

# Selective Prevention Interventions: The Strengthening Families Program

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## INTRODUCTION

This chapter discusses research-based interventions for selective (targeted) interventions to prevent the onset of substance abuse in high-risk children. The overview explores the merits of selective prevention programs to reduce the risk of substance abuse in subgroups of high-risk youth or adults. The remainder of this chapter explores the program description, principal components, original National Institute on Drug Abuse (NIDA) research results, and later Center for Substance Abuse Prevention (CSAP) multicultural replications of the Strengthening Families Program (SFP).

SFP was first developed as a selective prevention program for elementary school-age children of substance abusers. In demonstration/evaluation replication over the past 8 years, however, SFP has proven effective for other high-risk, conduct-disordered children and other culturally diverse youth (Kumpfer and Alvarado 1995). The hallmark of this selective program is its design for children living in high-risk families. Some of these children have no actual behavioral or emotional problems, but on average their multiple risk factors make them at risk for later substance abuse (Bry et al. 1982), delinquency, and school problems (Seifer et al. 1992). To address these multiple individual and family risk factors, this intensive 16-week family skills training program involves the children in a social skills training program, the parents in a behavioral parent training program, and the total family in behavioral family therapy.

## SELECTIVE INTERVENTIONS: THE SECOND WAVE OF PREVENTION

Because of inadequate funds and the increasing numbers of children raised in multiple-risk families, prevention practitioners and researchers have begun to emphasize selective, targeted interventions (Kumpfer 1987). While prevention programs have traditionally been organized into a continuum of primary, secondary, and tertiary prevention, the increased emphasis on creating prevention programs

that match the risk needs of subgroups or individuals required a more precise prevention classification scheme (Gordon 1987; Institute of Medicine 1994). The new prevention continuum includes a finer breakdown of primary prevention into universal, selective, and indicated prevention interventions. In this scheme, the prevention category (universal, selective, or indicated) targets those the program is designed to serve and their risk factors (Lorion et al. 1989).

Selective prevention interventions, in contrast to universal prevention interventions, are targeted to high-risk individuals or families as members of subgroups. These program recipients are defined as belonging to a segment of the population characterized by epidemiologically or empirically established risk factors, such as demographic risk factors, psychosocial environmental risk factors, and biological genetic risk factors.

#### KEY ELEMENTS OF SELECTIVE INTERVENTION PROGRAMS

The distinguishing characteristics of selective prevention interventions are as follows:

- There is a smaller number of participants per intervention group than in universal programs.
- Recipients are known and specifically recruited to participate in the intervention.
- Personal risk is generally not assessed except by belonging to a high-risk group.
- Knowledge of specific risks generally found in the target group allows program designers to sharpen the focus to address specific risk reduction objectives.
- Programs are longer or more intensive.
- Programs are more intrusive into the lives of the participants and aim to change the participants in beneficial ways.
- There is increased probability of controversial content (i.e., discussions with drug-abusing parents of the impact of drug use on their children) or potential negative effects for some participants.
- A larger number of skilled staff members are needed to work with multiproblem youth and families.

- Programs are somewhat more costly per participant because they must target a wider range of risk and protective factors with sufficient dosage to modify the underlying risk status of the individuals in the subgroup.
- Measurable positive effects are more likely because it is easier than in universal prevention programs to identify the recipients; interventions have a more direct effect on risk factors and drug use reduction; more participants have problems that can be improved (less “ceiling effect” than found in universal programs); and focused programs with higher intensity are more likely to have the desired impacts.

The hallmark of selective prevention interventions is not the type of intervention, but who receives the intervention. High-risk groups are recruited without specific individual assessments to ensure that individuals in the group actually manifest the risk factors. Therefore, an intervention determined to be useful in selective prevention programs may also be used for indicated prevention programs for identified individual high-risk youths or adults.

#### RESEARCH ISSUE: DEFINING APPROPRIATE HIGH-RISK POPULATIONS FOR SELECTIVE INTERVENTIONS

The vulnerable group should be defined as being likely to manifest empirically determined biopsychosocial risk factors shown to be precursors of drug use in the selected population. The most salient domain precursors in etiological research (Kumpfer and Turner 1990/1991) include association with delinquent and drug-using youth, lack of school bonding, lack of social competencies and self-efficacy, stressful or nonsupportive school, and community or family contexts or climate. Certain individual psychological characteristics, such as conduct disorders, aggression, thrill-seeking, and shyness, combined with anxiety, distinguish high-risk youth (Kellam et al. 1983, 1991; Kumpfer 1987; Zucker and Fitzgerald 1996).

Locating groups of high-risk children with these characteristics for selective prevention programs can sometimes be difficult. Suggestions for places to find high-risk children or youth include (1) children living in high-risk families; (2) children of abusers of alcohol or other drugs in drug treatment or self-help groups (Kumpfer 1996); (3) children of mentally ill and antisocial parents in treatment, (4) children of criminally involved parents (Kumpfer 1996), (5) children

living in neighborhoods of high crime and poverty, (6) physically and sexually abused children referred to protective services (Kumpfer and Bayes 1995), and (7) immigrant children experiencing high acculturation stress and conflict with their parents (Kumpfer et al. 1996*b*). Research suggests that some ethnic groups are more biologically at risk, such as Native American children for alcohol abuse and North American children of type II or type B alcoholics (Babor et al. 1992*a, b*; Cloninger 1987; Kaminer 1996).

Note that in no case do researchers know for sure that these youth are manifesting any of the known precursors for drug use. They are simply part of high-risk groups. If certain children are known to manifest specific drug use precursors, such as youth in treatment with diagnosed comorbid mental health problems, youth in special education programs or in alternative high schools because of conduct disorders or academic failure, or youth involved with the criminal justice system, they should be provided with even more intensive indicated prevention strategies tailored to treat these drug use precursors.

Since selective prevention interventions should recruit individuals who are part of high-risk groups, it is critical to define accurately and attract these risk groups. Ideally, selective prevention program development should be preceded by an etiological research study determining the most salient risk factors for substance abuse in the targeted population as was done for Project HI PATHE, a school community change project focusing on high-risk students (Kumpfer et al. 1991). For example, this project included structural equation modeling (SEM) of a hypothesized etiological model of risk and protective factors within major domains (latent cluster variables) of family, neighborhood, school, peer, and individual precursors of drug use (Kumpfer and Turner 1990/1991).

As the prevention field matures, more sophisticated methods have been employed to identify individuals at high risk for substance abuse. Prevention practitioners now have access to more specific etiological research on risk for drug abuse. Improved epidemiological and etiological research has helped in the identification of risk factors for recruitment of high-risk populations. Just as risk factor research has gone through three phases, so the methods for identification of recipients for selective interventions have begun to consider not just demographic risk factors, but also psychosocial environmental risk factors, and recently also biological and genetic risk factors.

Phase One: Demographic Risk Factors

In the first phase of selective prevention interventions, high-risk groups were identified by demographic risk factors, such as gender, ethnicity, age, socioeconomic status, employment, income, education, location of residency, and population density categorical status. Research on these demographically defined risk factors for drug abuse generally indicated that males were more vulnerable than females, white youth more vulnerable than ethnic youth (Trimble 1995), and young adults 18 to 29 years old more likely to use drugs than other age groups. Income or education level per se had little relation to drug abuse, and the western and northeastern regions of the United States, as well as inner-city areas, generally had the highest drug use rates. Survey research studies were often used as the basis for the selection of these demographic risk factors.

Today, many selective prevention programs target high-risk youth or adults by demographic risk factors. However, because of the common belief that ethnic youth are more at risk for drug use, many of these selective interventions have been developed for ethnic youth. Those selective prevention approaches that are designed for youth living in high-drug-use and high-crime communities or towns (i.e., resorts and inner-city neighborhoods) are most likely to be serving high-risk youth. Since selective prevention programs do not actually assess the risk levels in their participants, but select them only on the basis of research-indicated risk factors, it is very important that demographic characteristics that are supported by local data be used to select the participants.

Because each area of the country differs in its reasons for drug use and in its local cultural and socioeconomic climate, generalizations derived from national survey studies about who uses drugs may not match local household or school survey results. When designing a selective prevention program, prevention practitioners should consult their county and State divisions of substance abuse for local statistics on who uses what drugs. This information is the most valuable in determining who to target for selective prevention programs.

#### Phase Two: Psychosocial Environmental Risk Factors

In the next phase of risk research, experimental research studies were employed to determine risk factors in addition to epidemiological surveys. This research suggested that the psychosocial environment could provide either hazards or protection for drug use. Some youth live in low-risk communities, neighborhoods, and families and attend supportive schools. Protective environments provide opportunities

for involvement with prosocial peers, competency training, and rewards for successful involvement. Psychosocial environmental risk factors identified by research include:

- Community risk factors, including prodrug community values and attitudes, community dysfunction, high-crime and high-drug-use areas, high mobility and stress, poverty, and lack of prosocial institutions
- School risk factors, including prodrug school values and attitudes, school dysfunction and high stress, and school climates that discriminate against certain students or provide less encouragement and support
- Family risk factors, including families characterized by high stress and family dysfunction, few coping skills, and use of alcohol and other drugs

Selective prevention programs that target youth or families on the basis of risk factors that are not individually assessed should identify groups of youth or families that have large doses of these psychosocial risk factors. Subgroups that have been identified for selective prevention programs on the basis of these risk factors include families and youth living in:

- Communities or neighborhoods with high-drug-use and arrest rates, high drug-related crime rates, drug-infested housing projects, and dysfunctional neighborhoods
- Schools with high-drug-use rates and prodrug use norms, many drug-involved gang members, low teacher and student morale, and nonsupportive or nonprotective schools where students do not perceive that teachers care about them and there are few opportunities for youth to be involved in prosocial ways
- Families that are highly stressed or dysfunctional because of death, divorce, incarceration of parents, low income levels, lack of extended family or friend supports, parental mental dysfunction, and parenting problems including child sexual and other abuse

Selective prevention interventions have been developed specifically for children who live with drug-abusing, depressed, mentally ill, and criminally involved parents; reside in dysfunctional neighborhoods; and attend high-drug-use schools.

### Phase Three: Biological and Genetic Risk Factors

The newest criteria for selective prevention programs target subgroups of children, youth, or adults suspected of having increased vulnerability to drug abuse because they are children of drug abusers or some other genetically high-risk group of parents (e.g., thrill-seeking or antisocial parents or parents with some type of mental illness).

#### RESEARCH ISSUE: ACCESSING AND ATTRACTING HIGH- RISK POPULATIONS

Generally, the selective interventions are operated as “pullout” programs in schools or by advertisements to high-risk groups in community agencies. Some programs targeting high-risk youth are operated in publicly funded housing complexes or low-income neighborhoods. The NIDA-funded Strengthening Families Program (Kumpfer et al. 1989) discussed in this chapter is a family-focused selective intervention that has been modified for culturally diverse families. To increase recruitment of at-risk populations, it has been implemented in low-income neighborhood community centers, mental health centers, churches, public housing complexes, drug treatment agencies, and hospitals.

Establishing a positive track record in the community is important for accessing high-risk families. Many federally funded programs, particularly research programs, are short-term, one-shot interventions. SFP has always been implemented to match the typical services provided by a community agency over the course of years. In this manner, staff and family skills training courses that are provided become known and trusted by the community. Occasionally, site coordinators are used to canvass the high-risk neighborhoods to recruit high-risk families. When this is done, the site coordinators are ethnically matched and generally live (or have lived) in the neighborhood.

#### RESEARCH ISSUE: RECRUITING AND RETAINING HIGH- RISK FAMILIES

Many prevention practitioners believe that it is “monumentally discouraging” to work with high-risk families and that they are almost impossible to recruit and maintain in family interventions. While this is partially true, particularly in the first cycle of implementing the program before the “bugs” are worked out and staff members become

more competent in their jobs, many family skills training interventions, including SFP, report retention rates of around 82 to 85 percent (Aktan 1995; Aktan et al. 1996; Kumpfer et al. 1996a; McDonald 1993).

Special recruitment methods are needed to attract and retain high-risk families, as discussed by Kumpfer (1991) in *Parenting Is Prevention: Preventing Alcohol and Other Drug Problems Among Youth in the Family*. Methods used to reduce barriers to recruitment and to retain high-risk families in many selective prevention programs like SFP include child care, transportation, meals, payments for testing time, graduation completion gifts, prizes for completion of homework, and small gifts (pencils, pens, stickers) for the children based on good behavior. Special family outings or retreats are also major attractions in family programs that increase family participation.

#### RESEARCH ISSUE: LACK OF RESEARCH FUNDING FOR SELECTIVE PREVENTION APPROACHES

Unfortunately, most of the funding for selective prevention programs has come through foundation or CSAP demonstration/evaluation initiatives, which generally do not require research designs with random assignment of subjects. The selective prevention approaches that have been rigorously evaluated have found positive impacts on many risk factors. (See Center for Substance Abuse Prevention [1993]; Goplerud [1991]; and Lorion and Ross [1992] in the special issue of the *Journal of Community Psychology* for reviews of the effectiveness of many selective prevention programs for drug abuse prevention.)

The SFP discussed in this chapter has been evaluated by many different evaluators in a number of sites and was found in one true experimental design and several quasi-experimental (posthoc statistical designs) to reduce the targeted risk factors of family conflict, disorganization, and disengagement; improve youth behaviors and parenting behaviors; and reduce the expectations of children of substance abusers about using drugs and actual drug use, if using (Aktan et al. 1996; Kumpfer et al. 1996a). The positive program results were consistent across sites implementing the program even when different evaluators evaluated the program. Six different independent research evaluations have been conducted by researchers based in three departments at the University of Utah. In addition, researchers at the University of Hawaii, Case Western University, Harvard University, and the University of Colorado have evaluated the program on cultural modifications. One doctoral



dissertation addressing high-risk, general-population families recruited through schools also supported the positive results. Because SFP appears to be rather robust in terms of consistently favorable results across multiple replications with culturally diverse populations, NIDA selected SFP as an example of a selective prevention program for its Technology Transfer Package on Prevention.

## THE STRENGTHENING FAMILIES PROGRAM

SFP (Kumpfer et al. 1989) is a highly structured, 14-week, comprehensive family-focused curriculum. If group assessments are conducted at baseline intake and immediately at the ending of the program, the program is 16 weeks long. SFP includes three conjointly run components: parent training, children's skills training, and family skills training. Each is led by two cotrainers, requiring four trainers for each 2- to 3-hour session. SFP was originally developed based on the outcomes of a NIDA research grant (1982-1986) with children of drug-abusing parents in treatment in Salt Lake City, Utah.

This section focuses on the history, theoretical underpinnings, development, implementation, and research results of SFP—a family-focused prevention intervention for high-risk families from special populations. This program has two versions targeting two different high-risk populations:

A program for elementary school-age children of drug abusers and their families

A parallel intervention for high-risk junior high school students and their families<sup>1</sup>

### History

SFP was developed to meet the desire of drug-abusing parents at a methadone maintenance clinic, Project Reality, to improve their parenting skills. These parents wanted their children to have happy and successful lives rather than become drug abusers like themselves. They believed that for their children to do so, they would need to be better, more effective parents. A prior study in five cities (Solder and Burt 1978*a, b*) showed that drug-abusing parents spent little time with their children.

Development of SFP began in 1983 as a 3-year prevention research project funded by NIDA. Karol Kumpfer, developmental

psychologist, was the author and principal investigator of the project, and Joseph DeMarsh was the project coordinator. They were supported in their efforts to develop the program by a number of local psychologists and national consultants, primarily Robert McMahon of the Department of Psychology at the University of Washington and Bernard Guerney of Pennsylvania State University.

**Underlying Theoretical Model of Risk and Protective Mechanisms.** In the original Utah study, data on local drug-abusing families were available from a national multisite study of drug-abusing parents and children (Solder and Burt 1978*a, b*). The risk and protective factors were then fit into guiding theoretical models. The original model was the Values/Attitudes/Stressors/Coping Skills and Resources (VASC) Model (Kumpfer and DeMarsh 1985). Other models included the empirically tested Social Ecology Model of Adolescent Substance Use (Kumpfer and Turner 1990/1991), basically a domain model, and the Resiliency Model (Richardson et al. 1990), a process model. These theoretical models, empirically supported by advanced statistical analysis procedures (SEM), specify that family environment is an important factor in deterring the use of alcohol or other drugs by youth. Family climate and parenting factors are the major determinants of self-esteem. Self-esteem is highly related to school bonding and the choice of prosocial friends. Since family environment is a precursor that influences even a child's choice of friends, it is apparent that improving parent-child relations should be a major goal of any prevention intervention program. In addition, it has been found that a positive family climate characterized by supportive parent-child relationships is even more influential in protecting Latino youth from drug use (Kumpfer and Alvarado 1995). Because of the commitment to strong families found in ethnic communities, the author has found that African American, Latino, Asian and Pacific Islander, and Native American parents frequently request family programs from their provider agencies. They want to improve their family relationships and create a family climate that will help them to protect their children from negative influences.

**Intervention Theory and Family Research.** To impact effectively these family risks in multiproblem families, a multicomponent, comprehensive family-focused approach was selected. Family-focused interventions appear to be more effective than either child-focused or parent-focused approaches. Current reviews of early childhood programs also support this conclusion (Mitchell et al. 1995). In recent years there has been a shift from focusing therapeutic activities primarily on the child to improving parents' parenting skills and recognizing the importance of changing the total family system.

Newly developed family-focused skills-training programs are more comprehensive and include structured parent skills training, children's social skills, and parent-child activities, sometimes called behavioral family therapy, behavioral parent training, or family skills training. The new family skills-training approaches often offer a number of additional family support services (i.e., food, transportation, child care during sessions, advocacy, and crisis support). Some examples of these structured family-focused interventions include SFP (Kumpfer et al. 1989), effective with substance-abusing parents and ethnic parents (Kumpfer et al. 1996a); Focus on Families (Haggerty et al. 1991), for methadone maintenance parents (Catalano et al., in press; Catalano et al. 1997); the Nurturing Program (Bavolek et al. 1983) for physically and sexually abusive parents; Families and Schools Together (FAST) (McDonald et al. 1991), for high-risk students in schools; and the Family Effectiveness Training (FET) (Szapocznik et al. 1985). (See Kumpfer [1993] and Kumpfer and Alvarado [1995] for reviews of these promising family programs.)

Other researchers are employing these broad-based family skills programs as part of even more comprehensive school-based intervention strategies. The Fast Track program (Bierman et al. 1996; McMahan et al. 1996), one of the largest prevention intervention research projects ever funded by the National Institute of Mental Health (NIMH), is one exemplary program. This selective prevention program for high-risk kindergartners was nominated for the program because of risk factors including conduct disorders and is being implemented in several different sites in the Nation with a large team of nationally recognized prevention specialists, including Karen Bierman, John Coie, Kenneth Dodge, Mark Greenberg, John Lochman, Robert McMahan, and Nancy Slough. Fast Track includes McMahan's behavioral parent training, which is also incorporated in SFP.

One distinguishing feature of these new parent and child skills-training programs, called family skills-training programs, is that they provide structured activities in which the curriculum addresses improvements in parent-child bonding or attachment (Bowlby 1969/1982) by coaching the parent to improve playtime with the child during Child's Game. This special therapeutic play has been found effective in improving parent-child attachment (Egeland and Erickson 1987, 1990). Using intervention strategies developed by Kogan (1980) and Forehand and McMahan (1981), the parents learn—through observation, direct practice with immediate feedback by the trainers and videotape, and trainer and child reinforcement—how to improve positive play (Barkley 1986) by following the child's lead and not correcting, bossing, criticizing, or directing. Teaching parents

therapeutic play has been found to improve parent-child attachment and child behaviors in psychiatrically disturbed and behaviorally disordered children (Egeland and Erickson 1990; Kumpfer et al. 1996a). As found in prior SFP studies, these family programs encourage family members to increase family unity and cohesion, improve family communication, and reduce family conflict.

**Program Purpose.** Alone among parenting and family programs, SFP was developed specifically for children of drug-abusing parents. The key to reducing risk factors in children of substance abusers, the program developers believed, was to improve the family environment. Parents needed more ways to provide appropriate opportunities and to reward positive attitudes and responses in their children. Because families headed by drug abusers present many family relations problems, the program developers realized that making lasting changes would require more than a short parenting class. In addition, the program developers were skeptical of the value of teaching discipline techniques to parents without opportunities to watch parents implement them. Program developers believed that allowing staff trainers to model appropriate responses to the child and coach the parent in better responses would be more productive. The developers of SFP also found that the children needed to learn improved prosocial skills.

Their intent was to design and test a family-based prevention intervention that would combine the following three separate 16-week classes into a single 16-week course with 2- to 3-hour weekly sessions:

- A parent training program
- A children's skills-training program
- A family skills-training program (parents and children participating together)

To achieve the development of such a family program, the following program activities had to be completed to make this a research-based program:

- The development of a causal model of both substance abuse in general and the generational transfer of these behaviors
- The collection and analysis of a needs assessment, baseline data on the types of families targeted to participate in the program to

determine the most needed family components, and the appropriate program participant objectives

- The development, implementation, and evaluation of the three proposed prevention intervention programs mentioned above

#### **PARTICIPANT GOALS AND OBJECTIVES: INTENDED ULTIMATE OUTCOMES**

The original program goal was to reduce the substance abuse risk status of children (ages 6 through 10) living with a substance-abusing parent or parents. SFP is designed to reduce family environmental risk factors and improve protective factors with the ultimate objective of increasing personal resiliency to drug use in high-risk youth. Research suggests that SFP is equally effective in reducing risk precursors for mental disorders and juvenile delinquency. Other family skills-training programs that are conceptually similar (i.e., McDonald's FAST Program, Bavolek's Nurturing Program, Boswell's Families in Focus, Catalano's Focus on Families, Bierman and colleagues' Fast Track program) have been used to reduce child behavior problems and child abuse.

The major objectives for SFP are the following for the family, the parents, and the children:

- Improve family relations
  - Decrease family conflict
  - Improve family communications
  - Increase parent-child time together
  - Increase family planning and organization
- Increase parenting skills
  - Increase positive attention and praise
  - Increase parent's empathy with child
  - Reduce physical punishment
  - Increase effective discipline
  - Decrease parent's use or modeling of drugs
- Increase children's skills
  - Increase communication skills
  - Increase peer refusal skills
  - Increase recognition of feelings
  - Increase knowledge of alcohol and other drugs
  - Increase coping skills for anger and criticism

- Increase compliance
- Decrease aggression and behavior problems
- Increase self-esteem
- Reduce future intentions and use of alcohol and other drugs

## PROGRAM CONTENT

Both parents and children attend separate classes for the first hour and then work together in family sessions in the second hour. A third hour is spent in logistics, meals, and family fun activities. The underlying concept is to have the parents and children separately learn their skills or roles in a family activity and then come together to practice those family skills.

The Parent Training Program sessions in the original SFP included group building, teaching parents to increase wanted behaviors in children by increasing attention and reinforcements, behavioral goal statements, differential attention, chore charts and spinners (piecharts with sections representing rewards mutually decided on that children may get if they complete all chores and a spun arrow lands on it), communication training, alcohol and other drug education, problemsolving, compliance requests, principles of limit setting (timeouts, punishment, overcorrection), limit-setting practice, generalization and maintenance, and development and implementation of behavior programs for their children.

The Children's Skills Training Program included a rationale for the program; communication of group rules; understanding feelings; social skills of attending, communicating, and ignoring; good behavior; problemsolving; communication rules and practice; resisting peer pressure; questions and discussion about alcohol and other drugs; compliance with parental rules; understanding and handling emotions; sharing feelings and dealing with criticism; handling anger; and resources for help and review.

The Family Skills Training Program sessions provided additional information and a time for the families to practice (with trainer support and feedback) their skills in Child's Game (Forehand and McMahon 1981), a structured play therapy session with parents trained to interact with their children in a nonpunitive, noncontrolling, and positive way. Research and observation have shown that dysfunctional, antisocial, and drug-abusing parents are very limited in their ability to attend to their children's emotional and social cues and to respond appropriately (Hans 1995). Hence, the

four sessions of Child's Game focused on training parents in therapeutic parent-child play. The next three sessions of Family Game meetings trained parents and children to improve family communication. Four sessions of Parents' Game focused on roleplays during which the parents practiced different types of requests and commands with their own children. The beginning session focused on group building, introduction to content of program, and contracting and brainstorming possible solutions to barriers to attendance. The 13th session focused on generalization of gains and connecting to other support services; the 14th session is a graduation celebration. A testing session before and after the program meant the families actually attended for 16 weeks; the training program is 14 weeks long.

#### Recruitment and Retention Strategies

To increase recruitment and retention, a number of incentives were developed by the various sites implementing the program as recommended by Kumpfer (1991), including meals and snacks, transportation, rewards for attendance and participation (drawing tickets or vouchers for sporting, cultural, educational, and social family activities; movies; dinners; groceries; clothing; household items; and children's Christmas gifts), a nursery for child care of younger siblings, older adolescent recreation, and support/tutoring groups for older siblings.

#### SFP RESEARCH RESULTS

SFP for elementary school-age (6 to 12 years old) children of substance abusers was originally tested under a NIDA grant in Salt Lake City, Utah, and based on promising positive results in this randomized subject Phase III intervention trial research. It was subsequently modified and evaluated in CSAP Phase IV defined population research studies with African American families in Alabama and Detroit, with multiethnic families in three counties in Utah, with Asian and Pacific Islander families in Hawaii, and with Hispanic families in Denver.

#### Original NIDA SFP Research

Development of SFP began in 1983 as a 4-year prevention research project funded by NIDA. The program was initially tested with outpatient clients participating in community mental health drug outpatient treatment and the methadone maintenance program. The

actual family program was run at different community centers to avoid the stigma of drug abuse.

The original NIDA-funded research was designed to reduce vulnerability to drug abuse in children of substance abusers. The sample of 218 families consisted of 71 experimental intervention families, 47 no-treatment matched families, and 90 general-population comparison families. Employing an experimental dismantling design (PT-only, PT + CT, PT + CT + FT, no-treatment) families were randomly assigned to:

- Parent Training (PT), a 14-session SFP Parent Training Program based on Patterson's Parent Training model (Patterson 1975, 1976)
- Parent Training plus Children's Skills Training (PT + CT) based primarily on Spivack and Shur's (1979) social skills training
- Comprehensive Family Training Program (PT + CT + FT), a three- part combination of the prior two programs plus the SFP Family Skills Training Program based on Forehand and McMahon's program described in their book (Forehand and McMahon 1981) and Guerney's Family Relationship Enhancement Program

## MEASUREMENT

### Program Implementation Documentation: Process Evaluation

Highly intensive qualitative and quantitative program evaluation methods are used to track program fidelity and implementation. At the end of each family session, the four trainers log attendance for each participant, rate each family member on eight dimensions of participation and their Global Assessment Score for overall mental status, and complete a trainer session form on activities completed, any modifications made, and any critical events that occurred. Staff members are confidentially interviewed annually for recommendations on program implementation and program changes. The program is observed twice by two trained observers using fidelity checklists that track percent of structured activities completed as well as the quality of each leader's delivery of each major activity.

### Outcome Evaluation

The hypothesized parent, child, and family outcomes are primarily measured using standardized measurement instruments. An extensive



instrument battery was developed to measure hypothesized risk and protective factor outcomes, including the Child Behavior Checklist (CBCL) (Achenbach and Edelbrock 1988); the Parent Attitude Test (Cowen 1968), and the Family Environment Scale (FES) (Moos 1974). Analysis of the baseline pretest revealed that children of drug abusers in treatment have significantly more behavioral, academic, social, and emotional problems than matched comparison group children or general-population children (Kumpfer and DeMarsh 1985).

A major confounding variable is outside services to these families. To control for outside services received, the families and site coordinators track the alternative services received. This procedure has been conducted only in the most recent research studies and is proposed for all future research studies.

#### Outcome Research Results

The outcome data suggest that by combining the parenting, children's skills-training, and family relationship enhancement programs, many more risk and protective factors for drug abuse were positively changed. The combined effect of all three components was the most powerful in improving the child's risk status in three theoretically indicated and intervention-targeted areas: (1) children's problem behaviors, emotional status, and prosocial skills; (2) parents' parenting skills; and (3) family environment and family functioning (improved family communication, clarity of family rules, nonconflictive sibling relationships, decreased family conflict, and social isolation).

The component outcome analysis suggests that each program component was most effective in impacting those risk or protective factors most directly targeted by that component. For instance, the behavioral parenting program improved the parents' ability to reduce negative, acting-out behaviors in their children and improve child compliance with parental requests. Unfortunately, the parent training program alone did not improve children's prosocial skills (i.e., communication, problemsolving, peer resistance, goal setting). These were significantly improved when the children's skills-training component was added. Family relationships actually deteriorated when the parent training program was implemented alone. The children reported at posttest that they did not believe their parents loved them as much as before the parenting program started. When the family relationship enhancement program was added, parent-child relationships improved significantly.

While the children's social skills increased with exposure to the Children's Skills Training Program in the PT + CT condition, the improvements in negative acting-out behaviors were not as good as that found for PT only. This result, plus similar results of Dishion and Andrews (1995), calls into question the potential value of high-risk, child-only groups because of possible negative contagion effects and smaller effects on improving youth risk behaviors. Having highly qualified and effective trainers who can manage groups of conduct-disordered children to maintain order and positive group norms would reduce this problem.

Hence, it appears that the Parent Training Program significantly improved parenting skills and parenting self-efficacy, the Children's Skills Training Program improved children's prosocial skills, and the Family Skills Training Program improved family relationships and environment. In addition, when all three classes were run simultaneously in a coordinated manner, the children's risk and protective factors for drug use improved, and the use of tobacco and alcohol decreased in the older children who were already using (DeMarsh and Kumpfer 1985; Kumpfer and DeMarsh 1985). Parents also reduced their drug use and improved in parenting efficacy (DeMarsh and Kumpfer 1985).

#### Five-Year Followup Study

SFP was implemented in three counties in Utah through a CSAP Community Youth Activity Program (CYAP) grant to the Utah State Division of Substance Abuse. Eight community agencies participated, including substance abuse prevention agencies that serve only ethnic populations, such as Asians, Pacific Islanders, and Hispanics. SFP was tested in employing a quasi-experimental pretest, posttest, and followup design comparing SFP with Communities Empowering Parents Program, a local variant of SFP with no family skills training component. The families (421 parents and 703 high-risk youth ages 6 to 13) were recruited to attend one of the two programs. On the pretest, 57 percent of the youth had behavioral and academic problems. The total sample included 33 percent fathers, 59 percent mothers, and 8 percent guardians or foster parents from 49 percent single-parent families, 66 percent low-income families, 69 percent ethnic families (26 percent Asian, 20 percent Pacific Islander, 18 percent Latino, and 5 percent Native American youth), and 50 percent of families with little or no religious involvement. The program materials for both programs and instrument battery for this project were translated into Spanish, Vietnamese, Tongan, Korean,

and Chinese. Rates of attendance and completion for the program were very high, averaging 85 percent across the three county sites.

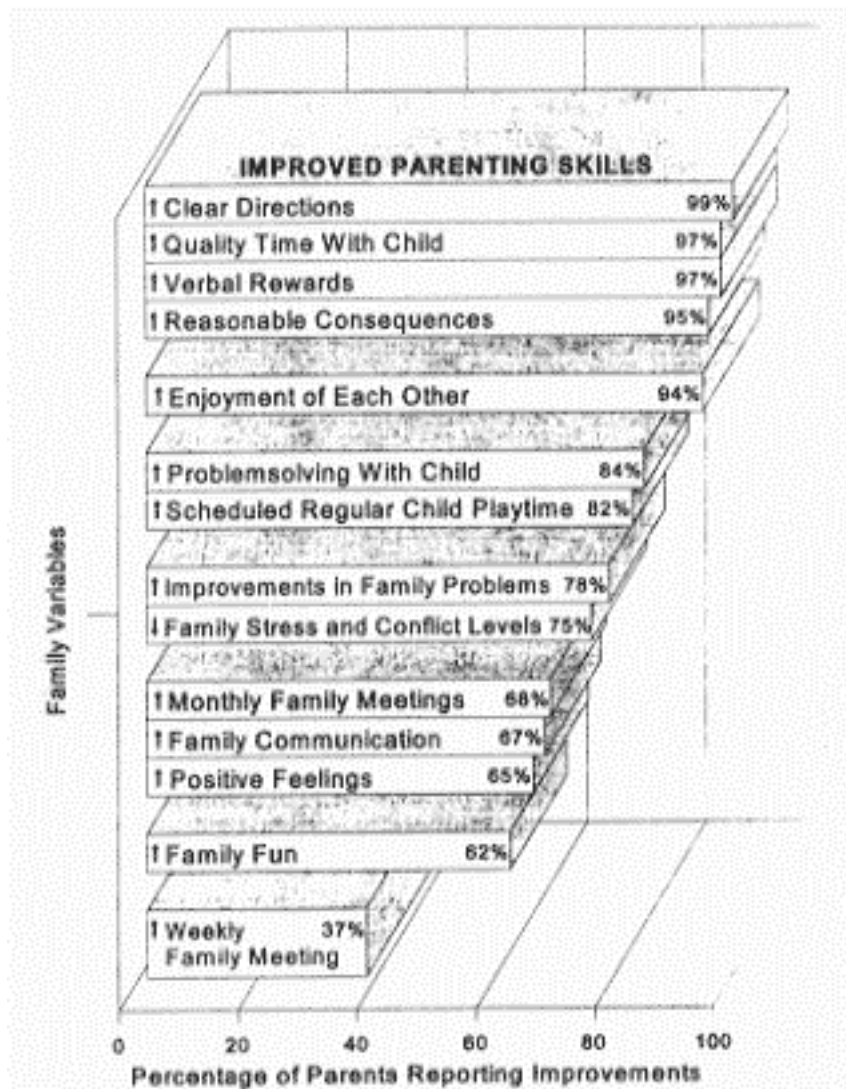
Immediate posttest results indicated that SFP was more effective overall in improving the family environment, parenting behaviors, and the children's behaviors and emotional status. Significant pretest/posttest reductions in the youths' problems were reported by the SFP parents on all CBCL subscales and composite externalizing and internalizing scales. Two of the Moos FES scales for family conflict and cohesion showed significant improvements. SFP was significantly more effective than the comparison program.

A 5-year followup study of just the SFP participants (Harrison and Proschauer 1996) included 87 families confidentially interviewed by a research psychiatrist from Harvard University. The results, shown in figure 1, provide evidence of long-term positive impact on the family and the child.

These interview data suggest that the parents reported very high mastery of the behavioral and social parenting skills taught in the parenting and family components of SFP. Almost all said they were rewarding good behavior frequently, were giving clear directions, were using reasonable consequences and timeouts, and had improved their problemsolving with their children. Consequently, most reported improvements in the quality of time they spent with their children and said family members enjoyed each other more. All but 15 percent said they scheduled family playtime regularly. While it may be easy for parents to deceive themselves on these measures of parenting and family relationships, it is more difficult to misjudge the frequency of a concrete behavior such as family meetings. Family meetings were reported being conducted by 68 percent of the families at least once per month, and 37 percent conducted them weekly. The adults reported lasting improvements in family problems (78 percent), stress/conflict levels (75 percent), amount of family fun (62 percent), family talking together more (67 percent), and showing positive feelings (65 percent). Analyses revealed a gradual decline in the frequency of use of family skills taught in the program; however, the researchers (Harrison 1994) concluded "the change figures show that a majority of families maintain lasting improvements, even over a 5-year period."

## CULTURAL REVISIONS

Since its initial inception as a generic program for white and multiethnic drug-abusing parents and their children, SFP has been made more culturally sensitive for specific ethnic populations in Phase IV defined population research studies (Jansen et al. 1996). These cultural modifications have been made through a series of independent CSAP Federal grants to State and community agencies targeting specific low-socioeconomic, high-risk ethnic populations of drug-abusing parents (i.e., rural African Americans [Alabama], urban African Americans



**FIGURE 1.** *Utah State Division of Substance Abuse CYAP Strengthening Families Program 5-year followup study.*

**SOURCE:** Harrison and Proschauer (1995)

[Detroit], urban [Utah] and rural [Hawaii] Asians and Pacific Islanders, and urban Hispanics [Salt Lake City and Denver]). Each of these program modifications and replications involved independent evaluators. In each case, most of the positive results of the original family program, with minor variations, have been replicated. Each replication has lent additional support for the effectiveness of SFP. The replications with the weakest results (Denver and Hawaii) are attempts to generalize the program to families with non-drug-abusing parents. In addition, the cultural modifications of these programs are substantial, and the basic principles or essential core elements (Kumpfer 1996) needed for success have possibly been compromised.

#### School-Based SFP

The first independent implementation and revision of SFP was by Joel Millard and Sally Brown of Project Reality, a methadone treatment center in Salt Lake City. Their goal was to create a school-based SFP that used teachers paired with parents as trainers. Because of the problems with logistics, they did not implement the family skills-training components. The new program was called Teachers Helping Parents (later renamed Communities Empowering Parents Program). A doctoral dissertation suggested that the results were positive (Millard 1988), and the program is being implemented in many local schools in Salt Lake City. Further revisions of this SFP version were made for Asian, Pacific Islander, and Hispanic families at the Asian Association of Utah and the Centro de la Familia. Language translations of the testing instruments were available.

#### Rural African American Families Study

Revisions were made to SFP to make it more appropriate for rural African American families by Dan Hoke, Lynne Brown, and Pinky Platt at the Cahaba Mental Health Center in Selma, Alabama. New manuals were developed by the African American trainers, with illustrations done by an African American cartoonist. This version is not very different from the original SFP, except for some additional readings on famous African Americans and quotes from African American professionals. The process evaluation revealed that the program was exceptionally well implemented, possibly because of the commitment and professional skill level of the African American trainers involved. Recruitment became a major barrier in this program after the first year when all the substance-abusing African American women in outpatient treatment at the mental health program had already participated in the program. At this point a special indigenous recruiter was hired to locate and recruit substance-

abusing women who were not in treatment. Women were recruited from public housing, churches, classes for special education children with behavioral or academic problems, and other sources.

#### Rural African American SFP Results

The Alabama SFP compared low-drug-use families (alcohol use only) with high-drug-use families (alcohol plus illicit drug use) in a quasi-experimental pretest, posttest, and 1-year followup design involving 62 families. Most (82 percent) of the recruited families completed at least 12 of the 14 sessions. Results showed that high-drug-use mothers not in drug treatment reduced their drug use on a composite index of 30-day alcohol and other drug quantity and frequency of use, family conflict decreased, and family organization increased. Before the program began, the children of the high-drug-use mothers compared with children of low-drug-use mothers had significantly more (CBCL) internalizing behavior problems (depression, obsessive-compulsive behavior, somatic complaints, social withdrawal, uncommunicative behavior, and schizoid scales) and externalizing behavior problems (aggression, delinquency, and hyperactivity).

As shown in figures 2a, 2b, and 2c, analyses of variance (ANOVAs) revealed significant pretest to posttest interaction effects between the two groups. The children of the high-drug-use mothers who participated in the program improved significantly in almost all CBCL scales when tested with paired *t*-tests.

By the end of the program, the children of high-drug-use mothers were rated as significantly improved on both internalizing and externalizing scales and all subscales, except the uncommunicative subscale. Children of low-drug-use mothers improved only on the clinical scales for which they manifested relatively higher scores on the intake pretest, namely obsessive-compulsive behavior, aggression, and delinquency. Because of the relatively low subject numbers in these analyses, these results are also clinically significant, and the effect sizes are very large. Some additional results of interest were that the program outcomes of improved parenting behavior and children's behavior were equally as effective with low-education-level women (less than high school graduation) as those of participants with more than a high school education. Of most interest was that the women who were not in

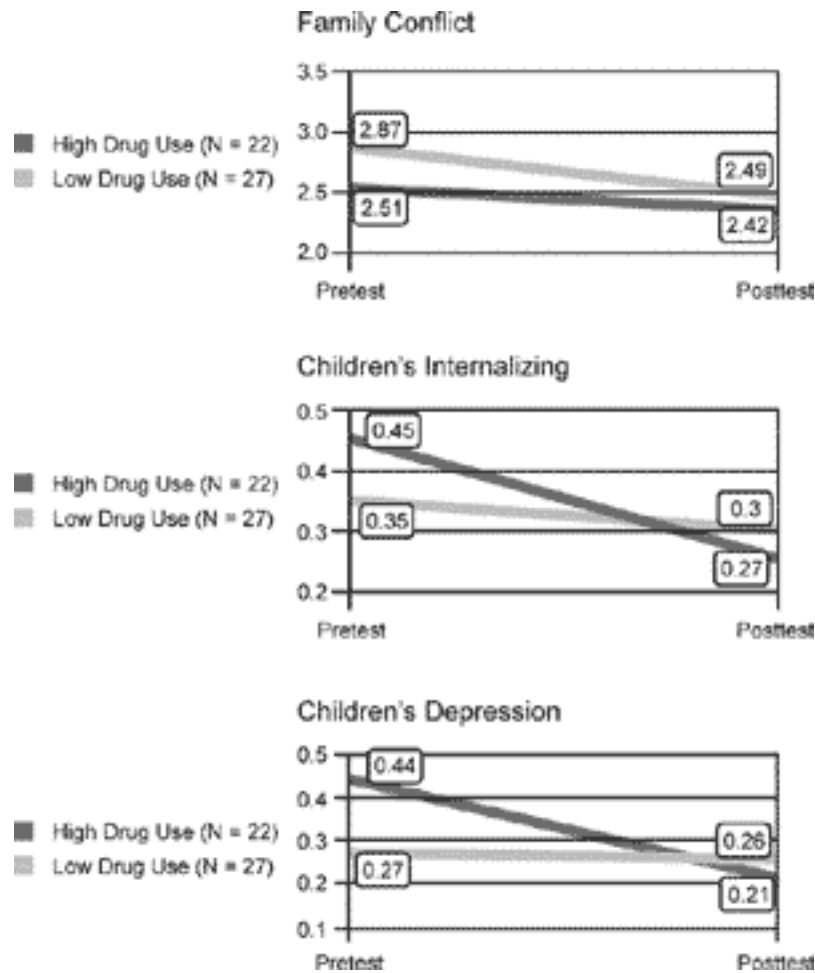


Figure 2a. Analysis of variance comparing pretest and posttest results for Alabama Strengthening Families Program participants. A large decrease in family conflict and children's internalizing and depression for high-drug-use families and a smaller decrease for low-drug-use families are shown.



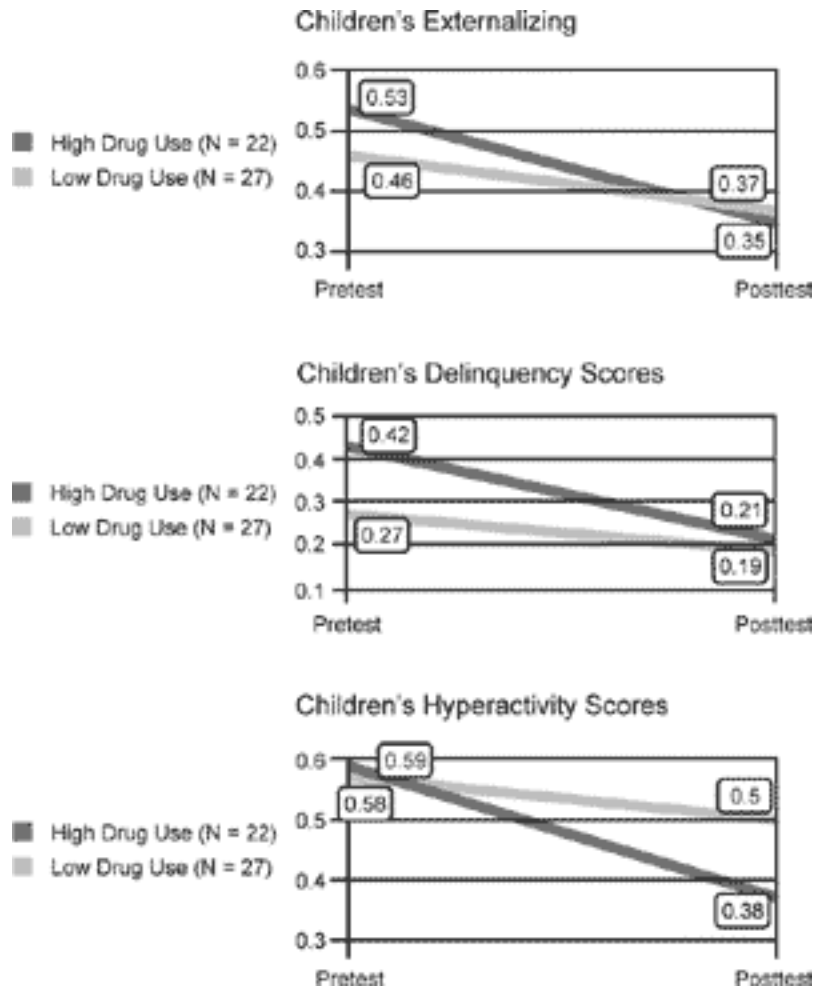


Figure 2b. Analysis of variance comparing pretest and posttest results for Alabama Strengthening Families Program participants. Significant reductions in scores on children's externalizing, delinquency, and hyperactivity scales for both high-drug-use and low-drug-use families are shown.

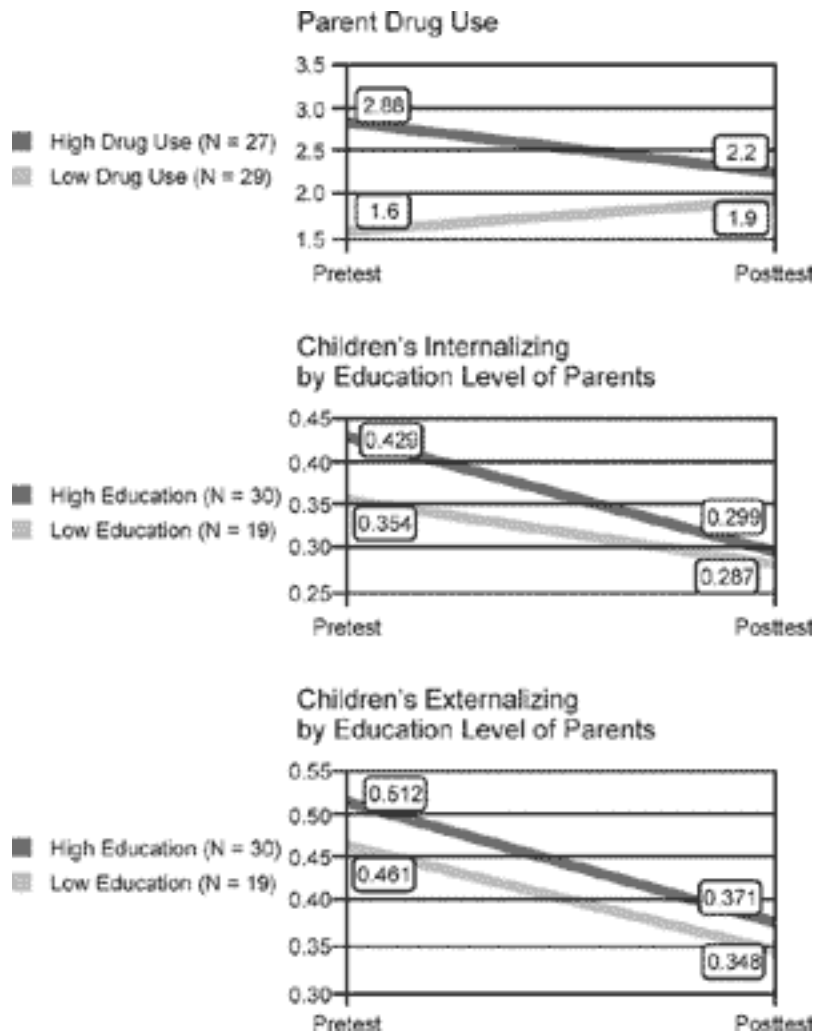


Figure 2c. Analysis of variance comparing pretest and posttest results for Alabama Strengthening Families Program participants. The first graph shows a significant decrease in drug use for high-drug-use families; next two graphs show significant decreases in children's internalizing and externalizing behaviors for all parental

treatment for substance abuse significantly decreased their composite alcohol and illicit drug use index by posttest and first-year followup.

#### Urban African American Families

Georgia Aktan and Susan Bridges from the Detroit City Health Department and the Harborlight Salvation Army in Detroit developed a 12-session culturally competent version of SFP, called the Safe Haven Program, for inner-city African American drug-abusing parents in residential drug treatment programs. (The manuals are revised from the rural African American version.) Because the parents are recruited from drug treatment agencies, discussion of the effects of substance abuse on their children was moved from the eighth session to the first session. The Safe Haven Program included its own videotapes, because their African American families did not want to see parenting tapes that involved any other ethnic groups. They also wanted videos that reflected their local reality of high-crime and high-drug-use neighborhoods with many safety concerns for the children.

The research results of this program essentially replicated the prior Alabama and Utah results and were reported in more detail by Aktan (1995) and Aktan and colleagues (1996). The reasons for successful implementation of the program, as discussed by Aktan (1995), included careful selection, training, and supervision of the staff. Within the first 2 years, 88 low-income African American families completed the program; 68 of these families had incomes below the poverty level. Although only about half of all families completed the program the first time it was delivered, once the trainers had more experience, the retention rate rapidly rose to 80 percent, where it remained for the 4 years of implementation. Child care, meals, transportation, and support with basic needs (groceries and clothing) helped to improve recruitment and retention. A high percentage of fathers in drug treatment were recruited by a male African American counselor. The program became so popular that 25 to 50 families were on the waiting list at any one time.

Outcome results from a nonequivalent comparison, repeated measure, quasi-experimental design reported in more detail by Aktan and colleagues (1996) showed significantly improved family, parenting, and child behavior using ANOVA with independent *t*-tests of correlated means comparing matched subjects ( $N = 56$ ) with experimental families ( $N = 88$ ). No unintended negative effects were found; hence, the Safe Haven Program appears to be a beneficial adjunct to drug treatment and supports the drug treatment process. A covariate analysis found that high-drug-use families improved

significantly more than low-drug-use families. Most importantly, highly significant decreases were reported in both family and parental illicit drug use ( $p < 0.002$  and  $p < 0.000$ ) and in parent depression ( $p < 0.02$ ). While family environment as measured by the FES (Moos 1974) improved for family relationships ( $p < 0.07$ ), family organization ( $p < 0.056$ ), and reduced family conflict ( $p < 0.06$ ), only the family cohesion variable met statistical significance ( $p < 0.03$ ) because of low power from a small sample size. This increase in family cohesion (not found in Alabama) may have occurred because the Safe Haven Program put more emphasis on reuniting the mothers and fathers as a total family.

The families reported spending more time together and increasing parent and child activities ( $p < 0.004$  for both variables). Parents reported nonsignificant trends in decreased use of corporal punishment and inappropriately high developmental expectations and reported statistically significant increased perceived efficacy as parents ( $p < 0.002$ ). According to parental reports on the CBCL, children's externalizing problem behaviors decreased significantly overall ( $p < 0.006$ ) as a composite of improvements in aggression ( $p < 0.006$ ), hyperactivity ( $p < 0.003$ ), and conduct disorders or delinquent behaviors ( $p < 0.08$ ). The overall composite internalizing scale suggests significant reductions ( $p < 0.027$ ), which was not as strong as the externalizing results, because all subscales (depression, uncommunicative behavior, obsessive/compulsive behavior, and schizoid tendencies) showed significant improvements except for somatic complaints ( $p < 0.73$ ). Parents reported highly significant improvements in school bonding ( $p < 0.001$ ) and increased children's time spent on homework ( $p < 0.03$ ). These parent reports matched therapists' reports on behavioral improvements in participating families.

#### Asian and Pacific Islander Families

In Hawaii, the Coalition for Drug-Free Hawaii, headed by Sandra Lecar, has revised SFP to be more culturally appropriate for Hawaiian Asian and Pacific Islander cultures. The Strengthening Hawaii Families (SHF) program has a 20-session curriculum that emphasizes awareness of family values, family relationships, and communication skills.

A 10-session family and parenting values curriculum precedes the 10-session SFP family management curriculum to increase parental readiness for change. The revised curriculum covers topics such as connecting with one another, caring words, generational continuity, culture, communication, honesty, choice, trust, anger,

problemsolving, decisionmaking, and stress management. An audiotape and videotape accompany the new curriculum manuals. The program, originally implemented and evaluated under a CSAP grant, is being widely disseminated primarily through schools in Hawaii with funding from a number of local foundations, trusts, and the Hawaii Children's Trust Fund. In 1996, 79 individuals from 22 agencies on Kauai, Maui, and Oahu were trained to facilitate SHF in their communities. A Systems Implementation Committee was formed in 1995 that included representatives from the legislature, government, schools, community services agencies, health departments, health maintenance organizations, and volunteer organizations. The goal is to implement SFP throughout schools, churches, and service organizations statewide.

An independent evaluation was conducted by the University of Hawaii (Kameoka 1996) using a quasi-experimental, pretest-posttest, nonequivalent control group design to evaluate the effectiveness of hypothesized outcome variables to program objectives. Despite having selection criteria (e.g., risk factors, ethnicity, socioeconomic status), the no-treatment group was not matched for risk factors to the experimental group. Hence, comparability between the groups was not achieved, and the treatment group included more high-risk subjects. The control group was recruited separately, and the staff experienced difficulties recruiting families for a no-treatment comparison group. In addition, the original 14-session SFP implemented in four sites in fall 1992 was compared with the 20-session, culturally revised SHF program implemented in nine sites between spring 1994 and winter 1995. Parents were tested in groups in the first and last parenting sessions and were paid \$20 each time they completed the questionnaire.

Over the 3 years, 136 participants began and 71 completed the program and the posttest. Hence, attrition from the experimental group was high over all 3 years (48 percent) and did not improve significantly with the development of the culturally revised programs (51 percent dropped out of SFP and 45 percent and 48 percent from the culturally revised SHF). Dropout tended to be a function of experience of the trainers and numbers recruited initially. The higher the number initially recruited, the greater the dropout because the program works best with about 6 to 8 participants, especially with the large Pacific Islander family sizes. For instance, the very first group pretested 18 families, but ended with a more appropriate number of 5 families. The resulting high (72 percent) dropout rate for this group only possibly occurred because the trainers did not really attempt to retain such high numbers. One group in the second year, however, did

begin with 10 families and had none drop out, possibly because of excellent facilities and trainers. A dropout analysis suggested that families more likely to complete the program included those most in need (e.g., most economically disadvantaged, homeless, greater family substance use, and greater children's emotional problem severity). Dropout rates also varied by ethnic group, with statistically significant increases for Filipinos and Samoans compared with Hawaiians or part-Hawaiians. Only 21 percent of the 96 participants in the comparison group failed to complete the posttest; hence, 76 comparison participants were included in the data analysis. The SFP attendance criterion of completers being required to attend at least 12 sessions was not applied to SHF, and the average number of sessions attended was 9 (4 to 14 sessions).

The measurement battery was culturally modified by altering words and expressions not common in Hawaii and included several different tests including the 53-item Brief Symptom Inventory (BSI) (Derogatis and Lazarus 1994) and the Center for Epidemiological Studies Depression Scale (CESD) (Radloff 1977) rather than the Beck Depression Inventory (BDI) (Beck et al. 1961). Only the 113-item Teacher's Report Form (TRF) (Achenbach and Edelbrock 1991) was used rather than the parent CBCL version. Teachers were paid \$5 to complete and return the form in a stamped manila envelope. The same 49-item substance use measure (Kumpfer 1981) was used as the original SFP testing battery as well as the four 10-item subscales of the FES (Moos 1974) on cohesion, expressiveness, conflict, and organization and two subscales of the Adult-Adolescent Parenting Inventory (AAPI) (Bavolek 1985) on physical punishment and inappropriate expectations. A third subscale on parent's use of positive reinforcers was developed by the evaluator (Kameoka 1996).

Because of high (48 percent) attrition, low attendance rates, and lack of risk-level equivalence of the experimental and comparison groups, the results of the outcome evaluation must be interpreted with caution. Small sample sizes (Ss) (19 Ss completed SFP and 52 Ss completed SHF), reduced risk at pretest compared with drug treatment samples in other studies, and switching to a values-based curriculum versus a social learning theory-based family and social skills training curriculum all contributed to lower power and effectiveness. This program was interpreted by the evaluator as an "educational program designed for nonclinical populations"; hence, participants receiving professional services were eliminated from the data analysis, yet they may have benefited the most (Kameoka 1996).

#### Outcome Evaluation Results

Because of the nonequivalence of the comparison and experimental groups, only the significant pretest and posttest changes are reported here. Both the SFP and SHF programs attained their goal of strengthening family relationships and resulted in significant improvements in family conflict, family cohesion, and family organization. No significant improvement was reported for expressiveness or communication, possibly because of the low alpha reliability ( $\alpha = 0.44$ ). Only the original SFP resulted in statistically significant improvements ( $p < 0.05$ ) in attitudes and skills in rewarding positive behaviors. The largest mean improvement for physical punishment was for the original SFP, but because of low numbers and high variance, this positive result can be reported only as a nonsignificant trend. Similarly, the original SFP appeared to be more effective in reducing parental depression (mean = 14.95 to 10.95) compared with the culturally modified SHF (mean = 15.69 to 13.67) on the Depressed Mood Scale; however, because of a larger sample size, only SHF produced a statistically significant result ( $p < 0.05$ ). Even with a smaller sample size, SFP was more effective in positively impacting the various scales of the BSI with statistically positive changes in somatization, interpersonal problems, anxiety, hostility, phobias, and paranoia, whereas the SHF program impacted only hostility and paranoia in addition to depression. The BSI depression scale, similar to the Depressed Mood Scale, did not meet statistical significance for the original SFP, although the mean decrease was bigger than for the SHF program, which had a significant decrease in depression.

Substance use decreased in SFP participants for parent, sibling (mean = 0.50 to 0.14), and child use (mean = 0.82 to 0.12) but increased significantly for SHF in child use (mean = 0.14 to 0.89,  $p < 0.05$ ) and nonsignificantly for parent use (mean = 0.83 to 1.20). Although part of the standard SFP testing battery, the CBCLs were not collected for the SFP program by the Hawaiian evaluator. The Teacher's Report Form CBCLs were added the year SHF was implemented. Despite high alpha reliability scores ( $\alpha = 0.93$  internalizing scale and  $\alpha = 0.96$  externalizing scale), no significant improvements were found in children's behaviors as rated by their teachers from pretest to posttest. No followup results were collected, though they were included in the original evaluation plan developed by Kumpfer; hence, improvements or detriments over time were not measured.

### Hispanic Families

The Denver Area Youth Services (DAYS), under the direction of Project Director Bob Pacheco, has been involved in modifying the SFP for increased local effectiveness with primarily Hispanic children and families in several inner-city housing projects. These are the families shown in the NIDA videotape "Coming Together On Prevention" (National Institute on Drug Abuse 1994). While this 5-year CSAP high-risk youth grant has not yet been completed, the preliminary results suggest that the staff has been successful in attracting and maintaining these high-risk families in SFP. Between September 1992 and February 1996, SFP and a child-only Basic Prevention Program (BPP) comparison intervention had been implemented with 311 clients. Twenty-five percent of referrals came from schools and other community agencies, but the balance of 75 percent came from DAYS' own aggressive outreach efforts in housing complexes.

One of the major successes of this program was the very high program completion rate of 92 percent, based on the criteria of participants attending at least 70 percent of all sessions and participating in the graduation ceremony to receive a certificate of completion (Kumpfer et al. 1996a). The mean age of the children was 8.43 years (range 5 to 12 years). Fifty-three percent were boys, and 47 percent were girls. Seventy-five percent of the children came from single-parent homes, with 30 percent of the mothers reporting that they were never married to the biological father. The mean family income was \$6,700, so most participants were from low-income families. The manuals were substantially modified, with Spanish translation versions for Spanish-language families.

The Strengthening Hispanic Families program is being evaluated by Wamberg and Nyholm (1994). Careful attention to retention in the followup design has resulted in 87 percent of the families completing the 6-month followup and 75 percent completing the 1-year followup. A relatively low level of risk factors was found in these children, possibly because this program was not selecting for children of substance abusers like the original NIDA research or the Utah, Alabama, and Detroit studies. On a referral rating scale and a risk factor rating scale consisting of six major risk factors, only 15 to 25 percent of the children had low to moderate adjustment problems in areas of school adjustment, family disruption, negative peer involvement, mental health problems, and deviant behavior. These preliminary intake assessment results suggest that using ethnicity and low income as the criteria for a selective family-based drug prevention program is probably not sufficient in targeting high-risk children. Because of the low level of risk factors reported in these participating



children, it will be much more difficult to have a significant positive impact on these children because of a ceiling effect. Of course, it was possible that the families were significantly underreporting their risk levels because of lack of trust in the confidentiality of their answers. A retrospective posttest would be helpful in determining whether underreporting occurred at intake.

The primary measures used to measure program effects included the Client Self-Report Assessment Scale (CSRAS) (Wamberg and Nyholm 1994), a child self-report instrument administered as an interview, and the Parent Assessment Profile (PAP), consisting primarily of the CBCL (Achenbach and Edelbrock 1991) and the FES (Moos 1974). Because of the low level of actual drug use in elementary school students, a novel drug exposure scale was constructed to measure hypothesized reductions in drug exposure. Baseline data suggest that the major increase in exposure to tobacco, alcohol, and other drugs occurs in these Hispanic children between ages 8 and 9. As in the Utah studies, many of the children (33 percent) report being sad or depressed, with 28 percent saying they have thoughts of hurting themselves or committing suicide. As many as 20 percent of these elementary school children have had difficulties with school adjustment, and 44 percent have been involved in fights.

The internal consistency reliabilities (Chronbach's alphas) for all pretest measures are relatively high: 0.85 to 0.94 for the referral and intake scales, 0.60 to 0.94 for the children's CSRAS scales, and 0.53 to 0.92 for the parents' PAP scales. Getting equally high or higher reliability scores for such young children demonstrated that by using optimal interview methods, even children as young as age 5 can produce reliable data. The Moos FES scales ranged from 0.62 to 0.75 in alpha coefficients on the pretest but increased from 0.77 to 0.90 on the first posttest. The CBCL scales ranged from 0.78 to 0.90 on the pretest and decreased slightly on the posttest from 0.74 to 0.85. The lowest alpha reliability on the PAP was for family drug use (0.53 alpha), and the highest was for child drug use (0.92 alpha). The lowest alpha reliability on the child interview measure (CSRAS) was for peer influence (0.60), and the highest was for program goals and expectations (0.94). In reviewing these data, it appears that higher reliabilities are found for both parents and children when they are asked about positive factors rather than negative behaviors or about someone else's behavior or drug use. This result may suggest that evaluations from a personal or family strengths perspective may yield more reliable data. Family strengths measures have been developed by Dunst and associates (Dunst and Trivette 1994; Kumpfer 1996) with their new Family Strengths Assessment instrument.

Child and parent satisfaction and perceptions of usefulness of the two comparison programs were almost identical, although parents rated SFP slightly higher, except in the areas of child “doing better at school” and child “making friends,” for which parents rated SFP about 20 percent higher (65 percent versus 46 percent). Children who participated in each program rated both programs about the same in usefulness.

Because of significant baseline differences between the ratings of the children in the child-only comparison intervention (BPP) with those in SFP, the repeated measures outcome data (pretest, posttest, and 6-month followup) will include analyses of variance (ANOVAs) or covariance (ANCOVAs) to determine changes across time within groups. The final outcome results should be available in about a year.

#### RURAL FAMILIES OF JUNIOR HIGH SCHOOL YOUTH

In conjunction with Program Originator Karol Kumpfer, researchers at Iowa State University developed a seven-session modification of SFP for junior high school students based on resiliency principles (Kumpfer, in press-*a*) called the Iowa Strengthening Families Program (ISFP) (Molgaard and Kumpfer 1994). Research on this program was conducted with NIDA and NIMH funding for a Phase III experimental intervention trial (Greenwald and Cullen 1985; Jansen et al. 1996), which compared 33 randomly assigned schools from 19 contiguous rural counties with either ISFP, Preparing for the Drug-Free Years (PDFY) (Hawkins et al. 1994), or no-treatment control schools. Like the original SFP, ISFP included parenting and youth sessions in the first hour and a family session in the second hour. Parents were taught the importance of encouraging and supporting dreams and goals or resilience in their children, appropriate expectations and discipline, effective communication with preteens, handling strong teen emotions, and implementing family meetings to improve family togetherness, improve family organization and planning, and determine family rules and consequences for breaking family rules. The children's sessions generally paralleled the parent sessions and covered resilience with dreams and goals, stress and anger management, and social skills (e.g., communication, problemsolving, decisionmaking, and peer refusal skills). The family sessions engaged the participants in activities to increase awareness of youth and family goals, increase family cohesion and communication, and reduce family conflict.

ISFP was implemented in winter 1994 with 161 families from 21 ISFP groups from 11 schools, but only 114 families completed the pretest and were included in the data analysis. (The implementation and 3-day training of trainers for this program is discussed in detail in Kumpfer and colleagues [1996a]). The average group size was 8 families and ranged from 3 to 15 families with about 20 parents and children attending each session. Approximately 94 percent of pretested participants completed at least five or more sessions, 88 percent attended at least six sessions, and 62 percent attended all seven sessions. Despite the availability of the total parenting program on videotape to help standardize the implementation as well as reduce the cost of the second trainer, fidelity observations of at least two sessions showed that 83 percent of the content of the parent training session was covered in comparison with 87 percent of the family session and 89 percent of the youth skills training session. (Spoth and colleagues [1998] report in more detail on the recruitment and retention rates for Project Family containing ISFP and PDFY.)

Data were collected during 2- to 2<sup>1</sup>/<sub>2</sub>-hour inhome sessions using both questionnaires, including a number of standardized measures and three 15-minute videotaped tasks. The topics for the tasks included general questions about family life (e.g., approaches to parenting and household chores), which were discussed independently with either the mother and the child or the father and the child selected randomly and then switched. In a second task, the family members discussed sources of disagreement determined previously by a checklist. The families were paid \$10 per hour for the testing time.

## ISFP Results

The preliminary session-by-session results were analyzed to determine the immediate behavioral intentions to change compared with actual changes (see Bry and colleagues, this volume, for additional discussion on these data). Overall, the data suggested a number of significant behavioral changes in the mothers and fathers from session to session that matched the actual objectives of the sessions. There were differential effects on mothers and fathers, primarily related to differences in baseline behaviors. Hence, fathers and mothers appeared to change in those behaviors where they had more room for improvement.

The preliminary outcome data from the inhome video coding of family interaction patterns and the self-reported changes on the annual family assessments have shown significant improvements. While the comparisons of each of the measurement scales have not been reported yet, Spoth and colleagues (1998) reported significant pretest and posttest improvements in all hypothesized effects for both ISFP and PDFY employing a “group code approach” for small-sample structural equation models discussed in Aiken and associates (1994). This approach used a common measurement model for both the experimental and control groups and included a group-code variable (e.g., dummy variable with group type identified by either a “1” or “0”). The major advantage of this type of SEM is that half as many parameters are required compared with the multigroup approach, making this analysis attractive for smaller sample sizes relative to the number of parameters estimated. A finding of no statistically significant intraclass correlations associated with outcome measures indicated that family-level rather than school-level analyses would be appropriate despite the nested research design of families within randomly assigned schools. Spoth (this volume) reports more on the preliminary results; however, at this point it appears that the three hypothesized structural effects (parent-child affective quality, intervention-targeted behaviors, and general child management) were statistically significant at both pretest and posttest at the 0.01 level conducting an SEM analysis employing 178 ISFP and 179 control-group families ( $N = 357$ ).

## Overall Summary of Multiple SFP and ISFP Study Results

Only two of these SFP research studies involved true experimental designs with random assignment to experimental groups—the original NIDA SFP study and the NIDA/NIH ISFP study. The results from the CSAP SFP replications should be interpreted with caution, because

they are based on quasi-experimental studies. The repeated replications with external evaluators, however, suggested that SFP can be implemented by others with integrity and fidelity. This is partially because the SFP manuals and training of trainers materials are very specific and detailed. The SFP trainings require staff members who will be doing the training from the manuals to actually prepare several sessions and deliver them to the group who roleplay typical parents or children. Time is spent in processing group dynamics and in determining how to most effectively deal with participant issues that could arise from the program session content. Therefore, the trainers learn the total content of the program, see many different delivery styles, and learn how to deal with group dynamics. The outcome results suggested that SFP was robust in disseminations and consistently demonstrated positive findings concerning improvements in family-focused risk and protective factors or processes and children's behaviors on standardized measures. Because of these positive results, NIDA chose SFP as one of three substance abuse prevention programs for dissemination through a technology transfer initiative on prevention.

## PROBLEMS IN IMPLEMENTING SELECTIVE PREVENTION RESEARCH

### Recruitment and Retention Issues

Typical issues included subject recruitment and retention. (Ideas for overcoming barriers to recruitment and maintenance are discussed in more detail in Kumpfer [1991]). By employing many ways to attract and retain high-risk families, these problems have not been an issue since the first NIDA research grant and Alabama replication grant, which ran out of substance-abusing women in treatment after the first year and had to become more creative in identifying drug-abusing women living in the community and hire a halftime indigenous recruiter. In most SFP replications, a number of incentives are provided for participation. Meals are provided at the conclusion of the family sessions. All the children participate or are in child care (older teens can help with child care or participate in specially structured groups). Vans pick up the families and bring them to the community center or church for the program. Basic needs are provided for in some sites, with clothing and food baskets given at the conclusion of the program. Graduation is a special dinner party, often at a special hotel with guest speakers who are key community leaders. Families are paid for completion of 12 of the 14 sessions and receive gift certificates redeemable at a local department store, often to buy

Christmas toys or clothing for the children. To increase recruitment, parents are encouraged to invite to the graduation party other parents who could benefit from the program.

#### Cost Issues

The major implementation barrier for this program was helping the agencies understand the high personnel cost of this program. Because three interventions were run simultaneously, the program was most effectively implemented with four trainers plus two van drivers and at least one person for child care. In addition, the recommended incentives (discussed above) make the program more expensive. Staffing appeared to work best if staff members were paid overtime or hired as outside consultants to run the program because it was generally run in the evenings. The program trainer's manuals were very inexpensive (\$40 each for six manuals) as well as the 3-day training (\$2,000 plus travel expenses). Under the research grants, the author conducted all staff training.

Some program administrators found it difficult to understand why this program cost more. The reason was because there were three programs (a parent, child, and family skills training), not just one parenting class. Including the 3-day training costs (\$2,000) and costs for the original six manuals (\$250), the program could be implemented initially for as little as \$4,450: Estimated personnel costs were \$1,950 for four staff members for 16 weeks. Additional costs would accrue depending on the level of family incentives (child care, transportation, meals, completion bonuses) and staff supervision needed to make the program successful with the particular target population. Assuming about 4.5 family members attending (1.4 parents, 2 young children, and 1 adolescent) or 36 participants, the unit cost is \$3.33 per hour of service or \$53.33 per SFP participant. A cost-benefit or cost-effectiveness analysis has never been conducted, but it has been proposed in a future NIDA grant involving more than 800 African American and Anglo American families in the Washington, DC, metropolitan area.

## Random Assignment to No-Treatment Issue

Another research issue was the random assignment of children from high-risk families to a no-treatment control group. Many community service agencies will not allow this unless they are convinced that the children in these families are only “high-risk” children and are not being referred because the children are diagnosed with mental health problems and need treatment. The identified parents should be given the drug or mental health treatment generally provided by the agency for their diagnosed problems. Additionally, if some children recruited are found to have diagnosed mental health or drug abuse problems, they should be treated or referred for treatment. Hence, no standard treatment is withheld, and only additional selective prevention services not generally provided are offered to the high-risk children.

## SPECIFIC RESEARCH QUESTIONS/ISSUES FOR NIDA

Unfortunately, most selective family-focused prevention interventions have been evaluated using “black box,” single-variable (program or no program/comparison program) evaluation designs, not research designs that manipulate independent variables within the program to allow more research questions to be answered about the programs. For example, there are many questions about parametric variations within family programs, such as length of the intervention, differential effectiveness for different types of families (i.e., single, divorced, ethnic, low or middle/high income, educational level, depression or drug use levels, and single-component versus multicomponent program effectiveness). Basically, there are many questions left unanswered by program evaluations that do not manipulate the independent variable in such a way as to answer more questions than whether the total program was effective compared with a control group. Additional posthoc statistical analyses (Cook and Campbell 1979) can be used to address some of the issues regarding effectiveness for subpopulations when recruiting different populations is difficult or burdensome for the site staff.

## SUMMARY

Because of the consistent replications of positive findings in reducing risk factors across many different cultural groups for drug use in high-risk children of substance abusers, SFP has shown itself to be a very powerful family intervention program. While only two NIDA randomized experimental Phase III intervention trials have been

conducted (one for SFP and one for ISFP), the six Phase IV special population studies employing quasi-experimental replication designs and posthoc statistical designs (Campbell and Stanley 1963) provide additional support for SFP effectiveness. The effect sizes are reasonably, statistically significantly larger for higher risk families compared with lower risk families. Because of these positive results, NIDA chose SFP as one of three substance abuse prevention programs for dissemination through its technology transfer package on Prevention (National Institute on Drug Abuse 1994). This package includes the videotape "Coming Together on Prevention" of the Denver Strengthening Hispanic Families Program implemented by the Denver Area Youth Services agency and the technology transfer package *Selective Prevention for Children of Substance-Abusing Parents: The Strengthening Families Program Research Manual*, which describes SFP and includes a guide for implementation (Kumpfer et al., in press-b).

#### NOTE

This new seven-session SFP for junior high school students was created by Virginia Molgaard and Karol Kumpfer, with support from an NIMH research grant. Because the results of the clinical trials in 20 counties in Iowa are still being analyzed for effectiveness, the new program will not be included in this resource manual. Prevention practitioners interested in a selective prevention intervention based on resiliency research can read a description of the program by Kumpfer and colleagues (1996a) or contact the authors.

#### REFERENCES

- Achenbach, T.M., and Edelbrock, C. *Child Behavior Checklist (CBCL)*. Burlington, VT: Center for Children, Youth, and Families, University of Vermont, 1988.
- Achenbach, T.M., and Edelbrock, C. *Child Behavior Checklist (CBCL) Teacher's Report Form*. Center for Children, Youth, and Families, University of Vermont, Burlington, VT, 1991.



- Aiken, L.S.; Stein, J.A.; and Bentler, P.M. Structural equation analysis of clinical subpopulation difference and comparative treatment outcomes: Characterizing the daily lives of drug addicts. Special Section: Structural equation modeling in clinical research. *J Consult Clin Psychol* 62(3):488-499, 1994.
- Aktan, G.B. Organizational frameworks of a substance use prevention program. *Int J Addict* 30(2):185-201, 1995.
- Aktan, G.; Kumpfer, K.L.; and Turner, C. The Safe Haven program: Effectiveness of a family skills training program for substance abuse prevention with inner city African American families. *Int J Addict* 31:158-175, 1996.
- Babor, T.F.; Dolinsky, Z.S.; Meyer, R.E.; Hesselbrock, M.; and Tennen, H. Types of alcoholics: Concurrent and predictive validity of some common classification schemes. *Brit J Addict* 87(10):1415-1431, 1992a.
- Babor, T.F.; Hofmann, M.; Delboca, F.K.; Hesselbrock, V.; Meyer, R.E.; Dolinsky, Z.S.; and Rounsaville, B. Types of alcoholics, I. Evidence for an empirically derived typology based on indicators of vulnerability and severity. *Arch Gen Psychiatr* 49(8):599-608, 1992b.
- Barkley, R.A. What is the role of group parent training in the treatment of ADD Children? *J Child Contemp Soc* 19(1-2):143-151, 1986.
- Bavolek, S. *Adult-Adolescent Parenting Inventory (AAPI)*. Park City, UT: Family Nurturing Center, 1985.
- Bavolek, S.J.; Comstock, C.M.; and McLaughlin, J.A. *The Nurturing Program: A validated approach to reducing dysfunctional family interactions*. Final Report. Grant No. 1R01MH34862. Rockville, MD: National Institute of Mental Health, 1983.
- Beck, A.T.; Ward, C.H.; Mendelson, M.; Mock, J.; and Erbaugh, J. An inventory measuring depression. *Arch Gen Psychol* 4:561-571, 1961.
- Bierman, K.L.; Greenberg, M.T.; and the Conduct Problems Prevention Research Group. Social skill training in the Fast Track program. In: Peters, R. DeV., and McMahon, R.J., eds. *Prevention and Early Intervention: Childhood Disorders, Substance Abuse and Delinquency*. Thousand Oaks, CA: Sage, 1996.
- Bowlby, J. *Attachment*. New York: Basic Books, 1969/1982.
- Bry, B.H.; McKeon, P.; and Pandina, R.J. Extent of drug use as a function of number of risk factors. *J Abnorm Psychol* 4:273-279, 1982.
- Campbell, D.T., and Stanley, J.C. *Experimental and Quasi-experimental Designs for Research*. Chicago: Rand McNally and Company, 1963.

- Catalano, R.F.; Haggerty, K.P.; and Gainey, R.R. Drug abuse prevention in drug abuse treatment settings. In: Bukoski, W.J., and Amsel, Z., eds. *Handbook for Drug Abuse Prevention Theory, Science, and Practice*. New York: Plenum Publishing, in press.
- Catalano, R.F.; Haggerty, K.P.; Gainey, R.R.; and Hoppe, M.J. Reducing parental risk factors for children's substance misuse: Preliminary outcomes with opiate-addicted parents. *Subst Use Misuse* 32(6):699-721, 1997.
- Center for Substance Abuse Prevention. *Signs of Effectiveness in Preventing Alcohol and Other Drug Problems*. Prevention Enhancement Protocol System (Contract No. ADM-SA-88-005), 1993.
- Cloninger, C.R. Neurogenetic adaptive mechanisms in alcoholism. *Science* 236:410-416, 1987.
- Cook, T.D., and Campbell, D.T. *Quasi-Experimentation: Design and Analysis Issues in Field Settings*. Chicago: Rand-McNally, 1979.
- Cowen, E.L. *Parent Attitude Test (PAT)*. Rochester, NY: Department of Psychology, University of Rochester, 1968.
- DeMarsh, J.K., and Kumpfer, K.L. Family environmental and genetic influences on children's future chemical dependency. *J Child Contemp Soc Adv Theory Appl Res* 18(\_):117-152, 1985.
- Derogatis, L.R., and Lazarus, L. SCL-90-R, Brief Symptom Inventory, and matching clinical rating scales. In: Maruish, M.E., ed. *The Use of Psychological Testing for Treatment Planning and Outcome Assessment*. Hillsdale, NJ: Lawrence Erlbaum Associates, Inc., 1994. pp. 217-248.
- Dishion, T.J., and Andrews, D.W. Preventing escalation in problem behaviors with high-risk young adolescents: Immediate and 1-year outcomes. *J Consult Clin Psychol* 63:538-548, 1995.
- Dunst, C.J., and Trivette, C.M. Methodological consideration and strategies for studying the long term follow up of early intervention. In: Freidman, S., and Haywood, H.C., eds. *Developmental Follow-Up: Concepts, Domains, and Methods*. San Diego, CA: Academy Press, 1994. pp. 277-313.
- Egeland, B., and Erickson, M.F. Psychologically unavailable caregiving: The effects on development of young children and the implications for intervention. In: Brassard, M.; Hart, S.; and Germain, B., eds. *Psychological Maltreatment of Children and Youth*. New York: Pergamon Press, 1987. pp. 110-120.
- Egeland, B., and Erickson, M.F. Rising above the past: Strategies for helping new mothers break the cycle of abuse and neglect. *Zero to Three* 11(2):29-35, 1990.

- Forehand, R.L., and McMahon, R.J. *Helping the Noncompliant Child: A Clinician's Guide to Parent Training*. New York: Guilford Press, 1981.
- Goplerud, E.N., ed. *Breaking New Ground for Youth at Risk: Program Summaries*. Office for Substance Abuse Prevention Technical Report-1, DHHS Pub. No. (ADM)91-1658. Washington, DC: Supt. of Docs., U.S. Govt. Print. Off., 1991.
- Gordon, D.A. An operation classification of disease prevention. In: Steinberg, J.A., and Silverman, M.M, eds. *Preventing Mental Disorders*. Rockville, MD: U.S. Department of Health and Human Services, 1987.
- Greenwald, P., and Cullen, J.W. The new emphasis in cancer control. *J Natl Cancer Inst* 74(3):543-551, March 1985.
- Haggerty, K.P.; Mills, E.; and Catalano, R.F. *Focus on Families: Parent Training Curriculum*. Seattle, WA: Social Development Research Group, 1991.
- Hans, S. Diagnosis in etiologic and epidemiologic studies. In: Jones, C., and De La Rosa, M., eds. *National Institute on Drug Abuse Technical Review: Methodological Issues: Etiology and Consequences of Drug Abuse Among Women*. Silver Spring, MD: National Institute on Drug Abuse, 1995.
- Harrison, R.S., and Proschauer, S. "The Impact of Family Skills Training on Children at Risk for Substance Abuse and Their Families: A Five-Year Evaluation." Final report submitted to the Center for Substance Abuse Prevention, Social Research Institute, Graduate School of Social Work, Salt Lake City, UT, 1996.
- Harrison, S. *Final Evaluation Report on Utah CSAP/CYAP Project*. Submitted to the Utah State Division of Substance Abuse. Social Research Institute, University of Utah, 1994.
- Hawkins, J.D.; Catalano, R.F.; Brown, E.O.; Vadasy, P.F.; and Roberts, Fitzmahon and Associates. *Preparing for the Drug Free Years: A Risk Reduction Program for Families*. Seattle, WA: Developmental Research and Programs, Inc., 1994.
- Institute of Medicine. New directions in definitions. In: Mrazek, P.J., and Haggerty, R.J., eds. *Reducing Risks for Mental Disorders: Frontiers for Preventive Intervention Research*. Washington, DC: National Academy Press, 1994.
- Jansen, M.A.; Glyn, T.; and Howard, J. Prevention of alcohol, tobacco, and other drug abuse. In: Sussman, S., and Johnson, C.A., eds. *Am Behav Sci* 37(7):790-807, 1996.

- Kameoka, V.A. *The Effects of a Family-Focused Intervention on Reducing Risk for Substance Abuse Among Asian and Pacific-Island Youths and Families: Evaluation of the Strengthening Hawaii's Families Project*. Social Welfare Evaluation and Research Unit, School of Social Work, University of Hawaii, 1996.
- Kaminer, Y. Patient treatment matching: Cognitive Behavioral Treatment (CBT) for adolescent substance abuse. *J Am Acad Child Psychiatry* 31:1046-1049, 1996.
- Kellam, S.G.; Simon, M.B.; and Ensminger, M.E. Antecedents of teenage drug use and psychological well being: A ten-year community wide prospective study. In: Ricks, D., and Dohrenwend, B.S., eds. *Origins of Psychopathology: Research and Public Policy*. Cambridge, MA: Cambridge University Press, 1983. pp. 17-42.
- Kellam, S.G.; Werthamer-Larsson, L.; Dolan, L.J.; Brown, C.H.; Mayer, L.S.; Rebok, G.W.; Anthony, J.C.; Laudolff, J.; and Edelson, G. Developmental epidemiologically based preventive trials: Baseline modeling of early target behaviors and depressive symptoms. Special Issue: Preventive Intervention Research Centers. *Am J Community Psychol* 19(4):563-584, 1991.
- Kogan, K.L. Interaction Systems between preschool handicapped or developmentally delayed children and their parents. In: Field, T.M.; Goldberg, S.; Stern, D.; and Sostek, A.M., eds. *High-Risk Infants and Children: Adult and Peer Interactions*. New York: Academic Press, Inc., 1980. pp. 227-247.
- Kumpfer, K.L. *Utah State Substance Abuse Scale*. Available from Utah State Division of Alcoholism and Drugs, 150 West North Temple, Salt Lake City, UT, 84112, 1981.
- Kumpfer, K.L. Special populations; etiology and prevention of vulnerability to chemical dependency in children of substance abusers. In: Brown, B.S., and Mills, A.R., eds. *Youth at High Risk for Substance Abuse*. DHHS Pub. No. (ADM)87-1537. U.S. Department of Health and Human Services, Public Health Service, Alcohol, Drug Abuse, and Mental Health Administration, National Institute on Drug Abuse. Washington, DC: Supt. of Docs., U.S. Govt. Print. Off., 1987. pp. 1-71.
- Kumpfer, K.L. How to get hard-to-reach parents involved in parenting programs. In: Pines, D., ed. *Parent Training is Prevention: Preventing Alcohol and Other Drug Problems Among Youth in the Family*. DHHS Pub. No. (ADM)91-1715. Washington, DC: U.S. Supt. of Docs., U.S. Govt. Print. Off., 1991. pp. 87-95.

- Kumpfer, K.L. *Strengthening America's Families: Promising Parenting and Family Strategies for Delinquency Prevention. A User's Guide.* prepared for the U.S. Department of Justice under Grant No. 87-JS-CX-K495 from the Office of Juvenile Justice and Delinquency Prevention, Office of Juvenile Programs, U.S. Department of Justice, 1993.
- Kumpfer, K.L. *Family Strengths Assessment.* Department of Health Education, University of Utah, Salt Lake City, Utah, 1996.
- Kumpfer, K.L. Factors and processes contributing to resilience: The resilience framework. In: Glantz, M., and Johnson, J., eds. *Resilience and Development: Positive Life Adaptations.* New York: Plenum Press, in press-a.
- Kumpfer, K.L., and Alvarado, R. Strengthening families to prevent drug use in multi-ethnic youth. In: Botvin, G.; Schinke, S.; and Orlandi, M., eds. *Drug Abuse Prevention With Multi-Ethnic Youth.* Thousand Oaks, CA: Sage Publications, 1995. pp. 255-294.
- Kumpfer, K.L., and Bayes, J. Child abuse and alcohol, tobacco and other drug abuse: Causality, coincidence or controversy? In: Jaffe, J., ed. *The Encyclopedia of Drugs and Alcohol.* New York: Macmillan Press, 1995.
- Kumpfer, K.L., and DeMarsh, J. Genetic and family environmental influences on children of drug abusers. *J Child Contemp Soc* 3/4(Fall):117-151, 1985.
- Kumpfer, K.L.; DeMarsh, J.; and Child, W. *The Strengthening Families Program.* Department of Health Education, University of Utah and Alta Institute, 1989.
- Kumpfer, K.L.; Molgaard, V.; and Spoth, R. The Strengthening Families Program for the prevention of delinquency and drug use. In: Peters, R., and McMahon, R., eds. *Preventing Childhood Problems, Substance Abuse, and Delinquency.* Thousand Oaks, CA: Sage, 1996a.
- Kumpfer, K.L.; Sasagawa, M.; and Cheng, S. "Final Report on Prevention Through Intervention Project." Report to the Center for Substance Abuse Prevention. University of Utah, Department of Health Education, 215 N-HPER, Salt Lake City, UT 84112, 1996b.
- Kumpfer, K.L., and Turner, C.W. The social ecology model of adolescent substance abuse: Implications for prevention. *Int J Addict* 25(4A):435-463, 1990/1991.
- Kumpfer, K.L.; Turner, C.W.; and Alvarado, R. A community change model for school health promotion. *Health Educ* 22(2):94-110, 1991.

- Kumpfer, K.L.; Williams, M.K.; and Baxley, G. *Selective Prevention for Children of Substance-Abusing Parents: The Strengthening Families Program Resource Manual*. National Institute on Drug Abuse Technology Transfer Package, Silver Spring, MD, in press-*b*.
- Lorion, R.P.; Price, R.H.; and Eaton, W.W. The prevention of child and adolescent disorders: From theory to research. In: Shaffer, D.; Philips, I.; and Enzer, N.B., eds. *Prevention of Mental Disorders, Alcohol and Other Drug Use in Children and Adolescents*. Office for Substance Abuse Prevention Prevention Monograph 2. DHHS Pub. No. (ADM)90-1646, Rockville, MD: Office for Substance Abuse Prevention, 1989. pp. 55-96.
- Lorion, R.P., and Ross, J.G. Programs for change: A realistic look at the nation's potential for preventing substance involvement among high-risk youth. Special issue: Programs for change. Office for Substance Abuse Prevention demonstration models. *J Community Psychol* 3-9, 1992.
- McDonald, L. Families Together with Schools. In: *Promising Programs for Safe Schools*. Washington, DC: American Psychological Association, 1993.
- McDonald, L.; Billingham, S.; Dibble, N.; Rice, C.; and Coe-Braddish, D. F.A.S.T.: An innovative substance abuse prevention program. *Soc Work Educ* 13:118-128, 1991.
- McMahon, R.J.; Slough, N.M.; and the Conduct Problems Prevention Research Group. Family-based intervention in the Fast Track Program. In: Peters, R. DeV., and McMahon, R.J., eds. *Preventing Childhood Disorders, Substance Abuse and Delinquency*. Banff International Behavioral Science Series. Thousand Oaks, CA: Sage, 1996.
- Millard, J. Evaluation of a School-based Parenting Program. Doctoral dissertation, Graduate School of Social Work, University of Utah, Salt Lake City, UT, 1988.
- Mitchell, A.; Weiss, H.; and Schultz, T. Evaluating education reform: Early childhood education. A review of research on early education, family support and parent education, and collaboration. Submitted to U.S. Department of Education, 1995.
- Molgaard, V., and Kumpfer, K.L. *Strengthening Families Program II*. Social and Behavioral Research Center for Rural Health, Iowa State University, Ames, Iowa, 1994.
- Moos, R.H. *Family Environment Scale*. Palo Alto, CA: Consulting Psychologist Press, Inc., 1974.

- National Institute on Drug Abuse. "Coming Together on Prevention." (Videotape) Produced for the National Clearinghouse for Alcohol and Drug Information Videotape Resource Program, Washington, DC, 1994.
- Patterson, G.R. *Families: Applications of Social Learning to Family Life* (Rev. Ed.). Champaign, IL: Research Press, 1975.
- Patterson, G.R. *Living With Children: New Methods for Parents and Teachers*. Champaign, IL: Research Press, 1976.
- Radloff, L.S. The CES-D Scale: A self-report depression scale for research in the general population. *Appl Psychol Meas* 1(3):385-401, 1977.
- Richardson, G.E.; Neiger, B.L.; Jensen S.; and Kumpfer, K.L. The Resiliency Model. *J Health Educ* 21(6):33-39, 1990.
- Seifer, R.; Sameroff, A.J.; Baldwin, C.P.; and Baldwin, A.L. Child and family factors that ameliorate risk between 4 and 13 years of age. *J Am Acad Child Adolesc Psychiatr* 31(5):893-903, 1992.
- Solder, B., and Burt, M. *Children of Addicts and Non-Addicts: A Comparative Investigation in Five Urban Sites*. Report to the National Institute on Drug Abuse. Bethesda, MD: Gurt Associates, Inc., 1978a.
- Solder, B., and Burt, M. "Children of Addicts: A Population in Need of Coordinated Comprehensive Mental Health Services." Paper presented at the American Association of Psychiatric Services for Children, Atlanta, GA, November 1978b.
- Spivack, G., and Shure, M. Interpersonal cognitive problem solving and primary prevention: Programming for preschool and kindergarten children. *J Clin Child Psychol* 8(2):89-94, 1979.
- Spoth, R.; Redmond, C.; and Shin, C. Direct and indirect latent-variable parenting outcomes of two universal family-focused preventive interventions: Extending a public health-oriented research base. *J Consult Clin Psychol* 66(2):385-399, 1998.
- Szapocznik, J.; Santisteban, D.; Rio, A.; Perez-Vidal, A.; and Kurtines, W.M. Family Effectiveness Training (FET) for Hispanic families: Strategic structural systems intervention for the prevention of drug abuse. In: Lefley, H.P., and Pedersen, P.B., eds. *Cross Cultural Training for Mental Professionals*. Springfield, IL: Charles C Thomas, 1985. pp. 245-264.
- Trimble, J.E. Towards an understanding of ethnicity and ethnic identity and their relationship with drug abuse research. In: Botvin, G.J.; Schlinke, S.; and Orlandi, M.A., eds. *Drug Abuse Prevention With Multiethnic Youth*. Thousand Oaks, CA: Sage Publications, 1995. pp. 3-27.
- Wamberg, K., and Nyholm, S. "Evaluation Results of Strengthening Hispanic Families Program." Presented at the Center for

Substance Abuse Prevention Annual High-Risk Youth National Conference, Denver, CO, March 21, 1994.

Zucker, R.A., and Fitzgerald, H.E. "Drug Abuse Prevention Through Family-Based Intervention: Lessons for Programming and Evaluation from Developmental and Etiological Studies." Paper presented at the National Institute on Drug Abuse Family Intervention Symposium, Washington, DC, January 1996.

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