appreciation of the teacher's willingness to work with Alex's family to address Alex's behavioral problems in the classroom. Alex's teacher shared specific difficulties Alex had been having in the classroom. Specifically, Alex had difficulty with speaking out of turn and getting out of his seat during class, and despite redirection in the moment and notes home to Alex's parents, this behavior was continuing to occur and interrupt the classroom. The trainee provided general information about ADHD, noting how these problematic behaviors fit in with the diagnosis. The trainee also spoke about how FSS would aim to support the development of a

collaborative partnership between the teacher and Alex's parents to encourage identification of a range of potential strategies to decrease these problematic behaviors and improve Alex's functioning in the classroom. Alex's teacher was appreciative though noted that she already felt overburdened by the demands of her classroom; she expressed concern about the extra time such strategies might take. The trainee co-therapist noted that she would be available to consult as plans were developed to help choose strategies that would feel feasible to both the teacher and parents.

When the daily report card was introduced, Alex's father expressed skepticism about whether Alex's teacher would be willing to utilize it. He felt that his son "had a target on his back" and was routinely receiving very negative feedback from adults in his school. Other parents in the group empathized with this and had similar concerns. The FSS clinician shared strategies for building effective partnerships with teachers and again made contact with Alex's teacher to support the development of a collaborative relationship. The teacher was initially hesitant to provide Alex with any additional supports, but after speaking with the trainee co-therapist further and learning how a daily report card may improve Alex's behavior, she agreed to try it. Alex responded very well to the clear expectations for behavior and increased positive feedback he received at school and home.

During a group session, other parents asked for assistance with their daily report cards; they were struggling with obtaining the reports from the teacher on a regular basis. Alex's father shared that he and Alex's teacher sent the note back and forth in Alex's homework folder, and that was usually effective. As the program progressed, Alex's father reported improvements in his relationship with Alex's teacher. Alex's parents eventually set up a meeting with the school team to discuss development of a Section 504 Plan to ensure that Alex was receiving appropriate accommodations and interventions to address the impact of ADHD on his academic performance.

Observations, Outcomes, and Parent Report of Satisfaction

At the final FSS session, Alex's father reported that he saw a dramatic improvement in Alex's behavior over the course of the program, particularly related to following directions and completing homework. In addition, Alex's parents both felt that their relationships with Alex improved, and they felt more comfortable interacting with the teacher and other school professionals to support Alex's education. Alex's parents were observed to have increased their knowledge of FSS strategies and discussed them more confidently in group. Although they continued to struggle with consistent implementation of FSS strategies, they had identified several methods to remind themselves to adhere to the plan. Alex's father was highly engaged in the group discussion related to the development of the family's "Formula for Success," and he expressed hope that they would continue to see improvements in the future. Posttreatment scores on outcome measures showed improvement across domains; PES = 3.90 ("agree"); HPC Factor I = 1.25 ("at times"); HPC Factor II = .43 ("never" to "at times"); IRS = 1.63 ("not a problem" to "mild problem"). Alex's father reported high satisfaction with the FSS program. Although baseline scores and changes in scores on outcome measures across treatment were not shared with families in these FSS cohorts, they certainly could be shared as a way of supporting readiness for change, marking progress, and helping families identify areas where they might benefit from continued focused work following the conclusion of the FSS intervention.

Discussion

The FSS program was originally developed and evaluated in the context of two federally funded research studies. The intervention was designed for families of elementary-school-aged children to improve parenting practices, family involvement in education, and child academic performance (Mautone et al., 2012; Power et al., 2012). After conclusion of the research studies, the FSS program was adapted for implementation outside the structure of federally funded RCTs in a specialty tertiary care center. This adaptation process addressed many of the common barriers to implementing RCT-tested interventions in fee-for-service clinic contexts including billing requirements and clinicians' time constraints. Major adaptations included shifting to holding parent groups only (i.e., elimination of concurrent child groups) plus the elimination of individual family sessions as well as the in-person school consultation meetings originally included in the program. Individual family sessions were initially designed to allow for individualized treatment planning and problem solving related to adherence challenges; however, the mixed format (i.e., a combination of group and individual family sessions) was not feasible to implement in clinical practice. To address this change, practice supports were added to the clinic version of FSS. Specifically, families were supported between sessions by phone and teachers were contacted by phone in place of in-person consultation. Additionally, problem solving related to adherence was a major focus of every group session.

Phone support provided to families between sessions as well as phone consultations with teachers were made possible by the inclusion of doctoral trainee co-therapists. The use of trainees to augment implementation of evidence-based interventions should be considered as a strategy for feasibly implementing RCT-tested interventions and "filling in the gaps" that may arise when grant support

is not available to protect clinician time for nonbillable activity. This strategy is beneficial for the clients, the trainees, and the field of evidence-based treatment. Clients are able to get practice support between sessions, a service that is not billable and therefore often not feasible for attending psychologists to provide to all clients on a weekly basis. Trainees receive an enhanced training experience. For example, within the FSS program, trainees are able to train and learn under live supervision during group sessions *and* have the opportunity to more independently provide therapeutic support that reinforces content from session. This rich experience thus adds to the development of a new cohort of psychologists well trained in evidence-based treatment models and prepared to deliver them in real-world contexts.

If it is not feasible for providers to partner with training programs to include trainees in the delivery of FSS, providers might consider offering the program for a flat fee that accounts for phone consultation time. This approach would provide the beneficial aspects of phone support while allowing providers to be compensated for their time.

Future endeavors that aim to adapt RCT-tested protocols should also consider embedding the concern of adherence into the treatment itself. By bringing awareness and attention to the barriers of implementing behavioral strategies, our team observed that parents felt comfortable sharing challenges they were having between sessions, which led to fruitful problem-solving discussions and generation of idiosyncratic strategies to increase adherence over the course of FSS. Similarly, we recommend regularly weaving a theory-based explanation for how the intervention works into session content. Rather than repeatedly telling parents, "It is important to do your FSS homework," we reminded them why we were encouraging them to practice strategies and make changes that were not easy, increasing treatment buy-in and adherence. We also informed parents about the research we have conducted which reveals that completing between-session assignments is associated with better outcomes for children (Clarke et al., 2015). This information was helpful in bolstering motivation and hope that their efforts were worthwhile.

Although it was not possible to specifically test the effectiveness of these strategies for overcoming barriers of adapting the RCT version of FSS to a clinic-based version, our findings suggest that the clinic-version of FSS is acceptable and feasible. Between-session homework adherence was comparable to rates of adherence in previous RCTs (Clarke et al., 2015). This finding suggests that practice supports used to overcome barriers of implementation, as discussed above, might be helpful. This should be further investigated in future studies.

In line with expectations, families and children showed significant improvement in parental self-efficacy, child homework performance, and reduction in child impairment over the course of the program—with medium to large effect sizes. These findings are in line with those demonstrated in the initial clinical trials (Mautone et al., 2012; Power et al., 2012) and thus provide additional evidence for the effectiveness of the FSS program for families with children with ADHD. Furthermore, the significant changes in outcome measures show that FSS can be delivered with positive effects within a tertiary care, fee-for-service clinic, and thus also speaks to the feasibility of the program.

In addition, this study aimed to determine whether variables that were found to predict outcomes in the grant-supported version of FSS were also related to change in the adapted version of the program. Overall, our findings support expectations that attending sessions and implementing strategies between sessions are important for families' success in the FSS program. As in the initial FSS RCT, parental attendance in the adapted FSS program predicted child attention to homework, controlling for parental adherence to between-session homework, a proxy for strategy implementation (Clarke et al., 2015). Additionally, the current study found that, controlling for attendance at regularly scheduled FSS sessions, parental adherence to between-session homework assignments predicted parental self-efficacy as well as child's homework productivity. In other words, parents who practiced FSS skills more consistently (i.e., did their between-session homework) reported feeling more effective in their ability to assist with their child's education and reported that their child was more productive with (the child's) homework. These results replicate those of the original RCT and confirm that although it is critical for parents to attend sessions in order to benefit from FSS, their engagement between sessions is as, if not more, important for improvement during the program. Similar findings were obtained in a study examining another family-school intervention for children with ADHD, using parent and clinician ratings of adherence (Rooney, Hinshaw, McBurnett, & Pfiffner, 2016). In addition, findings demonstrating the importance of between-session adherence for treatment outcome have been shown consistently with other behavioral treatments (Kazantzis, Whittington, & Dattilio, 2010), such as exposure and response prevention therapy for obsessive-compulsive disorder (Abramowitz, Franklin, Zoellner, & Dibernardo, 2002) and cognitive behavioral therapy for anxiety (Westra, Dozois, & Marcus, 2007). Due to the apparent contribution of adherence to outcome, there would likely be value in the development of further modifications to the FSS protocol aimed at identifying families who are struggling to complete between-session homework during the program and to provide additional support to promote adherence to recommended strategies.

The current study was unique in its examination of the FSS intervention outside the context of a federally funded RCT. Important limitations should be considered, however, when interpreting results. First, without a control group, nonintervention influences (e.g., maturation, seasonal effects) cannot be ruled out as explanations of the improvement in parental self-efficacy, child homework performance, and child impairment observed over the course of treatment. That being said, these results are consistent with previous trials using active control conditions that were acceptable to families, lending support to the veracity of the findings.

The inclusion of parents who referred themselves to a specialty clinic places limits on the generalizability of the findings. The sample includes a group of parents who completed a multistep intake process and waited for care at a specialty tertiary care center that has limited availability for follow-up treatment. Therefore, the participating families potentially represent a particularly motivated subgroup of parents who might be more likely to implement between-session homework. That being said, the mean rate of homework completion was not very high and, like the case study illustrates, the sample did include parents who had struggles with the implementation of the parent-training model of treatment.

It is also important to note that socioeconomic status was not systematically collected for this sample. Based on previous research showing that socioeconomic factors such as low family income have been associated with decreased treatment engagement or attenuation of treatment effects in evidence-based mental health treatments for youth (e.g., McKay et al., 2004; Miller, Southam-Gerow, & Allin, 2008; Southam-Gerow, Rodríguez, Chorpita, & Daleiden, 2012), it is possible that such factors were related to adherence, attendance, and/or treatment outcomes in the current sample.

Additionally, due to the nature of this retrospective chart review study, we were unable to systematically collect data about the nature and duration of the between-session phone contacts and phone consultations with teachers. In order to carefully obtain data from progress notes relating to telephone calls, we would have needed written informed consent from parents to review protected mental health information in the health record. Future evaluations of FSS in the clinic might include a more detailed examination of the effort required to support families between sessions and in developing collaborative family-school partnerships.

Another significant limitation relates to missing data. Pre- and posttreatment measures were not available for approximately half of the sample and therefore we cannot rule out that families for whom measures were unavailable had different outcomes than those who did complete measures. This limitation speaks to the challenges involved in consistent data collection in a community-based setting outside the structure and support of a federally funded study. Development of tools and systems for ensuring thorough data collection are invaluable to evaluate outcomes in the context of community-based practice.

Finally, outcomes for this study were evaluated solely using parent-report measures. It may be that parents who were more invested in the program saw more benefit and endorsed ratings in line with these beliefs rather than based on true behavioral changes in their children. Again, however, the pattern of findings in this study was similar to that of the clinical trials, which incorporated active control conditions, suggesting that the children of parents participating in this program improved in response to intervention.

Conclusions

The intervention examined in this study was an adaptation of an evidence-based intervention tested in the context of a large-scale, federally funded study. The intervention was adapted in collaboration with clinicians to make it feasible to deliver in a clinical context in which care is provided on a fee-for-service basis by providers with reasonably high expectations for productivity. Major adaptations included eliminating individualized family sessions, conjoint child group sessions, and meetings based in the school. It should be noted, however, that the intervention was offered with the support of one or two doctoral trainees per cohort, who were available to provide co-therapy, assist with the preparation of materials, and contact families between sessions to offer implementation support. For settings in which it is not possible to involve graduate students, additional adaptations may be needed to deliver the program in a manner feasible to clinicians. Nevertheless, this study represents a step forward in the implementation of an efficacious treatment for ADHD in progressively more routine practice conditions. It provides promising findings in support of the feasibility and effectiveness of the adapted FSS intervention, suggesting that future work toward dissemination to community-based settings would be worthwhile.

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