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The Strong African American Families–Teen Trial: Rationale, Design, Engagement Processes, and Family-Specific Effects

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Abstract

This study addresses two limitations in the literature on family-centered intervention programs for adolescents: ruling out nonspecific factors that may explain program effects and engaging parents into prevention programs. The Rural African American Families Health project is a randomized, attention controlled trial evaluating the efficacy of the Strong African American Families–Teen (SAAF–T) program, a family-centered risk-reduction intervention for rural African American adolescents. Rural African American families ($n = 502$) with a 10th-grade student were assigned randomly to receive SAAF–T or a similarly structured, family-centered program that focused on health and nutrition. Families participated in audio computer-assisted self-interviews at baseline and 6-month follow-up. Program implementation procedures yielded a design with equivalent doses, 5 sessions of family-centered intervention programming for families in each condition. Of eligible families screened for participation, 76% attended 4 or 5 sessions of the program. Consistent with our primary hypotheses, SAAF–T youth, compared to attention control youth, demonstrated higher levels of protective family management skills, a finding that cannot be attributed to nonspecific factors such as aggregating families in a structured, interactive setting.

Studies indicate that powerful factors protecting adolescents from a range of behavior problems originate in the family environment in general and caregiving practices in particular (Dishion, French, & Patterson, 1996; O'Connell, Boat, & Warner, 2009; Resnick et al., 1998). Effective caregiver-youth relationships are critical for building youth self-regulation and emotion regulation, which, in turn, foster academic engagement and achievement and avoidance of problem behaviors (Raffaelli & Crockett, 2003; Steinberg, Lamborn, Dornbusch, & Darling, 1992). Well-designed intervention studies have demonstrated that family-centered interventions can be efficacious in reducing problem behaviors, enhancing competencies, and improving intrafamilial relationships (Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2004; Dishion & Stormshak, 2007; O'Connell et al., 2009). Recent evidence also suggests that family-centered approaches, compared with programs that focus on youth alone, may produce better outcomes (Foxcroft, 2006; Spoth, Redmond, Trudeau, & Shin, 2002).

The literature on empirically based interventions for enhancing youth development and deterring problem behavior indicates that parent training and family-centered interventions are effective (Catalano et al., 2004; Lochman & Steenhoven, 2002). A survey of this literature, however, reveals two important limitations. First, to date, no evaluations of family-centered prevention programs have been designed to rule out the possibility that nonspecific factors can explain intervention effects. For example, in a randomized trial in which a family-centered program proves superior to a control condition, investigators cannot rule out the possibility that the simple gathering of family members in a structured context caused the change rather than the programs' specific components and activities. Designs that address this issue are critical for demonstrating that specific skills and knowledge targeted in the family program are the "active ingredients" of the intervention. The second limitation involves challenges in engaging caregivers in prevention programs. Suboptimal participation rates constitute a critical barrier to family-centered prevention programs' attainment of public health impact (Spoth, Kavanagh, & Dishion, 2002). Development of engagement protocols to ensure high program participation is needed not only to ensure the validity of efficacy trials, but also to address the transportability of efficacious intervention into real-world settings.

The Rural African American Families Health (RAAFH) project is a randomized controlled prevention trial designed to test the efficacy of the Strong African American Families-Teen (SAAF-T) program, a family-centered intervention designed to reduce substance use and sexual risk behavior among rural African American adolescents. The RAAFH trial is unique because it addresses both of these issues. It is *attention controlled*, permitting an examination of change in family management skills that rules out nonspecific factors (e.g., Hawthorne effects). The RAAFH trial also includes a set of systematic engagement protocols designed to promote high rates of family engagement. The purposes of the present study are (a) to determine whether the SAAF-T intervention produced effects on protective family management skills that cannot be attributed to nonspecific factors and (b) to report on the effectiveness of the trial's family engagement protocols. In the sections that follow, we first describe the context of the RAAFH trial and the development of the SAAF-T intervention. We then describe the significance of examining nonspecific factors in family intervention and the need for effective family engagement protocols.

The RAAFH Trial: Developing Family-Centered Risk Reduction Programming for Rural African American Youth

Research questions regarding nonspecific factors and engagement processes were examined in the context of a randomized prevention trial with rural African American adolescents.

This trial is part of a program of basic and prevention research, which suggests that caregiving processes are an essential component of positive development and risk behavior prevention among rural African Americans. Parenting practices and other family processes are stronger protective factors against risk behaviors, such as substance use, for African American than for European American youth (Wallace et al., 2002). Longitudinal research links attachment to parents, parental monitoring, and family communication to lower levels of risk behavior (Brody, Kim, Murry, & Brown, 2004; Kogan et al., 2010). Despite the potent protective effects that these parenting practices exert, studies also indicate that parental monitoring, communication, and involvement in adolescents' educational pursuits wane throughout the youths' high school years (Romer et al., 1999). Rural African American families protect youth from involvement in substance use and high-risk sexual behavior; the challenge for prevention scientists is to harness African American families' protective capacities throughout adolescence.

The SAAF-T intervention was designed to enhance protective intrapersonal and family processes that have been linked to substance use and risky sexual activity. Using information from the authors' research programs and input from rural African American community members, SAAF-T's family component was designed to enhance (a) parental academic support; (b) bidirectional communication, which includes clear messages about parents' expectations of youth, regarding risky behavior; and (c) cooperative parent-youth problem solving. Parental academic involvement promotes youths' academic motivation, achievement, and efficacy while protecting them from substance use and risky sexual behavior (Bryant, Schulenberg, Bachman, O'Malley, & Johnston, 2000; Kogan et al., 2010). SAAF-T also encourages frequent communication in which parents set clear expectations for their adolescents' behavior. Risk behavior communication promotes youths' internalization of their parents' norms (Whitaker & Miller, 2000) and fosters negative attitudes toward such behavior (Brody, Murry, et al., 2004). Particularly in mid- and late adolescence, bidirectional communication in which parents solicit youths' thoughts and ideas becomes critical (Eccles et al., 2003). SAAF-T stresses bidirectional communication during discussions of risk behavior as well as in solving everyday problems. Such interactions with older adolescents reduce the potential for youth to reject their parents' ideas and have been linked to reductions in substance use in family-centered programming (DeGarmo, Eddy, Reid, & Fetrow, 2009).

Overview of the SAAF-T Intervention

The development of SAAF-T was informed by the Strong African American Families (SAAF) program, a universal, family-centered preventive intervention for rural African American preadolescents. Both SAAF and SAAF-T are *family skills training* programs (Kumpfer & Alvarado, 2003) that integrate individual youth skill building, parenting skills training, and family interaction training. Working with rural African American community members who provided ongoing feedback about the curriculum, we adapted SAAF materials and activities for older adolescents and their parents. To address specific intrapersonal attitudes and competencies related to protective sexual behavior that were not addressed in SAAF, we integrated and adapted materials from the efficacious Sisters Informing Healing Living and Empowering (SiHLE) program for African American adolescent women (DiClemente et al., 2004). This included curriculum on protective sexual behavior efficacy, sexual health knowledge, and a condom skills unit. Parenting modules were developed to address communication about sexual behavior and to foster positive parental attitudes towards youths' learning about condoms.

SAAF-T sessions were guided by DVDs that included narration addressing specific content and family scenarios depicting program-targeted interactions and behaviors. Group leaders

presented the prevention curriculum, organized role-playing activities, guided group discussions, and answered questions. Youth in the prevention condition were taught about planning for the future, sexual health, and STI prevention. An optional 20-minute condom skills session was offered after the fourth meeting; separate sessions were provided for male and female youth. Parental approval was required for youth to attend this session. Parents were invited to attend a parallel parent-only session that included the same condom skills information presented to the youth. Approximately 70% of families assigned to SAAF-T attended the condom skills session.

RAAFH Trial Design and Nonspecific Factors in Family-Centered Prevention Programs

The SAAF-T program is being evaluated in a unique experimental context. To our knowledge, RAAFH is the first family-centered prevention trial to use an attention control design to rule out nonspecific factors in the evaluation of causal effects. Nonspecific factors include *Hawthorne effects*, in which participants demonstrate change as a result of the attention that the research context provides rather than the intervention's content (Gillespie, 1991). A nonspecific factor of particular relevance for family-centered interventions involves the potential for any program that brings family members together in a structured, supportive situation to engender positive changes. To date, evaluations of family-centered programs have not controlled for nonspecific effects (Catalano et al., 2004; O'Connell et al., 2009). This requires an attention control condition that includes a structurally similar program that is designed either to have no specific effects or to target intervention goals orthogonal to the experimental intervention. One trial compared two family-centered interventions (Spoth, Redmond, & Shin, 1998); however this design did not rule out nonspecific factors because both interventions targeted similar processes. A well-designed trial with Latino youth used alternative interventions, but they were not structurally similar (Pantin et al., 2009). Other trials have used minimal-contact or no-treatment controls (Lochman, 2000; Lochman & Steenhoven, 2002). Informed by the experimental designs used in individual-based sexual risk reduction programming, we developed an attention control intervention designed to promote healthful behaviors among adolescents by encouraging good nutrition, exercise, and informed consumer behavior.

To create an appropriate attention control for SAAF-T, we identified video-based health promotion programs that specifically did not include content about substance use or sexual risk reduction and did not target family relationships. The FUEL™ program, distributed by the Comprehensive Health Education Foundation (C.H.E.F.), is a school-based curriculum that includes four video presentations and numerous discussion activities. Our team adapted materials from FUEL™ and created new activities to fit the family-skills format that SAAF-T uses. This process yielded a program structurally similar to SAAF-T, which we named Fuel for Families (FF). Table 1 provides an overview of the similarities and differences between SAAF-T and FF. The programs were identical in duration and format. Both used videotaped presentations and interactive components to facilitate learning.

The research study was named the RAAFH project to conceal the status of SAAF-T and FF as experimental and attention control conditions. Families were recruited into a project designed to promote health among rural African American youth and agreed to be randomized to one of two health-promotion intervention programs. Except for core research staff and investigators, intervention implementers and assessment personnel were unaware of the attention control design. Every effort was made to promote both interventions equally and to implement each one with equal support and attention. To provide the most rigorous of tests, we sought to have equal attendance at both interventions as well.

Engaging Rural African Americans into Family-Centered Interventions

The RAAFH design included an extensive focus on engagement protocols. A major barrier to public health impact for universal, family-centered prevention programs for youth in general and rural African American youth in particular involves low participation rates. Recent trials of family-centered preventive interventions illustrate the difficulty of encouraging engagement. Recruiting participants through school systems, Spoth and colleagues (Spoth, Clair, Greenberg, Redmond, & Shin, 2007) reported a 17% rate of family engagement in the PROSPER trial, whereas the school-based Adolescent Transition Programs attained a 25% participation rate among parents (Connell, Dishion, Yasui, & Kavanagh, 2007). Programs that target African Americans, in particular, bring additional challenges. Mistrust of prevention providers and concerns regarding possible transmission of sensitive data to police, child welfare, child support, and TANF authorities are barriers to participation (Armistead et al., 2004; Murry & Brody, 2004). Moreover, many implementations of family-centered programs for adolescents rely on a school-based delivery system (Dishion & Kavanagh, 2000; Spoth et al., 2007). Schools, however, experience considerable difficulty in engaging parents in prevention efforts (Rohrbach et al., 1994; Stormshak, Dishion, Light, & Yasui, 2005); this is particularly true for African American parents, many of whom have not had positive experiences with school systems (Koonce & Harper, 2005).

The implementation system developed for RAAFH was designed to encourage high participation rates and intervention fidelity in rural communities and to provide a model for intervention dissemination into real-world conditions in the rural South. Based on our experiences in the SAAF trial, meetings with community stakeholders, and the literature on effective engagement with hard-to-reach populations (Cowan, Cowan, Pruett, Pruett, & Wong, 2009; Zand et al., 2004), we developed a manualized set of protocols that constitute a culturally-sensitive, community-based delivery system for prevention programming. A description of the key engagement-supporting elements of the implementation system follows.

Recruitment by community liaisons

Rural African American families in targeted communities were recruited for participation into the research trial by Community Liaisons (CLs), residents of the counties in which the study families live who act as contacts between our research center and their respective communities. They are selected on the basis of their positive reputations and extensive social contacts in their communities. CLs rather than project staff are responsible for recruiting families in their own communities. They are provided with contact information for potentially eligible families, whom they contact by phone and to whom they make home visits when necessary to describe the project. CLs are trained extensively on the goals of the project and provide a credible community voice to establish trust between families and the research team.

Program information visit

A second protocol to increase engagement involves a program information visit by intervention group leaders. After a family was randomly assigned to SAAF-T or FF, a leader from the assigned group arranged a home visit. At the visit, a video was shown that provided a concrete demonstration of the content and activities that comprise the prevention program. The group leader then discussed any questions and concerns the family may have had, such as those involving privacy and confidentiality.

Lay facilitators

Many efforts to implement family-centered prevention programs have relied on individuals with advanced degrees to deliver the intervention (Spoth et al., 2007; St. Pierre, Osgood, Mincemoyer, Kaltreider, & Kauh, 2005). In RAAFH, African Americans from the local community delivered the intervention programs. These group leaders were not required to have college degrees; the majority were not college graduates. Our experience indicates that lay facilitators increase the credibility of the program among rural African Americans and permit program delivery in rural areas where few individuals have postsecondary education.

Supporting family attendance

To support families who may have scarce resources and many competing demands for their time and attention, we provided transportation and childcare to families who needed it. Prior to the beginning of each session, families had a meal together, a protocol that created significant group cohesion and was welcomed by busy parents.

Summary of the Present Study

The present study addresses two key questions confronting family-centered prevention science. First, it is unclear whether family-based interventions demonstrate specific effects, changes that cannot be attributed to Hawthorne effects or other nonspecific factors. Second, engaging family members in programming remains a challenge. The RAAFH trial addressed these issues. Rural African American families with an adolescent in the 10th grade were recruited using community- and home-based protocols. Participants were assigned randomly to receive the SAAF-T risk reduction intervention or the similarly structured attention control intervention, FF. Families were pretested 1 month before the interventions began and posttested 2 months after the sessions ended, producing a 5-month interval between pretest and posttest. SAAF-T participation was expected to affect intervention-targeted protective family management skills; the RAAFH design was intended to permit alternative explanations, such as nonspecific factors, to be eliminated.

Method

Sample

A total of 502 families with a 10th-grade youth took part in the trial. Participants resided in six counties in Georgia that were selected on the basis of their rurality (> 50% of census tracts designated rural) and the number of African Americans living in the county (> 20%). These counties are representative of the Southern “Black Belt” (Wimberly & Morris, 1997), a geographic concentration of rural poverty that coincides with the nation’s worst economic and health disparities by race (Hartley, 2004). Public high schools in targeted counties provided lists of 10th graders, whose families were contacted by phone in random order to discuss participation. Eligibility requirements included youth age of 15 or 16 years at pretest and self-identification as African American. The flow of participants through the trial is pictured in Figure 1. Of the 692 families screened, 638 (91%) were eligible to participate. Of these, 502 (79%) agreed to take part in the study; refusal rates were similar across the SAAF-T and FF conditions. The most common reason stated for nonparticipation was a lack of time. Of the participating families, 252 were assigned randomly to SAAF-T and 250 were assigned to FF. Families provided data at pretest and a 5-month posttest administered 2 months after the intervention programs ended; 482 families (96%) completed the posttest. No differences emerged on study variables or demographic characteristics based on attrition status.

At pretest, mean youth age was 16.0 years, $SD = .57$. Primary caregivers' mean age was 43.1 years, $SD = 8.46$. In 55.8% of the families, the target youth was a girl. Of the families, 55.5% were headed by single mothers, 33.3% by married parents, 5% by separated mothers, and 6.2% by cohabiting partners. A majority of the primary caregivers, 74.6%, had completed high school or earned a GED; 25.4% did not complete high school. Approximately 71.3% of study families lived within 150% of the poverty threshold; they had an average of 2.5 children. The demographic characteristics of the families in the sample were representative of the areas in which they lived (Boatright, 2009).

Procedures

Research staff initially contacted families via a letter introducing the study. CLs made phone calls and in-person contacts to families and enrolled those who wanted to participate. Trained African American field researchers made home visits to collect data. At the visits, self-report questionnaires were administered to a primary caregiver and the target youth via audio computer-assisted self-interviewing (ACASI) technology on laptop computers. At all data collection points, primary caregivers consented to their own and the youths' participation, and the youth assented to their own participation. Caregivers were paid \$100 and youth were paid \$50 at each assessment. Caregivers and youth were also paid \$25 for each prevention session they attended. All study protocols were approved by the university IRB.

After pretest was completed, families were randomly assigned to SAAF-T or FF. They were informed by project staff of their assignment and called by their assigned group leaders to schedule a program information visit at their homes. Program information visits were completed with 94.4% of families.

Intervention Implementation and Fidelity

African American group leaders with good interpersonal and group facilitation skills were selected to deliver the SAAF-T and FF programs. These leaders took part in training that addressed content delivery in a structured group process format, implementation of specific curriculum activities, guided practice in delivering and pacing curriculum segments, and leader self-care. Before conducting any intervention sessions, group leaders demonstrated their mastery of the prevention curriculum and the prescribed method of presenting it. SAAF-T training took 20 hours and FF training took 12 hours. Teams of three group leaders conducted a total of 20 SAAF-T and 20 FF groups. In each community, the opportunity was provided to attend one's assigned program on a weeknight or a Saturday morning. Families were expected to attend their first choice of group regularly, but could attend the other if necessary. Prevention supervisors were assigned to each team of group leaders to support their implementation experience and enhance the quality of program delivery. All sessions were videotaped. Prevention supervisors reviewed videos of each week's session, then provided constructive feedback to group leaders during weekly telephone or in-person meetings. For each group, two parent, two youth, and two family sessions were selected randomly and scored for adherence to and coverage of the prevention curriculum. Coverage of the curriculum components exceeded 80% for both SAAF-T and FF sessions. Reliability checks were conducted on 20% of the fidelity assessments; the intraclass correlation between judges was .95.

Measures

Demographics—Three demographic variables were examined to establish the comparability of intervention groups. Parents reported their total household income and number of people in the family, from which we developed a per capita income variable. Parents reported their educational status on a scale ranging from *less than high school* to a

graduate degree. This scale was collapsed into three categories: *less than high school*, *high school or GED*, and *some college or more*. Target gender was also examined for comparability.

Protective family management skills—Consistent with past prevention and basic longitudinal research with African American youth (Brody, Dorsey, Forehand, & Armistead, 2002; Brody, Kim, Murry, & Brown, 2004), intervention-targeted protective family management skills were operationalized as a latent construct with four scales as indicators of the construct. Parents completed a nine-item measure addressing parental communication of expectations regarding substance use and sexual behavior (Brody, Murry, et al., 2004). Example items included, “I have clear and specific rules about my teen’s association with peers who use alcohol,” and “I have explained my rules concerning sexual activity to my teen.” The response set ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). Cronbach’s alpha exceeded .92 at pretest and posttest.

The Discussion Quality Scale (Brody, Flor, Hollett-Wright, & McCoy, 1998) assesses frequency of discussions between parents and teens on specific topics and the extent to which those discussions are argumentative. In the present study, we used the two-item subscale regarding frequency of discussion regarding risk behavior. Parents reported, on a scale ranging from 1 (*we don’t talk about it very much*) to 3 (*we talk about it a lot*), how often they discussed sex and substance use with their teens. The items comprising the subscale were intercorrelated at .36 ($p < .001$) at pretest and .46 ($p < .001$) at posttest.

The Parental Academic Involvement measure was developed for this project to assess intervention-targeted behaviors. Parents rated, on a scale ranging from 1 (*never*) to 4 (*4 or more times per week*), the frequency with which they engaged in nine behaviors during a typical school month. Example items include, “Talk about the importance of finishing high school,” “Discuss school activities with your teen,” and “Tell your teen that education is the key to being successful.” Cronbach’s alpha exceeded .89 at pretest and posttest.

The Effective Problem Solving Scale was developed for this project to assess intervention-targeted behaviors. Parents were asked to “think about what usually happens when you and your teen have a problem to solve.” On a scale ranging from 1 (*never*) to 5 (*always*), they reported how often they used eight behaviors such as, “Listen to his/her ideas about how to solve the problem,” “Insist that your teen agree to your solution to the problem,” and “Show a real interest in helping him/her solve the problem.” Cronbach’s alpha was .79 at both pretest and posttest.

Plan of Analysis

Efficacy hypotheses were tested with Structural Equation Modeling (SEM) in AMOS 7.0 (Arbuckle, 2006) using the full information likelihood estimator. This technique obviates the need for listwise deletion of missing data, testing study hypotheses with all data present. Gender was controlled in the analysis. Nonsignificant correlations among exogenous variables were deleted from final models to prevent attenuation of model fit. Standardized betas (β) are used to report efficacy on family management skills.

Results

Engagement Effectiveness

We hypothesized that the implementation of the specified engagement procedures (recruitment by CLs, program information visits, etc.) would result in high rates of recruitment into the trial and substantial doses of the intervention programs. As noted in

Figure 1, 79.4% of eligible families agreed to participate in the RAAFH trial. Mean attendance was approximately four of five sessions, $M = 3.96$, $SD = 1.6$; only 32 families (6.3%) declined to attend any intervention sessions. As noted previously, 94.4% of families received successful program information visits at home. Being visited was significantly associated with first-session attendance, $\chi^2(1) = 44.62$, $p < .001$, and total sessions attended, $r = .27$, $p < .001$. Among the SAAF-T participants, we expected that high rates of attendance would predict changes in protective family management skills targeted in the intervention. We regressed the latent posttest family construct on a dichotomous variable representing a high dose (3–5 sessions) versus a low dose (0–2 sessions) of intervention programming, controlling for pretest levels and gender. Dose significantly predicted changes in protective family management skills ($\beta = .12$, $p < .05$).

Effectiveness of the Attention Control Design

To rule out nonspecific factors in an attention control design, families in each condition must receive an equivalent dose of a similarly structured and implemented program. Table 2 shows that SAAF-T (4.01) and FF (3.90) families received equivalent mean doses, $t = .53$.

Baseline Comparability and Measurement Model

Characteristics of the sample and tests of comparability at baseline are presented in Table 2. No differences emerged at baseline on demographic characteristics or intervention-targeted family management skills. To test the hypothesis that SAAF-T would enhance family protective processes, we developed a latent construct, with four scales (communication of expectations, academic involvement, problem solving, and risk behavior discussion frequency) specified as indicators of the construct at pretest and posttest. Confirmatory analysis of the construct's measurement model was an adequate fit to the data, $\chi^2(15) = 44.29$, $p < .001$; $\chi^2/df = 2.95$; CFI = .97; NFI = .96; RMSEA = .062 (.042, .084). Table 3 presents the correlations matrix with means and standards deviations of study variables.

Intervention Efficacy

The main effects of the SAAF-T intervention on posttest levels of protective family management skills, with pretest levels and gender controlled, was tested with SEM. We created a dummy variable representing condition assignment (FF = 0, SAAF-T = 1). Figure 2 presents our findings. The model fit the data adequately, $\chi^2(29) = 57.21$, $p = .001$; $\chi^2/df = 1.97$; CFI = .97; NFI = .95; RMSEA = .044 (.027, .061). Consistent with our hypotheses and with the SAAF-T intervention's goals, assignment to SAAF-T rather than FF predicted increases in protective family management skills, $\beta = .10$, $p = .023$. To test the generalizability of effects across gender, we conducted a multigroup analysis. In this analysis, we first specified a two-group (male vs. female) invariance model where all parameters were constrained to be equal across groups. In a second model, we allowed the regression path connecting intervention assignment (SAAF-T vs. FF) to posttest protective family management skills to be estimated freely. The difference between the fit for the two models was not significant, $\Delta\chi^2(1) = 2.21$, $p = .14$. This indicates that the effect of SAAF-T on protective family management skills did not differ for boys and girls.

Discussion

In this article, we described the design and rationale for the RAAFH prevention trial and addressed two key limitations in the literature on family-centered intervention: engaging families and ruling out nonspecific effects. The engagement protocols yielded high rates of recruitment into the project and high program attendance. The use of a structurally similar attention control intervention, FF, permitted an evaluation of SAAF-T's effects on targeted family management skills that ruled out nonspecific factors as alternative explanations.

Family effects were assessed 2 months after the prevention programming concluded to provide time for any transitory immediate effects to dissipate. Consistent with study hypotheses, SAAF-T youth evinced higher levels of protective family management skills than did FF youth. The design eliminated attention and the effects of structured family interactions as explanations of these results.

Although family management skills are critical in protecting youth from adolescent risk behavior, the promise of family-centered interventions has been limited by difficulties in engaging parents (Haggerty, MacKenzie, Skinner, Harachi, & Catalano, 2006; Spoth, Kavanagh, & Dishion, 2002), particularly those in ethnic minority groups (Lochman & Steenhoven, 2002; Zand et al., 2004), into interventions. RAAFH protocols for engaging families yielded an 89% recruitment rate. Among pretested families, 92.6% attended at least one intervention session, 77.7% of the families attended at least four of the five program sessions, and 61.6% attended all five sessions. These rates are similar to the highest rates obtained in family-centered prevention trials with middle-class Caucasian parents (e.g., Spoth, Redmond, & Shin, 1998) and are more than twice those from efficacy and effectiveness trials of other family-centered programs (Haggerty et al., 2002; Spoth, Clair, Greenberg, Redmond, & Shin, 2007; Stormshak, Dishion, Light, & Yasui, 2005). This success with engagement may be attributable to the use of culturally consistent intervention programming, which past research suggests may enhance rates of participation in family-centered programs (Kumpfer, 2002). In addition to being grounded in longitudinal research with rural African American families, SAAF-T was developed with extensive input from community members who provided feedback on curriculum content and specific session activities (Murry & Brody, 2004). All videotaped exemplars and narration were designed specifically to be familiar and salient to rural African Americans, resulting in a culturally congruent program that reflected the target participants' experiences.

We also attribute our engagement success to our community-based implementation protocols that emphasize relationships with local community members and make information available to participants at pre-intervention home visits. Community members took part in program recruitment and implementation. In contrast to programs that recruit through schools, the protocols in the RAAFH trial focus on fostering among African American communities a sense of ownership of the program and its processes. This reduces the potential for the program to be seen as a way to "fix problems" among African American families, a message many families perceive from schools and other community agencies. Most project participants received pre-intervention home visits. Although we did not examine engagement processes experimentally, we did observe a significant positive association between home visits and program attendance. These visits allowed family members to meet a group facilitator, view a promotional video, and ask questions about the program.

The short-term longitudinal design of the RAAFH trial provided evidence that SAAF-T enhanced protective family management skills. To our knowledge, the SAAF-T trial is the first to utilize an attention control intervention. The FF program was designed to be structurally equivalent to SAAF-T and was implemented identically. The interventions were equally well attended. This design increases confidence that the changes in protective family management skills that emerged in this study cannot be attributed to nonspecific factors that might arise from any intervention or other setting in which family members interact in structured activities.

The RAAFH trial also supported the feasibility of community-based, family-centered programming for African American adolescents. The majority of risk-reduction programs that are implemented through schools rarely involve parents (Kirby, 2002). The SAAF-T

intervention emphasized family management skills that support substance use and sexual risk reduction, including collaborative youth-parent problem solving, frequent discussion about risk behavior, and parental support for academic activities. Curricula targeting these processes were integrated into a structured intervention that also included aspects of individual sexual risk reduction such as sexual health knowledge and protective behavior efficacy. The inclusion of content that addresses sexual behavior is uncommon in family-centered programming, as sexual behavior is a very sensitive topic for both youth and caregivers. In the RAAFH trial, we developed protocols that engaged high numbers of parents in a program that addressed these sensitive issues. Our approach used an optional condom skills session and a structured curriculum in which parents' authority was respected while they were encouraged to give their permission for teens to attend the condom skills session. Caregiver session content addressed common parental misgivings regarding sexual education, including the concern that teaching condom skills may encourage sexual activity. Of the families assigned to SAAF-T, 70% attended the condom skills training session. This engagement success, along with the increases in protective family management skills, suggests that parental involvement in sexual risk reduction programming is feasible with older adolescents.

Some limitations of the present research should be noted. Although we speculate that our set of integrated engagement protocols yielded high participation rates in the trial, experimental investigations of specific engagement practices are warranted. Designs that randomly assign participants to different engagement protocols (for example, see Szapocznik et al., 1988) are critical for the eventual diffusion of family-centered preventive interventions. Because a prevention trial focuses on efficacy, best methodological practice is to provide incentives for participation. The use of financial incentives may have encouraged many families to participate; however, in our own and others' past research, incentives were not sufficient to achieve the high rates of participation found in this study (Brody, Murry, et al., 2004). Also, the use of home-based engagement strategies is a resource-intensive protocol. Future research focusing on the costs and benefits of this investment are warranted to enhance its utility for real-world providers. Investigating the risk reduction efficacy of SAAF-T in the context of planned future assessments will provide crucial information on its potential public health impact. Finally, the effect size of the intervention could be termed small. This limitation, however, must be interpreted with caution. Whereas other trials have obtained larger effect sizes on family management skills (see, for example, Brody, Murry, et al., 2004), these trials included comparison groups that were not attention controlled. SAAF-T's family effect represents specific change as a consequence of targeted skill building rather than general social support or other nonspecific factors that are likely to operate in any family-centered program. These cautions notwithstanding, this prevention trial advances understanding of the potential for family-centered programming to initiate changes that cannot be attributed to nonspecific factors and provides a model for successfully engaging a typically hard-to-reach group of parents into a risk-reduction prevention program.

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Figure 1.
Flow of participants through the SAAF-T trial.

Figure 2.
SAAF-T effects on change in protective family processes, controlling for youth gender
** $p < .01$; * $p < .05$

Table 1

Comparison of the index and attention control interventions

	SAAF-T (Index Intervention)	Fuel for Families (Attention Control)
Structure	5 weekly meetings; concurrent 1 hour parent and youth session followed by family group session	
Group size	8– 12 families per group	
Group leaders	Team of 3 African American facilitators	
Leader supervision	Weekly in person and phone supervision with supervisor, review of videotaped sessions	
Instructional methods	Videotaped narration and exemplars, interactive activities, group discussion, homework assignments	
Engagement	Pre-program information home visit; Family meal prior to session; childcare and transportation available	
Leader training	20 hours	12 hours
Program dose	10.3 hours (includes optional condom skills session)	10 hours
Intervention-targeted processes	<ul style="list-style-type: none">• Problem-solving family interactions• Parent-youth risk communication• Supporting academic pursuits• Youth Future planning and goal setting• Youth risk behavior attitudes and knowledge	<ul style="list-style-type: none">• Media influences on body image and nutrition• How to eat healthy• The importance of exercise• How families and communities can support health

Table 2
Comparisons of Experimental Conditions by Implementation Processes, Sociodemographic Characteristics and Study Variables

Variable	Experimental Condition					
	SAAF-T (n = 252)			FF (n = 250)		
	M	SD	%	M	SD	% t/χ ²
Implementation						
Dose (sessions) x Sociodemographics (pretest)	4.01	1.53		3.90	1.75	0.53
Per capita income (\$)	436.00	386.00		514.00	496.00	1.33
Maternal education						1.21
Less than high school			27.5		23.3	
High school or GED			23.5		25.7	
More than high school			49.0		51.0	
Youth gender, female			56			56 0.39
Family management skills (pretest)						
Parental expectations	38.8	7.5		37.8	8.3	1.38
Risk communication frequency	4.4	1.3		4.3	1.4	1.20
Parental academic involvement	38.5	9.9		37.5	9.9	1.13
Effective problem solving	28.8	3.6		28.5	3.6	1.07
Family management skills (posttest)						
Parental expectations	39.12	8.1		38.43	7.8	.95
Risk communication frequency	4.90	1.8		4.75	1.7	.93
Parental academic involvement	39.62	9.9		37.64	10.0	2.2
Effective problem solving	29.02	3.6		28.65	3.8	1.09

Note. SAAF-T = Strong African American Families-Teen program. FF = Fuel for Families program.

Table 3

Correlation Matrix

Variable	1	2	3	4	5	6	7	8	9	10
1. Gender	--									
Pretest										
2. Parental expectations	-.003	--								
3. Risk communication frequency	-.057	.249	--							
4. Parental academic involvement	-.011	.173	.306	--						
5 Effective problem solving	-.022	.304	.246	.241	--					
Posttest										
6. Parental expectations	-.014	.551	.125	.133	.276	--				
7. Risk communication frequency	-.049	.265	.531	.284	.142	.264	--			
8. Parental academic involvement	-.039	.159	.297	.666	.214	.191	.353	--		
9. Effective problem solving	-.003	.296	.152	.226	.605	.361	.219	.297	--	
10. Experimental condition	-.004	-.062	-.054	-.050	-.048	-.043	-.156	-.099	-.05	--
Mean	0.44	38.30	4.33	38.01	28.65	38.78	4.49	38.64	28.84	1.50
SD	0.50	7.88	1.35	9.91	3.57	7.95	1.35	10.01	1.50	0.50

Note. Coefficients with an absolute value greater than .09 are significant at $p < .05$; those with an absolute value greater than .15 are significant at $p < .01$.