Group Dynamics: Theory, Research, and Practice
2010, Vol. 14, No. 3, 211–229

1089-2699/10/$12.00 DOI: 10.1037/a0020602

Effectiveness Outcomes of Four Age Versions of the Strengthening Families Program in Statewide Field Sites

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Family dysfunction is unacceptably high nationally and internationally with high costs to society in adolescent problems. A number of evidence-based (EB) parenting and family interventions have been proven in research to improve children's outcome. The question remains whether these EB family programs are as effective in practice. This article summarizes research outcomes from a quasi-experimental, 5-year statewide study of the 14-session *Strengthening Families Program* (SFP) with over 1,600 high-risk families. The study compared outcomes including effect sizes for the four different age versions of SFP (SFP 3–5, 6–11, 10–14, and 12–16 years). Quality assurance and program fidelity were enhanced by standardized training workshops, site visits by evaluators, and online supervision. Outcomes were measured using the SFP Parent Retrospective testing battery containing self-report standardized clinical measures of 18 parent, family, and child outcomes. The 2 repeated measures by 4 group ANOVA compared the four different age versions of SFP. All of the outcome variables for the four programs were statistically significant at less than the $p < .05$ level except for reductions in Criminal Behavior and Hyperactivity in the older 10 to 16 year-olds. The effect sizes were larger than in prior randomized control design of SFP. The average effect sizes for both the Parenting and Family Cluster scores range from a high Cohen's $d = .77$ for SFP 6−11 years to effect size of $d = .67$ for SFP 3–5 and 10–14. The largest effect sizes were for improvements for the SFP 6–11 condition in Family Communication and Family Strengths and Resilience ($d = .76$ for both), Family Organization ($d = .75$), Parental Supervision ($d = .73$), Parenting Efficacy ($d = .70$), and Positive Parenting ($d = .67$). Parental alcohol and drug use was reduced most in the SFP 12–16 year version ($d = .43$).

Keywords: evidence-based group therapies, family skills training, child maltreatment and substance abuse prevention, statewide field study

Rates of family dysfunction are unacceptably high nationally and internationally with high costs to society. Family and parental dysfunction are associated with multiple negative consequences for all family members, including multigenerational substance abuse, family violence, child maltreatment, removal of children, separation and divorce, incarceration, youth delinquency, psychological problems, and death. A multitude of developmental theories support the critical role of families in child rearing.

The ADD-Health longitudinal adolescent research published by Resnick and associates (Resnick et al., 1997) suggests that parents have a larger impact on their children's development and health than previously thought. Although peer influence is the major reason adolescents initiate negative behaviors, a positive family

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environment (e.g., family bonding, parental supervision, and communication of prosocial family values) acts to decrease the risk of adolescents' engagement in unhealthy behaviors, such as substance abuse, delinquency, and early or unprotected sex. These protective family factors have been found to exert an even a stronger influence on girls than on boys (Kumpfer, Smith, & Franklin Summerhays, 2008). The breakdown of the family system can be identified by parents' decreased involvement with and decreased time spent with their children. This breakdown contributed to increased delinquency and substance abuse in young girls during the mid-1990s. In addition, the Adverse Childhood Experiences (ACE) retrospective longitudinal study (Anda et al., 2008) conducted by the Centers for Disease Control and Prevention using Kaiser Permanente health records suggests that early family violence and dysfunction contributes to costly and long-lasting chronic health conditions.

Contents of Article

This article begins with an introduction to the need for family focused prevention and treatment services, which covers the definition of the different types of family preventive interventions, theories behind these evidence-based programs (EBPs), and the most effective family interventions, including the research and program description of the author's *Strengthening Families Program* (SFP). The results of a statewide implementation of SFP with 1,600 high-risk families in New Jersey are the major focus of this article. SFP is a 14-session, group-based prevention program that was designed originally in 1982 by Dr. Karol Kumpfer on a National Institute of Drug Abuse (NIDA) grant to prevent later substance abuse in the highest risk group of children, namely children of drug-abusers in treatment. The program's positive outcomes in eight randomized control trials by independent research teams appear to be related to its skills-training content and the structure of SFP with separate groups in the first hour for parents and children with a practice session joining parents and children in the second hour. In addition, the whole family attends, not just the identified child. SFP strives for sustained family systems change. This article will review the SFP theory and multiple research studies by independent researchers in up to 16 countries (Kumpfer, Pinyuchon, de Melo, & Whiteside, 2008) to demonstrate that SFP is a robust, evidence-based group model, capable of producing excellent results when replicated in field applications by local agencies as well as in independent research studies. The program consistently produces statistically significant positive changes with medium to large effect sizes in parent outcomes (e.g., increased parental supervision and monitoring, parental involvement, parenting efficacy, parenting skills, parenting confidence, and substance abuse), family relationships (e.g., communication, cohesion, organization, family conflict, and resilience), and children's mental health and behavioral outcomes (e.g., depression, overt and covert aggression, social skills, and concentration). SFP has succeeded in diverse cultures because a cultural adaptation process involving community/researcher is strongly recommended. The methods used to disseminate SFP and to assure a quality implementation by practitioners will be described. These include the language translation and cultural adaptation process for materials development, staff training, and on-site and online Web-based supervision, and technical assistance and evaluation services to assure quality implementation and process evaluation feedback for improvements.

The article concludes with research outcomes from a 5-year statewide study of SFP with over 1,600 families that compared effect sizes of the four different age versions of SFP (SFP 3–5, 6–11, 10–14, and 12–16 years). These data suggests that with effective training and supervision systems, group therapists, and counselors can replicate the same results, and in some cases, exceed, the effect sizes or amount of positive client improvement found in the original randomized control trials (RCTs) for SFP. When implemented in the field, EBPs are widely believed to achieve poorer results than in the original research studies. The results of this study, however, strongly support the widespread dissemination of cost-effective evidence-based group family interventions to reduce the high costs of family dysfunction.

This article is the first published study to compare the effect sizes or outcomes of the four age versions of SFP. This article also reports on the results of a statewide implementation with a very large sample size. The results are signifi-

cant because they discount the prevalent notion that prevention programs taken to scale for a public health approach fail to achieve the positive outcomes found in randomized control trials (Tobler & Stratton, 1997).

Review of Evidence-Based Group Family Interventions for the Prevention of Youth Problems

Through national expert reviews of family research for the Center for Substance Abuse Prevention (CSAP/PEPS, 1998; Kumpfer & Alvarado, 2003), a number of approaches to family interventions have been found to be effective in strengthening family systems and preventing family violence and behavioral or mental health problems in youth. Such interventions include: (1) *behavioral parent training* (primarily cognitive/behavioral parent training); (2) *family skills training* (parent training, children's skills training, and family practice); (3) *family therapy* (structural, functional, or behavioral), and (4) *in-home family support.* Evidence also suggests that less costly family interventions that do not rely on group process can also have significant although smaller positive effects. These cost reducing methods include mailed out homework assignments with telephone family coaches (Bauman et al., 2001) and parenting or family interventions using CD-ROM, DVD, or Web technology including learning videos (Gordon, 2000; Haggerty, Skinner, MacKenzie, & Catalano, 2007; Marsch, Bickel, & Grabinski, 2007; Schinke, Di Noia, & Glassman, 2004, Schinke, Cole, & Fang, 2009a; Schinke, Fang, & Cole, 2009b, 2009c; Schinke, Fang, Cole, & Cohen-Cutler, in press). The authors could find only one study (Haggerty et al., 2007) comparing the effectiveness of a group-based family version, *Parents Who Care*, to a CD delivery of the same parenting program. The surprising findings were that the self-paced CD video version was more effective than the group-based version for the lower income and lower education level African American mothers, but not for the European American mothers. One hypothesis is that a self-paced, home version allowed parents to repeat lessons thereby increasing learning. In addition, with few barriers to attendance such as transportation and child care problems in getting to a group based therapy, the African American mothers were able to complete more of the sessions, thus improving the outcomes in the intent-to-treat RCT design. Because the cost implications are substantial, research is needed comparing group to individual or computer-delivered versions with cost-benefit analyses. Individual family treatments are much more expensive than group versions and group versions are much more expensive than computer-delivered Web versions. The group-based SFP has never been tested against an individual SFP version. Because of the high cost of even the group-based version of about $100 per family per session with two coleaders, meals, incentives, child care, transportation, and so forth, a Web-based version is currently being developed for effectiveness testing in a RCT.

A review of family strengthening approaches conducted by Alvarado and Kumpfer (2000) found 34 evidence-based programs. Of these, 14 had been tested in RCTs and seven independently replicated. For more detailed descriptions of Office of Juvenile Justice and Delinquency Prevention (OJJDP) EBP family interventions, see *www.strengtheningfamilies.org* (Kumpfer & Alvarado, 2003). By 2011, a more recent update of this Web site including more EBP family interventions should be available through the United Nations Office of Drugs and Crime (UNODC) Web site. A useful compendium for the U.N. project is a manual, *Guide to Implementing Family Skills Training Programmes for Drug Abuse Prevention* (UNODC, 2009), on how to adapt EBP family interventions locally or culturally to maximize family recruitment, retention, and outcomes. A summary of these steps to cultural adaptation of family programs was recently published in 2008 by Kumpfer and associates.

Etiological Theory Underlying SFP

The causal or etiological theory underlying SFP is the tested Social Ecology Model that was derived from pretest data on 8,500 youth nationwide involved in substance abuse prevention programs. Using structural equations modeling (SEM), we determined that the most salient causal risk or protective factors for substance abuse included family cohesion or bonding, parental supervision and communication of positive family values. These factors were found to be the most influential in positive youth outcomes and should be incorporated into

any family prevention or treatment program (Kumpfer, Alvarado, & Whiteside, 2003). In addition, when SFP was created a needs assessment was conducted of 280 families comparing drug abusing parents to those of matched families and general population families (Kumpfer & DeMarsh, 1985). It was found that drug abusing parents spent half as much time with their children as normal families, had unrealistic developmental expectations, used more abusive and coercive discipline, rarely praised their children's good behaviors, and neglected their children more. Effective treatment methods for these risk factors were incorporated into the SFP curriculum manuals for practitioners.

Core Components of EBP Prevention Programs

Kaminski and associates (2008) analyzed the *critical core components* of EBP family strengthening interventions from 77 studies of programs for child maltreatment prevention in 0–7 year olds. Their results on the essential elements of effective parenting programs were incorporated into SFP and are listed below.

1. Format should include practice time for parents (with both children and group leaders in the sessions).

2. During family session, parents should be taught to interact positively with children (e.g., showing enthusiasm and attention for good behavior, letting the child take the lead in play activities).

3. Parenting content should include increasing attention and praise for positive children's behaviors, understanding normal development, positive family communication skills, and effective discipline.

4. Children's content should include teaching children social skills.

5. Generalization of new behaviors should be facilitated through assignments involving practice in home or other social settings.

Intervention Theories

The psychological theories underlying SFP and many other family EBPs are cognitive–behavioral psychology, social learning, and/or family systems theory (Liddle, Santisteban, Levant, & Bray, 2002). Key concepts incorporated into SFP and other EBPs include increasing praise for improvements in behavior and ignoring what can be ignored, clear communication of expectations, and reducing coercive parent–child interactions that give rise to child abuse and family violence—a process well documented by Gerald Patterson at the Oregon Social Learning Center. Parents are taught to hold family meetings and learn therapeutic and problem solving communication methods, including active and reflective listening, and "Speaker-Listener-Coach Roles" to replicate what a therapist would do for the family. The group therapists use family systems techniques such as reframing and cognitive restructuring methods to foster behavior change in participants. A key ingredient in the success of SFP is that it involves the *whole* family (parents and children and parents and children together) in interactive change processes, rather than involving them in didactic educational lessons. SFP is unusual in its stress on the importance of engagement, including cultural adaptations and reducing barriers to attendance through relationship building services-such as personal invitations, meals, childcare and transportation, and other incentives. The initial sessions are designed to improve positive feelings through positive reframing and skills exercises emphasizing family strengths and what parents like about their children rather than focusing on the negative aspects that brought them to the group sessions.

Description of the SFP Group Intervention

The SFP program was designed in a group format, but was being modeled on individual or parent/child therapy content developed by Patterson and also Forehand and McMahon (1981). The group format was chosen to be more cost-effective and to improve outcomes by increasing peer group support. Peer support typically includes, sharing parenting tips and ideas, vicarious learning, and helping children of substance abusers to realize that they are not

alone. The selective SFP variants for high risk families last for 14 2.5 hr weekly sessions and the universal SFP lasts for seven 2.5 hr weekly sessions. To remove barriers to attendance and allow the clinicians' time to observe and coach parents to improve their interactions with their children, SFP begins with a meal with parents and their children sitting together as families. Meals may conclude with warm-up and welcome exercises, sometimes lead by a family. Following the meal, parents and children separate to attend 1-hr parenting or children's social skills training classes. In the second hour, they rejoin as families to practice the new skills they learned in their separate sessions. They are sent home with assignments to practice and implement the skills at home and report back the next week on their success and challenges. Some agencies are also training home visitors or case managers to reinforce these new skills in home practice sessions. See content listed below:

1. *The Parent Skills Training* (*PT*) includes: group building, teaching family members how to increase resilience through developing and supporting dreams and goals, stress management, anger coping, using supportive communication; encouraging desired behaviors using humor, reasonable consequences, and positive attention and reinforcement. The program also promotes behavioral goal statements, differential attention, and positive communication. Additional topics include discipline, problem solving, maintenance, and implementing self-change behavioral programs.

2. *The Youth Skills Training Program* (*ST*) includes a rationale for the program, communication of group rules, stress management, social skills of attending and reflective listening, appropriate assertive behavior, problem solving, coping with anger, decision making, communication rules and practice, understanding and managing feelings and conflict, resisting peer pressure, media and drug education, dating and relationships, compliance with family or school rules, and resources for help and review.

3. *The Family Skills Training* (*FT*) provides additional information and a time for the families to practice communication skills (with group leader support and feedback). Families are encouraged to spend positive "home practice" time with their children weekly, called Child's Game in the original SFP 6–11, an adaptation of Child's Game by Forehand and McMahon (1981) and "Our Time" in the SFP 12–16 version. Parents or relatives learn to interact with their children in a nonpunitive, noncontrolling, and positive way. In the five sessions of Family Game meetings, family members are trained to improve family communication through Speaker/Listener/Coach role plays using active and reflective listening, structured family meetings, and problem solving steps. Four sessions of Parents' Game focuses on role plays during which the family members practice giving clear directions and effective discipline techniques with their children. The 1st session focuses on group building, program content, contracting and brainstorming possible solutions for barriers to attendance. The 14th session focuses on generalization of gains and connecting to support services. The final week session is a graduation celebration with invited guests. Activities planned by the families to highlight their cultural traditions (music, food, dance, entertainment), and what they have learned in testimonials. Table 1 provides an overview of the 14 SFP sessions plus graduation.

Parents' and children's classes are each led by two SFP group leaders, preferably a man and a woman of ethnicities matching the clients in each group. The SFP uses written group leader manuals detailing in depth each lesson plan and containing all parent and children's handouts. The Parent's Handbook and Children's Handbook contain readings, homework assignments, and in-class exercises. An SFP Implementation Manual also discusses ideas for how to best recruit families, the engagement process, group process problems that can arise and suggestions for solutions. All course materials as well as fidelity and quality checklists, attendance records and outcome instruments for parents

Table 1
Contents of The SFP 6–11 Year Sessions

	Youth		Parents		Family	
Session	Topic	Details	Topic	Details	Topic	Details
1	Hello and Rules	Why we're here, what we will do	Introductions	Rules, rationale, incentives	Introductions	Overview of program
2	Social Skills - Listening	Learn to listen better	Managing Stress	Developmental expectations	Our Time Game	Show and tell from classes
3	Social Skills - Speaking	Learn to speak clearly	Rewards	Using good reinforcements	Our Time Game	Focus on rewards and feelings
4	Creating Good Behavior	Secret rules of success	Goals & Objectives	Determining changes goals	Goals & Objectives	Goal-setting activities
5	How To Say "No"	Steps to avoid peer pressure	Noticing & Ignoring	Behavioral charts	Noticing & Ignoring	Negotiating chores and rewards
6	Communication	Learning to use "I" messages	Communication	Clear and unclear requests	Communication	Practice newly learned skills
7	Communication	Practicing listening and speaking	Communication	Family meetings and management	Communication	More practice of skills
8	Alcohol & Drugs	Consequences, normative info, etc.	Alcohol, Drugs, & Families	Generational transmission	Learning from Parents	More skills practice on neutral topic
9	Peer Resistance and Prob. Solving	Staying out of trouble	Solving Problems	Providing clear instructions	Problem Solving	Skills practice on a sensitive topic
10	Parent's Game	Practicing clear requests	Setting Limits	Dealing with noncompliance	Parent's Game	Discipline, rewards, attention, directions
11	Coping Skills	Recognizing feelings	Setting Limits	Problems with physical punish	Parent's Game	Logical and natural consequences
12	Coping Skills	Dealing with criticism	Setting Limits	Problem solving behaviors	Parent's Game	Time-out Practice
13	Coping Skills	Coping with anger	Using Behavior Programs	How to implement	Parent's Game	Punishment practice
14	Resources and Review	Finding safe people to help	Maintaining good behavior	Generalization and maintenance	Family Resources	Review of all that has been learned
15	Graduation	Presentations, awards, certificates	Graduation	Presentations, awards, certificates	Graduation	Presentations, awards, certificates

and children are distributed as a master set on CD with a limited site license to copy as needed for the agency's own use.

Research History of the SFP Group Intervention

SFP is an evidence-based program that has been culturally adapted and tested with many types of clients. SFP has a long history of research demonstrating its effectiveness with numerous populations. The positive SFP outcomes are based on eight independent replications in NIAAA/NIDA/NIMH/CSAP-funded RCTs with up to 10 year follow-ups (Kumpfer, Alvarado, Whiteside, & Tait, 2005; Spoth, Redmond, Mason, Kosterman, Haggerty, & Hawkins, 2005; Spoth, Redmond, Shin, & Azevedo, 2004). SFP was originally developed and tested on a NIDA RCTs as a 14-session, selective prevention intervention for 6- to 12-year-old children of substance abusers (DeMarsh & Kumpfer, 1985; Kumpfer & DeMarsh, 1985). SFP was found to improve the most salient risk and protective factors for substance use guided by its underlying etiological theory, the SEM-tested Social Ecology Model of Adolescent Substance Abuse (Kumpfer, Alvarado, & Whiteside, 2003). Those causal factors include family environment (conflict, communication, organization, and cohesion), parenting skills (supervision, positive parenting, communication of positive family values), and youth factors (resilience, depression, overt and covert aggression, and social skills).

Based on these promising results, a shorter 7-session universal prevention version of SFP for families of lower risk 10–14 year olds was developed and tested in two NIDA/NIMH RCTs, with families recruited from schools in 20 southern Iowa counties (Kumpfer, Molgaard, & Spoth, 1996). The 4-, 6- and 10-year follow-ups results of SFP 10–14 years (Spoth, Redmond, & Shin, 2001; Spoth et al., 2004) suggest it is twice as effective as other school-based substance abuse prevention programs (Cochrane Review; Foxcroft, 2006; Foxcroft et al., 2003). None of the children by the 6-year follow-up had begun methamphetamine use compared to 3.2% in no-treatment schools or 3.6% in the comparison parenting program making SFP 10–14 years the only proven methamphetamine prevention program (Spoth, Clair, Shin, & Redmond, 2007). Additionally, the researchers reported that 10 years later there were dramatic reductions of 220 to 300% in diagnosed mental health problems (depression, social anxiety, phobias, and personality disorders) by age 22 years in the 6th graders who attended SFP schools (Spoth et al., 2005).

In the 1990s, the program was culturally adapted on federally funded effectiveness trials with diverse populations (African American, Hispanic, Asian, Pacific Islander, and Native American) from different states to improve generalizability of the results. It is expected that each local agency will make additional local and cultural adaptations to make the program more relevant and increase the feeling of participants that this program was designed for families "like us." The steps to cultural adaptation used by SFP implementers are described in Kumpfer, Pinyuchon, de Melo, and Whiteside (2008). Generally, the final culturally adapted versions are not "deep structure" changes, but more often are "surface structure" changes resulting in culturally appropriate ways of communicating with, engaging, and enrolling families. In addition, session exercises, songs, stories, games, food, and music are matched to the local culture to incorporate cultural traditions and enhance cultural pride and identify. For example in the American Indian versions, a community elder is often invited to do a "blessing ceremony" at the beginning of the group. The children's Name Game in the first introduction session was not sharing their favorite ice cream, but their favorite or totem animal. In the last sessions where parents learn clear communications and directions for children, group leaders are encouraged to have parents teach children some cultural art that could be used in the graduation party, for example, making drums and flutes for boys and shawls and traditional Navajo dances for the girls. Hispanic parents taught children how to make piñatas. Asian parents taught their children origami to make 1,000 cranes for the graduation party. Pacific Islander parents taught grass skirt making and traditional dances and songs.

Five studies found that culturally adapted SFP versions improved enrollment and retention by an average of 40%. These studies, including African American, Hispanic, Asian, Pacific Islander, and Native Americans, nevertheless produced outcomes no better than the

generic SFP comparison groups (Kumpfer, Alvarado, Smith, & Bellamy, 2002). Of course, improving family engagement and enrollment is extremely important, indicating a need to culturally adapt EBPs. New age-adapted versions of SFP have been developed for 3–5 and 12–16 year olds. The results of these new versions are reported in this article.

Cost-benefit studies (Aos et al., 2004; Miller & Hendrie, 2008; Spoth, Guyll, & Day, 2002) report a positive cost/benefit ratio of $9.60 to $11. The most recent SAMHSA cost/benefit study (Miller & Hendrie, 2008) suggested that SFP prevented the highest percent of youth from using alcohol (18%), marijuana (15%), and other drugs (11%) compared to other prevention programs. The reported cost/benefit ratio of $11 saved/dollar spent should in fact be closer to $36. This is because in addition to the targeted child who benefits from a family intervention, others are also positively impacted, including siblings and parents whose stress, depression, and substance abuse are reduced.

Rationale for the Statewide Phase 5 Research

The final goal of any EBP is to be tested in a NIH Phase 5 large scale study and demonstrate effectiveness. Several well-publicized studies have reported reductions in the effectiveness of evidence-based prevention programs when not implemented with fidelity and quality in community settings (Gottfredson et al., 2006; Henggeler, Melton, Brondino, Schure, & Hanley, 1997). These studies questioned whether and how well evidence-based programs originally tested in well controlled, but sometimes artificial, research conditions can be implemented on a statewide or national level. Most prior research suggested a watering down of effectiveness when programs are not under the careful observation of the program developer and researcher or tested in larger scale implementations (Tobler & Stratton, 1997).

For instance when SFP was implemented by a community coalition of five government entities and multiple services providers in the Washington, DC, area under a NIDA RCT research grant, the actual program implementation quality was low. This trial produced statistically significant positive results, but with effect sizes smaller than the normally high effect sizes found in other community sites (Gottfredson et al., 2006). The less than optimal organizational setting and artificial research situation resulted in reduced effectiveness. SFP was not contracted to real family services agencies, but to government entities who hired individual contractors as group leaders. Staff turnover and lack of commitment to the project was higher than usual and contributed to the difficulties in family recruitment, retention, and quality of results.

In addition the planned African American cultural adaptation specified in the grant in the 3rd and 4th year was dropped because of concerns with sufficient power. This demoralized the largely African American program providers and reduced recruitment and retention. As an example, only 51% of families who were eligible enrolled, while 35% of those who were enrolled never attended a single session. Because of the intent-to-treat design analysis (Gottfredson et al., 2006) that included all enrollees in the data analysis (even if they never attended the program), the size of the outcomes was further reduced by more than a third. In addition, of the 65% that did attend SFP, those participating attended average of only 8 of the 14 sessions. Families were recruited universally through advertisement, as there was no therapeutic agency client base from which to recruit participants, because SFP was not run through actual drug or social services agencies, but by government entities contracting for services. These factors contributed to reduced clinical quality of delivery.

Although fidelity to the curriculum content was high at 91 and 92% for the parent and child curriculums as measured by fidelity checklists conducted by the research assistants, fidelity was much lower (62%) for the family practice sessions which are more difficult for less well trained community providers to deliver. Fidelity to completing all elements of the lesson plans was achieved because group leaders knew when the graduate research assistants were coming to observe and had the session fidelity checklists and so were able to refer to the checklists to assure all parts were completed. On site visits the program developer observed low quality in the more subjective parts of the sessions such as engaging the families and responding appropriately to family questions. It is much harder for inexperienced graduate students to judge qual-

ity of the group process and the clinical appropriateness of the group leader's responses. Unsurprisingly, results were found to be stronger when the program implementation was better (Fox et al., 2003).

Despite these breaches of quality, many positive parenting, family, and children's results were found in the Washington, DC. SFP 6–11 studies even by the immediate posttest, suggesting that the program is robust in replication or dissemination efforts. Despite comparison to a minimal contact control of four sessions that itself resulted in some significant improvement), SFP resulted in significant improvements in family conflict, parenting confidence, and children's antisocial behavior, school progress, and social skills.

Because many researchers and policymakers are skeptical that EBPs get positive results when taken to scale, this study demonstrates that SFPI when implemented with good training, site visits, and evaluation feedback obtains results similar or superior to those obtained in RCTs. This is unsurprising because local agencies typically have higher standards for implementation and clinical experience, than the often necessarily somewhat artificial circumstances required in the original RCTs conducted by researchers.

Research Method

Research Design

The statewide outcome evaluation of SFP involved a quasi-experimental, repeated measures, pre and posttest design with standardized instruments being administered to parents and children attending the program. Post hoc subgroup comparison groups were created as recommended by Campbell and Stanley (1963) to create a quasi-experimental design that allows for a higher level of control for most threats to internal and external validity. The post hoc group comparison groups included the four different SFP age versions: SFP 3–5 years, SFP 6–11 years, SFP 10–14 years, and SFP 12–16 years. This analysis addressed the research question of whether the different age versions of SFP result in differential effectiveness for the intended outcomes. The hypothesis was that the older age versions of SFP designed for adolescents, who should have more problems at the pretest, would have better outcomes because they have more room for improvement. In addition, the 14-session SFP 12–16 that was designed for high-risk families was expected to have better outcomes than the 7-session SFP 10–14 that was designed for low risk universal families from schools in Iowa (Kumpfer, Molgaard, & Spoth, 1996).

Participants

Families with youth at-risk for substance abuse and delinquency were recruited by 54 local community agencies in New Jersey with emphasis on serving families with a history of substance abuse and/or involved with substance abuse treatment and prevention agencies, child welfare (Division of Youth and Family Services), mental health services agencies, faith-based agencies, and the criminal justice system. Because SFP 3–5 years and SFP 12–16 years were developed after the study began, agencies were slow to adopt them and sample sizes were smaller. Agencies determined which of the four age versions they wanted to implement and this further contributed to unequal group sizes for the four age variants.

A total sample size of over 1,600 families from 142 cycles participated in one of four age versions of SFP over the 3 years of this research between July 1, 2004 and June 30, 2007. Because of the large number and varied types of high-risk families in this statewide implementation, a table of gender, age, race, and ethnicity characteristics by percentages will not be included in this article. Generally, about 66% of the attending parents were female and 34% male. All ethnicities were included including about 40 Korean families from the Newark area. More families participated in SFP groups over the 142 cycles, but only those with completed pre and posttest data were included in this report.

Data Collection Methods

The site coordinator or agency representative read the script attached to the directions for administration of the instrument and had the parents complete the instrument. This instrument was administered to all parents attending the final program session. The data was recorded by the parents on printed questionnaires and returned to the site coordinator. The instru-

ments were sent to Lutra Group for data entry and analysis. Because the retrospective test contains both the pre and posttest, no names or unique identifier were required on the surveys to link the data, thus increasing assurances to the parents of confidentiality.

Evaluation Instruments

Because of the need for a short, research quality, practitioner friendly evaluation instrument, an "Adult Retrospective Pre- and Posttest" was developed for the New Jersey SFP Initiative. This standardized SFP parent interview questionnaire contains 195-items self-report items including a number of scales taken from standardized outcome evaluation instruments and clinical diagnostic instruments. The instruments used for the outcome data collection were created by Dr. Kumpfer on the basis of standardized CSAP and NIDA core measures. The parent instrument is three pages in length. A child instrument that is two pages in length was created but discontinued because of increased testing burden and low internal consistency (Cronbach's α) of the children's' results. The combined retrospective pretest and posttest instrument was administered by site staff in the parent group at the final session of the classes. It was recommended that group leaders not administer the questionnaires because they also contain a client satisfaction scale and rating of the characteristics of the four group leaders.

Instrument Scales

The questionnaire comprised of 20 questions collecting demographic information about the parents, children, and family. There is a 40-question Parenting Scale (Kumpfer, 1984) with subscales measuring positive parenting, parent involvement, SFP parenting skills, family organization, family cohesion, family communication, parent supervision, parenting efficacy, family conflict, and parent and child alcohol and drug use. A 44-question Parent Observations of Child Activities (POCA) scale (Kellam, 1972) with subscales measured children's overt aggression, covert aggression, concentration problems, criminal behavior, impulsivity, hyperactivity, depression, and sociability. The POCA has similar scales to the Achenbach and Edelbrock (1988) Child Behavior Checklist (CBCL), but POCA has a 5-point scale and is more sensitive to smaller changes than the CBCL. Additionally, the wording is simpler for low education families and minimizes offensive wording.

The Family Strengths and Resilience Assessment (12-items) is a brief 5-point checklist created by Karol Kumpfer and Carl Dunst (1997) for the American Humane Association to improve measurement of outcomes in child abuse and neglect cases. We have found this global scale to be very change sensitive and a good outcome measure of positive changes in the family's situation. Parent alcohol, and illicit drug use including age of first use and 30-day substance use rates for tobacco, alcohol, marijuana, binge drinking, and other illicit drugs was measured using the CSAP/GPRA drug use measures from the Monitoring the Future (Johnston, Bachman, & O'Malley, 1998) and the National Household Survey (SAMHSA/OAS, 2003).

The children's social and life skills were measured by selected items from the Gresham and Elliot Social Skills Scale (1990). The parent's parenting efficacy and skills were measured by the 10-item Kumpfer Parenting Skills. The family conflict, organization, communication, and cohesion were measured by Moos Family Environment Scales (Moos, 1974). To reduce testing burden, only subscales of selected Core Measures instruments were used for evaluation. They match the hypothesized dependent variables and were used in the construction of the testing batteries.

These instruments are designed to assess child and parent mental health, substance abuse risk and resiliencies, family management and cohesiveness, and parent and child social skills and attitudes. Use of the retrospective measure has been found in parenting programs to increase validity of the outcomes because at the pretest many parents do not know how to rate themselves or their children accurately. "Mindful parenting" exercises and charting their parenting behaviors and those of their children improve their awareness of actual behaviors (Kumpfer, Alvarado, Smith, & Bellamy, 2002). This measurement instrument has been found to have high reliability and validity in prior studies.

Data Entry and Analysis

After data cleaning (removing any names, assuring readable marks, checking for missing data, and random markings) by the research assistants, the data was hand-entered into a computer by a research assistant and sent for analysis by an independent statistical consultant who is a director of the Office of Biostatistics for a state health department using a personal PC using SPSS for Windows. The data tables were then sent to Dr. Karol Kumpfer, the primary author, to write the report to the state annually.

For this study, only the de-identified (coded) parent pre- and posttest quantitative data was entered into the SPSS program. Scale reliabilities were calculated using Cronbach's α statistic. These are reported in the results section below. Outcome data analysis procedures included for each of 18 outcomes and 3 cluster variables a 2 × 2 ANOVA of the pre- to posttests changes in means, *SD*s, mean change scores, ANOVA *F* values, *p* values for statistical significance. Additionally, effect sizes of the outcomes were calculated using Cohen's *d* and also the *d′* or partial eta squared statistic. The effect sizes can be used to compare the degree of change that is used to determine whether a program is evidence-based and which are the best programs based on the largest effect sizes in the meta-analysis. Cohen's *d* effect size is generally considered the "gold standard."

Comparison Group Analyses

Four primary SFP age version subgroups were constructed for comparison to answer the posed research question of the comparative effectiveness of the four age versions. In addition, the SFP 10–14 years is only half as long or 7 sessions, so this also examines the impact of the different length in terms of number of sessions. Additional subgroup analyses were conducted by type of agency (substance abuse treatment, community-based, faith-based, or schools), and year of implementation. However, only the age version results are presented in the publication because of space constraints. Each of these questions is listed below with the type of analysis that was conducted.

Results

The following section of the outcomes includes statistical analyses for all of the parent, family, child, and substance abuse outcomes compared for each of the four different SFP Age-Specific Curricula: SFP3-5 years, SFP 6–11 years, SFP 10–14 years, and SFP 12–16 years. Separate tables will present the parents' substance abuse reductions, parenting improvements, family improvements, and finally the children's improvements.

Parental Alcohol and Drug Use Reductions by SFP Age-Specific Curricula

An analysis comparing all of the four Age-Specific Curricula of SFP for reductions in the parents' alcohol and drug use revealed that the SFP 12–16 years parents were using the most and improved significantly more by effect sizes ($d = .43$) than the other SFP versions. The next most effective program for reducing parental drug use was the SFP 6−11 years ($d = .14$) followed closely by SFP 10–14 years ($d = .13$) (Table 2).

Pre- to Posttest Parenting Changes by Age Version

The table below shows that the average mean change score across all five parenting variables

Table 2
SFP Parents Alcohol and Drug Use by SFP Age-Specific Curricula

Scale name	No.	Pretest	*SD*	Posttest	*SD*	*M* diff.	*F*	Sig.	ES *d*	ES *d″*
Alcohol and drug use										
3 to 5 years	18	1.31	0.41	1.30	0.41	(0.01)	3.08	0.08	0.00	0.13
6 to 11 years	1028	1.37	0.55	1.30	0.52	(0.07)	21.95	0.00	0.14	0.88
10 to 14	251	1.30	0.47	1.23	0.45	(0.06)	31.53	0.00	0.13	0.76
12 to 16	122	1.42	0.70	1.19	0.36	(0.24)	59.00	0.00	0.43	1.34

for SFP 6−11 years was .75 (m = 3.34 pretest to m = 4.10 posttest score) with an effect size of d = .77. The next largest mean improvements in the parent's parenting ability was for the parents enrolled by the SFP 12–16 years (m = 3.33 to 4.05) or .73 mean change score with an Effect Size of d = .62. The effect sizes range from a high Cohen's d = .77 for SFP 6–11 years to the lowest effect size of d = .60 for SFP 3–5 years. However, because of the newness of SFP 3–5 years, the sample size of was very small this year of only 19 families. As should be expected the SFP 10–14 parents were higher in parenting skills than any of the conditions at baseline. The largest effect sizes are for improvements in Parental Supervision (d = .73), Parenting Efficacy (d = .70, and Positive Parenting (d = .67) for the SFP 6–11 condition. The smallest improvements were for SFP 3–5 in Parenting Involvement (d = .49) (Table 3).

Pre- to Posttest Family Changes by Age Version

The SFP 6–11 years groups had the best results across all of these five family outcomes shown in the table below. The effect sizes for the Family Cluster score range from a high Cohen's d = .77 for SFP 6−11 years to the lowest effect size of d = .67 for SFP 10–14 and SFP 3–5.

For most of the five family outcome scales SFP 6–11 had the best outcomes including for improving Family Cohesion (d = .65), and Parent/Child Attachment, Family Communication (d = .76), Family Organization (d = .75), and Family Conflict (d = .34) as well as Overall Family Strengths and Resilience (d = .76). However, for SFP 12−16 the average mean change was slightly larger with a mean change

Table 3
All Five Parenting Outcome Statistics by Age Version

Scale name	No.	Pretest	*SD*	Posttest	*SD*	*M* diff.	*F*	Sig.	ES *d*	ES *d*′
Parental involvement										
3 to 5 years	18	3.51	0.83	4.25	0.47	0.74	699.66	0.00	0.49	1.98
6 to 11 years	1043	3.42	0.95	4.23	0.70	0.81	411.04	0.00	0.68	2.93
10 to 14	263	3.52	0.91	4.23	0.70	0.70	219.56	0.00	0.50	1.99
12 to 16	123	3.42	0.86	4.25	0.72	0.83	365.77	0.00	0.53	2.13
Parental supervision										
3 to 5 years	19	3.23	0.49	3.94	0.37	0.71	843.31	0.00	0.54	2.16
6 to 11 years	1051	3.08	0.74	3.83	0.58	0.75	525.13	0.00	0.73	3.31
10 to 14	263	3.07	0.69	3.78	0.66	0.71	303.62	0.00	0.58	2.33
12 to 16	128	2.97	0.73	3.69	0.63	0.72	497.72	0.00	0.60	2.46
Parenting efficacy										
3 to 5 years	18	2.91	0.66	3.67	0.76	0.76	755.46	0.00	0.51	2.05
6 to 11 years	1048	3.15	0.86	4.03	0.67	0.88	446.00	0.00	0.70	3.06
10 to 14	262	3.20	0.90	4.02	0.69	0.82	287.68	0.00	0.56	2.28
12 to 16	123	3.12	0.82	4.06	0.66	0.94	388.27	0.00	0.54	2.18
Positive parenting										
3 to 5 years	18	4.21	0.67	4.58	0.41	0.37	747.82	0.00	0.51	2.04
6 to 11 years	1049	3.67	0.93	4.53	0.55	0.86	382.29	0.00	0.67	2.82
10 to 14	261	3.82	0.86	4.53	0.52	0.71	277.25	0.00	0.55	2.23
12 to 16	123	3.69	0.90	4.50	0.70	0.81	408.24	0.00	0.56	2.24
SFP parenting skills										
3 to 5 years	18	3.60	0.59	4.14	0.51	0.54	538.99	0.00	0.43	1.74
6 to 11 years	1049	3.39	0.74	3.88	0.65	0.48	297.69	0.00	0.61	2.50
10 to 14	256	3.40	0.70	3.86	0.60	0.46	216.59	0.00	0.49	1.97
12 to 16	124	3.31	0.62	3.86	0.58	0.56	279.44	0.00	0.46	1.85
Parent cluster scale										
3 to 5 years	19	3.47	0.44	4.07	0.39	0.60	1073.24	0.00	0.60	2.43
6 to 11 years	1055	3.34	0.67	4.10	0.47	0.75	643.03	0.00	0.77	3.66
10 to 14	264	3.41	0.61	4.09	0.47	0.68	371.46	0.00	0.62	2.57
12 to 16	128	3.33	0.63	4.05	0.57	0.73	527.80	0.00	0.62	2.53

of .92 compared to .91 for SFP 6–11 years (Table 4).

Pre- to Posttest Child and Teen Behavioral and Emotional Changes by Age Version

As shown in the table below, the SFP 6–11 years groups had the best results according to the effect sizes (d) across five of the seven children's outcomes. The effect sizes range from a high Cohen's $d = .77$ for SFP 6–11 years to the lowest effect size of $d = .67$ for SFP 10–14 years and also for SFP 3–5 years.

For most of the children's outcomes SFP 6–11 years had the best outcomes including for improving Children's Concentration ($d = .59$), Overt Aggression ($d = .46$), ($d = .75$), Depression ($d = .46$), Covert Aggression ($d = .25$) as well as reducing Hyperactivity ($d = .06$). SFP 12−16 years had the second largest results; however, for SFP 10−14 years had the largest effect sizes for two of the youth outcomes—namely Social Skills and Competencies ($d = .35$) and reductions in Criminality ($d = .06$) (Table 5).

Conclusions

These research results suggest that model programs can be implemented with fidelity, quality, and get even better results than in research studies. The State of New Jersey SFP results are very robust with positive outcome results exceeding other research replications even with a statewide dissemination and a significant total 3-year evaluation sample size of 142 cycles and over 1,600 families.

This 3-year cross-site evaluation of the various SFPs provides outcomes for the largest known statewide dissemination initiative for SFP. The outcomes suggest that the evidence-based SFP can be implemented with quality and

Table 4
All Five Family Outcome Statistics by Age Version

Scale name	No.	Pretest	*SD*	Posttest	*SD*	*M* diff.	*F*	Sig.	ES *d*	ES *d*″
Family cohesion										
3 to 5 years	18	3.69	0.69	4.33	0.42	0.64	611.38	0.00	0.46	1.85
6 to 11 years	1044	3.47	0.99	4.34	0.66	0.87	351.33	0.00	0.65	2.71
10 to 14	260	3.69	0.90	4.38	0.60	0.70	205.64	0.00	0.48	1.92
12 to 16	123	3.54	0.91	4.34	0.67	0.80	380.74	0.00	0.54	2.17
Family communication										
3 to 5 years	18	3.07	0.73	4.00	0.51	0.93	1432.45	0.00	0.67	2.82
6 to 11 years	1051	3.01	0.79	4.04	0.63	1.03	610.97	0.00	0.76	3.57
10 to 14	263	3.13	0.72	4.03	0.60	0.90	439.06	0.00	0.66	2.81
12 to 16	124	3.11	0.69	4.14	0.66	1.03	684.95	0.00	0.68	2.89
Family conflict										
3 to 5 years	18	3.06	0.66	2.53	0.78	(0.53)	123.94	0.00	0.15	0.84
6 to 11 years	1039	2.46	1.10	2.05	0.83	(0.41)	96.87	0.00	0.34	1.42
10 to 14	254	2.58	1.07	2.20	0.89	(0.38)	81.58	0.00	0.27	1.21
12 to 16	123	2.85	1.05	2.30	0.80	(0.54)	84.49	0.00	0.21	1.02
Family organization										
3 to 5 years	18	2.58	0.66	3.72	0.53	1.14	1404.58	0.00	0.66	2.80
6 to 11 years	1047	2.49	0.87	3.76	0.78	1.26	589.41	0.00	0.75	3.50
10 to 14	262	2.57	0.88	3.67	0.77	1.10	432.34	0.00	0.66	2.79
12 to 16	123	2.54	0.78	3.75	0.79	1.22	653.74	0.00	0.67	2.84
Family strengths/resilience										
3 to 5 years	18	3.30	0.51	4.18	0.38	0.87	1153.29	0.00	0.62	2.55
6 to 11 years	1031	3.29	0.80	4.23	0.56	0.95	557.30	0.00	0.76	3.54
10 to 14	248	3.24	0.82	4.18	0.56	0.94	401.00	0.00	0.65	2.71
12 to 16	126	3.11	0.78	4.21	0.57	1.11	664.50	0.00	0.67	2.86
Family cluster scale										
3 to 5 years	19	3.18	0.47	3.87	0.46	0.70	1504.36	0.00	0.67	2.87
6 to 11 years	1060	3.15	0.69	4.06	0.50	0.91	643.52	0.00	0.77	3.66
10 to 14	265	3.21	0.67	4.01	0.51	0.80	457.11	0.00	0.67	2.85
12 to 16	128	3.12	0.62	4.04	0.52	0.92	749.31	0.00	0.69	3.00

Table 5
All Child and Teen Behavioral and Emotional Outcome Statistics by Age Version of SFP

Scale name	No.	Pretest	*SD*	Posttest	*SD*	*M* diff.	*F*	Sig.	ES *d*	ES *d*″
Concentration										
3 to 5 years	19	3.30	0.51	3.91	0.42	0.61	598.98	0.00	0.45	1.81
6 to 11 years	1058	3.11	0.74	3.60	0.69	0.49	274.51	0.00	0.59	2.39
10 to 14	253	3.10	0.69	3.51	0.65	0.42	168.66	0.00	0.43	1.73
2 to 16	140	2.95	0.70	3.52	0.66	0.57	347.13	0.00	0.51	2.05
Covert aggression										
3 to 5 years	19	1.93	0.49	1.68	0.63	(0.25)	67.73	0.00	0.09	0.62
6 to 11 years	1040	2.01	0.61	1.80	0.50	(0.21)	64.82	0.00	0.25	1.17
10 to 14	246	2.08	0.66	1.87	0.54	(0.21)	49.26	0.00	0.18	0.94
12 to 16	137	2.23	0.70	1.93	0.60	(0.31)	71.55	0.00	0.18	0.94
Criminal behavior										
3 to 5 years	19	1.05	0.16	1.05	0.16	0.00	0.14	0.70	0.00	0.03
6 to 11 years	1020	1.10	0.38	1.09	0.38	(0.02)	4.07	0.05	0.02	0.29
10 to 14	237	1.12	0.44	1.06	0.33	(0.06)	13.19	0.00	0.06	0.49
12 to 16	135	1.19	0.45	1.07	0.24	(0.11)	0.92	0.34	0.00	0.11
Depression										
3 to 5 years	19	2.21	0.74	1.85	0.50	(0.36)	210.37	0.00	0.22	1.07
6 to 11 years	1058	2.12	0.74	1.82	0.60	(0.30)	131.38	0.00	0.41	1.65
10 to 14	255	2.24	0.75	1.96	0.65	(0.28)	71.67	0.00	0.24	1.12
12 to 16	140	2.46	0.76	2.10	0.65	(0.36)	135.62	0.00	0.29	1.28
Hyperactivity										
3 to 5 years	19	2.79	0.90	2.96	0.88	0.16	5.25	0.02	0.01	0.17
6 to 11 years	1034	2.66	0.89	2.66	0.88	0.00	5.78	0.02	0.03	0.35
10 to 14	240	2.69	0.85	2.67	0.86	(0.02)	0.17	0.68	0.00	0.06
12 to 16	136	2.54	0.80	2.54	0.78	(0.00)	0.92	0.34	0.00	0.11
Overt aggression										
3 to 5 years	19	2.21	0.62	1.79	0.54	(0.42)	207.10	0.00	0.22	1.07
6 to 11 years	1056	2.15	0.71	1.82	0.56	(0.33)	161.74	0.00	0.46	1.84
10 to 14	255	2.21	0.76	1.87	0.63	(0.34)	112.92	0.00	0.33	1.41
12 to 16	139	2.39	0.67	1.92	0.60	(0.47)	164.67	0.00	0.33	1.41
Social skills										
3 to 5 years	19	3.95	0.57	4.20	0.52	0.25	306.87	0.00	0.30	1.31
6 to 11 years	1041	3.80	0.70	4.06	0.61	0.26	87.95	0.00	0.32	1.36
10 to 14	246	3.83	0.68	4.03	0.61	0.20	119.79	0.00	0.35	1.47
12 to 16	137	3.68	0.75	3.95	0.71	0.27	97.10	0.00	0.23	1.09
Child cluster scale										
3 to 5 years	19	3.86	0.35	4.11	0.33	0.25	252.76	0.00	0.26	1.17
6 to 11 years	1064	3.82	0.47	4.06	0.39	0.24	177.57	0.00	0.48	1.92
10 to 14	257	3.77	0.48	3.99	0.45	0.22	158.42	0.00	0.41	1.67
12 to 16	141	3.68	0.42	3.99	0.39	0.31	145.87	0.00	0.30	1.32

fidelity and result in good outcomes. The large investment in high-quality training of agency group leaders and on-site and online technical assistance resulted in excellence in implementation. This investment by a state is resulting in large positive changes in behaviors in the families who complete SFP. These positive changes occur across the four age versions and types of agencies implementing the program. The hypothesis that the effect sizes overall for SFP 12–16 years would be the largest because the families would be at higher risk turned was not supported by the data. However, the SFP 6–11 years version actually had the best outcomes with larger average effect sizes ($d = .77$ for both parenting and family cluster variables). This could be attributed to the agencies having more experience with SFP 6–11 because it has been implemented in New Jersey longer. Outcome evaluation data revealed larger effect sizes ($d = .45$ to $.85$) or positive changes in parents and children in this statewide study than in the prior RCTs (Kumpfer, Green, Cofrin, & Whiteside, 2008). These data do not support the

expected "watering down" effect of an EBP group program when taken to scale or implemented by field sites as found for a prior meta-analysis of substance abuse prevention programs by Tobler and Stratton (1997). The site visit quality ratings were higher in the field implementations than the RCTs possibly because they were implemented by more experienced clinical staff who knew their families better rather than graduate students or contracted community members employed frequently in a RCT as was done in the Strengthening Washington, DC. Families Projects (Gottfredson et al., 2006). That RCT research produced significant results but with smaller effect sizes than normally found for SFP because of the reasons mentioned earlier that introduced Type II Errors in the study. These data suggest that field applications of EBPs under conditions of high quality training and supervision can result in larger effect sizes than those of the original RCTs.

The larger effect sizes in this statewide evaluation could also be due in part to the data collection methodology that used retrospective pre- and posttests rather than standard pretests that have to be matched by code numbers to posttests. A number of clinicians have observed that on a standard pretest, parents often underestimate their parenting, family, and children's problems. We observed this pretest positive response bias first in the mid-1990s with refugee Cambodian and Vietnam refugees who reported that their children were "perfect," they were "perfect" parents and there were no family relationship problems. The clinicians reported there were considerable behavior problems in the children and parenting problems in the parents which were, not reflected in the pretests. Later this same pretest positive response bias was observed in Denver with Hispanic immigrant families participating in SFP. Because the parents were more candid, trusting, and aware by the posttest, the counterintuitive result was apparently negative outcomes For this reason, we switched data collection methodology to a retrospective pre- and posttest that seems to work well and match clinicians' observations of the families.

The accuracy of conventional pretest data is questionable because parents are less "mindful" parents. Before SFP exercises and homework to track, monitor, and report on their parenting behaviors and those of their children, parents are less able to judge their behaviors. Parents at risk of losing their children to child protective services also tend to display an even more exaggerated "positive response bias" on a standard pretest, a testing error that can cut effect sizes by half. The authors determined this bias by conducting both standard pretests and also the retrospective pre- and posttest in Kansas, Oklahoma, and Virginia agencies working in child maltreatment prevention (K. L. Kumpfer, unpublished data). The retrospective test requires no names or codes as pre- and postdata appear on the same page and forms need not be matched already. Consequently, the confidentiality of their responses is more believable to the parents. Many traditional evaluators would question the validity of a retrospective pretest because of limitations such as participants' memory issues and trying to make the group leaders look good.

These results also support prior results suggesting that comprehensive, multicomponent family skills training interventions that also include children and parent skills training components have been found to impact a great number of youth risk-related and protective factors that reduce adolescence developmental issues (Kumpfer, Alvarado, & Whiteside, 2003; Lochman & van den Steenhoven, 2002). They also yield better "maintenance of effects" in subsequent follow-ups (Lochman, 2000), attend to more risk and protective factors (Kumpfer, Alvarado, & Whiteside, 2003; Spoth, Shin, Guyll, Redmond, & Azevedo, 2006) and result high-cost benefit ratios estimated for SFP from $9.60 to $11 per dollar spent (Aos et al., 2004; Miller & Hendrie, 2008; Spoth, Guyll & Day, 2002). Recently, the Center for Substance Abuse Prevention published a contracted cost/benefit analysis of substance abuse prevention programs that concluded that because of their lower cost some of the best youth-only, behavioral skills training programs such as All Stars, and Life Skills had cost/benefit ratios as high as $33/dollar spent even though they prevented very few youth (1 to 3%) from using because of their low cost. If costs for teacher training and delivery were included in the total delivery costs of the school-based youth-only versions, however, the costs would be higher and the true cost/benefit ratio accordingly much lower. For reasons not stated, Aos and associates (2004)

excluded personnel costs in assessing school-based programs but included them in assessing family and community-based interventions. Unfortunately, using Aos' cost benefit data, Miller and Hendrie (2008) have compounded this bias in favor of youth-only programs by calculating the benefits of the family interventions to include only those impacts on the identified student participating, even though the full family generally participates and benefits in terms of reduced substance abuse, stress, depression, family violence and improved family resilience. Hence, because an average of at least 1.3 parents or adults and 2 children totaling 3.3 per family participated in SFP, the cost/benefit ratio for SFP should be more accurately calculated at $36 per dollar spent.

Future Directions for Research, Group Practice, and Training

Practitioners should become more familiar with, be trained in, and implement EB family interventions found on state and national Website lists. Learning to disseminate EBPs effectively has come with experience for the university researchers who were not adept 20 years ago in marketing and dissemination. Today, evidence-based family interventions are highly structured programs with rigorous training programs to assure adherence or fidelity to the model. Most EBP family interventions require initial training workshops with some type of ongoing quality assurance system via outcome evaluations including standardized measures.

The positive outcomes of this statewide SFP initiative highlight the value in providing an EBP that requires training, evaluation and adherence to fidelity of a developer's model that encourages local cultural adaptation in delivery, but not modification to essential structure or content. This was assured by technical assistance, fidelity sites visits, funding incentives for retention, and booster sessions. Funded agencies were allowed to provide the program to at-risk families in their community based on grass-roots needs assessment. This resulted in high participation and fidelity and is evidenced in the high outcomes. The findings of this program point to the need for funding and implementation of family programs for families with children across the age span. They also point to the need to adapt EBPs so that all members of the family can benefit and so that all families in a community can participate. Too often families are excluded from participating because they do not meet narrowly constructed and sometimes restrictive eligibility criteria.

The NJ SFP initiative highlights the need for EBP developed and disseminated in developmentally appropriate and varied age specific versions that can develop key skills across the life span of childhood. This can be accomplished through an environmental model and initiative with sustained funding so that communities can implement, evaluate, and demonstrate successful outcomes and then take ownership and sustain the program through alternative funding. The New Jersey initiative was funded for 8 years with training, evaluation, and ongoing technical support for all age-specific versions of SFP provided by the State. Agencies were allowed to assess the needs of their own communities and to select the age-appropriate curriculum best suited to graduate the six required families. Training and evaluation were key to the dissemination, program quality, and delivery with fidelity to the evidence-based model and led to implementation in all 21 counties and over 54 agencies serving in excess of 1,600 families with strong measured results for families with children ages 3–16.

Future challenges to group process research will include pressures to make group interventions more cost beneficial by developing and testing Web-based or video and computer-enhanced group versions. Of course with diminished group process and peer support the results could be diminished. Hence, new Web-based program effectiveness will have to be compared to the group skills training versions in research trials. A major concern is whether these computer-delivered family interventions are as effective in engaging families and producing the same large effect sizes as the group process based version of the same program. The New Jersey sites, in fact, preferred the 14 session SFP version because of the extended contact and support the group provided to parents, particularly isolated parents. These group leaders and parents objected to the distraction from group process resulting from the instructional videos used in the 7-session version to time the sessions and limit discussion. After using the 7-session version many sites have now shifted

back to the longer 14-session version, considering the universal 7-session version to have been used inappropriately for high-risk families who needed the 14-sessions to get lasting behavior changes. In addition, immediate encouragement for positive changes to parents and children by the group leaders and other participants promotes behavior change that would be lacking in Web-based versions without programming creativity or live chat features.

These conflicting considerations of in-person versus PC-driven skills training substantiate the need for dissemination, research and evaluation of the fidelity and effectiveness of group skills training and home-based video/DVD/Web-based skills training. The developers of the SFP are currently developing a 10-session DVD and Web-based version of SFP for teens to be tested in efficacy trials against the group-based version.

This statewide research study supports the wide dissemination to local agencies of evidence-based family skills training interventions like the four age versions of SFP, particularly if there is adequate quality assurance and training supports. Reducing the costs of group therapies is a challenge for the field, but we hypothesize based on very preliminary data (Haggerty et al., 2007) that Web and DVD delivery with technologically enhanced support groups could be equally effective for some types of families.

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Received February 17, 2010
Revision received June 7, 2010
Accepted June 16, 2010 ■