

A WHITE PAPER

SUBSTANCE ABUSE PREVENTION:

WHAT WORKS, AND WHY

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**SUBSTANCE ABUSE PREVENTION:
WHAT WORKS, AND WHY**

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EXECUTIVE SUMMARY

The field of substance abuse prevention has been recently described as in its infancy. As such, no strategy or approach has yet been proven through rigorous scientific study to be effective over the long term in reducing substance use. However, in the absence of conclusive evaluations, there appears to be a consensus among experts as to which prevention programs are the most promising.

State-of-the-art approaches to substance abuse prevention have evolved considerably over the past two decades, shifting from large-scale public education campaigns to programs that combine several strategies tailored to a more specific audience within their particular community. Traditionally, programs often provided training in general social skills as well as more specific information about, and alternative activities to, substance abuse. More recently, prevention providers have shifted their attention to teaching adolescents a set of specific skills for resisting peer pressure to use drugs. Beyond that, some experts advocate a much broader focus that addresses the deep-seated causes of substance abuse.

For instance, research has shown that community and family factors, as well as individual traits, often precede substance abuse. However, many children growing up in environments that place them at high-risk for drug and alcohol abuse do not succumb. Prevention programs can strengthen and augment the factors that protect these at-risk children, and, at the same time, can address the relevant risk factors.

Twenty programs that appear to both shore up protective factors while combatting the effects of risk factors are identified and described in this report. These programs share three important characteristics. They are:

- o comprehensive in approach,
- o positive in focus, and
- o carefully tailored to a clearly defined target population.

The comprehensiveness of these exemplary programs can be seen in the way each utilizes multiple intervention strategies, delivers diverse services to meet an array of participant needs, and addresses the individual within his or her social environment — be it among peers, within the family, in a cultural community, or in the broadest context of the community at large.

- o *School-based* programs provide early prevention and intervention. They often target their services to children and families at risk for substance use.
- o *Peer-based* programs teach youth how to resist peer pressure to abuse drugs and alcohol and how to support abstinent life-styles. Many also train youth to teach these resistance skills to their peers, often in programs outside the classroom.

- o *Family-based programs* train family members in behavior management, communication, and conflict resolution skills, often through meetings involving other families.
- o *Programs based in culturally defined communities* promote cultural understanding and pride in a shared ethnic heritage, while addressing the ways in which unique cultural factors affect substance abuse. In distressed neighborhoods they organize to address and remedy the conditions that encourage substance abuse.
- o *Programs based in geographically defined communities* coordinate all major sectors of the community to work to reverse attitudes that foster and tolerate substance abuse. They often promote programs that provide positive alternatives to substance abuse, as well.

Most of the exemplary programs described in this report are community based or community oriented, seeking the input of people from a variety of fields and agencies, including business, human services, local government, teachers, parents, and students. This collaboration and partnership building has proven valuable in accurately assessing the nature of the problem of alcohol and drug abuse in a given community and in identifying available resources to combat it. The strategic alliances of community members enable coordination of prevention endeavors while challenging community attitudes that tolerate substance abuse. They also help programs to respond with appropriate flexibility to the changing needs of the community served.

By maintaining a positive focus on health promotion, prevention providers attempt to intervene in any number of potentially negative outcomes -- from school failure and teen pregnancy to violence and community deterioration -- in addition to substance abuse. In doing so, they avoid casting participants in a negative light or labeling them as "high-risk", increase participants' self-esteem through leadership training, and offer services that are active and participatory in nature.

Model prevention programs empower participants to choose healthy life-styles by training them in specific skills using techniques that are designed to appeal to them, both in terms of their age and cultural background. Model program activities effectively engage participants, in part because they are designed to embrace the cultural context of the people they serve.

INTRODUCTION

Prevention methods and intervention strategies have undergone continual development and modification throughout the last two decades. In the 1970's, programs based on the public health model, such as broad-based media campaigns, the provision of positive alternatives to drug use, and lessons in interpersonal skills were used as singular approaches to the prevention of alcohol and drug abuse. When used in isolation, these individual strategies did not effect significant changes in behavior.¹ Thus, programs developed during the 1980's and 1990's have attempted to integrate these approaches into more comprehensive programming that more specifically addresses substance abuse. Thus far, these techniques appear to have produced some short-term positive effects; however, further rigorous evaluation is needed to determine whether these effects endure over time.

PREVENTING DRUG USE — THE PUBLIC HEALTH MODEL

The prevention field is based on the public health model that recognizes that people are at varying risk of initiating or continuing substance abuse. By recognizing these differences, prevention providers can gear their programs according to the risk level of their participants.

Primary Prevention Approaches

Primary prevention services target individuals who are not yet at immediate risk of using psychoactive substances. Typically, elementary school children are served by these programs. However, primary prevention approaches can also be aimed at the entire population, including adults and youth, through the use of broadcast media. Examples include the "Just Say No" campaign, brochures on how to detect drug use in children mailed to all households, and classroom programs that educate elementary school children about the dangers of experimenting with drugs.

Secondary Prevention Approaches

Secondary prevention is aimed at people who are at risk for alcohol and drug abuse (meaning that their eventual alcohol or drug abuse is considered highly probable) or who have initiated use but have not become habitual users. This approach entails many strategies, depending on the characteristics of the affected population and the perceived risk. If the target group is elementary school students identified as "high risk" based on early antisocial behavior, the strategy may be

to teach basic life and interpersonal skills in conjunction with providing information on drugs. If the target group is junior high school students judged to be at high risk by a guidance counselor or other professional, the preferred intervention may be a peer education approach that models resistance skills for confronting drug-using and drug-selling peers.

Tertiary Prevention and the Link to Treatment

Tertiary prevention is directed toward individuals who use drugs and for whom habitual use is likely or has already begun. This approach comprises drug and alcohol treatment programs. Most substance abuse prevention programs have mechanisms for referral to drug treatment services.

The approaches that have emerged in the past 20 years are often a blend of both primary and secondary prevention. Further, a wide variety of programs have emerged that encompass a range of services and intervention methods. This report outlines both the traditional approaches to substance abuse prevention and the modifications to those approaches that have emerged over the last decade. It also summarizes the designs of some selected exemplary programs and identifies features shared by promising prevention programs. The report is based on a review of the prevention literature, informal discussions with prevention practitioners and other researchers, and site visits by Abt Associates staff.

CURRENT THINKING ON PREVENTION

Few of the most promising prevention strategies that have emerged in recent years have received formal evaluations of their long-term effectiveness in actually preventing substance abuse.² Consequently, conclusions about "what works" in this rapidly advancing field generally lack a solid scientific basis. Rather, they are based on the opinions of experts, although even experts say that more is known about what doesn't work in prevention than what does.³

Because traditional prevention strategies appear to have limited long-term effectiveness, experts contend that they require enhancement. They must address specific risk factors beyond peer pressure to use drugs, such as family or environmental influences, and they must be strengthened by adding periodic "booster" sessions throughout the course of a youth's development.⁴ Hawkins and colleagues advocate a "risk-focused prevention approach"⁵ that is based on known causes of substance abuse. By targeting interventions to intercede when known warning signs of eventual substance abuse arise, prevention programs can interrupt the causal chain of events that leads to substance abuse. Where precursors to substance abuse are not amenable to change, prevention programs can foster protective mechanisms that will increase the chances that participants can overcome those circumstances without turning to substance abuse.

Risk Factors

Hawkins and his colleagues⁶ identify 16 distinct risk factors that precede drug abuse. These risk factors fall into three general categories: environmental, interpersonal, and individual. Environmental risk factors include the social climate of one's community, both with respect to its overall cohesion and its specific standards of behavior regarding substance use. In addition, individuals who live in neighborhoods suffering from severe poverty and community disintegration are at increased risk for drug abuse. Similarly, youths who reside in areas where psychoactive substances are more widely available are more likely to abuse alcohol or drugs than young people from areas with lower availability.

Interpersonal risk factors include poor relations with peers (especially in the elementary grades) as well as various family characteristics, such as an overall lack of cohesion within the family, inadequate conflict resolution and behavior management skills, favorable attitudes towards drug use, and having one or more family members with a history of alcohol or drug abuse. Perhaps in combination with these latter family risk factors, the individual may be at higher risk for drug abuse by virtue of certain physiological factors arising from the possibility that substance abuse is, in part, an inherited trait.⁷

Additional individual risk factors have been identified for the various developmental stages, early childhood through adolescence. During the early elementary school years, behavioral problems such as hyperactivity and antisocial behavior can predict later substance abuse. If these behavior problems persist into adolescence, and particularly if the adolescent is aggressive, he or she is at even higher risk for substance abuse.

While research is needed to determine how these factors interact, it seems reasonable that these psychological factors may play into the poor academic performance and lack of commitment to school that are also known to predict drug abuse. Similarly, rebellion and rejection of conventional values have also been found to predict adolescent substance use, as have favorable attitudes to drug use and having friends who either use drugs or approve of drug use. Further, the earlier an adolescent initiates drug use, the greater the probability of persistent and heavy drug use in the future.

Protective Factors

Given that some risk factors (such as economic deprivation) are beyond their reach, local prevention programs must help those living in high-risk environments escape unscathed. Many children from such environments manage to overcome the odds and refrain from drug use despite their increased risk. Researchers have begun to identify protective factors that make children

more resilient to these risks. To the extent that these characteristics can be enhanced, prevention programs can take certain steps that will help children beat the odds.

Research on the resilience of children to harmful environments is built on a solid theoretical framework. Hawkins and colleagues have developed a social development model which holds that prosocial bonding (that is, the development of healthy family, school, and peer relationships and the social skills necessary to maintain those relationships) is a crucial protective factor in preventing both substance abuse and juvenile delinquency.⁸ To foster prosocial bonding, prevention programs must provide participants with opportunities for involvement in positive social activities, teach the skills necessary for successful participation in these activities, and consistently reward these activities while presenting clear disapproval of substance abuse.

OVERVIEW OF PREVENTION

The best prevention programs employ a broad array of intervention strategies and are designed to attack several risk factors at once. Table 1 provides an overview of the strategies used by prevention programs, according to the context in which the intervention is typically found, the risk factors it seeks to counter, and the protective factors that it aims to enhance. These strategies range from more traditional media- and school-based approaches, like information dissemination and affective social skills training, to programs that may include peer leadership, such as alternatives programs and resistance skills training. Some prevention programs target entire families rather than just the individuals at risk for substance abuse while other programs expand the focus even further, attempting to address alcohol and drug abuse throughout an entire community.

These categories of prevention strategies are presented only as a framework to help the reader understand the various approaches to prevention. They are not meant to illustrate actual programs. Today's prevention programs typically use a combination of these intervention strategies to address multiple risk factors. A program that incorporates a myriad of prevention strategies and approaches is thought to be more likely to successfully target the combination of environmental, psychosocial, cultural, and familial factors that may contribute to alcohol and drug abuse. Similarly, programs that invite participation from many sections of a community -- and thereby pool the resources of businesses, civic organizations, local governments, and human service agencies -- are best able to address the diverse factors that contribute to drug use in a given community.

Table 1
Overview of Prevention Approaches

Typical Domain	Strategy Used	Target Population	Sample Activities	Risk Factor Addressed	Protective Factor Enhanced
MEDIA	Information Dissemination/ Fear Arousal	General population	Advertising campaigns, factual information through posters, pamphlets, films	Social norms favorable to substance use	Recent campaigns present positive role models
SCHOOL/ COMMUNITY	Affective Social Skills	Children who are identified as having behavior problems, or at-risk adults	Goal setting, values clarification, social and inter-personal skill building in classroom; women's support groups in community settings	In early childhood, antisocial behaviors; in adolescence, school failure; in adolescence or adulthood, alienation and association with drug-using peers	Coping skills for those at higher risk (e.g., children of divorce, women with substance abusing partners)
SCHOOL/ COMMUNITY/ PEER	Alternatives	At-risk neighborhoods, or entire school systems	Youth centers, drug-free events (e.g., dances), outdoor adventure programs, peer-led group activities	Association with drug-using peers, alienation, commitment to school	In peer-led programs, prosocial bonding (e.g., as alternative to gang involvement)
SCHOOL/ PEER	Resistance Skills	Children, typically between 10 and 15 years old	Modeling, role-playing, feedback; especially effective when taught by peers	Norms favorable to substance use	When used to more broadly develop positive peer culture through peer leadership and ongoing rewards for successful resistance
FAMILY	Parent Training/ Family Training	Preschool to elementary-aged children, sometimes targeted due to behavior problems, and their parents or families.	Parent-effectiveness training; 1-to-1 structured time between parent and child; experiential training in communication and conflict resolution	Behavior management problems, lack of family cohesion, academic failure, commitment to school	For those at risk due to: early antisocial behavior, enhancing parent-child bond; neighborhood disorganization, increase family support
COMMUNITY	Collaboration of Multiple Approaches/ Organizations	Entire communities or specific neighborhoods	Community partnerships, neighborhood coalitions	Social norms favorable to substance use, neighborhood disorganization	In at-risk neighborhoods, creating positive culture with healthy values

Traditional Approaches to Prevention

In the 1970's, prevention programs relied on techniques such as producing media campaigns, sponsoring alcohol- and drug-free events as positive alternatives to substance use, and building or strengthening the social and life skills of participants to impact substance abuse. Formal evaluations of these programs showed that, by and large, they were not effective in preventing substance abuse.⁹ As a result, experts have criticized the underlying assumption behind many of these programs -- that given increased knowledge, individuals will shift their attitudes, which will in turn cause a change in behavior.¹⁰ Rather, experts recommend that these strategies be adapted to include a focus on specific skills for resisting drug use.¹¹

Media campaigns. In the past, media campaigns often relied on scare tactics to present the negative consequences of drug and alcohol use. Such tactics seem to have been ineffective. More recent campaigns model abstinent behavior and promote positive alternatives to drug use. Even so, prevention programs based solely on providing information do not seem to reduce or prevent substance abuse. Experts agree that if media campaigns are to be effective in preventing substance abuse, they must be part of more comprehensive prevention programs.¹²

Alternatives programming. The goal of this approach is to provide young people with healthy alternatives to substance abuse. To do this, both schools and community centers often sponsor drug- and alcohol-free social and recreational activities. A potential danger arises when prevention programmers unintentionally choose activities that are often linked with drinking or drug taking.¹³ For example, while sports events can provide a fun, active alternative to parties, a tradition of drinking may surround these events, thus unintentionally exposing participants to added risk.

Alternatives programs are meant to counter boredom, alienation, and lack of structured time and supervision. However, the causes of substance abuse are more complex. Alternative activities can only help create an adolescent culture that discourages drug and alcohol abuse when combined with other strategies that more specifically address those causes.

Affective education. The goals of affective education include building self-esteem, developing social and decision-making skills, and helping participants clarify their personal values. Although affective education can change recipients' knowledge and attitudes towards alcohol and other drugs, it may not reduce actual substance use.¹⁴ For affective education to work, providers must, in addition to bolstering participants' self-esteem, teach specific skills that help them abstain from substance use. Thus, recent approaches to affective education combine previous strategies with techniques for resisting peer pressure to use drugs or alcohol and with opportunities to practice those techniques.

More Recent Approaches

Programs developed during the 1980's and 1990's have integrated traditional approaches with new strategies, such as:

- o resistance skills training where children are shown *how* to "say no" to drugs and alcohol (often by older adolescents),
- o family training which helps parents create more cohesive households, improve communication, and establish appropriate roles for parents and children, and
- o collaboration by a variety of groups to coordinate the prevention activities in a given community.

Programs that incorporate multiple prevention strategies and approaches are most likely to successfully address the complex combination of environmental, psychosocial, cultural, and familial factors that contribute to alcohol and drug abuse.

Peer resistance skills training. This approach to prevention aims to combat a long-recognized risk factor for adolescent substance use: peer pressure. Children whose friends have either used drugs or who approve of drug use are more likely to use drugs themselves.¹⁵ A traditional approach to training children to resist peer pressure has been conducted in schools for several years now (Drug Abuse Resistance Education [DARE] is one example.) In these programs, trainers demonstrate how to handle confrontations about drug use, and provide participants with the opportunity to practice refusal skills by acting out scenarios in which they might be pressured to use drugs or alcohol.¹⁶ Formal evaluations of these programs suggest that the influences these programs have on participants appear to be short-lived. Participants who have been interviewed two years after learning resistance skills were just as likely to have experimented with cigarettes, alcohol, or marijuana as young people who had not participated in the program.¹⁷

Peer resistance programs have been modified in specific ways in recent years to increase their effectiveness. Recent innovations use peers instead of school counselors, teachers, or law enforcement officials as trainers. Prevention providers believe that youth are more open to receiving information and training (especially regarding alcohol and drug use) from their peers. So an emerging part of peer resistance skills programs is the training of peer leaders, who then teach these same skills to younger children.¹⁸

Family training. Although peer groups influence young people, families are arguably the strongest force in children's lives. Family training programs aim to educate parents on their role as "the primary prevention agents for their own children."²⁹ Traditionally, family-based programs have focused on training parents in behavior management and communication skills. Parents learned the signs, symptoms, and causes of drug and gang involvement, along with basic child development skills. They also learned techniques for resolving conflicts and for allowing children to experience the logical consequences of their misconduct or misbehavior.

Whereas traditional parent training focuses solely on the parent-child relationship, more recent family-based prevention programs seek to improve the functioning level of the entire family. By intervening in the family as a whole, substance abuse can be prevented among both children and their parents. Recent family training programs incorporate family therapy principles such as:

- o fostering supportive relationships among participating parents,
- o defining family boundaries,
- o establishing routine and order within the family, and
- o clarifying family roles (for example, empowering parents to be authority figures while freeing children from excessive responsibility).

These programs support healthy family relationships by teaching modified play therapy techniques that:

- o build the self-esteem of both parents and children,
- o teach active listening skills, and
- o promote the healthy expression of feelings and the empathic interpretation of others' feelings.

Evaluations show that family training programs have successfully addressed two factors that contribute to adolescent substance use — family cohesion and children's behavior problems.³⁰

Also, one evaluation of a preschool program showed long-term improvement in other areas known to be connected with substance abuse, such as juvenile delinquency, teen pregnancy, and high school dropout rates.²¹ Long-term studies to investigate such programs' direct effect on substance use have begun, but the results will not be available for some time.

Community orientation. Perhaps the most promising recent development in the prevention field is the movement towards community-based programming that consolidates the efforts of diverse community groups interested in addressing substance abuse. The most successful substance abuse prevention programs seek the participation of people from a variety of fields and agencies (including community leaders, business executives, human service professionals, local government officials, teachers, police, parents, and students). Such groups can gauge the unique needs of their community, agree on a plan to meet those needs, and identify and develop the resources needed to combat the problem. The very existence of a strategic alliance of leaders devoted to solving their community's drug problem challenges local attitudes that tolerate substance abuse.

In minority communities, successful prevention programs also deal with the dynamics of drug use specific to their differing cultures. These programs promote cultural understanding and pride in a shared heritage while confronting whatever problems of alcoholism or other drug abuse are most common to their particular community.²² In addition, many inner-city programs also address the issues of community disorganization, lack of structure and cohesion, apathy, and economic deprivation that contribute to substance abuse in their neighborhoods.

PROMISING FEATURES OF MODEL PREVENTION PROGRAMS

Although not all of the model programs are community based, each addresses individuals within their social environment:

- o within schools
- o among peers
- o within the family
- o within a particular cultural or ethnic group
- o in the community as a whole

This comprehensive approach to prevention enables programs to confront many interrelated social problems -- from school failure and teen pregnancy to violence and community deterioration -- that often occur in connection with alcohol and other drug use.

Another way model programs can attack multiple social problems is by maintaining a positive focus. By emphasizing healthy life-styles rather than the negative consequences of unhealthy behavior, prevention programs check the development and progression of many social ills. Part of this positive approach includes focusing on learning skills. This approach encourages evenhanded treatment of both high- and low-risk program participants.

By allowing clients to participate actively in learning skills, rather than passively receiving information, prevention programs act to empower their clients. An example is found in the peer resistance programs discussed earlier. These programs encourage participants to recognize the skills they have mastered and share them with other youths.

As one researcher noted, no single panacea exists for preventing alcohol and drug abuse by all kinds of people.²³ Therefore, to serve their clients better, model programs must carefully tailor their interventions to their participants' age and cultural backgrounds.

Profiles of Model Prevention Programs

Identification of Model Programs. The model programs profiled here were selected based on the recommendations of several sources. A recent edition of the Office of Substance Abuse Prevention²⁴ report that annually commends ten alcohol and other drug prevention programs was one source.²⁵ Two additional sources were a published report by the Government Accounting Office (GAO) on promising adolescent drug use prevention programs²⁶ and an unpublished report on youth self-sufficiency programs funded by the Administration of Children and Families.²⁷ Experts in the field were also consulted, and some model programs were identified through a literature review. Researchers from Abt Associates Inc. visited nine of these model programs to observe program operations.²⁸ These programs were chosen to represent a diversity of rural and urban locations, racial and ethnic populations targeted, and types of services provided.²⁹ In the discussion that follows, the model programs are organized according to the social group the program targets: schools, peer groups, families, cultural groups, and entire communities.

School-based programs. In the past, schools have typically attempted to prevent substance use by teaching students about the harmful effects of drug use. Evaluators deemed these programs ineffective in preventing substance use.³⁰ In fact, some evidence suggests that teaching students about how drugs can make them feel might inadvertently "advertise" the use of drugs, and

actually stimulate students' interest, and, ultimately, their drug use.²¹ Based on these findings, prevention programs have been redesigned provide students with drug resistance and other life skills that will nurture a young person's development and better support a drug-free life-style.

Prevention providers often work with school personnel to identify children in need of services. For example, a student with a certain set of certain behavior problems in the classroom or social problems with other students may have a family member with a substance abuse problem. By working with the schools, prevention providers can intervene at the first signs of trouble, before the student becomes involved with drugs or alcohol. However, many model school-based prevention providers believe it is important not to further alienate high-risk children by treating them in isolation from their peers. For example, Early Drug Abuse Prevention (EDAP) of Montpelier, Vermont²² purposefully mixes high- and low-risk middle-schoolers together in structured support groups. Healthy adolescents are expected to influence peers who are at risk through the bonds formed in these groups. Additional goals of the program include improving the self-esteem of the participants and teaching basic life and interpersonal skills; including problem solving, self-expression, and stress management.

Similarly, stress management is one of the principal aims of the Preschool Stress Relief Project in Atlanta, Georgia.²³ his program seeks to reduce the risk of later substance use by teaching Head Start students, parents, and teachers to recognize the effects of stress and to manage stress through appropriate relaxation techniques. This approach is based on studies that have shown that elementary school children who lack the normal sense of attachment to schools and family, or who have shown signs of antisocial behavior or unusual levels of stress, are more likely to use substances during their adolescence. Like EDAP, this program does not select out and serve only high-risk students (although Head Start participants and their families do share the environmental risk of poverty, individual participants are not identified in terms of their risk level.) Table 2 describes these two school-based programs in greater detail, including their organization, staffing, and funding sources. The table also summarizes the range of services provided and details how the programs are linked to other organizations (especially drug treatment agencies) in their communities.

Although there are many advantages to focussing prevention efforts in the schools, this setting has some limitations. While school-based programs can provide a captive audience for drug prevention, they may not reach students most at risk because these students are absent or truant more often than others. In addition, students rarely encounter pressure to use drugs while in the classroom. Young people must practice resistance skills in a setting which more closely resembles the sort of situations in which they might actually encounter peer pressure to use drugs. The best school-based programs offer students that opportunity by conducting practice sessions outside the classroom.

Table 2

Model School-Based Prevention Programs

<p>SITE</p>	<p>Early Drug Abuse Prevention (EDAP), Montpelier, Vermont</p>	<p>Preschool Stress Relief Project (PSRP), Atlanta, Georgia</p>
<p>CENTRAL FEATURES/CHARACTERISTICS</p>	<p>Community-based program that provides youth with support groups and life and social skills building that will empower them to make healthy choices about alcohol and drug use.</p>	<p>A primary prevention training and consultation program for high-risk students, teachers, and parents on stress management. PSRP aims to promote healthy life-style choices through education, recognition and reduction of stress, and self-esteem and coping skills building.</p>
<p>STRATEGIES EMPLOYED</p>	<p>Life and social skills training, self-esteem building, and communication skills</p>	<p>Self-esteem building, coping skills training, training on the effects of stress</p>
<p>TARGET GROUP</p>	<p>Program targets both low- and high-risk youth and families.</p>	<p>Metropolitan Atlanta's Head Start students and their teachers.</p>
<p>ORGANIZATION</p>	<p>EDAP is part of the Washington County Youth Service Bureau.</p>	<p>PSRP shares a board of directors with its now sponsor, the Holistic Stress Control Institute (it was formerly sponsored by the National Council of Negro Women, Inc.).</p>
<p>STAFF/FUNDING</p>	<p>Funding: State & Federal monies through the Department of Education.</p>	<p>Staff: four, including a parent trainer. Funding: program funded solely by OSAP.</p>
<p>RANGE OF SERVICES</p>	<p>Educational in-school support groups for youth are led by school staff, trained high school students, or trained facilitators from the outside. Support groups last for 12 weeks and include skill building, support, and informing youth of available community resources.</p>	<p>Trainings, workshops, and the dissemination of culturally sensitive education materials to teachers, high-risk youth, and parents on stress management and the relationship between stress and substance abuse.</p>

Table 2

Model School-Based Prevention Programs

SITE	Early Drug Abuse Prevention (EDAP), Montpelier, Vermont ¹	Preschool Stress Relief Project (PSRP), Atlanta, Georgia ¹
LINKAGE TO TREATMENT, OTHER ORGANIZATIONS	Referrals and resource system in place	PSRP has a referral and resource guide for parents or teachers; PSRP maintains linkages with programs in and outside the city.
EVALUATION ACTIVITIES	Pre- and post-program comparisons showed that participants significantly improved their self-esteem and classroom conduct.	PSRP was evaluated during 1987 through 1989; a process and outcome evaluation was begun last year.

¹ Source: OSAP, "Communities Creating Change: Exemplary Alcohol and Other Drug Prevention Programs," 1990.

Peer-based programs. As children reach adolescence, they look more and more to their peers as they decide what is permissible and desirable, including decisions about drug and alcohol use. Peer-based programs use the power of the peer group to help adolescents comprehend the consequences of alcohol and drug abuse. Peer support groups foster frank discussions of the pressures facing adolescents and suggest healthy ways to deal with them. These groups promote peer support of abstinence, creating an alternate peer culture that rejects substance use. Many programs foster this positive peer culture by enabling adolescents to devise the agenda for discussion or support groups, design alternate activities, and train other children in how to resist pressures to use alcohol and drugs. By encouraging youth to become leaders among their peers, these programs also enhance their participants' self-esteem.

For example, Hispanic teenagers in the Peer Counseling Project³⁴ in Washington, D.C. and participants in the Leadership Project of Westminster, Vermont organize their own discussion groups around issues of concern to them, such as drug use, AIDS, suicide, and family problems. Teens in the Leadership Project also organize meetings that foster dialogue between teens and adults covering a wide range of issues of concern to adolescents. At other programs, such as Vermont's Alternatives for Teens,³⁵ teen leadership revolves more around planning activities that serve as positive alternatives to substance use, such as fitness-oriented field trips and substance-free prom nights.³⁶

Such prosocial programs may be structured to get group members to work together on even more intensive projects, thus building a strong sense of belonging to a healthy community. The American Variety Theater Company of Minneapolis³⁷ involves youth in all aspects of the production of plays, representing a range of issues — including the consequences of substance abuse, gang violence, and environmental destruction — that concern today's urban youth. Through a unique mix of therapeutic groups and physically challenging outdoor activities and wilderness backpacking trips, the Adventure Alternatives program in Austin, Texas,³⁸ seeks to encourage a positive peer culture. (Table 3 describes these and other model peer-based programs.)

Family-based programs. In contrast to the peer-based programs discussed above, other prevention programs target younger children and focus on the entire family rather than solely on the child. This acts to reinforce the key role parents play in preventing their children from using drugs and alcohol and simultaneously shows drug-using parents how their behavior might influence their children's welfare. By addressing the many risk factors for substance abuse that have to do with the child's family,³⁹ such as family strife and disorder, family-based programs can both prevent substance abuse by children and intervene when the parent has a substance abuse problem.

Table 3

Model Peer-Based Prevention Programs

SITE	<p>Alternatives for Teens (AFT), MADISON, Vermont</p>	<p>Substance Abuse Prevention Project, CARIBOU, Maine</p>	<p>Madison Square Boys and Girls Club, New York, New York</p>
CENTRAL FEATURES/ CHARACTERISTICS	<p>Provides peer-driven groups to discuss issues and build skills in a safe environment with an outside facilitator not connected with the school or criminal justice system, also provides youth with positive alternatives to alcohol and drug use</p>	<p>Program based on the belief that vast representation of a community that includes businesses, schools, grass roots organizations, and human service providers is needed to combat substance abuse</p>	<p>Through five clubhouses located in the Bronx, Brooklyn, and Manhattan, this program centers on youth empowerment and group leadership development.</p>
STRATEGIES EMPLOYED	<p>Listening and empathy skills, communication building, social and life skills training</p>	<p>Refusal skills training, self-esteem building, communication skills, peer-to- peer education, and alternative events</p>	<p>Social, life, and communication skills training; self-esteem enhancement</p>
TARGET GROUP	<p>Area youth between ages of 12-18 in Addison County</p>	<p>Youth aged 5-19 and their families in two communities in Caribou, Maine</p>	<p>New York City youths aged 13-17</p>
ORGANIZATION	<p>Sponsored by the Addison County Parent/Child Center, shares board of directors with Center</p>	<p>Prevention Project has advisory committee and is sponsored by the Aroostook Mental Health Center; other community organizations co-sponsor events and programming.</p>	<p>Part of the national Boys and Girls Clubs network, the Madison Square Club encourages participants to enjoy other club activities, including academic services, job development, physical activities, and counseling</p>
STAFF/FUNDING	<p>Staff: one counselor/facilitator as primary staff person, supervision provided by Parent/Child Center Funding: no State or Federal money presently; area schools, businesses, organizations</p>	<p>Program has been scaled down considerably since 1990 due to funding cuts.</p>	<p>Staff: Each clubhouse maintains its own staff (program overseen by project director) Funding: primarily from United Way, local and State government, and private sources. Annual budget for all five sites is approximately \$175,000.</p>

Table 3

Model Peer-Based Prevention Programs

SITE	AFT, Middlebury, Vermont	Substance Abuse Prevention Project, Caribou, Maine	Madison Square Boys and Girls Club, New York, New York
RANGE OF SERVICES	Weekly discussion groups with students from 7th to 12th grade (agenda items are primarily peer-driven); alcohol and drug-free alternatives to graduation parties, sports victories, etc.; physical outdoor adventure programs.	Armsrock Teen Leadership Camp, a peer-led camp instructing ways to end substance abuse; the Buddy System Program, which matches teenagers with elementary students for purposes of role modeling, providing positive relationships among age groups, and building communication skills among teens and children; peer education programs; trainings for youth service providers, families, and parents	Substance abuse programming includes an initial 10-session workshop that emphasizes decision making, values clarification, and the consequences of alcohol and drug use. After completion of the sessions, youth then pick a community, assess its drug problem, and develop a drug-free campaign (such as posters, presentations, rallies, etc.) for that community.
LINKAGE TO TREATMENT, OTHER ORGANIZATIONS	Linkage with local community mental health center, referrals for treatment, although there is a shortage of treatment resources including beds and counseling, lengthy waiting lists	Program sponsored by a community mental health agency with links to treatment providers, operates under a community partnership model.	No information available.
EVALUATION ACTIVITIES	No evaluation to date, outcome evaluation of 12 case studies performed in-house in 1987. While AFT is committed to conducting a formal evaluation, no plans are underway given budget restrictions.	Information not available.	No information available.

1 Source: OSAP, "Communities Creating Change: Exemplary Alcohol and Other Drug Prevention Programs," 1990.

2 Source: GAO, *Adolescent Drug Use Prevention: Common Features of Promising Community Programs*, 1992.

Table 3

Model Peer-Based Prevention Programs

SITE	Peer Counseling Project (PCP), Washington, D.C.	The Leadership Project (LP), Westminster, Vermont ¹³	Twelve Together Detroit, Michigan ¹
CENTRAL FEATURES/ CHARACTERISTICS	PCP trains students to become peer leaders who will conduct outreach to other youth on alcohol prevention. PCP believes that it is successful because it is peer-led and youth oriented.	This program stresses adult-youth partnerships through programming that targets both area youth and adults and seeks to change community norms that tolerate alcohol and drug abuse.	As part of the Metropolitan Detroit Youth Foundation, Twelve Together is a peer counseling program whose main goal is to prevent high school students from dropping out of school. However, drug prevention is addressed as one in a combination of factors that cause students to drop out of school.
STRATEGIES EMPLOYED	Peer counseling and crisis intervention	Communication skills, life and social skills training, peer resistance skills training, self-esteem enhancement	Peer counseling groups
TARGET GROUP	Area youth, predominantly Hispanic	Area youth and adults	Target population is area youth in the 9th grade.
ORGANIZATION	The Peer Counseling Project is sponsored by the Latin American Youth Center (LAYC). Youth recruited through PCP often take advantage of other services offered by the sponsoring agency.	LP under auspices of Project Adventure, shares board of directors, has distinct advisory board.	Twelve Together is sponsored by the Metropolitan Detroit Youth Foundation.
STAFF/FUNDING	Staff: One official staff person, approximately six peer counselors	Staff: Coordinator of Prevention Services; LP Teams, consisting of adults and youth; volunteers Funding: OSSAP (Community Partnership grant), State area schools, private sources	Staff: Four outreach counselors, and three administrators, plus volunteer group facilitators Funding: MHS and local businesses

Table 3

Model Peer-Based Prevention Programs

SITE	Peer Counseling Project (PCP), Washington, D.C. ¹	The Leadership Project (LP), Westminster, Vermont ²	Twelve Together Detroit, Michigan ³
RANGE OF SERVICES	Peer leaders are trained in prevention, treatment resources, and other social issues including AIDS, suicidality, family problems, etc. These youth (called "amigos") then train other youth on drug prevention. Latin American Youth Center also provides a host of other services to youth such as counseling, tutoring, job training, and alternative activities.	Weekly discussion groups among students within schools; meetings with youth and police, teachers, parents, and other adults; peer-to-peer training; community-wide awareness activities/events	Peer counseling groups meet weekly for one year and discuss a range of topics including school, families, drug use, suicidality, sexuality, sexual abuse, and communication skills; Twelve Together groups also attend weekend retreats; ancillary services include job development, academic programming, and parent-peer support groups.
LINKAGE TO TREATMENT, OTHER ORGANIZATIONS	Amigos are trained in community treatment options so that they can provide referrals.	Referral system with linkages to treatment facilities and professional counseling services	Schools assist with recruitment; businesses provide financial and in-kind support.
EVALUATION ACTIVITIES	No formal evaluations performed to date. LAYC is interested in having formal studies conducted if funds can be procured for that purpose.	Process and outcome evaluation to date, LP committed to conducting further evaluations at all levels.	An outside evaluator conducted a study looking at graduation rates, increases in academic performance, and improvements in interpersonal skills. The evaluation showed the program had a positive effect on participants.

¹ Source: CSR, "Identification of 'Best Practices' of OMSD's Youth-Related Demonstration Projects," 1991.

² Source: OSAP, "Communities Creating Change: Exemplary Alcohol and Other Drug Prevention Programs," 1990.

³ Additional information gathered through a site visit by ABI Associates staff.

Table 3

Model Peer-Based Prevention Programs

SITE	<p>SMART Moves, Pittsburgh, Pennsylvania¹³</p>	<p>American Variety Theatre Company (AVTC), Minneapolis, Minnesota¹⁴</p>	<p>Adventure Alternatives Program, Austin, Texas¹⁵</p>
CENTRAL FEATURES/ CHARACTERISTICS	<p>As part of the Boys and Girls Clubs of America, SMART Moves' prevention program targets a number of problems facing youth, including drug use and teen pregnancy, through a standardized curriculum being implemented throughout the country.</p>	<p>The performing arts are the foundation of AVTC. Dramatizations of current social issues, including the dangers of drugs and alcohol, are performed by youth for family and friends. The performances provide youth and their audiences with a forum to discuss difficult issues.</p>	<p>Adventure Alternatives strives to promote positive interactions between youth and adults and to increase youth's ability to express themselves through experiential learning, physical adventure activities, and a variety of services for youth and adults.</p>
STRATEGIES EMPLOYED	<p>Communication skill building, social and life skills development, resistance skills training, information dissemination, alternative activities, programs for parents and other caretakers</p>	<p>Alternative activities, social and life skills training, self-esteem building, communication skills, decision-making skills, peer leadership</p>	<p>Social and life skills, communication skills building, alternative activities, family training</p>
TARGET GROUP	<p>Area high-risk youth, aged 9-13</p>	<p>Area youth, aged 4-21, mostly from the distressed urban neighborhood where AVTC is located</p>	<p>Services provided to area youth (aged 9-17) and adults, both primarily male and white (55 percent white, 29 percent Hispanic, 16 percent African-American)</p>
ORGANIZATION	<p>SMART Moves is sponsored by the Boys and Girls Clubs of America, a nationwide organization; supervision and development is provided by the Boys and Girls Club.</p>	<p>Part of the Minnesota Extension Service of Hennepin County</p>	<p>The sponsor, Austin Wilderness Counseling Services, has a 12-member board of directors.</p>
STAFF/FUNDING	<p>Staff: 14 staff, 70 volunteers Funding: United Way, with additional monies from other private sources</p>	<p>Staff: Six staff Funding: Local government, businesses, performance earnings</p>	<p>Staff: Adventure Alternatives has a staff of 22. Funding: Federal, State and county government, as well as private sources and client fees; budget for 1990-1991 was \$472,000.</p>

Table 3

Model Peer-Based Prevention Programs

<p>SITE</p>	<p>SMART Moves, Pittsburgh, Pennsylvania^{1,2}</p>	<p>American Variety Theatre Company (AVTC), Minneapolis, Minnesota³</p>	<p>Adventure Alternatives Program, Austin, Texas⁴</p>
<p>RANGE OF SERVICES</p>	<p>SMART Moves has a standard curriculum with components for various age groups focusing on drug use and other social issues. Components include a resistance skills program for youth aged 9-12, a social and life skills program incorporating resistance skills and stress reduction techniques for youth aged 13-15, and training curricula for parents, peer leaders, and volunteers.</p>	<p>Peer education: Youth Teaching Youth, a peer-to-peer drug and alcohol awareness/prevention program that older youth teaches to 4th-6th grade students; stage productions on drug and alcohol use and other social issues of concern to the community; role modeling on nondrug-using behaviors. Preparations for the performances teach a variety of life skills and offer participants an overall sense of competency.</p>	<p>School-based programming for children of drug-using parents, educational support groups for parents and youth that strive to improve family communication, counseling for youths, adventure activities that include trips to wilderness areas and outdoor challenges.</p>
<p>LINKAGE TO TREATMENT, OTHER ORGANIZATIONS</p>	<p>Referral system with linkages to treatment providers</p>	<p>Established referral network in place for those suspected of alcohol or drug abuse, collaborate with other youth service organizations</p>	<p>Linkage has been established with treatment resources in community; also, teachers make referrals to AA program if they identify an appropriate student.</p>
<p>EVALUATION ACTIVITIES</p>	<p>Program monitoring is the only current evaluative activity. A formal outcome evaluation has shown that SMART Moves programs were effective in reducing drug dealing and the presence of crack in public housing community.</p>	<p>No formal evaluation planned.</p>	<p>The University of Texas provides evaluation services.</p>

¹ Source: OSAP, "Communities Creating Change: Exemplary Alcohol and Other Drug Prevention Programs," 1990.

² Source: GAO, *Adolescent Drug Use Prevention: Common Features of Prevention Programs*, 1992.

³ Additional information gathered through a site visit by Abt Associates staff.

Table 4

Model Family-Based Prevention Program

SITE	Families and Schools Together (FAST), Madison, Wisconsin
CENTRAL FEATURES/ CHARACTERISTICS	Through a combination of family and parenting training, parent support groups, and community collaboration, FAST empowers families to face the many stressors in their lives. FAST seeks to foster healthy children and families by addressing the multiple factors that contribute to alcohol and drug use.
STRATEGIES EMPLOYED	Family training, social and life skills training, self-esteem building, family communication skills
TARGET GROUP	At-risk area school children aged 5 to 9 and their families
ORGANIZATION	Statewide replication is overseen by Family Services, Inc., a nonprofit mental health agency, through training, technical assistance, and certification of all sites
STAFF/FUNDING	<p>Staff: Over 70 sites in six States have four staff members each, one from each collaborative partner</p> <p>Funding: State and Federal including the Drug-Free Schools Act and Head Start, as well as private sources such as the United Way.</p>

Table 4

Model Family-Based Prevention Program

SITE	Families and Schools Together (FAST), Madison, Wisconsin ¹
RANGE OF SERVICES	Multifamily meetings with the same agenda each week. Free meals, transportation and child care are provided for the entire family. Parents are given "Buddy Time," without the presence of children, designed to decrease isolation by building support among parents. The at-risk child is then given Special Play (based on play therapy techniques), a time when the parent devotes full attention to the child.
LINKAGE TO TREATMENT, OTHER ORGANIZATIONS	Collaboration between schools, parents, mental health, and treatment providers is integral to the program design.
EVALUATION ACTIVITIES	Strong evaluation study shows significant behavioral improvements at home and in the classroom by high-risk children, as well as improvement in family relationships.

¹ Source: OSAP, "Communities Creating Change: Exemplary Alcohol and Other Drug Prevention Programs," 1990; with additional information gathered through a site visit by Abt Associates staff.

Table 5

Model Community-Based Prevention Programs

SITE	Students Taught Awareness and Resistance, Kansas City, Kansas and Missouri ¹	Community Organizing for Prevention, Lincoln, Nebraska ²	Jackie Robinson Center for Physical Culture, Brooklyn, New York ³
CENTRAL FEATURES/ CHARACTERISTICS	STAR seeks to reduce drug and alcohol use through a standardized school-based curricula including homework for families to explore attitudes and behaviors relating to drug use.	Program seeks to develop and support statewide networks of community partnerships, substance-free youth groups, parent educators, and peer leaders throughout the state of Nebraska.	Community-oriented program offering an array of services designed to promote solid decision making and healthy choices around alcohol and drug use, staying in school, and attaining fulfilling careers
STRATEGIES EMPLOYED	Resistance skills, communication skills, and social skills training, role playing, media coverage of the drug problem and the prevention program	Community task forces, alternative activities, training members of other communities through a statewide information and support network	Alternative activities, academic tutoring, discussion groups, community events
TARGET GROUP	Middle and high school youth, their parents, and their community	Communities in rural Nebraska; teachers, parents, students	Programming for area youth, predominantly African-Americans aged 8-18
ORGANIZATION	Project STAR is run by a nonprofit foundation.	Part of the Alcoholism and Drug Abuse Council of Nebraska (ADACN), shares board of directors with ADACN	The Jackie Robinson Center is a large organization that sponsors its own programming; there is a board of directors that includes a congressional representative and members of the business and professional communities.
STAFF/FUNDING	Staff: 10 staff as well as administrative support from the foundation Funding: Federal, foundation, and private donations	Staff: eight full-time Funding: State, Federal (OSAP, Youth Activities Block Grant, Department of Education), private donations, and fees from retreats	Staff: The Center employs approximately 350 full- and part-time staff. Funding: State funding is supplemented by the Ford Foundation. Annual budget for 1990 was \$2.15 million, with 3,658 youths served.

Table 5

Model Community-Based Prevention Programs

SITE	<p>Students Taught Awareness and Resistance, Kansas City, Kansas and Missouri¹</p>	<p>Community Organizing for Prevention, Lincoln, Nebraska²</p>	<p>Jacide Robinson Center for Physical Culture, Brooklyn, New York³</p>
RANGE OF SERVICES	<p>Resistance skills training delivered in all middle and high schools, standardized curricula and training for teachers delivering the prevention program</p>	<p>Teams of youth, parents, and teachers trained through retreats that include educational and team building sessions, information on community resources, and family group sessions; also serves as statewide clearinghouse of resources for other communities throughout Nebraska</p>	<p>Programming ranges for recreational and sporting events to academic support. Educational activities consist of tutoring and classes in basic skills; counseling activities consist of individual counseling, discussion groups, and in-service trainings on a variety of health and social issues.</p>
LINKAGE TO TREATMENT, OTHER ORGANIZATIONS	<p>All school districts have participated with select teachers receiving training in the STAR curriculum; local business support for the program</p>	<p>Maintains statewide clearinghouse which contains information relating to treatment facilities and other available resources; operates under a community partnership model</p>	<p>Referral networks with treatment facilities exist, and crisis intervention is provided on site.</p>
EVALUATION ACTIVITIES	<p>Randomized cross-sectional and longitudinal surveys of students and parents on drug use risk behaviors, drug availability, and community norms for drug use, and interviews with families and community members; initial research showed a decline in program participants beginning alcohol use as compared to nonparticipants.</p>	<p>COP has had process, impact, and outcome evaluations performed on the programs.</p>	<p>No information available.</p>

¹ Source: Literature review

² Source: OSAP, "Communities Creating Change: Exemplary Alcohol and Other Drug Prevention Programs," 1990.

³ Source: GAO, *Adolescent Drug Use Prevention: Common Features of Prevention Programs*, 1992.

Table 5

Model Community-Based Prevention Programs

SITE	Northside Opportunities Project, Youth Emergency Services, St. Louis, Missouri ¹	Fulfilling Our Responsibility Unta Mankind (FORUM), Chicago, Illinois ^{2,4}	Addison Terrace Learning Center (ATLC), Pittsburgh, Pennsylvania ^{3,4}
CENTRAL FEATURES/ CHARACTERISTICS	The Northside Opportunities Project (NOP) developed the "I Believe in Me" workshop, targeting African-American youth, as well as other services designed to increase minority participation and relevance to minorities.	FORUM seeks to foster human, community, and economic development in its inner-city target area of South Side Chicago. Community-based prevention and education programs through community training, public awareness events, and prevention programs in the schools and community.	Program uses multicultural model that emphasizes self-enhancement/empowerment through efforts aimed at increasing cultural identity and pride. ATLC believes this will lead to a greater sense of community and more positive and healthy individual choices concerning alcohol and drug use.
STRATEGIES EMPLOYED	Affective social skills training	Life and social skills training; refusal skills training; family training; organizing neighborhood block clubs, community parades, and events	Alternative activities, self-esteem building, affective education techniques, information dissemination, case management
TARGET GROUP	At-risk youth and their families	Low- and moderate-income African-American youth and inner-city families in South Side Chicago area	Area youth, primarily African-American aged 5-21 and their families
ORGANIZATION	Youth Emergency Services is the parent organization for NOP.	12-member board of directors made up of staff and community members	ATLC is run independently and is not governed by any other agency; volunteers are used in several different capacities.
STAFF/FUNDING	Staff: one Project Director, staff from YES available to help run events and workshops Funding: HHS	Staff: eight full-time staff, two administrative assistants, many volunteers Funding: through State and private donations, annual budget \$330,000	Staff: 12 staff members Funding: largely funded by the United Way, with additional monies from Federal, local, and county agencies and private contributions and donations

Table 5

Model Community-Based Prevention Programs

SITE	Northside Opportunities Project, Youth Emergency Services, St. Louis, Missouri ¹	Fulfilling Our Responsibility unto Mankind (FORUM), Chicago, Illinois ^{2,4}	Addison Terrace Learning Center (ATLC), Pittsburgh, Pennsylvania ^{1,4}
RANGE OF SERVICES	A broad range of services are provided, including individual and family counseling, job development and training, a youth shelter, self-esteem building activities, workshops and trainings. One workshop ("I Believe in Me") is used extensively in the community as a means of outreach and self-esteem building for African-American youth.	Don't Hang with Gangs prevention and intervention program provides education on human interpersonal and community relations to combat a variety of social problems including drugs, gangs, and violence. Effective Black Parenting classes offered. Student Assistance Programs promote economic development while providing positive alternatives to substance use.	Wide range of programming, activities, and events; support groups for co-dependent or single-parent women; parenting classes for high school students; youth groups which focus on self-esteem, cultural awareness, and community involvement; counseling, case management, and crisis intervention to individuals and families.
LINKAGE TO TREATMENT, OTHER ORGANIZATIONS	Youth that need other services are referred out; YES maintains links with treatment providers and other resources.	Linkages with several community treatment providers, cooperative relationships with local organizations	Referral system has linkages to treatment. Aftercare and case management ensure consistent care and no overlap services.
EVALUATION ACTIVITIES	YES collects data on youth served; evaluations to date have revolved around the "I Believe in Me" workshops and numbers of youth receiving services.	Beyond routine monitoring, no formal evaluation due to budget restrictions; recently developed programs include evaluation component.	Information not available.

¹ Source: CSR, "Identification of 'Best Practices' of OHSD's Youth-Related Demonstration Programs," 1990.

² Source: GAO, *Adolescent Drug Use Prevention: Common Features of Prevention Programs*, 1992.

³ Source: Literature Review.

⁴ Additional information gathered through a site visit by Abt Associates staff.

Table 5

Model Community-Based Prevention Programs

SITE	Golden Eagles, Minneapolis, Minnesota ¹	Asian Youth Substance Abuse Project California ²
CENTRAL FEATURES/ CHARACTERISTICS	Promotes healthy lifestyles among Native American youth, promotes cultural identity and values in an attempt to address high rates of alcoholism and other social issues in Native American communities	Culturally sensitive services and programming to area Asian youth run by a consortium of five community-based agencies and two service organizations, community-based programming that targets both youth and families
STRATEGIES EMPLOYED	Alternative activities such as after-school and summer day camp programs, family and parent training, information dissemination through seminars on drug abuse, community events, social and life skills training, self-esteem enhancement, academic support	Alternative programs, parenting and family skills training, peer resistance skills training, life and social skills training
TARGET GROUP	Area Native American youth aged 3-20	Area Asian youth, including Japanese, Filipino, Chinese, Korean, and Vietnamese groups
ORGANIZATION	Golden Eagles is part of the Indian Health Board which provides an array of services to the Native American community.	AYSAP is a consortium of organizations serving the Asian community of San Francisco; AYSAP has a board of directors, and member agencies have separate advisory boards.
STAFF/FUNDING	Staff: 21 staff members Funding: both public and private monies	Staff: AYSAP has a staff of 30, most of whom work at consortium centers. Funding: OSAP, also State, county, and private monies

Table 5

Model Community-Based Prevention Programs

<p>SITE</p>	<p>Golden Eagles, Minneapolis, Minnesota¹</p>	<p>Asian Youth Substance Abuse Project California¹</p>
<p>RANGE OF SERVICES</p>	<p>Peer leadership (through tutoring younger participants and acting as program representatives in community events), service activities designed to foster pride in heritage and community, support groups, referrals to sponsor agency for on-site health services, academic programs including school readiness for preschoolers and tutoring for students in all grades, culturally specific programming</p>	<p>School programs designed to reduce academic failure; alternative activities to gang and drug involvement, including expressive arts programs, summer day camps, after school clubs and youth centers; peer-to-peer refusal skills training; social and life skills training, including confronting pressures to assimilate and become Americanized.</p>
<p>LINKAGE TO TREATMENT, OTHER ORGANIZATIONS</p>	<p>Treatment is provided on site through sponsoring organization--referrals are easily exchanged, collaboration with area schools and agencies.</p>	<p>AYSAP has link with substance abuse recovery program; treatment center in area provides detox, treatment, aftercare services; two staff of AYSAP are based at treatment center.</p>
<p>EVALUATION ACTIVITIES</p>	<p>Currently, program outcomes are based on standardized psycho-educational assessments administered before and after the program. More in-depth evaluations are planned for exemplary program activities.</p>	<p>Evaluation are underway of the individual bilingual counseling programs that focus on stress management and coping skills and of an eight-week youth group.</p>

¹ Source: GAO, *Adolescent Drug Use Prevention: Common Features of Prevention Programs, 1992* with additional information gathered through site visits by Abi Associates staff.

One such model program is Families and Schools Together (FAST),⁴⁰ a program that seeks to prevent substance abuse by improving family functioning. During weekly meetings that include all the members of several families, the FAST program offers something to both parents and children. First, parents are given a chance to support each other during "Buddy Time," with the children cared for in another room. Then the at-risk child is given "Special Play" (based on supportive play therapy techniques), a time when the parent devotes total attention to the child. A representative from the local alcohol and drug abuse agency also provides informal consultations with family members at all the weekly meetings. (For further details about FAST, see Table 4.)

Community-based programs. Community-based programs broaden the focus beyond peer and family relations to attack the attitudes and conditions within an entire community that may promote or foster substance abuse. Programs that focus their efforts on changing common attitudes that accept substance abuse typically spotlight their interventions on a large, geographically defined community. These interventions have primarily been implemented in culturally homogeneous communities. On the other hand, programs that see substance abuse as but one of a host of challenges facing their community usually center their efforts on their own cultural group or inner-city area. Table 5 describes seven unique community-based programs of all three types.

Community-based programs that primarily address common attitudes that are tolerant of substance abuse:

- o provide information on the dangers of drug use,
- o teach communication and resistance skills, and
- o deliver positive messages and images about drug-free life-styles.

This approach, developed by Mary Ann Pentz and her colleagues, has been successful in several Midwestern communities, such as Project STAR (Students Taught Awareness and Resistance) which covers 15 communities in the Kansas City metropolitan area. The Project seeks to involve all key community systems that influence the attitudes and values of youth: family, media, workplace, and schools. All Kansas City school districts participate, and ongoing teacher training promotes consistent messages about drug use.

Formal evaluation of Project STAR has shown its success.⁴¹ However, one limitation to using Project STAR as a model for other communities is that it has been developed and applied primarily in Midwestern communities. The program is currently being established in at least 17

schools in Washington, D.C. Given the very different cultural and geographic makeup of that community, monitoring success in the D.C. area may answer remaining questions regarding the approach's applicability to communities outside the Midwest.

The community-based programs that seek to enhance the cultural identity of their participants typically serve a smaller geographic area, such as a neighborhood rather than an entire city like that of Project STAR. For example, programs serving inner-city communities, where the drug culture seems to have nearly overrun the neighborhood, provide culturally sensitive interventions that:

- o offer young people a safe haven from the streets,
- o provide positive alternatives to drug- or gang-related activities, and
- o support the pursuit of jobs outside of the drug market.

One such model program is FORUM (Fulfilling Our Responsibility Unto Mankind),⁴³ serving a predominantly African-American community on the South Side of Chicago. FORUM strives to empower young people, families, and the inner-city community it serves through a broad range of programs that are especially tailored to the African-American community. FORUM sponsors family and parent training programs that aim to strengthen participants' parenting skills and increase the awareness of parents with small children of the consequences of alcohol and other drug use. A showpiece of the FORUM approach is the Don't Hang with Gangs program, in which staff teach fringe gang members (or first-time juvenile offenders) basic life and interpersonal skills and counsel them about dealing with the many serious social problems they face. FORUM seeks to build the characters of these youth so that, in the face of widespread gang violence and drug use in their neighborhoods, they will choose healthy alternatives for themselves and those around them. Beyond these programs that spotlight young people and their families, FORUM also aims to foster community and economic development by sponsoring neighborhood precinct councils and business initiatives.

Another type of community-based program serves specific minority communities that may or may not be located in a single geographic area. These programs address pressures such as assimilation, immigration, and discrimination confronting the members of their ethnic communities. By acting to relieve these pressures and to foster positive bonds among its members, these programs seek to reduce the appeal of substance use.

The Golden Eagles/Ginew⁴⁴ program serves Native American youth of greater Minneapolis. Ginew is housed in an Indian Board of Health center so that alcohol and drug abuse prevention fits within the program's general goal of health promotion. Peer support groups that specifically

target adolescents at risk for drug and alcohol use meet after school and in summer camps. Ginew sponsors alternate activities designed to foster pride in the youths' heritage and community, such as traditional drumming and dancing classes. In addition, Ginew organizes volunteer tutoring services for school-aged children and parent training for preschoolers entering kindergarten.

The Asian Youth Substance Abuse Project (AYSAP)²⁴ is an umbrella organization for several agencies that aid five distinct Asian ethnic groups of San Francisco. AYSAP tailors each prevention program to the particular Asian community targeted. For example, the Japanese Community Youth Center teaches adolescents to train elementary school-aged children in basic life and interpersonal skills. In the Filipino and Korean communities, where the church has a more visible influence, the project works with clergy to bolster family support and to provide substance-free social events. In contrast, AYSAP programs serving the Vietnamese and Cambodian communities sponsor drug- and alcohol-free activities that are based on the lunar new year, a popular holiday in Southeast Asia. The project confronts the unique stresses faced by immigrant families. The program also coaches immigrant parents in discipline, helping them to regain a sense of authority through improved communication. Finally, the Chinatown Youth Center provides alternate activities, including expressive arts programs, to those at risk for or on the fringes of gang and drug involvement.

CONCLUSIONS

The experiences of prevention providers and findings from program evaluators clearly show that recent innovations in substance abuse prevention hold great promise. During site visits, many program directors expressed a keen interest in evaluating their programs. Unfortunately, fiscal constraints were the most common reason noted for not having done so. This may help to explain the lack of overwhelming scientific evidence as to "what works" in the field of substance abuse prevention. In the absence of such evidence, prevention programs have evolved based on our understanding of what causes substance abuse and the common wisdom of those working in the field. Providers believe that programs emphasizing the individual in the context of their social groups (focusing on schools, families, peer groups, or entire communities) are more successful than those that treat individuals without regard to their social environment. Interventions that employ active rather than passive learning, using parents or peers as leaders, are considered most successful because they more fully involve participants. Finally, programs are best when they respond to the unique needs and cultural makeup of their own particular communities and when they actively engage community leaders in their efforts.

Despite these advances, the field of prevention research is still, as Gilbert Borvin stated in 1990, in its "infancy". As the field continues to mature, prevention programs offering such promising approaches as parent or peer leadership training and multicultural community-based programming

have emerged over the past decade. While experts agree these approaches are promising, there is a pressing need for further rigorous study of program effectiveness, particularly as influenced by the gender, race, and class composition of the target population. In the absence of formal program evaluations, prevention providers continue their work based on a common understanding of the causes of alcoholism and other drug use. In order to state conclusively "what works" in the field of substance abuse prevention, additional support for program evaluation would be necessary: only with such study can public policy become fully informed in this arena.

ENDNOTES

1. See Gilbert Botvin, "Substance Abuse Prevention: Theory, Practice, and Effectiveness," in *Drugs and Crime*, Michael Tonry and James Q. Wilson (eds.), (Chicago: University of Chicago Press, 1990); David Hawkins, Robert Abbot, Richard Catalano, and R. Gilmore, "Assessing Effectiveness of Drug Abuse Prevention: Implementation Issues Relevant to Long-Term Effects and Replication," *Drug Abuse Prevention Intervention Research: Methodological Issues*, (Washington, D.C.: Government Printing Office, 1991), National Institute on Drug Abuse Research Monograph 107, DHHS Publication Number (ADM)91-1761; Nancy Tobler, "Meta-Analysis of 143 Adolescent Drug Prevention Programs: Quantitative Outcome Results of Program Participants Compared to a Control or Comparison Group," *The Journal of Drug Issues* 16 (1986): 537-567; and E. Schaps; R.D. Bartolo, J. Moskowitz, C.S. Palley and S. Churgin, "A Review of 127 Drug Abuse Prevention Program Evaluations," *Journal of Drug Issues* 1981: 17-43 for reviews of evaluations from that era.
2. See Hawkins, et al., "Assessing Effectiveness of Drug Abuse Prevention: Implementation Issues Relevant to Long-Term Effects and Replication," *Drug Abuse Prevention Intervention Research: Methodological Issues*, (Washington, D.C.: Government Printing Office, 1991), National Institute on Drug Abuse Research Monograph 107, DHHS Publication Number (ADM)91-1761.
3. Carl G. Leukefeld and William J. Bukoski, "Drug Abuse Prevention Evaluation Methodology: A Bright Future," *Journal of Drug Education*, 21 (1991): 191-201.
4. Hawkins, et al., "Assessing Effectiveness of Drug Abuse Prevention: Implementation Issues Relevant to Long-Term Effects and Replication," *Drug Abuse Prevention Intervention Research: Methodological Issues*, (Washington, D.C.: Government Printing Office, 1991), National Institute on Drug Abuse Research Monograph 107, DHHS Publication Number (ADM)91-1761.
5. David Hawkins, Richard Catalano, and Janet Miller, "Risk and Protective Factors for Alcohol and Other Drug Problems in Adolescence and Early Adulthood: Implications for Substance Abuse Prevention," *Psychological Bulletin* 112, no. 1 (1992): 64-105.
6. David Hawkins, Richard Catalano, and Janet Miller, "Risk and Protective Factors for Alcohol and Other Drug Problems in Adolescence and Early Adulthood: Implications for Substance Abuse Prevention," *Psychological Bulletin* 112, no. 1 (1992): 64-105.
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22. For example, etiological research indicates that the drugs of choice and the progression pattern which drug users will follow can differ significantly from culture to culture. Further, drug use patterns may differ between subgroups of the same broadly defined ethnic group. For example, the Asian Youth Substance Abuse Project tailors its interventions, due to cultural differences and variations in the substance abused, to each of five separate Asian communities in San Francisco: Japanese, Chinese, Filipino, Vietnamese, and Korean.

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25. Office of Substance Abuse Prevention, "Communities Creating Change: Exemplary Alcohol and Other Drug Prevention Programs, 1990," (Washington, D.C.: Center for Substance Abuse Prevention, 1990); as well as supplemental information provided by program staff, either in written form or through telephone interviews with Abt Associates staff. OSAP issued a call for nominations to State alcohol and other drug agency officials who were allowed to nominate no more than two model prevention programs from their State. Nominations were also solicited by national organizations and experts in the field. Then, 33 experts reviewed all available written program materials, rated all the nominees and, based on these ratings, the 10 best programs were selected. All of these programs are described in this report with one exception: the Absentee Prevention Program was omitted because it solely targets behaviors not directly relevant to alcohol and other drug use.
26. Government Accounting Office, "Adolescent Drug Use Prevention: Common Features of Promising Community Programs," (Washington, D.C.: GAO, 1992). The GAO identified "promising" programs from a wide range of sources. In addition to OSAP grantees, the GAO gathered lists of programs receiving support from the National Institute on Drug Abuse (NIDA), the Department of Housing and Urban Development (HUD), and the Department of Education (i.e., Drug-Free Schools), as well as model programs named by the U.S. Conference of Mayors, the National League of Cities, the Department of Justice, and a panel of national experts. In this way, 226 programs were identified as models of adolescent drug use prevention, and all 226 were respondents to a mail survey on program characteristics and best practices. From these 226 programs, 10 programs were selected in consultation with knowledgeable staff from funding agencies and other experts to receive site visits from GAO staff and to be showcased as the most promising in the field. All the programs commended by the GAO are described in this report with the exception of two programs: Parents for a Drug Free Youth and the Puerto Rico Department of Anti-Addiction Services were not included because they do not provide direct services to an identifiable target population.
27. Signus Corporation (formerly CSR, Inc.), "Identification of 'Best Practices' of OHDS's Youth-Related Demonstration Projects: Summaries of 26 Effective Youth-Related Demonstration Projects," Volume 2, unpublished report prepared for the Administration for Children and Families, Department of Health and Human Services, 1991. In a study of the best practices and most effective programs among youth-related demonstration projects funded by the Administration for Children and Families, Signus Corporation identified 26 model programs. The 26 model programs were identified through a rating system based on best practices criteria developed in consultation with national experts. Of these, four programs are included in this report because they are the only ones directly relevant to drug abuse prevention.

28. Abt Associates staff attempted to visit those programs that were commended as exemplary by more than one source. Of the 11 programs initially selected, two programs declined to be visited on the grounds that they had already been commended as exemplary and that staff were not available to accommodate visitors.
29. The protocol for Abt's site visits is included in an unpublished report to ONDCP which is available upon request.
30. Gilbert Botvin, "Substance Abuse Prevention: Theory, Practice, and Effectiveness," in *Drugs and Crime*, Michael Tonry and James Q. Wilson (eds.), (Chicago: University of Chicago Press, 1990); Arnold Goldstein, "Refusal Skills: Learning to Be Positively Negative," *Journal of Drug Education* 19(1989): 271-283; John O'Connor and Bill Saunders, "Drug Education: An Appraisal of a Popular Perspective," *The International Journal of the Addictions* 27(1992): 165-185; Gilbert Botvin, "Substance Abuse Prevention Research: Recent Developments and Future Directions," *Journal of School Health* 56 (November 1986): 369-374.; Nancy Tobler, "Meta-Analysis of 143 Adolescent Drug Prevention Programs: Quantitative Outcome Results of Program Participants Compared to a Control or Comparison Group," *The Journal of Drug Issues* 16 (1986): 537-567; David Hawkins, Denise Lishner, and Richard Catalano, Jr., "Childhood Predictors and the Prevention of Adolescent Substance Abuse," *Etiology of Drug Abuse: Implications for Prevention*, (Washington, D.C.: Government Printing Office, 1990), National Institute on Drug Abuse Research Monograph 56, DHHS Publication Number (ADM)90-1335.
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34. CSR, Inc. "Identification of 'Best Practices' of OHDS's Youth-Related Demonstration Projects: Summaries of 26 Effective Youth-Related Demonstration Projects," Volume 2, unpublished report prepared for the Administration for Children and Families, Department of Health and Human Services.
35. Office of Substance Abuse Prevention, "Communities Creating Change: Exemplary Alcohol and Other Drug Prevention Programs, 1990," (Washington, D.C.: Center for Substance Abuse Prevention, 1990); and information gathered through a site visit by Abt Associates.

36. Some peer-based programs provide a range of social services for their participants. In the programs examined for this study, they are all housed in neighborhood centers situated in inner cities. The Madison Square Boys and Girls Club serves New York City youth in the Bronx, Brooklyn, and Manhattan. The club also provides sports and other alcohol- and drug-free activities, academic tutoring, job development, and psychological counseling. The Latin American Youth Center in Washington, D.C. which sponsors the Peer Counseling Project, provides counseling, tutoring, job training, and alternate activities. Twelve Together in Detroit holds support groups that address the social and academic challenges the students face. In addition, Twelve Together provides academic tutoring, job development, and parent support groups.
37. Office of Substance Abuse Prevention, "Communities Creating Change: Exemplary Alcohol and Other Drug Prevention Programs, 1990," (Washington, D.C.: Center for Substance Abuse Prevention, 1990); and information gathered through a site visit conducted by Abt Associates.
38. Government Accounting Office, "Adolescent Drug Use Prevention: Common Features of Promising Community Programs," (Washington, D.C.: GAO, 1992).
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**PREVENTION EFFECTIVENESS:
ASSESSING ALTERNATIVE
EVALUATION METHODOLOGIES**

PHASE III REPORT

**OFFICE OF NATIONAL DRUG
CONTROL POLICY**

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INTRODUCTION

During the past 25 years, the Federal Government has acknowledged the increasing problems of alcohol, tobacco, and other drug use (ATOD) and has increased its commitment to addressing them. Attempts to prevent, delay, and otherwise treat ATOD problems have resulted in the increased awareness that this is a complex phenomenon with diverse etiologies for many population groups.

Due in large measure to the massive public outcry for solutions to the ATOD problem in the United States, research and services in this area have placed increased emphasis on prevention. The primary reason for the increased attention on preventive efforts is the high cost of treatment—in dollars as well as in the rate and consequences of failure. However, the technologies behind preventive interventions have only recently come under scrutiny and, thus, have been redesigned to meet more rigorous standards.

At the same time that the prevention field is developing, strategies for evaluating prevention programs also have been evolving. One fundamental barrier to more and better evaluation of prevention programs (both publicly and privately funded) is the fact that funds are allocated primarily by formula, without any need to know what works and why. Arguably, such a funding scheme, until recently, was needed to support the building of a broad base of capability (e.g., through the purchase of materials and training). Recently, however, the Federal Government and private investors have begun to require evidence of program effectiveness to justify expenditures associated with developing and maintaining preventive programs.

However, there are other reasons for implementing prevention evaluation studies. First, prevention program evaluations can clearly identify who is being served, how often they are served, and whether the services are appropriate and reaching the population in need. Such information is valuable for targeting program activities and modifying services and delivery. Second, prevention program evaluations can assist not only in assessing intended program effects but also unanticipated effects. Many times, unanticipated program effects help identify positive aspects, as well as negative aspects, of program performance that can then be promoted or corrected, as appropriate. Third, effective prevention program evaluations can help program staff identify areas for program expansion or replication.

The current interest in ATOD prevention underscores the need for effective, high-quality program evaluation techniques. The findings that result from a program evaluation will always be suspect unless the evidence of a program's success (or failure) has been rigorously determined. The primary issue is how well conclusions regarding program performance have been linked to the program itself (i.e., whether those conclusions can reasonably be attributed to some other activities, events, or phenomena).

PURPOSE OF THE PROJECT

The purpose of this project is to critically examine the range of methodological alternatives available to researchers to determine the effectiveness of prevention programs. To that end, CSR, Incorporated, conducted a study composed of three phases. The first phase involved the review of a wide body of ATOD prevention and evaluation research literature,

followed by the development of a typology of evaluation methodologies that reflects the work of both evaluation theorists and methodologists, as well as prevention program operators and field researchers (CSR, 1994a).

The second phase involved the identification of a small group of relatively well-documented and rigorously evaluated ATOD prevention programs for closer examination. CSR identified more than 100 prevention programs implemented since 1988 that had been formally evaluated and that were published in the public domain. The programs and evaluations were carefully reviewed by CSR staff and assessed along five important evaluation design dimensions using a 5-point rating scale. CSR staff classified the studies into a number of categories (e.g., study question type, design type, target population age, geographic location, and target population race/ethnicity) for the purpose of identifying a small number of projects for indepth review. Given the focus of this project, design type was used to classify the studies for selection. CSR selected the study receiving the highest rating in each of the four design-type categories for indepth review and analysis (CSR, 1994b).

The third and current phase involved the careful review and analysis of these four selected ATOD prevention programs' evaluations, as well as telephone interviews with program directors and evaluation staff, in order to describe the evaluations and discuss how the evaluations interfaced with important characteristics of the programs (e.g., the population targeted and served). The methods used to conduct the third phase of this study are described below.

Purpose of the Phase III Report

The purpose of this Phase III report is to describe methodological alternatives available for assessing the effectiveness of ATOD prevention programs. The four program case studies graphically illustrate the alternative methodologies that are best suited for addressing questions of program effectiveness. With this information the Office of National Drug Control Policy will be better able to judge, prospectively, the likely contribution of any prevention evaluation effort and provide specific technical guidance to Federal, State, and local drug and alcohol prevention agencies regarding the assessment of prevention program effectiveness.

OBJECTIVE, SCOPE, AND METHODOLOGY

While methodologically grounded in rigorous experimental laboratory research, prevention research and program evaluation suffer from the same problems that plague research and evaluation in the fields of mental health, education, criminal justice, and social service. Chief among them is the unrealistic expectation that outcome studies conducted in the field using laboratory methods alone will "prove" the efficacy of ameliorative programs. When field researchers adopt the laborating or true experiment model, it "interferes with their ability to anticipate, confront, and document the complexities and complications typically encountered" in a field study (Moskowitz, 1992, p. 6). In addition, researchers have begun to pay greater attention to formative or process evaluation methods to help explain outcome evaluation findings.

Descriptive information for each of four case studies in this report was collected from program documents and supplemented by interviews with program directors and evaluators contacted by CSR and by other techniques, such as literature reviews and bibliometric research. The selected programs have the strongest proof of effectiveness and the most well-documented evaluations of all programs within their evaluation. Data collection efforts were guided by information extraction guides and telephone interview protocols designed specifically for this project (see Appendix A). CSR analysts then carefully reviewed and analyzed the program information, summarizing the information into the case studies. Each case study is presented in detail below, including a program description, the evaluation or methodology design and results, and a review of the appropriateness and effectiveness of the particular evaluation methodology selected by each ATOD program.

The purpose of this project is to identify and describe the evaluation designs that best answer this question: Is the ATOD prevention program effective or successful in meeting its goal of preventing or decreasing ATOD use? As a result of CSR's comprehensive review of the evaluation research literature (Phase I of this project), a typology of evaluation strategies and approaches was developed (see Exhibit 1 following this page). It outlines the four general evaluation strategies available to choose from when designing an evaluation: (1) field experiments, (2) sample surveys, (3) use of available data, and (4) naturalistic approaches. Within each of these broad categories, there are several evaluation approaches that can be employed, depending on the conditions and the intended outcomes of the evaluation.

Of all the evaluation designs available, field experiments are best suited to answer causal questions such as the one mentioned above. Therefore, CSR selected programs for case study analysis that used each of the three evaluation approaches associated with the field experimental strategy for this phase of the project (i.e., true experiment, quasi-experiment, and before-and-after design). In addition, in order to discuss some of the real-world dilemmas facing programs when designing and implementing evaluations, a fourth case is also highlighted—one that combines the ethnographic principles of a naturalistic approach with a before-and-after design of the field experimental strategy (hereafter called a mixed design). Each of these programs attempted to conduct the most rigorous and valid evaluations possible, given the program and field limitations under which they operated. Careful consideration of the issues they faced and the decisions they made is the focus of the remainder of this report.

FINDINGS

Evaluating the effectiveness of prevention programs is especially difficult when evaluators must measure behavior that has not occurred (i.e., ATOD use). How can the evaluator confidently attribute the results solely to the program? The evaluator must differentiate between individuals who would never have used drugs in the first place and those who probably would have had they not received the intervention. Control groups, in this case, are essential to producing meaningful results; by comparing program participants to a control group with similar characteristics, the evaluator controls for nonprogram-related factors that may result in the absence of ATOD use.

According to evaluation experts and evidence from effective prevention evaluations, the most rigorous and defensible prevention program evaluations involve the following components:

Exhibit 1

Evaluation of ATOD Prevention Programs: Typology of Evaluation Strategies and Approaches

Strategy	Approach
Field experiments	True experiment Quasi-experiment Before-and-after
Sample surveys	Cross-sectional Panel (longitudinal) Criterion referenced
Use of available data	Secondary analysis Evaluation synthesis
Naturalistic approaches	Ethnography Case study (single, multiple, and criterion referenced)

- The program must be stable and fully implemented;
- Valid and reliable outcome measures must be applied before and after the program intervention; and
- A control group must be identified and measured in the same fashion as the program group.

As is often the case, however, work in the field reveals that prevention evaluations are most frequently flawed as a result of the following:

- Inappropriate control groups;
- Inadequate measurement procedures and statistical analyses; and
- Sizable attrition rates.

As stated above, CSR analysts classified nearly 100 ATOD prevention program evaluations conducted since 1988 into four general categories of evaluation design (i.e., true experiments, quasi-experiments, before-and-after designs, and mixed methods designs) and selected one from each category for closer inspection (see Exhibit 2 following this page). Each of the case studies was written using a common outline allowing for cross-case comparisons.

Exhibit 2

Evaluation of ATOD Prevention Programs: Selected ATOD Prevention Program Evaluation Designs

CASE STUDY DESIGN	CHARACTERISTICS			
	<i>Random Assign- ment</i>	<i>Pretest</i>	<i>Program</i>	<i>Posttest</i>
<i>Case Study No. 1: True Experiment</i>				
Program Group	Yes	✓	✓	✓
Control Group	Yes	✓		✓
Conclusion: Can validly attribute program effectiveness.				
<i>Case Study No. 2: Quasi-Experiment</i>				
Program Group	No	✓	✓	✓
Comparison Group	No	✓		✓
Conclusion: Can validly attribute program effectiveness if all rival explanations are controlled. Primary difference between this and true experiment is the lack of random assignment to program and control groups.				
<i>Case Study No. 3: Before-and-After Design</i>				
Program Group	No	✓	✓	✓
Conclusion: Cannot accurately attribute program effectiveness because there is no control over many serious threats to the validity of the design.				
<i>Case Study No. 4: Mixed Design</i>				
Elementary, Middle, and High School Samples				
Surveys	No	✓	✓	✓
Interviews	No		✓	✓
Elementary School Sample Only				
WAR Program Survey	No	✓	✓	✓
Conclusion: Unlikely to accurately attribute program effectiveness.				

Case Study No. 1—True Experiment: Life Skills Training Program (New York, New York)

The Life Skills Training Program (LST) (Botvin, 1983) in New York, New York, is a school-based prevention strategy consisting of 12 curriculum units designed to be taught in 15 class periods. The primary purpose of the LST program is to facilitate the development of personal and social skills, with particular emphasis placed on the development of coping skills to deal with social influences to smoke, drink, or use drugs. The LST program teaches students cognitive-behavioral skills for building self-esteem, resisting advertising pressure, managing anxiety, communicating effectively, developing personal relationships, and asserting themselves (Botvin, Baker, Dusenbury, Tortu, and Botvin, 1990). These skills are taught using a combination of demonstration, behavioral rehearsal, feedback and reinforcement, and behavioral "homework" assignments (Botvin et al., 1990).

Program Description

The LST program was developed in direct response to a growing body of research literature indicating that current prevention strategies that rely on traditional approaches do little to impact drug use behavior. Botvin and his colleagues reasoned that the onset of substance use is the result of the interplay of social and interpersonal factors. Substance use, like other behaviors, is learned through modeling and reinforcement and is mediated by interpersonal factors such as cognitions, attitudes, expectations, and personality. Substance use is believed to be promoted and supported by social influences from peers, family, and the media. Individual vulnerability is determined by domain-specific cognitions, attitudes, and expectations, as well as the ability to handle situations where ATOD substances are offered.

This logic led Botvin and his colleagues to suggest that an effective approach to preventing ATOD use might involve teaching (1) domain-specific skills, knowledge, attitudes, and expectations necessary to resist substance use social pressures and (2) generic personal and social skills to increase overall competence and promote the development of interpersonal characteristics associated with decreased substance use risk. Each teaching unit of the LST program consists of a major goal, measurable student objectives, program content, and classroom activities. The curriculum was originally designed for early adolescents in the seventh grade.

The intent of the 3-year evaluation study was threefold: (1) to overcome the methodological criticisms leveled at previous prevention research; (2) to extend the evaluators' previous research in cigarette smoking to other forms of substance use and abuse by determining the potential generalizability of this prevention approach; and (3) to determine whether this type of prevention approach could be packaged in a manner that would make large-scale dissemination feasible, while at the same time maintaining its effectiveness (Botvin et al., 1990). Botvin hypothesized that the prevention intervention would cause students to (1) have lower levels of ATOD use than the control students; (2) be more knowledgeable about the prevalence, social acceptability, and salient negative consequences of ATOD use than control subjects; (3) view ATOD use as less normative and have more negative attitudes toward substance use than control students; (4) have better domain-specific and generic skills than control subjects; and (5) have higher self-esteem and self-sufficiency and lower social anxiety than control students.

Evaluation Design and Results

In the spring of 1985, 56 schools from 3 geographic regions of New York State were recruited for participation in the evaluation. Of the original 5,954 seventh-grade students who participated in the evaluation during the fall of 1985, 4,466 (75 percent) provided both pretest (taken in the 7th grade) and posttest (taken in the 9th grade) data. The sample was 52 percent male and approximately 91 percent white, 2 percent African-American, 2 percent Hispanic, 1 percent Native American, and 4 percent from other racial/ethnic backgrounds.

Participating schools were surveyed to determine existing smoking levels. On the basis of this data, schools were divided into groups of high, medium, and low usage. In a randomized block design, schools were randomly assigned to receive: (1) the prevention program with formal provider training and implementation feedback, (2) the prevention program with videotaped provider training and no feedback, or (3) no prevention program (control group). After establishing pretest equivalence and comparability of conditions with respect to attrition, students who underwent at least 60 percent of the prevention program were included in the final analyses.

Statistically significant prevention effects were found for cigarette smoking, marijuana use, and immoderate use of alcohol (see Table 1 following this page). Prevention program effects also were found for normative expectations and knowledge regarding substance abuse, interpersonal skills, and communication skills (see Table 2 following this page). In addition, this type of ATOD prevention program was found to be successfully implemented on a large-scale basis.

Further analysis of the evaluation findings revealed that the effectiveness of the program was correlated with the degree of implementation (i.e., intervention or program dosage) received by the students. In other words, the more ATOD prevention intervention a student received, the greater its impact on that individual student. Most importantly, the evaluation found that students who received a minimally complete version of the program (deemed to be 60 percent for the purposes of this evaluation) had significantly lower levels of ATOD use at the end of the evaluation (ninth grade) than the control subjects. This validates the hypothesis that this type of prevention approach is capable of having an impact on drug use. However, it should be noted that there was a higher dropout rate among substance users than nonusers. Since there was no differential attrition rate with respect to the study conditions, the evaluation's internal validity was maintained (Botvin et al., 1990).

CSR Review of the Evaluation Design

This evaluation provides the largest and most rigorous test of the LST program's prevention approach to date. The true experiment evaluation design and findings clearly illustrate the importance of randomly assigning subjects (or in this case, schools) to program conditions and analyzing changes in participants' knowledge, attitudes, and/or behaviors to determine whether the changes are attributable to the program (i.e., whether the changes would have occurred without the program activities). While not all of the data were statistically significant, the evaluation design and measurement tools controlled the important sources of invalidity and provided the program with a rigorous assessment of its effectiveness.

Table 1

Univariate F Values and Adjusted Followup Substance Use Means and Standard Errors for Prevention and Control Conditions

Variable	E1		E2		C		F(2,3678)	p
	M	SE	M	SE	M	SE		
Smoking	1.46 _a	0.04	1.50 _b	0.04	1.63	0.03	5.72	.0033
Drinking frequency	3.17	0.05	3.10	0.05	3.15	0.05	0.45	ns
Drinking amount	2.65	0.05	2.55	0.05	2.65	0.04	1.59	ns
Drunkenness	2.31	0.04	2.19 _a	0.04	2.32	0.04	3.25	.0391
Marijuana use	1.51 _b	0.04	1.54 _a	0.04	1.66	0.04	4.04	.0176

E = experimental group

C = control group

M = mean

SE = standard error

F = F-test

p = probability

Note: E1 = 1-day teacher workshop with feedback; E2 = videotape teacher training, no feedback; C = control condition. Means for the E1 and E2 groups with subscripts differ from the control group at the following probability levels: subscript a, $p < .05$; subscript b, $p < .01$; subscript c, $p < .001$.

Source: Botvin et al., 1990.

Table 2

Univariate F Values and Adjusted Followup Knowledge, Attitude, Expectations, Skills, and Personality Means for Prevention and Control Conditions

Variable	E1		E2		C		F	df	p
	M	SE	M	SE	M	SE			
Knowledge									
Smoking prevalence	1.10 _d	0.28	1.16 _d	0.28	0.93	0.25	20.37	2, 2357	.0001
Smoking consequences	4.80 _d	0.04	4.60 _d	0.04	4.13	0.04	76.25	2, 2346	.0001
Smoking acceptability	1.49 _c	0.03	1.52 _d	0.03	1.37	0.02	10.86	2, 2340	.0001
Drinking knowledge	7.54 _d	0.08	7.43 _c	0.08	7.08	0.07	10.50	2, 1202	.0001
Marijuana knowledge	5.93 _b	0.07	5.68	0.07	5.66	0.06	5.40	2, 1192	.0046
Substance use attitudes									
Smoking	41.13	0.23	41.42 _b	0.23	40.63	0.21	3.31	2, 2252	.0366
Drinking	37.05	0.29	37.62 _a	0.28	36.74	0.26	2.67	2, 1188	.0696
Marijuana use	44.77	0.38	45.21 _b	0.37	43.84	0.34	3.87	1, 1177	.0211
Normative expectations									
Adult smoking	3.92 _d	0.03	3.95 _d	0.03	4.22	0.03	27.25	2, 2390	.0001
Peer smoking	3.80 _b	0.04	3.77 _b	0.04	3.92	0.03	5.37	2, 2392	.0047
Adult drinking	4.51 _b	0.05	4.57 _a	0.05	4.72	0.05	4.76	2, 1171	.0087
Peer drinking	4.35	0.06	4.34	0.05	4.47	0.05	1.91	2, 1235	.1489
Adult marijuana use	2.95 _c	0.05	3.06	0.05	3.19	0.05	5.79	2, 1139	.0031
Peer marijuana use	3.13 _c	0.06	3.17 _b	0.05	3.39	0.05	7.18	2, 1154	.0008

Table 2 (continued)

Variable	E1		E2		C		F	df	p
	M	SE	M	SE	M	SE			
Skills									
Assertiveness.	60.95	0.37	61.47 _a	0.39	60.41	0.37	1.97	2, 1612	.1404
Decisionmaking	23.71	0.26	24.07	0.26	23.67	0.24	.74	2, 1607	.4796
Skills efficacy	50.54	0.34	51.33	0.34	51.28	0.31	1.81	2, 2338	.1639
Relaxation	11.44	0.14	11.79	0.14	11.70	0.13	1.73	2, 2519	.1780
Communication	3.12 _b	0.04	3.12 _b	0.04	2.96	0.03	6.26	2, 2132	.0019
Interpersonal	9.28 _d	0.06	9.11 _d	0.06	8.81	0.06	16.76	2, 2350	.0001
Personality measures									
Self-esteem	34.25 _a	0.21	34.07	0.21	33.65	0.19	2.40	2, 2014	.0913
Self-efficacy	19.27	0.12	19.20	0.12	19.26	0.11	0.11	2, 2283	.9002
Social anxiety	28.71 _b	0.32	29.36	0.34	29.92	0.31	3.78	2, 1442	.0231

E = experimental group
 C = control group
 M = mean
 SE = standard error
 F = F-test
 df = degrees of freedom
 p = probability

Note: E1 = 1-day teacher workshop with feedback; E2 = videotape teacher training, no feedback; C = control condition. Means for the E1 and E2 groups with subscripts differ from the control at the following probability levels: subscript a, $p < .05$; subscript b, $p < .01$; subscript c, $p < .001$; subscript d, $p < .0001$.

Source: Botvin et al., 1990.

Discussion with the program director and the evaluator suggested that further research be conducted to determine whether this type of prevention intervention is effective with the highest risk populations—those most at risk of becoming substance abusers. Achieving a greater rate of program completion (i.e., greater than 60 percent) is an important external validity issue for this program and its evaluation effort.

Case Study No. 2—Quasi-Experiment: Positive Youth Development Program (New Haven, Connecticut)

The Positive Youth Development Program (Caplan, Jacoby, Weissberg, and Grady, 1988) is a required, school-based social competence training curriculum designed to impact adolescents' substance use, attitudes toward use, and skills thought to mediate substance use. The 20-session curriculum consists of six basic units: (1) stress management, (2) self-esteem, (3) problemsolving, (4) substances and health information, (5) assertiveness, and (6) social networks. The curriculum initially focuses on promoting general social competence and then providing opportunities for students to apply their knowledge and skills to developmentally appropriate dilemmas concerning ATOD use. The program was administered to sixth and seventh graders in an inner-city middle school and a suburban middle school in south-central Connecticut. It was implemented twice a week in six program classes for a total of 10 weeks.

Program Description

The Positive Youth Development Program was developed from an earlier program consisting of a general competence training approach designed to promote the adaptive behavior of adolescents. Although this earlier program was highly successful in improving participants' problemsolving skills and social behavior, it had no effect on self-reported ATOD use (Caplan, Weissberg, Grober, Sivo, Grady, and Jacoby, 1992).

In 1987 the Connecticut Department of Children and Youth Services launched a new initiative to focus on ATOD abuse prevention. The Consultation Center, a community agency affiliated with the psychiatry department at Yale University, suggested collaboration on a substance abuse prevention effort with Yale University's psychology department. Combining the expertise and prior experience of both groups, they developed a new social competence promotion program, the Positive Youth Development Program, which incorporated both general competence enhancement strategies, and domain-specific instruction and applied them to substance use prevention. Classroom teachers implemented the program in conjunction with master's degree-level health educators from the Consultation Center; psychology department staff were responsible for the program evaluation.

The Positive Youth Development Program was integrated into the curriculum at a suburban middle school and an inner-city middle school in south-central Connecticut in 1987.¹ These schools were representative of each setting as a whole in terms of school size and demographic characteristics of students. Of a group of 298 eligible 6th and 7th graders, 282 participated in the program. The inner-city sample consisted of 72 program and 134 nonequivalent control students; 55 percent were boys, 45 percent were girls, 90 percent

¹ Federal legislation enacted in 1989 and effective October 1, 1990, requiring schools to provide kindergarten through 12th-grade drug education in order to receive Federal funds for federally sponsored programs, prompted the suburban Connecticut school district to terminate the Positive Youth Development Program and to adopt a curriculum appropriate for all grade levels. The program was maintained in a modified form by the inner-city school district as part of their new systemwide kindergarten through 12th-grade drug education curriculum. Because the Positive Youth Development Program has evolved from its original form, this review will focus on the program as it existed and was evaluated from 1987 through 1988.

were African-American, 8 percent were Hispanic, and 2 percent were of mixed ethnic origin. The suburban sample consisted of 37 program and 39 nonequivalent control students; 54 percent were boys, 46 percent were girls, 99 percent were white, and 1 percent were Hispanic (Caplan et al., 1992). The effects of attrition were minimized because participation in the program was mandatory as part of the regular school curriculum.

Researchers sought to document program effects on young adolescents' skills, social adjustment, and self-reported ATOD use. The evaluation also examined program outcomes for different socioeconomic and racial groups. The researchers implemented an outcome or summative evaluation to respond to research questions concerning program effectiveness.

While a process or formative evaluation of program operations and implementation was not formally conducted, researchers did attempt to ensure the integrity of program delivery and the usefulness of the program. The research team conducted weekly visits to the classrooms to observe, provide feedback, and otherwise monitor program delivery. The quality of implementation also was addressed through the training of program staff in a series of six 2-hour workshops. Another element of the program's informal process analysis was the administration of an anonymous participant-satisfaction survey to all students upon completion of the program. Findings from this survey indicated that almost all the participants liked the program and believed that it was worthwhile. While the evaluator felt that the program was heavily monitored and fully implemented, he believed that the program could have benefitted from a formal process analysis: "It may be more important to evaluate process and extent and quality of implementation than outcome in order to ensure that the delivery and quality of the program are excellent" (Grady, 1994).

Evaluation Design and Results

To address the program's causal evaluation questions (i.e., whether the program had an impact on ATOD use), the researchers intended to implement a field quasi-experimental strategy that randomly assigned classrooms by ability groupings to program and nonprogram conditions. This sampling decision was influenced by the natural limitations of a school setting. Because it was not possible to randomly assign students within a given classroom to experimental and control groups, the program used "nonequivalent control groups" (i.e., other classes in the same school that had a similar student population). The nine nonequivalent control classes were instructed in the regular academic science curriculum, which included a lesson series addressing the physical consequences of ATOD use. While the evaluators used an approach "as experimental as we could make it," the lack of random assignment of subjects to experimental and control groups distinguishes this evaluation from a "true experiment."

Researchers utilized a variety of measures to evaluate program outcomes. Students in both program and nonequivalent control classes completed preintervention and postintervention tests designed to measure coping skills, social and emotional adjustment, substance use, and intentions and attitudes regarding substance use. The student questionnaire consisted of a variety of standardized and developed or adapted measures, including a modified version of the Decision-Making Questionnaire (Gersick et al., 1988), a measure of ability to manage stress; the Rand Well-Being Scale (Veit and Ware, 1983); the Decision-Making Confidence Scale (Wills, 1986); and two subscales of the Self-Perception Profile for Children—the Behavioral Conduct Scale and the Self-Worth Scale (Harter, 1985).

The self-report survey was administered to students during one 50-minute class period at both pretest and posttest.

A teacher rating scale (Allen, Weissberg, and Hawkins, 1989) also provided an independent assessment of students' behavior at school. This measure required teachers to rate the students on items related to constructive conflict resolution with peers, impulse control, popularity, and assertiveness with adults. Classroom teachers completed behavior-rating scales on both program and nonequivalent control students prior to and following program implementation.

Outcome data were analyzed using multivariate analyses of variance. Findings from the data analysis indicated beneficial training effects on subjects' skills in resisting peer pressure, ability to cope with anxiety, awareness of media and peer influences, and attitudes toward ATOD use (see Tables 3 and 4 following this page). The evaluation also determined that the program had some preventive impact on self-reported intentions to use drugs and alcohol as well as excessive use of alcohol (drinking three or more drinks on one occasion); however, it did not have a statistically significant effect on self-reported experimental substance use. The program appeared to be equally beneficial for both inner-city and suburban students.

CSR Review of the Evaluation Design

The results of the evaluation indicate that the Positive Youth Development Program had a positive impact on the subjects' skills and social adjustment. However, the specific program outcomes should be viewed critically for the following reasons: (1) the lack of a true control group and insufficient examination and documentation regarding the equivalence of the two groups (program and nonequivalent control) at pretest; (2) the self-report nature of the survey data, which may reflect reporting biases; and (3) teachers who provided the adjustment ratings being aware of the condition to which each student was assigned.

Discussions with the evaluator suggested that an important next step is to compare the social competence promotion training with a credible alternative treatment. It is believed that this step would provide more adequate experimental control. The evaluator noted that since the program contained only 20 lessons, "you may need multiple years of intervention to see an impact." While the results of the study should be interpreted with caution, the program appears to have achieved the goal of promoting the skills and social adjustment of youth in diverse settings.

Discussions with the evaluation and program staff revealed that the evaluation appeared to be culturally and developmentally appropriate for program participants. Instruments were selected according to the reading level of the youth, and survey questions were read aloud in order to maximize comprehension. In addition, research assistants circulated throughout the classrooms during test administration to answer individual questions. Moreover, while the Consultation Center had considerable experience working with youth from the suburban middle school, the Yale University psychology department staff had a similar amount of experience working with urban middle school youth. The combined experience of the two groups resulted in an evaluation sensitive to the needs and cultural heritage of the target populations.

Table 3

Univariate Analyses and Descriptive Statistics for Coping Skills

Coping Skill	Program (n = 90)		Control (n = 132)		Condition x Time
	M	SD	M	SD	F
Alternative solution thinking Quantity					
Pretest	5.02	1.87	4.20	2.01	
Posttest	6.06	1.93	4.07	2.01	14.77**
Effectiveness Quantity					
Pretest	2.89	1.80	2.71	1.63	
Posttest	3.84	1.84	2.51	1.68	13.23**
Stress management Quantity					
Pretest	5.47	2.91	3.84	2.94	
Posttest	6.92	2.73	4.56	2.88	7.57*
Adaptiveness					
Pretest	4.76	2.74	3.44	2.70	
Posttest	5.97	2.63	3.73	2.66	11.48**

M = mean

SD = standard deviation

F = F-test

* $p < 0.01$

** $p < 0.001$

Source: Weissberg et al., 1988.

Table 4

**Univariate Analyses and Descriptive Statistics
for Teacher Ratings of Students' Social and Emotional Adjustment**

Adjustment Index	Program (n = 109)		Control (n = 173)		Condition x Time F
	M	SD	M	SD	
Conflict resolution with peers					
Pre	3.31	0.93	3.53	1.07	
Post	3.78	0.93	3.58	1.15	8.42**
Impulse control					
Pre	3.37	0.86	3.62	1.10	
Post	3.69	0.74	3.51	1.18	9.09**
Popularity					
Pre	3.30	0.90	3.51	1.05	
Post	3.54	0.79	3.60	1.00	3.85*
Assertiveness with adults					
Pre	3.74	0.97	3.65	1.15	
Post	3.86	1.03	3.77	1.11	0.35

* $p < 0.05$

** $p < 0.01$.

Source: Weissberg et al., 1988.

Respondents also revealed several ways in which the results of the evaluation were used for program development purposes. Evaluation findings were reviewed and utilized to train teachers how to conduct ATOD prevention programs. The evaluation provided the program with a systematic overall approach that guided program staff to examine their interventions and to specify the outcomes they had attempted to achieve. Therefore, the evaluation was beneficial to the program not only in determining the effect of the interventions on participants (outcome information) but also in streamlining program operations.

One hindering factor in the development of the program evaluation was the element of random assignment of classrooms to program conditions. The school district initially was reluctant to have classrooms randomly assigned to receive or not to receive the program. However, school administrators consented once they understood that this approach was necessary to compare the two groups using statistical methods.

Respondents also revealed several factors that enhanced the evaluation of the program. The evaluation was designed as an integral part of the program curriculum, helping shape the program as the evaluation forced staff to link each program activity to a specific outcome measure. The evaluation also was greatly facilitated by the initial planning period; 6 months were allocated at the start of the program for curriculum development. During this time the researchers helped plan program goals and objectives and developed the evaluation and data collection plans. The foundation established during this 6-month period served to minimize problems in implementing the program, and its eventual evaluation.

In summary, the Positive Youth Development Program appears to have executed the most rigorous evaluation possible, given the constraints of their local context. The program's quasi-experimental outcome evaluation design permits some conclusions regarding the cause of observed outcomes; however, the lack of an equivalent (i.e., true) control group weakens the ability of the evaluation to rule out all factors other than the program as possible causes for the results. While the lack of a true experimental design limits the rigor and persuasiveness of causal arguments concerning program effectiveness, a quasi-experimental design may be a more feasible alternative for many ATOD prevention programs. As the evaluator noted, in prevention program evaluation, there is no such thing as a "true" control group: "For people to believe in random assignment to intervention and control groups, they are deluding themselves. If principals and teachers are worth their salt, they will try to go out and get something for these kids [the nonequivalent control group]. They won't deny them drug education" (Caplan et al., 1992).

Case Study No. 3—Before-and-After Design (Pilot Study): Smart Leaders Program (Pittsburgh, Pennsylvania)

The Smart Leaders Program, developed by the Pennsylvania State University (PSU) and operated in selected Boys and Girls Clubs of America nationwide, is designed to delay the onset of ATOD use and teenage sexual activity among youth living in high-risk environments. The Smart Leaders Program curriculum was developed for youth ages 14 to 16 who had completed Stay Smart, a 12-session, small group prevention program for youth ages 13 to 15. Stay Smart is designed to teach youth a broad spectrum of social and personal competence skills, including identifying and resisting peer and other social pressures to use alcohol, cigarettes, and marijuana, and resisting participation in early sexual activity.

Program Description

Stay Smart is part of the Boys and Girls Clubs of America's national prevention program known as Smart Moves. Smart Moves is based on Botvin's (1983) LST program and began in 1986 as a school-based intervention. PSU has subcontracted with selected Boys and Girls Clubs in 12 program sites located throughout the United States to administer these programs.

Similar to the Stay Smart program, Smart Leaders I, II, and III consist of structured small-group sessions. Members move to the next level each successive year. As youth progress through each successive level, they become increasingly qualified and experienced in working with the Smart Moves program. Although Smart Leaders is a booster program, it is presented to the Boys and Girls Clubs of America youth as a peer leader training program that prepares them to assume club leadership roles by assisting their peers to resist pressure to use alcohol and other drugs or become involved in early sexual activity.

The 12-session Stay Smart program includes the original topics in the LST program plus the addition of topics designed by the Boys and Girls Clubs of America to prevent early sexual activity. Many of the Stay Smart sessions address sexual activity and gateway drug prevention within the same educational activity. For example, in Session 3 (Advertising), youth analyze advertisements to help them see how underlying pressures in the media promote sexual activity and drug use, and in Session 10 (Assertiveness), teens participate in a roleplaying activity, during which they practice resisting pressures to have sex, smoke, drink, or use other drugs.

Smart Leaders was designed for Stay Smart graduates as a peer leader program that encourages participants to be positive role models and to help their peers resist pressures to engage in sexual activity and ATOD use. It also attempts to reinforce skills learned in the Stay Smart program, meet the developmental needs of program youth, keep the youth involved in prevention, and create an overall environment with positive behavioral norms.

Evaluation Design and Results

The Year 1 design for the pilot evaluation of the Smart Leaders program is a before-and-after design, while in Years 2 and 3 it is a quasi-experimental design consisting of three types of groups: Smart Leaders, participants, and two nonequivalent control groups. The

first nonequivalent control group experienced the Stay Smart program without the Smart Leaders booster; the second nonequivalent control group had no prevention program at all. The pilot study was designed to identify program effects during a single administration of the program, while the overall plan was to compare program effects annually and longitudinally over a 3-year period.

This evaluation was designed to assess whether Smart Leader participants exhibited (1) a slower onset rate of ATOD use, (2) a slower onset rate of sexual activity, (3) greater knowledge of the consequences of ATOD use and teen sexual activity, and (4) less behavioral intent to use ATODs and engage in sexual activity than the control groups. Pretest and posttest data were gathered with a questionnaire designed to solicit information from youth regarding their perceptions of social skills and their knowledge, attitudes, behavioral intentions, and current levels of ATOD involvement and sexual activity. Many of the items were adapted from the Cornell University Medical School Health Survey (Botvin, Baker, Botvin, Filazzola, and Millman, 1984). The questionnaire was pilot-tested in 14 Boys and Girls Clubs of America and was found to have statistically acceptable internal consistency, content, and face validity evidence.

The following section discusses the findings from the first year of the pilot evaluation.

Year 1: Findings

Fifty youth ages 13 to 17, nearly three-fourths of whom were male, completed the pretest for the Year 1 Smart Leaders I program. Data were collected from 44 matched pretests and posttests of youth who completed the pilot program of Smart Leaders at the 5 Boys and Girls Clubs demonstration sites.

Across the five domains measured in the evaluation—social skills, knowledge, attitudes, behavioral intentions, and actual behavior—there were no statistically significant changes between the pretests and posttests for participants (see Tables 5 and 6). For the five domains studied, the data suggest (1) generally positive self-perceptions of social skills, (2) a moderate level of knowledge about ATODs and sexual activity, (3) generally negative attitudes toward ATOD use and the social advantages to being sexually active, (4) more than one-half (60 percent to 98 percent) of the participants would not or were unlikely to use ATODs, and (5) more than one-half of the participants had engaged in ATOD use or sex-related behaviors at least once.

Years 2 and 3: Findings

The Year 3 evaluation report showed that over time the SMART leaders (booster group) came to perceive fewer statistically significant social benefits from drinking, smoking cigarettes, and smoking marijuana, while the two nonequivalent control groups perceived greater social benefits related to ATOD use. However, reported behavior was similar for the Smart Leaders group and the Stay Smart group, both of whom showed a statistically significant difference from the nonequivalent control groups. For overall drug use, both the Stay Smart group and the booster group reported significantly less drug-related behavior than the nonequivalent control group.

Table 5

**Two-Year Intentions for Smart Leaders 1 Participants,
Time 1 and Time 2 (N = 44 matches)**

Behavior	Time 1		Time 2	
	n	Percent	n	Percent
Alcohol				
Definitely not or probably not	24	54.6	27	61.4
Maybe	12	27.3	9	20.4
Definitely will or probably will	8	18.2	8	18.2
Marijuana				
Definitely not or probably not	38	86.3	36	81.8
Maybe	3	6.8	4	9.1
Definitely will or probably will	3	6.8	4	9.1
Cocaine				
Definitely not or probably not	40	90.9	43	97.7
Maybe	0	0.0	1	2.3
Definitely will or probably will	3	6.8	0	0.0
Cigarettes				
Definitely will or probably will	35	79.5	34	77.3
Maybe	5	11.4	3	6.8
Definitely will or probably will	3	6.8	6	13.6
Chewing tobacco or snuff				
Definitely not or probably not	39	88.6	42	95.4
Maybe	2	4.5	0	0.0
Definitely will or probably not	2	4.5	1	2.3
Sexual Intercourse				
Definitely not or probably not	8	18.2	7	15.9
Maybe	12	27.3	14	31.8
Definitely will or probably will	23	52.3	23	52.3

Note: Columns may not add to 100 percent owing to rounding and missing responses.

Source: St. Pierre et al., 1990.

Table 6

Ability of Smart Leaders 1 to Refuse Substances and Sex, Time 1 and Time 2 (N = 44 matches)

Behavior	Time 1		Time 2	
	n	Percent	n	Percent
Beer				
Sure I could not or probably could not refuse	6	13.6	7	15.9
Not sure	9	20.5	5	11.4
Sure I could or probably could refuse	29	65.9	32	72.7
Marijuana				
Sure I could not or probably could not refuse	8	19.8	6	13.7
Not sure	4	9.1	2	4.5
Sure I could or probably could refuse	32	72.7	36	81.8
Cocaine				
Sure I could not or probably could not refuse	5	11.4	3	6.8
Not sure	1	2.3	2	4.5
Sure I could or probably could refuse	37	84.1	39	88.6
Cigarettes				
Sure I could not or probably could not refuse	7	15.9	8	18.2
Not sure	4	9.1	1	2.3
Sure I could or probably could refuse	32	72.7	34	77.3
Chewing Tobacco or Snuff				
Sure I could not or probably could not refuse	5	11.4	7	15.9
Not sure	2	4.5	1	2.3
Sure I could or probably could refuse	36	81.8	35	79.5
Sexual Intercourse				
Sure I could not or probably could not refuse	12	27.3	18	40.9
Not sure	15	34.1	9	20.4
Sure I could or probably could refuse	16	36.3	17	38.6

Note: Columns may not add to 100 percent owing to rounding and missing responses.

Source: St. Pierre et al., 1990.

Results of this longitudinal study indicate that over the 24 months following the implementation of the program, Stay Smart participants showed effects for marijuana-related behavior, cigarette-related behavior, alcohol-related behavior, and overall drug-related behavior among participants (see Exhibits 3 and 4 following this page). Knowledge concerning drug use also was positively affected but was not statistically significant. Further, the Smart Leaders booster program appears to have affected attitudes toward ATOD use but not behavior. These results, according to program and evaluation staff, are consistent with previous studies of LST programs (without the SMART Leaders booster sessions).

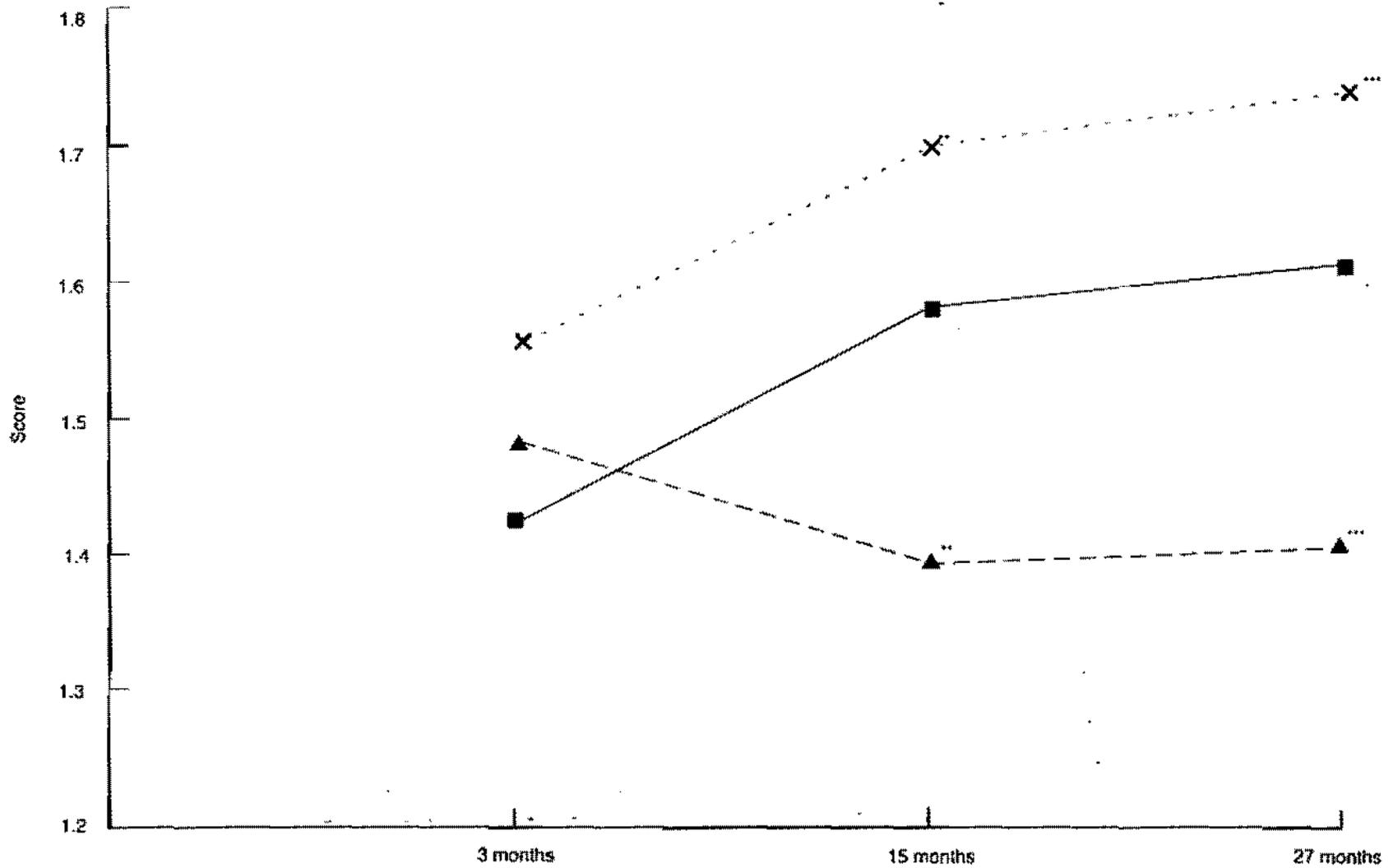
CSR Review of the Evaluation Design

The pilot study (Year 1) design utilized by the evaluators of the Smart Moves/Smart Leaders program is a before-and-after design. The before-and-after design measures participant performance prior to and following participation in program activities. This design suffers from a number of potential problems in terms of the internal validity of the evaluation. These problems often are characterized as rival alternative explanations for the changes found in the outcomes measured. Chief among these are history, maturation, selection, mortality, and testing. Each of these problems can be controlled by the use of a comparison or control group. For example, without a control group, the effect of change-producing events other than the program that may have occurred between the pretest and the posttest cannot be ruled out as rival alternative explanations for the measured change. With a group experiencing the same change-producing events but not receiving the program, one can control the effect of history.

As shown in the results from Years 2 and 3, the use of a nonequivalent control group, even a nonequivalent control, helps to ground the findings and provide a basis for comparison to assess whether changes found between the pretest and the posttest have both practical as well as statistical significance.

Exhibit 3

Evaluation of ATOD Prevention Programs: Attitudes Toward Drinking Alcohol, by Group and Time, Adjusted for Baseline Differences

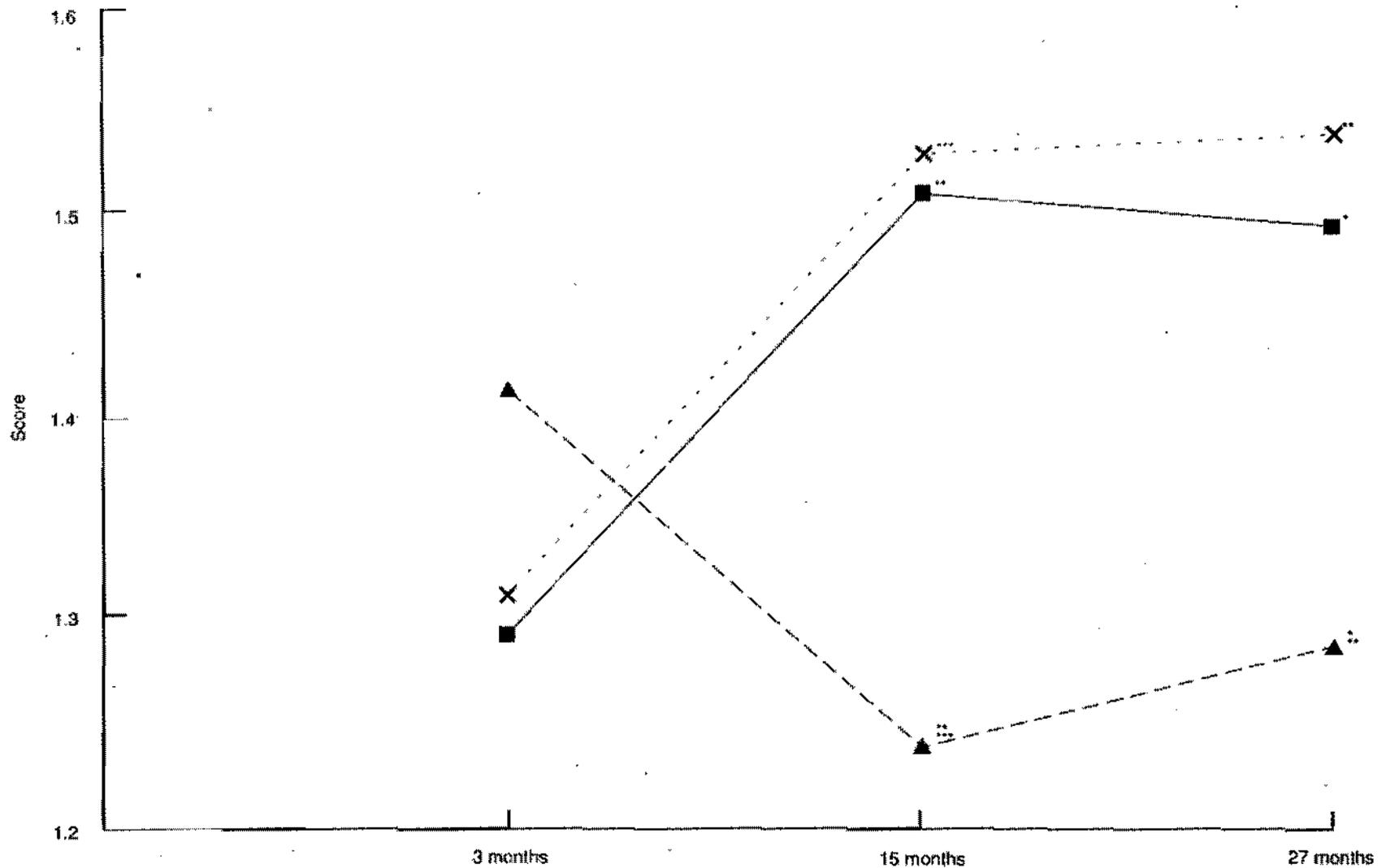


Between condition differences within time:
** p < .05 *** p < .01

■ Stay SMART Only ▲ Stay SMART + Boosters X Control

Exhibit 4

Evaluation of ATOD Prevention Programs: Attitudes Toward Smoking Marijuana, by Group and Time, Adjusted for Baseline Differences



Between condition differences within time:
* $p < .10$ ** $p < .05$ *** $p < .01$

■ Stay SMART Only ▲ Stay SMART + Boosters × Control

Case Study No. 4—Mixed Design: Drug-Free Schools and Community Program (St. Louis, Missouri)

The St. Louis Drug-Free Schools and Community Program (DFSCP) commenced operations in 1987, one year after the State of Missouri enacted legislation mandating that each Missouri school district develop a DFSCP for all the schools in their district. The DFSCP of the St. Louis, Missouri, public schools is composed of a series of school and community activities designed to prevent ATOD use among students in city schools and in the surrounding communities. The goal of the program is to inform parents or guardians and their children about the harmful effects of ATODs. Program objectives include preventing younger children from initiating substance use and reducing substance use among middle school and high school students. The program operates from mid-August through June and offers in-school, afterschool, and weekend activities for students, as well as their parents or guardians.

Program Description

The program's elementary school component is aimed at instructing students in grades kindergarten through five about the dangers of ATOD use and providing training in problemsolving and decisionmaking in order to promote resistance to substance use. At each school, a team leader—in conjunction with a committee of students, parents or guardians, and faculty members—writes a school/community treatment plan, which outlines a strategy for implementing the program. The plan includes such activities as (1) visits and presentations by local police officers (We Are Responsible [WAR] program), (2) classroom lessons that incorporate drug prevention themes, (3) strategies for organizing support groups and afterschool programs, and (4) educational events for parents and community members.

The program's middle school and high school components are aimed at promoting the awareness of drugs and substance abuse among 6th through 12th graders and inspiring them to be drug-free. Program staff train team leaders, teachers, and parents to develop action plans that consist of such activities as drug-free student clubs, student miniconferences, afterschool activities, and teen institute retreats. These interventions are intended to promote collaboration between students and community agencies.

While the in-school component of the DFSCP is integrated into the regular school curriculum, the afterschool and weekend components are voluntary. For these noncompulsory activities, the program has reported consistently high levels of participation from both elementary school students and their parents or guardians. In fact, the program has had such a high level of involvement from primary school students that they have created a waiting list to accommodate the demand.

Evaluation Design and Results

Despite the fact that the DFSCP grant required only limited monitoring and assessment, program administrators hired an independent evaluator—the Center for the Application of the Behavioral Sciences (CABS). Because this was the first ever evaluation of the DFSCP program, the evaluator focused on process or formative evaluation goals,

including assessing needs, evaluating program implementation, and measuring perceived satisfaction.

Because the major process evaluation was conducted from 1990-1991, the 1991-1992 (Year 2) program year was primarily devoted to an outcome evaluation. The process evaluation component of the Year 2 evaluation was accomplished through survey and interview questions pertaining to program participation and satisfaction with program activities.

The Year 2 evaluation focused on the school and the classroom, to the exclusion of the community aspect of the program. This evaluation sought to measure the impact of the program on students' attitude about ATODs, knowledge of ATODs, and intentions to use/abuse ATODs. The following specific questions were addressed (Wiener, Pritchard, Frauenhoffer, and Edmonds, 1993):

Process Evaluation Questions

- How do the students subjectively experience DFSCP?
- Do the students believe that participating in the program influenced the way that they think about and act around ATODs?

Outcome Evaluation Questions

- Do the number of activities attended early in the semester predict attitudes, knowledge, and intentions to use substances measured later in the semester?
- Is it more likely that participation in DFSCP activities causes changes in attitudes, knowledge, and intentions to behave than it is that attitudes, knowledge, and intentions to behave cause students to attend more activities?

The evaluator initially sought to employ a quasi-experimental outcome evaluation design; however, he had to abandon this strategy due to an inability to identify and maintain a control group. In addition, the DFSCP was already in progress in all St. Louis schools and, as a result, the evaluator could not pretest the students. Moreover, ethical and political concerns precluded the possibility of withholding the program from some schools in order to obtain a control group. Finally, the evaluator was concerned that the effects of the DFSCP had been generalized over time such that most students in any given year were affected by the program. Thus, because there was no naive sample with which to compare the program findings, the evaluator was forced to be creative in order to develop a feasible and methodologically convincing evaluation strategy.

The evaluation of the DFSCP utilizes a mixed design—involving quantitative (a before-and-after survey and a self-report questionnaire) and qualitative (an interview study) components integrated through a case study approach. This design included highly independent, and often divergent, perspectives in order to improve the validity of the evaluation. The internal validity of the evaluation was further strengthened by following a pattern-matching logic employed by the evaluator. Subsequent to developing this evaluation approach, the evaluator constructed hypotheses regarding a development pattern of a

successful and an unsuccessful program. The evaluator then collected and analyzed the data and compared the observed patterns to the hypothesized patterns for success and failure. The estimated pattern that best matched the actual pattern determined the evaluator's conclusion as to the effectiveness of the program.

The evaluator selected the (1) elementary school program and the (2) middle school and high school programs (hereafter referred to as high school programs)² of the St. Louis School District as the evaluation sample. Three separate methodologies were implemented to collect evaluation data. The before-and-after survey measured the number of activities that the students had attended early and late in the semester, their attitudes toward substances, knowledge about substances, and intention to use substances. At each school, 10 students were selected at random to complete the surveys. The surveys were sent to all 75 elementary schools and 41 high schools in the St. Louis School District.

The postintervention interviews involved the development of separate open-format interview guides for elementary and high school students. Graduate students conducted the interviews, asking students about their experiences with the DFSCP and whether it influenced the way they thought about substances, their attitudes toward substances, and the likelihood that they would use substances in the future. Qualitative interviews were conducted with a sample of elementary, middle, and high school students, including 10 students from 4 elementary schools, 10 students from 3 middle schools, and 9 students from 2 high schools.

In addition, a preintervention and postintervention self-report questionnaire was designed to determine the effectiveness of the WAR officers' presentations on altering students' knowledge about ATODs and their attitudes toward substance abuse. The timing of the WAR presentation was designed to be staggered so that two classrooms would not receive the WAR presentation at the same time that two other classrooms received it. The classrooms that did not receive the WAR presentation were to be designated as control groups. However, the time sequence for the data collection at each school was not maintained as scheduled. As a result, each classroom was treated as its own before-and-after design without a control group. Each of the four classrooms served as its own replicated experiment involving two pretests and one posttest of all students.

The results of the correlational analyses for elementary school students revealed that participation in program activities modestly correlated with students' knowledge about substances and their intentions to use substances in the future; no relationship was indicated concerning their attitudes toward substances. For the high school respondents, no statistically significant correlations were found between program participation and changes in attitudes, knowledge, or intention to use substances (see Tables 7 and 8). The evaluator attributed this outcome to the relatively low level of participation of high schoolers in program activities and their low rates of response to the survey.

Data from the interview study supported the elementary school panel survey findings. Nine out of 10 interviewees believed that the program positively influenced the way they

²The middle school students and the high school students were combined for the analysis because the two groups did not differ significantly in terms of activities and developmental skills.

Table 7

Correlations Between the Activity Index and the Criterion Variables at Panels 1 and 2 for Elementary Students

Variable	Panel	Activity Index					
		Panel 1			Panel 2		
		<i>r</i>	<i>p</i>	<i>N</i>	<i>r</i>	<i>p</i>	<i>N</i>
Attitudes	(1)	0.08	0.18	302	-0.07	0.23	302
Attitudes	(2)	0.01	0.80	302	0.05	0.38	302
Knowledge	(1)	0.06	0.28	303	0.01	0.91	303
Knowledge	(2)	0.20	0.06	303	0.02	0.001	303
Intention	(1)	-0.11	0.06	303	0.02	0.77	303
Intention	(2)	-0.12	0.03	303	-0.11	0.05	303

r = correlation

p = probability

N = number of students

Note: Individual variables are scored so that higher numbers indicate more activities, more positive attitudes, greater knowledge, and greater intention to abuse drugs. The numerals following each variable indicate the panel in which that variable was measured.

Source: Wiener et al., 1993.

Table 8

Correlations Between the Activity Index and the Criterion Variables at Panels 1 and 2 for High School Students

Variable	Panel	Activity Index					
		Panel 1			Panel 2		
		<i>r</i>	<i>p</i>	<i>N</i>	<i>r</i>	<i>p</i>	<i>N</i>
Attitudes	(1)	0.02	0.80	123	0.01	0.95	123
Attitudes	(2)	0.04	0.64	122	0.10	0.26	122
Knowledge	(1)	-0.07	0.44	123	-0.06	0.54	123
Knowledge	(2)	0.02	0.83	123	0.06	0.52	123
Intention	(1)	-0.04	0.64	123	0.06	0.54	123
Intention	(2)	-0.02	0.84	123	-0.07	0.41	123

r = correlation

p = probability

N = number of students

Note: Individual variables are scored so that higher numbers indicate more activities, more positive attitudes, greater knowledge, and greater intention to abuse drugs. The numerals following each variable indicate the panel in which that variable was measured.

Source: Wiener et al., 1993.

think about substance use and abuse (Wiener et al., 1993). An analysis of student responses revealed that program participation: (1) decreased intentions to abuse substances; (2) modified patterns of interpersonal relationships so as to diminish the impact of others who abuse substances; and (3) increased awareness of the dangers of drugs and gang membership. In total, interview data from the elementary school sample matched the predicted outcomes hypothesized by the evaluator.

The qualitative interview data did not, however, support the panel survey findings for the high school case. Despite the lack of program impact demonstrated by the panel survey, the high school respondents were as positive about the program as their elementary school counterparts. The high school students' responses indicated that program participation decreased their motivations and intentions to use ATODs and improved the manner in which they interacted with others concerning substance use. The evaluator concluded that the results matched the pattern of a successful program for the elementary school sample but not for the high school samples.

The WAR measure failed to demonstrate any significant differences between pretest and posttest measures of attitudes, knowledge, and intentions to use substances as a result of visits by the WAR officers. The evaluator did not view these findings as indicators of program failure; rather, he attributed them to unforeseen barriers that may have limited the program's validity and power to demonstrate program effectiveness, such as (1) small sample size; (2) ceiling effects in the measures (e.g., youth demonstrated a high degree of knowledge and strong antisubstance attitudes at the pretest; therefore, there was little room for improvement on the measurement scale); and (3) breakdown of the initial quasi-experimental design due to the inability to secure control groups and, therefore, the need to employ a less traditional—and, thus, less predictable—evaluation approach.

CSR Review of the Evaluation Design

One of the primary difficulties with a pattern matching approach with data that are not quantifiable is determining whether the data fit the hypothesized pattern (Yin, 1989). Because this evaluation lacked a necessary outcome evaluation design element for effective evaluation—such as a control group—the design could not support the determination of program effectiveness. However, the combination of two maximally different methodologies potentially offer more defensible conclusions regarding program effects than the singular use of either method. While the evaluator recognized that the modified design of the WAR assessment did not allow for comparisons as originally planned, the evaluator also recognized that “flexibility in research designs are often necessary in outcome evaluations that employ quasi-experimental methods such as the one used in this study” (Wiener et al., 1993). Thus, the evaluation of the DFSCP demonstrates the necessity of adapting evaluation methodologies for measuring outcomes of ongoing programs in complex school environments, however, reinforces the fact that evaluation designs that lack the basic elements for effective evaluation cannot yield defensible statements of program impact.

For example, one important methodological limitation related to the high school sample is the possibility that the program may not have been fully implemented—as stated earlier, one of the three critical evaluation design elements. While the surveys were found to have adequate reliability and response rates, analysts found that relatively few program

activities were completed by high school participants. This limitation is significant in that it represents a key element necessary to successfully determine program effectiveness.

The evaluator noted that the allocation of Year 1 to a formative evaluation provided him with an opportunity to determine which data he would utilize and to develop instruments accordingly. The evaluator also felt that it was beneficial to discuss the proposed evaluation with school and program staff prior to its implementation. Through this exchange, the evaluator had the opportunity to hear what the issues were in the schools and communities. Furthermore, the meeting helped to "demystify" the evaluation process for program staff. The program director was able to communicate that "the process was not happening to them, rather they were a part of it." As a result, program staff were more cooperative and supportive.

Another issue that is pertinent to this program and most ATOD prevention programs targeting youth is the fact that different styles of evaluation are needed for different age levels and groups. High school youth are generally more transient than primary school youth who follow the same schedule and stay with the same teacher throughout each school day. The program director wondered "with such situations, how can we ensure that the information that we attain from the evaluation is accurate and that it tells us the strengths of the program and what we should do differently" (Wiener et al., 1993). Consequently, the levels of difficulty in obtaining reliable data from youth need to be addressed according to such variables as age, and cultural and socio-economic conditions in order to protect the validity of the study results.

SUMMARY

Program evaluation offers a unique opportunity to assist decisionmakers in identifying how to streamline programs and find ways to wring every last program effect out of available funding, especially at a time when accountability is paramount. Today more than ever, program efficiency and effectiveness are demanded, and increasingly shrinking program budgets are the norm. Program evaluation of ATOD prevention programs also can effectively assess and describe what works and does not work in prevention and how to reshape program operations to increase the likelihood that prevention interventions will have the greatest impact on the participants.

The four case studies presented in this report represent four different attempts of applying the principles and methodologies of program evaluation to assess the effectiveness of ATOD program interventions and improve the delivery of ATOD prevention services. These four cases illustrate important differences (and similarities) among evaluation designs and the ability (or lack) of those designs to answer questions regarding ATOD prevention program effectiveness.

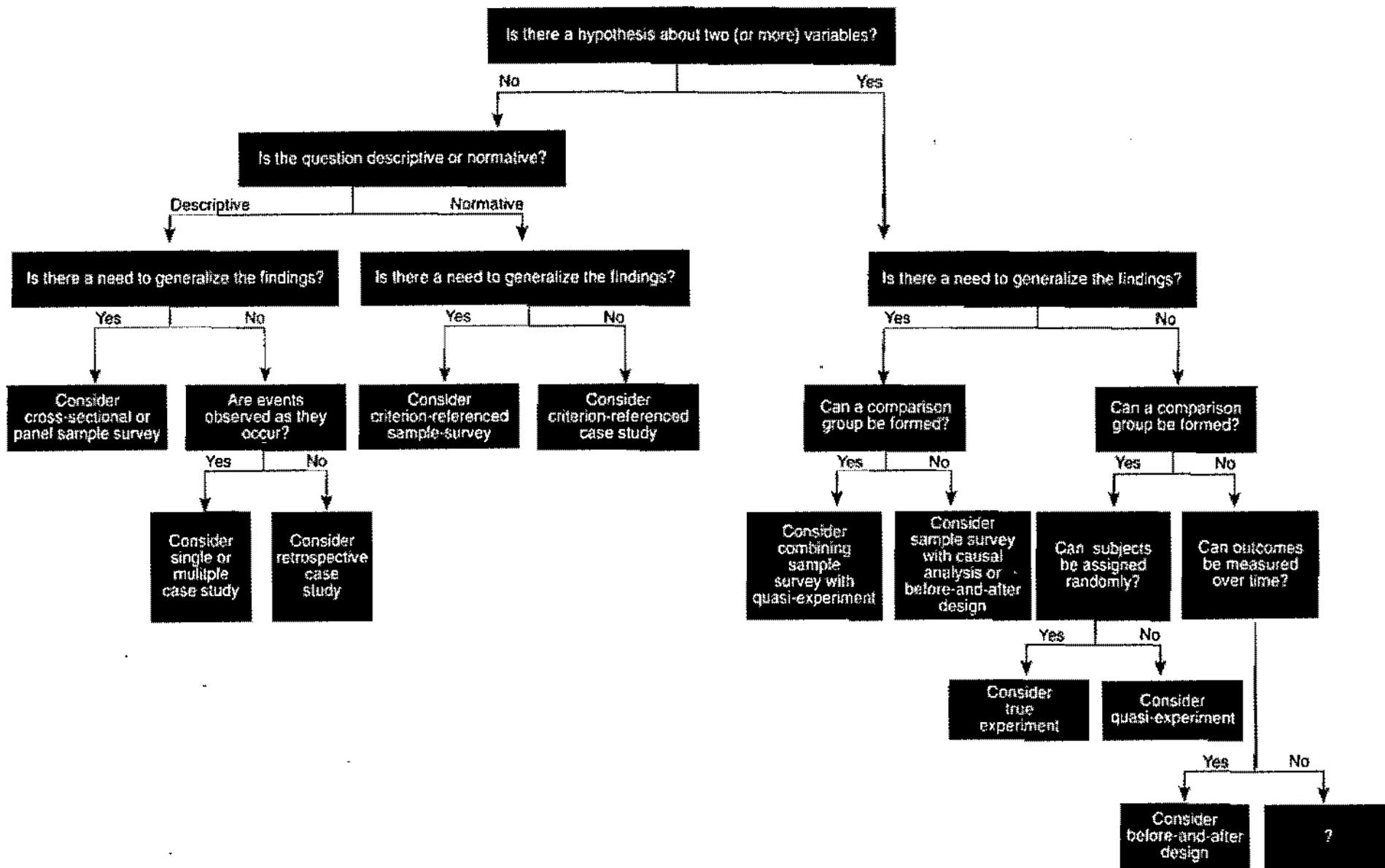
Ideally, program evaluations should be designed and built into the development of prevention programs. In this case, the evaluation can take many forms. Exhibit 5 following this page illustrates a "roadmap" for determining the best evaluation strategy given each unique situation. Each strategy allows for different types of information to be determined based on the availability of data and the ability of program administrators and researchers to manipulate the program to "fit" one design type over another. In the interest of assessing the effectiveness of a prevention program, the evaluation design must include three basic elements: (1) a way of identifying the maturity and stability of the program, (2) application of valid and reliable outcome measures before and after the program intervention, and (3) identification and consistent use of a control group (whose subjects are measured in the same way and at approximately the same intervals as the program group). These three program evaluation design elements ensure the necessary level of rigor for implementing an effective program evaluation. The lack of any one of these elements or a combination of these elements reduces the quality (validity and reliability) of the information collected during the course of the evaluation effort.

In the event that an evaluation component is not built into the early development of a program, there are still ways that a rigorous evaluation can be introduced. For example, if at least one group of participants is expected to receive program services, it would be prudent to identify a matched control group or available control group and, using instruments of known validity and reliability, assess the outcomes of interest of both the program and the comparison or control group before the program starts and after the program ends. In addition, because control group participants are not provided with program services, it is critical to maintain contact with them between the application of the pretest and posttest instruments so as not to jeopardize the utility of the evaluation results due to high attrition rates.

How the evaluation is designed and conducted is driven by the evaluation questions that are developed to both frame and guide the study. Cause-and-effect evaluation questions are most effectively answered using a field experimental approach (e.g., true experiments, quasi-experiments, and before-and-after designs) because they incorporate two important

Exhibit 5

Evaluation of ATOD Prevention Programs: Decision "Roadmap" for Distinguishing Among Evaluation Approaches



evaluation design elements: (1) valid and reliable pretest and posttest measures and (2) the use of a control group. These measures provide a basis for comparison over time and, through the use of a control group, allow for comparisons between them and the group receiving the program. Any differences noted, after accounting for all relevant variables, can be accurately portrayed as being due to the program intervention.

True experiments randomly assign subjects to program and control conditions. This is not always possible, however, as it is often unethical to withhold services from subjects who need them, or it is simply impossible to identify a group that is not receiving, directly or indirectly, the program interventions.

Of the three field experiment design types, true experiments are considered to be the most rigorous and persuasive regarding the cause of observed outcomes (followed by quasi-experiments and before-and-after designs). When the evaluation question is causal, such as, "What is the effect of providing Life Skills Training to high-risk adolescents on their attitudes and use of ATODs?" and there is no ethical or administrative obstacle to using random assignment, the **true experiment** is the design of choice (General Accounting Office, 1991). The effect of the random assignment is to help ensure internal validity. To the extent that random assignment to the program/no program condition is not feasible, identification of groups that are similar along important demographic, economic, and social dimensions is the next best alternative (i.e., quasi-experimental design).

Since the groups of the **quasi-experimental** design are not strictly equivalent but, rather, subjects are chosen who can be matched on a number of demographic and program-related characteristics, causal statements about program effects are weakened. The more dissimilar program and control groups are, the less likely the evaluation will be able to rule out factors other than the program as plausible causes for the results. It is therefore imperative that complete information regarding program and control groups be collected (regardless of design type). With this information, the evaluator may be able to adjust for observed differences via statistical procedures.

Before-and-after designs lack a control (or a nonequivalent control) group, making it very difficult to attribute outcomes measured by the evaluation as due to the program. A number of threats to the internal validity of the study remain unresolved and form the basis for rival alternative hypotheses. Simple before-and-after designs (i.e., those with just two observations) compare outcomes for the units of study before and after exposure to a program. As such, this design is able to adequately address questions regarding the amount of change that has been observed but cannot necessarily allow the attribution of that change to program exposure. The reason for this is the design cannot separate the effects of the program from other effects influencing the units of study. To account for these other effects, before-and-after designs with multiple observations can be applied. With a sufficiently large number of observations, one can implement what is known as an interrupted time-series design (McCleary and Hay, 1980). Interrupted time-series designs help to rule out alternative explanations of program effect, as comparison and control groups do for quasi-experiments and true experiments.

By definition, other evaluative strategies such as sample surveys, secondary analysis, and naturalistic designs lack control groups and, in some cases, primary data collection, making attribution of program effects impossible without integrating multiple evaluation

strategies (e.g., mixed design). The use of a **mixed design** approach, which by itself would not offer a convincing argument about the effectiveness of the prevention program, can at least partially improve the process or implementation of the ATOD program, even if it fails to support an experimental design, thus allowing causal conclusions to be drawn.

Of particular difficulty in evaluating the effectiveness of prevention programs, ATOD-related or otherwise, is the fact that evaluators must measure behavior that has not occurred—which, for the case studies, was ATOD use. For example, if the results indicate that a significant number of program participants in a school-based program did not use ATODs, how can the evaluator confidently attribute the results solely to the program? The evaluator must differentiate between individuals who would never have used drugs in the first place and those who probably would have had they not received the intervention.

That is why control groups are essential to producing meaningful results. By comparing program participants to a control group with similar characteristics, the evaluator controls for factors, other than the program, that may result in the absence of ATOD use. Only by using control groups can evaluators attribute the absence of ATOD use to prevention programs and determine the program's effectiveness.

Effective program evaluations also are characterized by designs that are sensitive enough to detect effects if they exist. A number of factors—including sampling error, measurement error, program variability, and the type of statistical analysis used—determine the likelihood that an evaluation will yield information regarding true effects. Recognition and correction of the field limitations will greatly improve the design, implementation, and overall success or failure of the evaluation. Field limitations specific to youth ATOD prevention programs can include a transient student population, transfers among teachers and other school personnel who administer the program and/or the evaluation, awareness that factors other than the ATOD prevention program impact youth, and wariness on the part of program personnel toward outside evaluators.

The best way to ensure the usefulness of the outcome evaluation results is to set aside time at the onset of the program to outline the project's goals, objectives, and evaluation plan. For the Positive Youth Development Program, this 6-month "curriculum development" stage served as a planning function similar to that achieved by the Drug-Free Schools and Community Program, through their Year 1 process analysis and instrument development, and Smart Leaders Pilot Evaluation (which eventually developed into a quasi-experimental design). In all instances, the programs were able to achieve a spirit of togetherness between the implementation and evaluation teams, make ongoing adjustments that improved the programs, such as forcing the prevention programs to clarify their generalized goals into specific and measurable objectives, and ultimately realize better results because of the initial investment made in the evaluation process.

The information in this report suggests a clear perspective when it comes to effective prevention program evaluation: conduct randomized experimental designs or other field experimental designs that can address the numerous threats to the validity and reliability of the data collected. To the extent that a randomized experimental study cannot be conducted, it is incumbent upon the field evaluator to identify all rival alternative hypotheses for measured effects and collect data to control for those alternative explanations of the measured results.

RECOMMENDATIONS

Our review of the four programs selected for this study revealed a number of important lessons regarding effective evaluation methodologies to convincingly demonstrate that prevention programs do work. In particular, this review illustrates that (1) programs designed with evaluation as a component of the program's development, particularly those with true experimental or quasi-experimental designs, are able to convincingly demonstrate the effectiveness of their programs and (2) evaluation designs that accommodate program characteristics and follow scientific rules for sampling, measurement, data collection, and analysis produce the sort of evidence necessary for drawing conclusions regarding program effectiveness. In addition, it is always prudent to conduct process evaluations to help explain what the outcome findings mean and to be able to assist program operators in improving their programs.

Conducting high-quality prevention program evaluations requires thoughtful consideration of the program under study, creative and often innovative ideas for how to approach the evaluation, and adequate time and resources to ensure a complete a fair assessment of program effectiveness. Prevention program evaluations conducted over the past 10 years have generally demonstrated a growing understanding of the difficulties involved in effectively evaluating prevention programs, yet many still suffer from problems such as the narrow use of methodologically inferior strategies and approaches to evaluation and inconsistencies between the evaluation questions and the evaluation design.

While prevention experts can agree on a list of general programmatic principles of prevention programs, there exists much less consensus regarding effective prevention programs. The primary reason for this is the general lack of convincing evidence regarding prevention program effectiveness. To date, no comprehensive study of what works in prevention intervention has been conducted. In addition, there has been no large-scale analysis of the degree to which prevention programs as a whole have undertaken evaluations, the strategies they employed, or the situations they encountered. A meta-analysis or field "evaluation of the state of prevention program evaluations" would provide general guidance to program staff and their evaluation teams as each struggles with the need to provide answers regarding the effectiveness of their programs. Without this guidance, and the accompanying funding, programs will continue to either ignore this necessary component or attempt to evaluate their programs using inappropriate methods, which will ultimately led to the programs' inability to accurately portray the results.

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APPENDIX A

Prevention Program Evaluation Study Materials

ONDCP Prevention Program Evaluation Checklist

Program Name/Reference: _____

1. Purpose

Notes

- a. Basic Research
- b. Policy Analysis
- c. Program Evaluation
- d. Other _____

2. Evaluation Question Type

- a. Descriptive
- b. Normative
- c. Cause and Effect

3. Sampling Approach and Technique

- a. Probability
 - i. Simple Random
 - ii. Systematic
 - iii. Stratified
 - iv. Cluster
 - v. Multistage
 - vi. Other _____
- b. Nonprobability
 - i. Convenience
 - ii. Quota
 - iii. Critical Case
 - iv. Typical Case
 - v. Snowball
 - vi. Other _____

4. Data Collection Type

- a. Physical
 - i. Observation
 - ii. Other _____
- b. Testimonial
 - i. Structured Interview
 - Telephone
 - Face-to-face

- ii. Semi-structured interview
- iii. Unstructured interview
- iv. Self-administered questionnaire
- v. Other _____

c. Documentary

- i. Document review
 - Internal
 - External

d. Analytical

5. Basis for Judgement (Design)

a. Sample survey

- i. Cross-sectional
- ii. Panel
- iii. Criteria-referenced

b. Case Study

- i. Single case
- ii. Multiple cases
- iii. Criteria-referenced

c. Field Experiment

- i. Experimental
- ii. Quasi-experimental
- iii. Non-experimental

d. Secondary analysis

- i. Meta-analysis
- ii. Meta-evaluation
- iii. Evaluation synthesis
- iv. Meta-ethnography

6. Analysis Technique

- a. Descriptive statistics
- b. Content analysis
- c. Multivariate statistics
- d. Time-series analysis
- e. Effect size
- f. Other _____

7. Final Judgement

Prevention Program Characteristics Checklist

Program Code:

1. Program Size (# of Participants)

- a. Small (1-50)
- b. Medium (51-200)
- c. Large (201+)

2. Race/Ethnicity of Target Population

- a. African-American
- b. Asian/Pacific Islander
- c. Hispanic
- d. Native-American/Alaska Native
- e. White
- f. Multiracial
- g. Other

3. Target Age

- a. Preschool (age 5 or under)
- b. Primary (ages 6-11)
- c. Middle/junior high (ages 12-14)
- d. High school (ages 15-18)
- e. Adults (ages 19+)

4. Program Environment

- a. Superurban (inner city)
- b. Urban
- c. Suburban
- d. Rural
- e. Other

5. Program Setting

- a. School
- b. Housing Development
- c. Residential
- d. Community
- e. Church
- f. Other

6. Intervention Type

- a. ATOD Education
- b. Cultural Values
- c. Counseling/Therapy
- d. Youth Training
- e. Peer Group Development (including problem solving skills, cooperative learning)
- f. Case Management
- g. Support Services (including instruction to parents & teachers)
- h. Other

PREVENTION PROGRAM EVALUATION STUDY ASSESSMENT

Prevention Program Code: _____

- ___ Evaluation Question (clarity, relevance, completeness)
- ___ Sampling Approach (appropriateness, validity)
- ___ Data Collection Methodology (appropriateness, reliability, validity)
- ___ Study Design (appropriateness, rigor)
- ___ Data Analysis Technique (appropriateness, rigor)
- ___ TOTAL

Scoring

1 = Lowest, 5 = Highest

EXECUTIVE SUMMARY

ACADEMIC PANEL MEETING ON THE NATIONAL STRATEGIC ACTION PLAN FOR AFRICAN AMERICAN MALES

Prepared for:

Executive Office of the President
Office of National Drug Control Policy
Washington, DC 20503

Prepared by:

CSR, Incorporated
Suite 200
1400 Eye Street, N.W.
Washington, DC 20005

■ Task 94H ■ August 1995 ■

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EXECUTIVE SUMMARY: ACADEMIC PANEL MEETING ON THE NATIONAL STRATEGIC ACTION PLAN FOR AFRICAN AMERICAN MALES

The National Strategic Action Plan for African American Males will provide a comprehensive, systematic approach to developing solutions to the plight of African American males, a population group that is disproportionately more at risk than males of other races/ethnicities for substance abuse, drug trafficking, violent behaviors, unemployment, debilitating health conditions, and failure in the educational system. This strategic action plan aims to create greater visibility of the problems faced by African American males and to generate public support to eradicate the conditions. It also will provide action steps and specify the combined role that the Federal, State, and local governments; the private sector; and the African American community play in eliminating these negative outcomes.

INTRODUCTION

To develop this strategic action plan, focus groups were employed as one of the methods of collecting data on social problems impacting drug-related crime and violence among African American males. The focus groups helped define and frame the parameters of this national African American male strategy, as well as generate other prevention and intervention strategies targeting African American males. The focus groups comprised three panels of experts: an academic panel, a community panel, and a Government panel. Each panel convened in Washington, D.C., in March and April 1995 for 8-hour sessions moderated by Lawrence E. Gary, Ph.D., of the Howard University School of Social Work. This executive summary focuses on the focus group meeting of the academic panel. Executive summaries of the other panel meetings are provided in separate reports.

The academic panel's role in developing a national strategy was to examine the problems of inadequate education, poor health, impaired social functioning, unemployment, and substance abuse as they impact drug-related crime and violence among African American males and to discover ways by which the role performance of African American males may be

strengthened. Panel members were selected based on their outstanding backgrounds in research and teaching, advocacy efforts, and interest in the subject matter. All were knowledgeable about strategies for eliminating negative outcomes for African American males, as shown in their writings and other scholarly products. Panelists represented various disciplines and professions, including African American studies, fine arts, economics, education, geography, psychology, law, and social work. They also represented various types of institutions, including social agencies, research universities, historically Black colleges and universities, State universities, private colleges, and public and private agencies. The various theoretical, ideological, and epistemological perspectives provided a range of views and ways of examining the problem of the high-risk status of African American males and enriched the discussions related to developing the National Strategic Action Plan for African American Males. The academic panel was diverse by design to represent the diversity of the African American male community. The appendix to this executive summary lists the panel members and their affiliations.

Panel members were asked a series of related questions based on a given theme and were encouraged to ask questions of each another. The discussion was driven by the following questions: (1) Is there a connection between drugs and violence within the African American community? and (2) How much is known about the connection?

The answers to these questions were examined in light of several theories and issues: conspiracy theory, ecological theory, defunct drug control strategies, alternative drug control strategies, protective factors, economic theory, entrepreneurship, media theory and negative images, educational impact, cultural alienation, cultural flexibility, and gender definitions and roles. The following sections summarize the discussions related to these topics.

THE LINK BETWEEN DRUGS AND VIOLENCE

Violence comes in two forms: expressive and instrumental. Expressive forms of violence normally are associated with the use of weapons. Instrumental forms of violence translate into automobile accidents, including alcohol-related crashes and spousal abuse.

The problem of illegal drugs encompasses more than just the use of cocaine, marijuana, or PCP (phencyclidine). Legal drugs such as alcohol, which provide revenues to State and local governments as well as profits for business, also are creating chaos in the African American community. Thus, when we examine homicide deaths in African American communities, we see a disproportionate share of victims and perpetrators with relatively high alcohol contents in their bodies at the time of their deaths. In fact, alcohol often is found to be associated with violent behavior. Moreover, the disproportionate location of liquor stores in African American communities provides easy access to this drug. The traditional definition of drugs, therefore, must include alcohol.

The availability of weapons and drugs in the community also strengthens the connection between drug peddling and violence. Even if the demand for drugs were reduced, America still would be confronted with a vast proliferation of weapons. Easy access to legal and illegal weapons creates a serious problem for the Nation separate from the drug issue. Limited control of firearms has escalated violence in and devastated poor African American communities.

The availability of drugs and weapons in the African American community is a profound problem, and many question whether it is intentional. The ease and ability to secure drugs within the community, the disproportionate location of liquor outlets in residential neighborhoods, and the opportunity for any resident regardless of age to profit from drug peddling all raise the question of conspiracy. Are the things happening in the African American community taking place by design? There is much speculation about whether institutional processes over time operate to differentially encourage African American boys to participate in drugs and violence.

In several major cities, adolescents and teens know where to buy drugs in a stationary location, and it stands to reason that law enforcement officials also must know. African Americans do not have the material means to transport drugs and weapons into their communities from foreign countries, and they are not involved in processing drugs on a large scale. Yet African American males are disproportionately more likely than any other group to be arrested on drug violation charges. How is it that 6 to 7 percent of African American

boys (i.e., under age 19)—just 7 to 8 percent of the total American population—make up 42 percent of all prison inmates? How does 7 percent of the total American population constitute 47 percent of death row inmates?

CONSPIRACY THEORY

As shown in recent years, there are sweeping contradictions between the declarations in the U.S. Constitution and the actual behavior of the leaders who wrote those laudable words. Founding fathers kept their slaves even while they spoke of equality and the rights to life, liberty, and the pursuit of happiness for all men. They also established laws that prevented women and nonland-owning whites from voting. Under the Constitution, the founding fathers put in place a system of race, class, and sex discrimination.

Even though progress has been made toward eliminating race, class, and sex discrimination in American society, the system still is in place. Without conscious intervention to change the entire system as it stands today, these injustices will continue. An analogy can be made with Newton's Law of Inertia: material objects when in motion stay in motion unless otherwise halted. An argument can be made that this law also can be applied to processes, systems, and prevalent ways of thinking. The system of race, class, and sex discrimination must be systematically dismantled to ensure that all individuals are equal and able to experience the promises of the U.S. Constitution.

ECOLOGICAL THEORY

An ecological perspective further supports the notion that drug peddling and violence in low-income African American communities appear to exist by design. For example, in urban areas across the country, neighborhoods and sections of neighborhoods have been allocated for drug trafficking. Anyone can come into these areas and participate, and these areas appear to be protected. Recently, a graduate student collected a portion of data needed for a master's thesis by riding through a low-income African American neighborhood with the local police "top squad," which seizes drugs and drug money from homes. The student noticed that the top squad knew who was selling drugs, who was buying drugs, and even the amount

of drugs flowing into the neighborhood. Yet no arrests were made. On another occasion, a college professor gathered ethnographic data by riding through a neighborhood with a police officer who could identify drug traffickers by name and who knew how many times and for what offenses they had been arrested. The officer even suggested that they sit and watch a drug transaction. And yet again, no arrests were made. These incidents give the impression that there is a conspiracy to perpetuate and protect drug peddling in low-income African American communities.

African American communities are plagued by abandoned buildings, a lack of quick sanitation removal, and litter. When neighborhoods begin to deteriorate, many individuals take the opportunity to pollute them, and this neglect fosters crime. Residents must reclaim deteriorated and abandoned spaces in their neighborhoods. Reclaiming geographic areas designated for illegal activity will reduce violence and criminal activity because these areas are where crime is centered. Reclaiming the community includes using school buildings after hours for community activities such as academic programs, sports, art and music classes, general equivalency diploma preparation for adults, and parenting workshops.

Even though the ecological perspective gives some credence to the notion that drug peddling and the resulting violence are intended and even encouraged, blaming the drug problem on external forces—an active conspiracy—absolves African Americans of their responsibility for cleaning up their own neighborhoods. Some contend that since there is a shortage of creative, broad-based strategies to confront the problems of drugs and violence at all levels of government and in the private sector, drugs continue to wreak havoc on low-income African American communities. Therefore, the absence of innovative strategies make the conspiracy theory appear to be a less plausible explanation of the drug crisis.

DEFUNCT DRUG CONTROL STRATEGIES

With lucrative drug profits; increasing demand; and little emphasis on treatment, rehabilitation, and prevention, drugs flourish. As soon as one drug trading operation is shut down, another one takes its place. Current solutions to the drug crisis focus on law enforcement attacking drug trafficking at its lowest level—the street level. Community

policing and drug policy efforts have been ineffective at stopping the flow of illegal drugs. These strategies have not been successful at infiltrating the top levels of the drug distribution hierarchy and areas of marketing.

We must begin approaching the drug problem differently. Guaranteed drug treatment options would aid the United States' fight against drugs tremendously. Unfortunately for many African American males, access to services is linked to financial resources. Low-income individuals with limited or no health insurance have difficulty accessing long-term drug rehabilitation services. Without drug rehabilitation options, having a drug problem becomes defined as committing a crime. A lack of drug rehabilitation resources puts African American males at risk of being involved in the criminal justice system. If there is a demand for drugs, there will be a supply of drug peddlers.

When cocaine was first introduced in America, it was used in soft drinks and medicines. Over time cocaine abuse developed among white housewives. Cocaine then became popular among movie stars and the rich and famous. Cocaine was not viewed a critical problem until it gained use among the "common man," and treatment became the appropriate way to deal with it. With the introduction of crack-cocaine, the cheapest form of cocaine, the drug became the problem of inner-city poor. Solutions have gone from concern and treatment in upscale clinics to law enforcement activities. There have been massive increases in drug-related arrests and incarcerations in this country over the last 10 years, primarily of young African American and Hispanic males.

The story often is different for whites. Recently the media delivered a series of reports on roving white female gangs engaged in violent activities. Members of these gangs never went to jail, and instead, social workers and school officials created strategies to deal with their behavior. These efforts point to the fact that more front-end drug prevention strategies are needed to steer African Americans away from drugs and incarceration.

ALTERNATIVE DRUG CONTROL STRATEGIES

Public opinion research on criminal justice has found that people are supportive of tough crime measures, but the research also has found that people would be supportive of drug treatment and job creation as a means of dealing with crime. People are open to alternative strategies to fight crime because in many instances, funding for criminal justice initiatives has exhausted community resources and put a strain on spending for other public expenditures such as education. It is more expensive to imprison a criminal for 1 year than it is to attend Harvard University for an academic year. Therefore, some people are questioning whether using prevention efforts to fight crime can be more cost-effective, better improve public safety, and have a longstanding positive impact on lowering crime rates compared to incarceration. Eighty percent of current prevention efforts are divided between the 10 percent of children who are not at risk—these individuals will make wise choices regardless of the interventions to which they are exposed—and the 10 percent of children who are going to make bad decisions and become involved in criminal or violent activities regardless of the interventions they experience. Few prevention resources are targeted toward the 80 percent of children whose lives are not clearly aimed in one direction or another.

PROTECTIVE FACTORS

Many young African American males have value systems and discover paths that steer them away from drugs. (The term "drugs" covers any involvement with drugs, including peddling and abuse.) It should be duly noted that not all African American males are participating in violence and criminal behavior. Not all are having difficulty in school or dropping out. What makes them different from those who engage in drugs and violence? The answer might be protective factors. Protective factors are those characteristics closely aligned with resiliency and strengths. Even though there may be adverse influences in a male's life, he is able to move away from and survive negative forces because he has the benefit of certain values, expectations, institutions, family arrangements, and policies that make him less susceptible to undesirable behavior. Prevention efforts must be based on strengthening resiliency in young African American men.

The criminal justice system is aware of situations and experiences that dramatically increase a person's chance of delinquency and criminality. A 20-year longitudinal study found that child abuse and neglect placed a person at 50-percent more risk of juvenile delinquency and adult criminality than those who did not experience abuse or neglect. Over the last decade, a prominent researcher has worked with children who seem to suffer from a malady similar to posttraumatic stress disorder due to the violence they have witnessed in their neighborhoods, such as drive-by shootings and family members and friends being murdered. If services are not available that take into consideration a child's emotional needs while accurately identifying and treating the problem, he or she will become a young adult who strikes out against society by committing crime or behaving violently or who abuses drugs or otherwise acts in a self-destructive manner. Not all children who are abused or who witness violence fall prey to or adopt a life of delinquency or criminality as adults. Again, these children seem to have had various important resources, appropriate treatment options, and family situations that protected them.

Timely and easily accessible counseling services would greatly reduce a child's risk of becoming involved in drugs and violence as an adult. A fairly simple piece of public policy would be to establish a formal counseling program for crime victims. Children who have witnessed or experienced severe acts of violence or have been abused should be counseled immediately after an incident in rape crisis centers, hospital emergency rooms, and community policing units. These are the places they end up after they have been abused or witnessed violence. It also is known that children who have experienced failure at school are at greater risk of becoming involved with the criminal justice system compared to those who succeed in school.

Children who experience difficulties at school or are disruptive should be offered an alternative learning environment. Cooperative educational programs can benefit these children. In these programs, children may spend half the school day building proficiency in reading, writing and mathematics and the other half day enhancing trade skills. They also may serve as apprentices to journeymen (e.g., plumbers or carpenters) and actually work a job, such as rehabilitating housing. Working under the auspices of a trained professional teaches children how to solve problems as well as two other, economically valuable skills in

the United States: how to give and how to receive orders. Profits from the newly renovated buildings could be shared: half the money could go toward buying materials for the next building project, and half could go back into community and local governments.

To be effective, prevention programs must be longitudinal. Community-based initiatives that intervene in people's lives over long periods of time and throughout the stages of their life tend to be more effective than cross-sectional programs. Cross-sectional programs intervene at one point in time only; followup services in these programs are rare. Public opinion research has found that the public would be open to these sorts of strategies to fight crime, and many believe that America desperately needs a change in priorities.

The current political leadership has broadcast only one set of solutions to the problems of drugs and violence in the United States: incarceration and the construction of more prisons. Other options must be presented to the American public as solutions to the crisis. Furthermore, because of the dramatic devaluation of the Federal Government's role in dictating social policy, States will soon have more responsibilities. Organizations that serve the African American community will need to be prepared to compete for services and funding at the local level. African Americans must not only lobby at the State level to ensure that they receive their fair share of benefits from State governments, but they also must make sure that local governments are presented with alternative solutions to correcting the drug and violence crisis. Enhancing economic opportunities for African American males must be among the solutions.

ECONOMIC THEORY

What economic forces put African American males at risk of participating in drugs and violence? To an at-risk youth, the drug trade offers high wages, high status, and a sense of importance. Legal employment options open to African American males pale by comparison. The jobs often do not offer wages above the poverty level and do not give a person high social status among peers. Even though low-wage laborers are essential to the division of labor, they are not respected; societal views on low-income labor have been wholly negative. Individuals attain status in society by how much income they earn and the types of

job they procure. The absence of hope for legal economic stability and high social status naturally leads some African American males to the only employment situation that provides these necessary things—drug peddling.

What has happened to high-wage jobs for African American males? The answer lies in examining what has happened to the American job bank. Real median incomes have gone down, and the number of jobs has decreased. America lost nearly 2 million manufacturing jobs in the 1980s and 1990s. Currently, the country is experiencing a high rate of job creation, but most of these are part-time jobs that do not offer fringe benefits. The current employment dilemma was originated in 1981, when specific public policies were designed to benefit high-income whites. Policies on taxes, international trade, and deregulation were implemented that had a devastating impact on jobs for the working class and for African Americans in particular. Today the “angry white male” concludes that women and minorities are the cause of their inability to secure high-wage jobs. Even though they have access to information that say this is not the case, they seem to be deluding themselves about the true causes. Policy initiatives that give minorities and women equal access to employment, housing, and credit should not be thwarted to appease this group. Turning back civil rights will not create jobs for working class white males. Policymakers must focus on reversing those policies established in 1981 that brought the country to this point of economic vulnerability. A cost-benefit analysis should be done on the effects of tax breaks given to the wealthy and corporations and how this impacts employment and wages for African Americans as well as for the white working class.

High rates of immigration have been eroding legal high wage employment options for African American males as well. Since the 1970s, nearly 30 million immigrants have come into the United States. These immigrants compete directly with African Americans for social services, housing, and education, as well as for a place in the American labor market. Labor is not exempt from the law of supply and demand; anything that increases supply reduces demand. High immigration depresses labor markets as well as wages. Many employers prefer operating in depressed markets because labor is abundant and wages are low; the minimum wage has not kept up with inflation.

**EXECUTIVE SUMMARY: ACADEMIC PANEL MEETING ON THE NATIONAL STRATEGIC ACTION PLAN
FOR AFRICAN AMERICAN MALES**

Americans should have the best possible economic advantage. A high-wage industrial policy (i.e., a policy in which demand for labor is high and wages are high) would ensure this. Two economic strategies should be considered. One is to halt the influx of low-wage immigrants; the other is to raise the minimum wage, making it impossible for employers to use low-wage labor. However, without the existence of tighter regulations and higher tariffs on imported goods, the danger of both these strategies is that employers may move their businesses to foreign countries.

Unlike white Americans, African Americans are disproportionately more dependent on labor for income for economic security than they are on earnings from economic investments that produce wealth (e.g., stock and real estate). African American investment and savings practices and access to capital should be strengthened. Discrimination in lending practices often denies African Americans access to homeownership, the first step in creating wealth. Economic policy must include a closer examination of employment and housing discrimination practices that affect African Americans. Even though laws address discrimination, members of the enforcement agencies have been ambivalent about whether the laws ought to be enforced. If they are enforced, then there is ambivalence about the vigor with which they will be enforced. For example, 5 years after the Home Mortgage Disclosure Act—which requires documentation of the race of applicants seeking credit for mortgages—the oversight agency denied that there was any discrimination in lending and therefore was not implementing the law. Current penalties for lending discrimination should be aggressively imposed on firms found to be breaking the law, and the penalties should include public disclosure of those firms.

The total African American annual income is more than \$350 billion. However, examining net wealth shows that this figure does not translate into actual wealth. Net wealth is the difference between the value of one's assets and the amount of one's debt. The primary source of wealth for African Americans is in depreciating assets such as cars and not in equity ventures or appreciating assets such as housing and checking accounts. For whites, the primary source of wealth is housing. African Americans also save conservatively, putting proportionally more into certificates of deposit and Government bonds, not into stocks and long-term investments that have the potential for high yields as whites do.

Economic institutions that serve the African American community, in spite of community reinvestment acts, have not been great sources of capital for African American entrepreneurs. Minority-owned banks have not been active advocates of community investment. Economic institutions serving the African American community should be supported, and strategies should be adopted to strengthen them. These institutions in turn must be held accountable to the community. Economic institutions that hold African American pension funds should be lobbied to invest those funds back into the community, in urban enterprise and empowerment zones, for example. These ventures can be effective in stabilizing industries and restructuring communities. Enterprise and empowerment zones essentially ensure that community residents are the recipients of newly created jobs and that residents have influence in the economic institutions that serve them.

ENTREPRENEURSHIP

Another factor affecting income and wealth in the African American community is lack of entrepreneurship. An entrepreneurial class has not been created within the African American community. Jobs are typically found outside the community's borders. This places African Americans at risk because the community's economic life force is externally controlled. Even though there have always been those who have advocated self-help and have created highly successful businesses, no longstanding industrial and employment base has been developed and sustained within African American communities. The current American economic situation makes it vital that African Americans place a heavier emphasis on creating their own jobs. Not having economically viable institutions built into African American communities puts males more at risk of participating in drug peddling.

The information highway can be used to generate an entrepreneurial class by exposing young people to future communication and industry technologies that will translate into jobs. Educational institutions are needed to prepare young people for the business world. Every community has a library, a schoolroom, and a church in which universities (through the local school system) can teach young people about advanced technology. However, there is a serious debate in the economic literature about whether it is access to technology that improves wages or whether changes in problemsolving skills required to

manipulate technology can increase wages. In the absence of further information, policies should be developed that cover both predictions. Providing access to technology and teaching children higher levels of problemsolving skills are both necessary in building an entrepreneurial class. Enlisting individuals in entrepreneurial training programs also cannot be overlooked. Stairstep, Incorporated, in Minneapolis, Minnesota, provides an effective training model. The program operates a food franchise in the inner city and employs kids with the goal of taking a certain number of them to Africa. Participants work in the food franchise to help pay for their month-long trip. In the process they learn business principles, and those who go to Africa create linkages with African entrepreneurs who become role models.

MEDIA THEORY AND NEGATIVE IMAGES

It has long been thought that television transmits standard American values. Researchers have examined how much and what types of television programs children are watching. Even though children are watching educational and informative programs, the vast majority of what they view contains violence. Young children are socialized by what they see; they repeatedly view negative images of themselves and of violence, and negative self-images emerge and are internalized. These images then are translated into behaviors that are destructive for the children and society.

Talk shows, films with violent themes, and television programs that perpetuate and celebrate violence are part and parcel of American culture. But who benefits from American culture being violent? This question must be viewed within the context of the political and economic structure of the United States. American powerbrokers control the dissemination of values through entertainment. They are making millions of dollars from the current tide of violence in America because real-life violence often inspires movies and television scripts. Violent programming yields the highest financial returns on the international entertainment market, and violent programs and movies can more easily obtain domestic sponsorship than can movies and shows with nonviolent themes.

Negative images in film and television have helped to establish stereotypic opinions about African American males. For example, a host of police dramas portray African American males as villains and drug users. These and other programs glorify violence. Furthermore, the news media portray the African American male as violent and as a drug peddler. Images of drug peddlers, drug importers, distributors, and marketers of other races/ethnicities besides Hispanics are rarely shown, and the media rarely discuss drug violence and crime committed by whites.

Negative images about African American males in the media, particularly in television programs, have led to the colorization of drugs, violence, poverty, and crime. The media reinforce the general public's perception that African American males are more violent and more criminal than whites and that they are responsible for all the crime in society. Research has shown that there is no statistically significant difference in the prevalence or incidence of drug use among incarcerated white, African American, and Hispanic inmates. Furthermore, there is no statistically significant difference in the number of drug sales to the various racial/ethnic groups. There was a small difference in the rate of gang fights among the various groups in the early 1980s, but the prevalence of gang fighting was higher among whites than among African Americans.

In one survey of high school seniors, data showed that among white and African American students, there was no statistically significant difference in the use of any drugs except heroine, for which the rates were highest among African American students. There was no statistically significant difference, however, with regard to cocaine and marijuana use. In another study, data showed that there was no statistically significant difference in self-reported theft rates among whites and African Americans. A national child abuse agency found a higher incidence of child abuse among whites than among African Americans. According to Federal arrest statistics by race, of 31 categories counted, African Americans exceeded the arrest rate of whites only in the categories of murder, robbery, gambling, liquor law violations, and suspicion (i.e., arrest due to a police officer's suspicion that an individual may have committed a crime, which is related to image); in all other types of arrest, whites exceeded African Americans. Yet, there has been little discussion of eradicating violence in white communities.

Many in the African American community do not realize how powerful, pervasive, and manipulative television can be. An educational campaign is needed to sensitize adults to the impact of these negative images. Age-specific children's books also are needed to explain how to watch television and serve as tools to teach positive image formation. African Americans need to systematically critique and correct the negative images projected onto them because these images have far-reaching effects. The African American community must offer the public alternative images of who they are. The African American media and public access television should be more fully utilized to offer these new images. Most African Americans do not take the initiative to express their opinions about media images. Letter writing campaigns, often used by other groups, are a most effective strategy. For instance, the Stigma Clearinghouse operated by the Advocates for People With Mental Illness examines movies, television, mass media, and books and mounts letter writing campaigns. The clearinghouse also prompted incorporation of trailers at the end of programs with schizophrenia themes that state, "Nothing in this show is meant to imply that people with schizophrenia are more violent..." African Americans can create a watch-dog group similar to this one to respond quickly and appropriately to correct negative images of African Americans.

Independent African American filmmakers who present balanced and positive images of the community should be supported. Films that exaggerate or project false or negative images of the African American community must not be supported financially. The Government can play an active role in reshaping images of African Americans; the Government and the African American community together should mount an active campaign to counterbalance the negative images of African American males. This is not a strange concept. After all, the Government has mounted a campaign to rehumanize the Russian people, once America's archenemy. The same thing could be accomplished for African American males. African Americans should financially support a rehumanization campaign of African American males that uses public service announcements.

EDUCATIONAL IMPACT

Negative images in the media and perceptions in the general public also affect how African American males are treated in classrooms. By the time an African American male starts school, he has been cast as violent and a low achiever. In one survey of African American public school students in New York, 78 percent believed that white teachers were afraid of them, while only 14 percent thought African American teachers were afraid of them. Stereotypes cause teachers to view African American students as culturally and educationally disadvantaged and immoral and, therefore, incapable of learning. Inner-city teachers in particular stop teaching and become solely concerned with keeping the classroom quiet. Longitudinal research shows that when boys progressively encounter negative schooling experiences as they move into adolescence, their ego centers shift, school becomes less important, peers become more important, and their urge to succeed in school diminishes. Teachers must establish warm relationships with African American boys. Motivating African American boys to learn is directly tied to whether the boy perceives that the teacher likes and cares for him.

Placing African American male teachers and administrators in elementary and secondary schools would provide role models for boys. Their presence would offset television-enhanced stereotypes and would decrease the risk of academic alienation, and academic performance would improve. African American men in the schools also would increase discipline among students and show boys that school, reading, and studying are male activities. In the 1960s, teachers were given incentives for teaching in inner-city schools. This should be supported once more, but compensation must be tied to excellent teaching. Teachers in the inner city who perform poorly should be removed from their teaching responsibilities.

CULTURAL ALIENATION

Culture is defined as the way in which people think and behave. Culture is a set of values. Philosophical assumptions undergird values and are manifested in behavioral ethos and patterns that are considered appropriate and normal. Values include symbols, music,

and styles of dress. There is a set of values and philosophical assumptions that can create risks for African American males. The discussion of cultural risk factors for African American males is framed within the context of differentiating between African American males who engage in drug trafficking and violence and those who do not. Culture alienation or cultural oppression can be used to describe the relationship between drug abuse and violence among African American males.

African Americans, being forcibly brought to the United States, had to adapt to a set of cultural expectations that were distinct from the traditional values and ethos of the African people. American culture emphasizes individualism and materialism and supports a physical and sexual definition of self-worth. Males are considered men based on their sexual vigor, physical strength, and the jobs they hold and their level of salary. American culture also puts a heavy emphasis on conflict as a natural outcome in human relations. Conflict is seen as a means of resolving problems. These values do not affirm the human spirit or encourage moral development. American culture also is beginning to question the existence of a spiritual force in the universe. Yet, for African Americans, acknowledging a spiritual force is key to developing sound morals. The internalization of general American values creates risk for African American males.

Traditional African-centered values and culture emphasizes collectivity and a collective view of identity. There is a strong emphasis on both a spiritual and a material view of human phenomena. A heavy emphasis is placed on social responsibility and mutual aid. Currently many African American communities hold similar values. They acknowledge a spiritual force that is divine and that guides them morally and ethically, and many members of the community feel a strong sense of social responsibility. Current research shows a link between the internalization of Afrocentric values (i.e., emphasizing collectivity and spirituality) and violence, delinquency, and academic performance among African American youth. Internalization of, and operating from, a value system that is not collective and humanity affirming puts a person more at risk of involvement with drugs and violence.

CULTURAL FLEXIBILITY

Adopting traditional African values would be beneficial not only for African Americans, but for all Americans. With an emphasis on collective success and social responsibility, the United States on the whole would be a more peaceful and less stressful society—a more emotionally fulfilling, not to mention more productive, safe, and psychologically stable country. Given the current tide of consciousness in America, however, this is unlikely to happen. This creates a dilemma for African Americans. Knowing this, cultural flexibility becomes important because African Americans must be able to move between Eurocentrism and Afrocentrism. Problems of cultural alienation suggest that lack of cultural flexibility is a risk factor for involvement in drugs and violence. If African Americans are going to be successful in America, they must become bicultural. Being able to operate within the larger American society while internalizing and morally operating under an Afrocentric or African-centered value system is critical to African American males. However, operating from an African-centered value base is not a celebration of its antithetical relationship to Eurocentrism.

In discussing cultural flexibility, a distinction must be made between cultural adaptation and cultural adoption. Cultural adaptation involves working within the philosophical assumptions of society. Adoption refers to a deeper internalization of the core cultural values. African Americans can adapt to American culture without adopting it. When African Americans try to adopt American culture, it produces a conflict between their reference group and their membership group. Even when African Americans seek to integrate or to adopt, they never have central standing with the majority; conflict arises between what they would like to be and what they are allowed to become. Adopting American culture also devalues African Americans' unique cultural expression in behavior and language. As a result, African Americans begin to question whether expression of their culture is an essential strength.

Several strategies are needed to help African Americans become culturally empowered. Public policy mandates must be created that support cultural diversity and inclusion. Policies of diversity, pluralism, and sensitivity must be incorporated into the

academic preparation of teachers. Diversity courses in sexual harassment already exist to teach men and women about sexual harassment. Racial harassment courses should be created as well. African-centered principles such as collectivity, spirituality, and social responsibility should be affirmed and internalized by the community. Manhood training and rites of passage programs should be undertaken. African Americans could create a "Black Bar Mitzvah," a series of rituals that formally reinforce recognition of the roles and responsibilities a person will encounter throughout the stages of life.

Racial and gender socialization are key components of cultural empowerment. A noted French sociologist in the late 19th century stated, "If we are to have a France in the future, we must make French children. Nature makes children. We must make them French." If there are to be African American children, African Americans must make them. When African Americans allow others to culturally train their children, cultural authenticity is lost, especially in the classroom. The media should not be transmitting culture to African American children. African American parents should more fully utilize the religious sector for the political and moral socialization of their children.

Children should be educated about racism. They must be consciously aware and understand that racism is a fact of life; parents should not try to deny that it exists. Research has shown that children imitate their parents in racially charged situations. Denying or not acknowledging racism can be detrimental for African Americans. A story was told of a man from Haiti who went to south Boston during the busing crisis; he was almost murdered although he kept telling the crowd that was trying to kill him, "I am not Black; I am Haitian."

Conscious racial socialization for children protects incentive and self-esteem and prepares them psychologically for dealing with life. Early childhood programs that teach racial awareness in schools are needed. These programs can be developed so that there is cultural continuity between the school and the home. African American women are the primary socializers of African American children, and men are especially important in the socialization of boys. If positive African American men are absent, boys will turn to male peers for direction.

GENDER DEFINITION AND ROLES

American culture dictates that a boy becomes a man when he takes on the role of sole provider and protector within a family. The American definition of manhood is founded on the principles of male dominance and power and female dependence. Machismo has become an integral component of manhood and self-esteem, and it also is a great stimulus to violence. Societal institutions, the media in particular, do not legitimize or support men who assume other roles, such as nurturers and caregivers. This narrow definition of manhood has steered public discourse on the definition of manhood away from identifying the other essential roles men can assume.

An examination of American gender stratification and its impact on African American families warrants discussion. Defining African American men primarily as providers has damaged their level and quality of family involvement and has devastated the African American family structure. With few educational and legal employment opportunities, many turn to drug peddling to gain manhood status. Others have simply given up trying to fulfill their responsibilities and have left their families. Consequently, welfare has become "father" for many African American children. A new value system of ambivalence toward familial responsibility has crept into many young African American males. More indepth discussion is needed to examine how these gender role constructions and definitions take men out of families and contribute to problems in the African American family.

Major innovations are needed to help African American males recognize their importance to the survival of the African American family. African American males must receive positive messages about the value and necessity of legitimate types of work. There is still a place for the economic provider role for males within the family, but its importance must be viewed as relative to the other types of roles men can and need to assume.

Even if a father is absent from the home, mothers can do several things to make sure their boys receive appropriate messages about manhood. They can actively seek out and connect their sons to African American organizations that sponsor activities for boys wherein the sponsors or directors of those activities are responsible African American male adults.

Mothers also can seek out male friends and extended family members who can serve as positive role models for their sons.

CONCLUSION

The Academic Panel defined the link between drugs and violence in light of the following theories or perspectives: conspiracy theory, ecological theory, defunct drug control strategies, alternative drug control strategies, protective factors, economic theory, entrepreneurship, media theory and negative images, educational impact, cultural alienation, cultural flexibility, and gender definitions and roles. A full listing of the panel's recommendations on strategies for reducing the prevalence and incidence of drug involvement and violence among African American males is found in the final report titled *The National Strategic Action Plan for African American Males*.

APPENDIX

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Draft Policy Brief

DRUG PREVENTION PROGRAMS FOR HIGH-RISK YOUTH

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■ November 1995 ■

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EXECUTIVE SUMMARY

Preventing alcohol and other drug (AOD) use among youth remains a paramount concern of American parents, educators, and policymakers. Thousands of programs designed to prevent AOD use operate around the country. Most of these programs have been developed for and tested on general, in-school populations of youth, many of whom are at low risk for using substances. Little is known about the effectiveness of these programs for youth who are most at risk of AOD use, including youth living in neighborhoods characterized by poverty, social disorganization, and crime; children of substance abusers; children who drop out of school; pregnant teenagers; and juvenile offenders.

While special programs designed to prevent AOD use among high-risk youth have been developed, few have undergone rigorous evaluation to determine their true effects on deterring and reducing AOD use. In fact, most data collected on these programs measure changes in participants at two time points only, subjecting the studies to a host of confounds and alternative explanations for any positive changes encountered. Nevertheless, the field has had to rely, and continues to rely, on such data to judge program success. For example, just 14 of the 67 programs reviewed for this report employed experimental or quasi-experimental designs to compare outcomes for program participants with similar groups of youth who did not participate in the interventions.

This report (1) provides an overview of the prevention field; (2) discusses the approaches and findings of evaluations of 67 substance use prevention programs for high-risk youth reporting positive results, providing detailed descriptions of 18 of them; and (3) offers recommendations for improving the Nation's capacity to prevent AOD use in populations of high-risk youth.

Considerable diversity was found among AOD prevention strategies. These strategies include providing adult mentors to youth, employing high-risk youth to assist disabled students, providing opportunities to perform in a steel band, coordinating a visit to a hospital trauma unit, and providing parenting skills training to youths' parents. Few programs used

a single strategy; most commonly, they combined life skills training (i.e., training designed to develop personal and social competencies and ability to resist peer pressure) with another intervention.

Most contemporary prevention programs focus on reducing risk factors and building resiliency in youth. Rather than waiting to target AOD behaviors directly once they occur, the programs seek to bolster personal and interpersonal competency, improve family relationships, strengthen parenting skills, provide social support outside the family, and enhance academic achievement and school bonding so that youth navigate more successfully through adolescence and avoid involvement with AODs.

Outcomes targeted by AOD prevention programs reflect concern about the need to increase resiliency. Reported outcomes often are not behavioral measures of AOD use but intermediate outcomes of increased school achievement, reduced truancy, enhanced psychosocial functioning, and reduced behavior problems. These variables have been demonstrated to be correlates of substance use. However, a direct relationship between attaining these intermediate outcomes and reducing subsequent substance use has yet to be established.

The prevention field in its current state can offer no definitive answer to the question of which strategies are most effective in preventing AOD use among high-risk youth. To better address the problem of AOD use among the neediest populations of youth, CSR offers the following recommendations:

- Include rigorous evaluation of short-term effects as a requirement for receiving Federal funds. Despite the implementation of thousands of drug prevention programs nationwide, the field knows little about which strategies are most effective and which intermediate outcomes can best be effected.
- Use a stricter criterion of demonstrated outcomes to determine and report program success in publications and award ceremonies recognizing exemplary prevention programs.

- Fund more longitudinal studies to determine the long-term effects of AOD prevention strategies and enhance the field's understanding of the relationship between reducing specific risk factors and later substance use behavior.
- Replicate only those programs that prove effective through rigorous research.

The prevention field shows considerable promise in reducing risk of AOD use among high-risk youth. Programs have demonstrated that they can produce positive, short-term effects. However, much work remains to be done to build a stronger foundation of knowledge that can firmly support long-term efforts to help high-risk youth avoid the dangers of AOD use in both adolescence and adulthood.

DRUG PREVENTION PROGRAMS FOR HIGH-RISK YOUTH

Despite their comparatively small numbers, strategies do exist that have demonstrated effectiveness in preventing alcohol and other drug (AOD) use among high-risk youth. This report (1) examines the current knowledge of programs and strategies shown to be effective in preventing AOD use among high-risk youth, (2) discusses the approaches and findings of evaluations of 67 AOD prevention programs, and (3) offers recommendations for improving the Nation's capacity to prevent AOD use in high-risk populations.

INTRODUCTION

After a decade of steady decline, drug use among American adolescents began to rise in the early 1990s (Johnston, O'Malley, and Bachman, 1994). Although current rates of drug use are still far below the highest levels of the late 1970s and early 1980s, this upswing in substance use calls attention to the need for continued development, testing, and replication of effective drug prevention programs.

Fueled by longstanding concerns about the incidence of AOD use among children and adolescents, thousands of drug prevention programs have been developed and implemented across the country. The most common programs are school based, designed for the general, in-school population. School-based programs, however, fail to reach many youth who are at highest risk of substance use, such as youth who are chronic truants or school dropouts (Norman and Turner, 1994). Moreover, many programs have been developed for majority populations of youth (primarily white, middle-class students), and their effectiveness with high-risk youth has not yet been established. There are far fewer programs—and few evaluations of such efforts—designed to target youth who are most vulnerable to AOD involvement. Clearly those youth who are at highest risk of using drugs are in most need of prevention programs.

The first section of this report provides an overview of the prevention field and the current state of prevention research as well as a detailed discussion of the methodology used

in this review, the second section reviews the strategies and findings of 18 of the 67 promising programs examined, and the third section presents CSR's policy recommendations for building a more solid foundation of knowledge and enabling the field to better prevent AOD use in high-risk youth.

Defining Risk and "High-Risk Youth"

Contemporary prevention theory and practice predominantly focus on reducing risk factors and increasing resiliency in youth. Hawkins and colleagues (1992) identify 17 factors statistically associated with the onset of drug use. These risk factors fall into three categories—contextual, interpersonal, and individual—and are discussed in the following sections.

Contextual Risk Factors

Contextual risk factors focus on broad social and cultural norms for behavior. The following are contextual risk factors for AOD involvement:

- Laws and norms favorable toward AOD behavior;
- Availability of AODs;
- Neighborhoods characterized by extreme economic deprivation; and
- Neighborhood disorganization.

Interpersonal Risk Factors

Interpersonal risk factors focus on families and peers, both of which can have a significant effect on adolescent drug use. The following are interpersonal risk factors for AOD involvement:

- Family AOD use;
- Poor and inconsistent family management practices;
- Family conflict;
- Low bonding to family;

- Peer rejection in elementary school; and
- Association with drug using peers.

Individual Risk Factors

The individual factors that put youth at risk for AOD use are physiological, psychological, and behavioral. The following are individual risk factors for AOD involvement:

- Physiological characteristics of sensation-seeking, low harm avoidance, and genetic susceptibility;
- Early and persistent behavior problems;
- Alienation and rebelliousness;
- Attitudes favorable to drug use;
- Academic failure;
- Lack of commitment to school; and
- Early onset of drug use.

Risk-based approaches to AOD prevention focus on eliminating or reducing these precursors of substance use. Because some risk factors may be difficult if not impossible to eradicate, increasing protective factors to mediate or offset the risk factors is a critical component of risk reduction approaches. Research has identified the following protective factors as leading to greater resiliency and less risk behavior in youth living in high-risk environments: individual positive temperament and disposition, including self-esteem and a sense of control; a supportive family environment; and an external support system that encourages positive development and social values (Hawkins et al., 1992; Stein et al., 1992).

Research has found that as the number of risk factors increase, the more likely it is that youth will use AODs (Austin and Pollard, 1993; Goplerud, McColgan, and Gardner, 1992). However, there is no consensus on the number and type of risk factors that must be present in a youth's life to categorize the youth as high risk. Although Federal antidrug grant programs frequently designate "high risk" or "at risk" populations as target beneficiaries of drug use prevention resources, the labels "at risk" and "high risk" often are used interchangeably and to define populations by a variety of characteristics, including sociodemographics (e.g., race/ethnicity or low income); geography (e.g., urban or high crime area); environmental factors (e.g., homeless or juvenile justice); health status (e.g., pregnant or mentally ill); and behavior (e.g., school dropout or current substance use) (CSR, 1994).

The Demonstration Grants for the Prevention of Alcohol and Other Drug Abuse Among High-Risk Youth program of the Center for Substance Abuse Prevention (CSAP) defines a high-risk youth as an individual under age 21 who (1) is the child of a substance abuser, (2) has been physically or sexually abused, (3) is a school dropout, (4) has become pregnant, (5) is economically disadvantaged, (6) has committed a violent or delinquent act, (7) has mental health problems, (8) has attempted suicide, (9) has experienced long-term physical pain due to injury, or (10) has experienced chronic failure in school. This review uses this fairly comprehensive definition to examine programs that target high-risk youth.

OVERVIEW OF PREVENTION LITERATURE

Drug prevention programs for youth usually are multifaceted. Programs rarely use one prevention strategy exclusively. Instead, most programs contain a range of prevention activities. For example, most school-based prevention curricula include (1) factual information about drugs and drug use; (2) life skills training, including resistance skills training and social and personal skills training; (3) identification of alternatives to drug use; (4) exercises to increase self-esteem; (5) instruction in stress management; and (6) public pledges by youth not to use drugs (Gerstein and Green, 1993).

The complex nature of multifaceted curricula makes determining the effectiveness of specific components difficult. Although alternative activities used alone fail to produce positive effects on AOD use—and have, under certain circumstances, actually increased

use—their ability to produce an added benefit when combined with effective components such as life skills training has not been determined. Outcome evaluations measure the effectiveness of the intervention as a whole; they rarely can attribute outcomes to individual components. Therefore, when program operators seek to replicate a program demonstrated as effective, it is important that they remain faithful to the program model in its entirety to maximize the likelihood of replicating desired outcomes. Moreover, there is consensus in the field that no “magic bullet” for prevention exists but that multiagency, multicomponent programs will more likely produce the most positive effects for the greatest number of youth than strategies focused on a single approach (Dryfoos, 1992; Logan, 1991).

This section provides an overview of traditional and new approaches to preventing AOD use among youth.

Traditional Approaches

Approaches to AOD prevention have been developed over the past two decades as more knowledge has accumulated about what does and does not work. Traditional approaches to AOD prevention have included one or more of the following strategies designed to target youth (Schinke, Botvin, and Orlandi, 1991): the information approach, fear arousal, affective education, and the alternatives approach.

Information Approach

The information approach is based on the premise that if youth have accurate information about the hazards of drug use, they will develop negative attitudes toward drugs and avoid using them. This approach provides factual information on the nature, pharmacology, and adverse consequences of AODs. This approach, while capable of increasing knowledge about AODs and AOD use, has not proven effective in deterring drug use. In fact, evidence suggests that this “information-only” approach may actually increase use by arousing curiosity (Montagne and Scott, 1993; Norman and Turner, 1994).

Fear Arousal Approach

The fear arousal approach focuses on dramatizing the hazards of AOD use, portraying grave consequences for anyone who uses drugs (Schinke et al., 1991). This type of approach also suffers because the negative claims frequently are exaggerated, causing youth to disbelieve the program and ignore the messages (Norman and Turner, 1994).

Affective Education Approach

Affective education does not focus explicitly on substance use but is directed toward psychological factors that place youth at risk of substance use. Programs taking this approach try to impact drug use by bolstering self-esteem, helping youth clarify their values, and promoting self-growth (Dryfoos, 1990). Little evidence exists, however, that this strategy impacts substance use (Dryfoos, 1990; Schinke et al., 1991).

Alternatives Approach

The alternatives approach assumes that providing youth with alternative activities to drug use will cause them to be engaged, challenged, and therefore less likely to use AODs. However, little empirical support exists for this assumption and for the efficacy of this approach (Norman and Turner, 1994). In fact, research has found that alternative activities of a social nature actually can increase AOD use because substance users often are present in the settings in which social activities take place, and associating with drug-using peers is a powerful correlate of AOD use (Norman and Turner, 1993).

New Approaches

Traditional approaches have not proven effective in preventing AOD use. New approaches to preventing AOD use are more grounded in theory and research, although the effectiveness of newer strategies continues to be judged less on rigorous studies of long-term outcomes and more on expert opinion (Smith, Langenbahn, Cole, Kaufman, and Newlyn, 1993). Approaches currently considered to be the most promising are those that focus on psychosocial factors and the importance of social influence in drug use (Dryfoos, 1990;

Norman and Turner, 1993; Schinke et al., 1991) as well as those that incorporate family and community involvement. Current approaches include life skills training and community-based approaches.

Life Skills Training Approach

The life skills training approach is referred to alternatively in the literature as life skills training, the social environmental model, social influence and life skills, social learning model, and personal and social skills training. This report uses the term "life skills training." Life skills training, designed to develop youth's personal and social competencies and ability to resist peer pressure, is based on social learning theory. It emphasizes the influence of peers, parents, and the media on substance use and teaches youth the skills they need to avoid negative influences from these sources. In addition to teaching skills to avoid AOD use, life skills training programs teach youth other, more general personal and social skills for coping successfully in a variety of situations.

The life skills training approach has demonstrated capability to reduce drug use (Dryfoos, 1990; Norman and Turner, 1993; Schinke et al., 1991), and a recent study indicated that this approach can impact an individual's life up to 6 years after the intervention, provided the program is properly implemented and booster sessions are administered in subsequent years (Botvin, Baker, Dusenbury, Botvin, and Diaz, 1995). The two components of life skills training are resistance skills training and personal and social skills training.

Resistance Skills Training

The resistance skills training component of life skills training emphasizes the ability of the media, family, and peers to shape adolescents' perceptions of what is normal and acceptable behavior and teaches youth techniques to recognize, avoid, and resist peer pressure. Students typically role play and practice the skills learned. Students also learn about the actual prevalence of drug use (typically students find that drug use is less prevalent and hence less normative than they had assumed) as well as how to critique messages from the media.

Personal and Social Skills Training

The personal and social skills training component emphasizes teaching youth a broad range of general skills to use in coping with life, including decisionmaking and problemsolving skills, self-control, coping strategies for relieving stress and anxiety, and general interpersonal and assertiveness skills. A combination of instruction, demonstration, rehearsal, reinforcement, and practice is used to teach these skills.

Community-Based Approaches

Many contemporary drug prevention programs have moved away from purely individualistic approaches to community-based approaches. Community-based approaches focus on involving families and communities to prevent AOD use among youth.

Family Involvement

Family involvement approaches generally focus on (1) teaching parenting skills to adults so children are more effectively socialized by the family and better able to develop stronger family bonds or (2) involving parents in advocacy groups so they become educated about drug use in the community and begin to promote social events for youth at which drugs are not tolerated, such as drug-free dances and proms. Although evidence exists that teaching parenting skills has been effective in preventing substance use among young people, little research has been done on the effectiveness of parent advocacy groups.

Comprehensive Community Involvement

Comprehensive community-based efforts emphasize sending a communitywide "no use" message to youth. Various sectors of the community (e.g., community leaders, business executives, human service professionals, parents, teachers, and police) come together to devise a community drug use prevention plan that includes (1) teaching resistance skills to youth; (2) training teachers, parents, and other program implementors about AODs and AOD use prevention; and (3) providing ongoing booster sessions for youth and program implementors. Comprehensive community-based programming, such as Project STAR in

Missouri and Indiana (Johnson et al., 1990), has demonstrated success in reducing tobacco and marijuana use.

Targeting High-Risk Youth

This section discusses the use of programs targeted at low-risk, majority populations to help high-risk youth populations avoid AOD use as well as the field's lack of evidence of program effectiveness.

Targeting Low-Risk versus High-Risk Populations

The prevention strategies presented above were designed for, implemented in, and evaluated on majority, low-risk populations—primarily white, middle-class youth. The field knows little about the effectiveness of these strategies as interventions for high-risk youth. Yet it is high-risk youth who most urgently need AOD prevention programs. Although high-risk youth are in the minority, they account for the majority of young adults in the criminal justice system (Norman and Turner, 1993), exacting a high social cost.

Although some broad-based intervention strategies for general populations of youth include high-risk youth (particularly as defined by low socioeconomic status or minority status) and measure the effectiveness of the intervention on this population, little information exists about interventions specifically targeted to high-risk youth. School-based prevention programs typically target all youth in that school. However, in a time of scarce resources, it may not be desirable or feasible to target entire school populations but rather to concentrate resources on those individuals most in need. One cannot assume that knowledge gained from testing the usefulness of a school-based program will be applicable when the intervention is limited to high-risk youth.

Lack of Evidence of Program Effectiveness for High-Risk Youth

Evidence of a program's effects must be available if the field is to determine whether it represents a truly promising strategy for preventing drug use. Despite the many prevention programs operating nationally that specifically target high-risk youth, few have

been evaluated, and fewer still have been subjected to the type of rigorous evaluation that allows unambiguous determination of program effectiveness. In fact, many programs fail to collect any data and, instead, measure their success by the number of participants involved or the reaching of certain implementation goals.

Identifying exemplary programs for replication requires substantial evidence that a program model is solid in addition to strong empirical evidence that the program produces positive outcomes in reducing AOD use. Only a true experimental design—random assignment of participants into control and treatment groups and comparison of changes in the groups over time—can definitively prove that a program is effective. Well-designed, well-executed quasi-experimental designs, which compare changes in similar but nonidentical populations, also can produce compelling evidence of program success. However, few programs compare the gains made by participants to similar groups of youth who do not participate in the program. Fewer still use random assignment to compare equivalent groups. The net result is that we know little about the real effectiveness of prevention programs targeting high-risk youth. Furthermore, although many programs have demonstrated positive changes in AOD behavior by comparing measures taken before and after interventions, it often is difficult to determine whether the change was due to the intervention or to extraneous factors such as maturation or other historical events.

The paucity of rigorous evaluation has been detrimental to the prevention field. Because few studies have been conducted to determine "what works," the evaluations that do exist often are discredited or ignored. Program models that have been clearly shown to be ineffective but are aggressively marketed continue to be replicated (Dryfoos, 1992; Gerstein and Green, 1993). Replicating models that have been shown to be effective or testing innovative program models would be a much better way to use the Nation's limited resources.

Lack of support for evaluation and demonstrated effects has been found not only at the local program level but at the Federal level as well. Too often, programs have not needed to produce outcomes to be considered exemplary and to receive Federal awards and official recognition. A report from the General Accounting Office (1991) soundly criticized the Department of Education's Drug-Free School Recognition Program and the Office for Substance Abuse Prevention's (now CSAP) Exemplary Programs by noting that among other

problems, evidence of effectiveness was not a selection criterion. CSAP has modified its selection process and now states that evidence of program effectiveness is required of all applications. However, solid commitment to the importance of demonstrated outcomes still does not exist as needed. The publication of the *1994 Exemplary Prevention Programs Award Ceremony* (CSAP, 1994) contains no information about outcomes or about how program effectiveness was determined (although it does contain complete descriptions of clientele, major services, funding, and contact information). Exemplary programs recognized by the Department of Education's Regional Centers for Drug-Free Schools and Communities typically report outcome findings when they are available.¹

It is important to judge the quality of programming not merely by the number of clients served, the diversity of programming offered, the theoretical orientation of the intervention, or the interagency linkages established, but by the outcomes achieved. Program operators considering replication must have information on which programs are effective in impacting what outcomes. Given the wide variety of prevention programs available, the specific outcomes a program model can produce should factor into the decision of which model to select and implement.

Methodology

Reviewing promising programs for high-risk youth should involve a focus on programs that have demonstrated effectiveness through experimental or strong quasi-experimental designs. However, a comprehensive literature review turned up few studies that met this criterion—too few to provide a complete picture of the diversity of the prevention field both in the types of strategies used and the different populations of high-risk youth targeted. Because of the field's limitations, the criteria for inclusion in this review necessarily were broadened to include studies and programs that suggest evidence of positive outcomes based on pretest/posttest measures of program effectiveness.

¹ The Southwest Regional Center's 1994 *Shining Stars* publication of exemplary prevention programs is a good example of a committed approach to evaluation and outcomes. Criteria for recognition include the stipulation that programs must "establish specific, measurable objectives and demonstrate evidence of significant outcomes." Outcomes for each program are clearly identified in a special section of the program description.

Programs targeting high-risk youth were identified from a comprehensive search of literature published from 1990 to the present.² In addition, the most recent publications from the Department of Education's Regional Centers for Drug-Free Schools and Communities were reviewed.³ Programs recognized by the Regional Centers as exemplary are not reviewed with the same rigorous standards for internal validity and reliability of results generally (but not always) found in the published literature; however, they must demonstrate some level of program effectiveness and evidence of "good practices" to be nominated by specialists in the field as promising interventions.

Programs must meet all of the following criteria to be included in this review:

- Programs must specifically target high-risk youth;
- Programs must measure and report outcomes; and
- Programs must report positive outcomes.

A total of 67 programs met the above criteria and therefore were included in CSR's review. The text highlights 18 of those programs, focusing on those evaluated with more rigorous research designs.

² Computerized database searches were conducted on Sociological Abstracts, Psychological Abstracts, CHID (Combined Health Information Database), ERIC (Educational Resources Information Center), ETOH (Alcohol and Alcohol Problems Science Database), NCJRS (National Criminal Justice Reference Service), and NCADI (National Clearinghouse for Alcohol and Drug Information).

³ The Regional Center publications include the Southeast Regional Center for Drug-Free Schools and Communities' *Shining Stars*, 1994 edition; the Western Regional Center for Drug-Free Schools and Communities' *Sharing Your Success*, 1995 edition; the Midwest Regional Center for Drug-Free Schools and Communities' *Highlights of Award-Winning Drug-Free Schools Prevention Programs: 1993-94 Winning Schools*; and the Southwest Regional Center for Drug-Free Schools and Communities' *Noteworthy Programs and Practices* (1993-94 school year, published in 1995). While the Northeast Regional Center for Drug-Free Schools and Communities' publication of *Prevention Recognition Awards* was reviewed, no programs from this source are included in this paper because the programs either did not target high-risk youth or failed to report program outcomes. Program summaries from CSAP's 1994 *Exemplary Prevention Programs Award Ceremony* could not be included because no outcomes were mentioned.

PROMISING PROGRAMS FOR HIGH-RISK YOUTH

Considerable variation exists in how programs measure success of drug prevention efforts. While some programs measure their success by the most direct indicator of success—reduction in AOD use or delayed onset of AOD use—intermediate outcomes are measured more frequently because of their theoretical relationship to AOD use and their relative ease in measurement. The prevalence of actual substance use, particularly among minority youth, often is too low to find a measurable program impact on actual use (Botvin, Schinke, Epatein, and Diaz, 1994), a problem exacerbated by small sample sizes. Knowledge of and attitudes toward AOD use frequently are measured instead of, or in addition to, measures of actual use. There is clear evidence, however, that changes in attitudes and increases in knowledge are not sufficiently linked to actual changes in behavior to be used as surrogate measures of successful prevention (Dryfoos, 1990).

The long-term effect of enhanced psychosocial skills on substance use is not clear. Longitudinal studies needed to determine whether success in achieving intermediate sociopsychological outcomes ultimately result in the desired long-term outcomes of reduced drug and alcohol use for high-risk youth have not been conducted. Many programs for high-risk youth are not exclusively dedicated to the prevention of AOD use but are designed to give youth the tools to successfully navigate through adolescence and avoid a range of negative outcomes that lead to a diminished chance for a successful adult life (e.g., teenage pregnancy, dropping out of school, or entering the criminal justice system). Programs therefore may experience success if one outcome, such as increased school completion, is successfully attained, even if drug use is not impacted.

Similar to prevention programs for the general population, most programs targeting high-risk youth offer multifaceted programming. They frequently provide a range of services, activities, and opportunities, including education on the negative consequences of AOD use, life skills training, individual and family counseling, recreation, and tutoring. Target outcomes tend to be multifaceted as well, focusing on increasing resiliency and reducing risk factors in a variety of domains at the individual, school, and family levels.

This section reviews promising programs for high-risk youth. They are grouped by the youth population they target, as follows:

- Economically disadvantaged youth or youth living in distressed neighborhoods;
- Children of substance abusers;
- Substance users;
- Juvenile offenders;
- Youth failing in school and/or at risk of dropping out; and
- Other special populations (e.g., pregnant teenagers or deaf and blind youth).

The "membership" of these categories certainly overlap; for example, many youth who fail in school also are economically disadvantaged, and substance abusers frequently are the children of substance abusers. Most programs, however, focus on one particular population of high-risk youth and design their interventions to fit the specific needs of this group. Of the 67 programs reviewed, only 4 specifically target multiple at-risk populations of youth. The prevention literature is replete with warnings that what is effective for one group may not be effective with another, and one must be cautious when designing programs for multiple target groups. This categorization of different high-risk groups, while imperfect, does allow a review of the strategies and effectiveness of programs for different groups of youth and an evaluation of differences in strategies and effectiveness.

Tables 1 through 6 provide information about the programs reviewed by CSR regarding participants, interventions used, use of a control or comparison group in program evaluations, program outcomes, and the sources used for this review; the tables reflect the youth population breakdown noted above and highlight the programs discussed in the text. Most do not have experimental or quasi-experimental designs, so firm conclusions regarding their effectiveness cannot be made. Programs including an evaluation component having, at

a minimum, a nonequivalent control group are discussed in detail in the text as more convincing examples of promising prevention strategies. In cases where no rigorous studies have been conducted for a particular group, CSR selected programmatic examples from nonexperimental (i.e., one-group, pretest/posttest) designs.

Programs for Economically Disadvantaged Youth or Youth Living in Distressed Neighborhoods

CSR identified 28 programs that specifically target youth who live in high-risk environments where poverty, crime, and drugs are prevalent (see Table 1 following this page). About half these programs are school based, and half are community based. Considerable variation exists in the number and types of approaches to drug prevention offered by these programs. Nearly all take a multifaceted approach to prevention, and they offer a range of services and activities. Sixteen of the programs offered some type of life skills training to youth. Eleven offered alternative activities to teach youth about healthy alternatives to recreational drug use. Several had incorporated components for parents or mentoring, tutoring, case management, and counseling services. Reflecting a genuine focus on the antecedents of drug use, less than half (i.e., 11) highlighted drug education as a predominant program feature. These programs may have offered factual information about drug use, but other program features were considered more central to prevention.

The outcomes produced by these programs varied considerably as well. Programs produced predominantly intermediate, most often school-based, outcomes. Ten programs reported an increase in school achievement (e.g., grades and test scores); seven reported impacts on school disciplinary problems (e.g., suspensions and disruptive behavior); six reported an effect on attendance; four reported decreased dropout rates; and two reported improved attitudes or bonding to school.⁴ Three programs reported improved social and personal skills, and three reported increases in self-esteem. Only five programs demonstrated a reduction in AOD use. Eleven reported an increase in AOD knowledge, and three reported a change in AOD attitudes.

⁴ These outcomes are not exclusive. Programs could report multiple school outcomes.

Table 1

Programs for Economically Disadvantaged Youth or Youth Living in Distressed Neighborhoods

Name of Program	Participants	Intervention	Control/ Comparison	Outcomes	Citation
SMART Moves program (Boys & Girls Clubs)	<i>Study 1:</i> Youth living in public housing projects <i>Study 2:</i> Economically disadvantaged youth	<i>Studies 1 and 2:</i> Life skills training, cultural enrichment, recreation, citizenship and leadership development, health and physical education	<i>Study 1:</i> Yes <i>Study 2:</i> Yes	<i>Study 1:</i> Fewer damaged and unoccupied buildings, 25% lower presence of crack, 22% less overall drug activity, 13% less juvenile crime, greater parental involvement <i>Study 2:</i> Lower alcohol and other drug (AOD) use, increased AOD knowledge	<i>Study 1:</i> Schinke et al. (1992) <i>Study 2:</i> St. Pierre et al. (1992)
Life Skills Training	<i>Study 1:</i> Urban African-American 7th-grade students; <i>Study 2:</i> Urban African-American and Latino 7th-grade students	Life skills training	<i>Study 1:</i> Yes <i>Study 2:</i> Yes	<i>Study 1:</i> Reduced smoking behavior, increased knowledge of smoking consequences and prevalence <i>Study 2:</i> Decreased intentions to use AODs	<i>Study 1:</i> Botvin et al. (1989) <i>Study 2:</i> Botvin et al. (1994)
Foundations Program	Children enrolled in Head Start	Skills enhancement for coping and decisionmaking skills	Yes	Increased knowledge, coping, and decisionmaking skills	Center for Substance Abuse Prevention (CSAP) (1993)

Table 1 (continued)

Name of Program	Participants	Intervention	Control/ Comparison	Outcomes	Citation
ADEPT Drug and Alcohol Community Prevention Program	Latchkey children in grades K-6	Homework sessions, self-esteem building exercises, free play, dramatics	Yes	Improved verbal and math scores	Ross et al. (1992)
Juvenile Substance Abuse Prevention Project	African-American youth living in public housing	Educational, recreational, and mental health services for parents and children; AOD prevention curriculum for youth	Yes	<i>Youth:</i> Increased AOD knowledge and school attendance, lower dropout rates, improved student behavior, enhanced self-esteem, improved cultural awareness <i>Parents:</i> Increased AOD knowledge	Southeast Regional Center for Drug-Free Schools and Communities (1994)
YouthNet	Junior high inner-city youth	Outreach, counseling, case management, alternative activities	Yes	Change in AOD attitudes, decreased likelihood of dropping out of school	Lucas and Gilham (1992)
Big Brothers/Big Sisters	Children ages 7-11 whose parents are alcoholics	Mentoring	No	Lower scores of internalizing behavior and delinquency, lower hypoactivity scores, scores on the personal growth dimension of the Family Environment Scale improved	Keenan (1993)

Table 1 (continued)

Name of Program	Participants	Intervention	Control/ Comparison	Outcomes	Citation
CASPAR	Children in grade 7 or higher whose parents are alcoholics	Information on alcoholism, training in decisionmaking, group discussions of family dynamics and coping	No	Reduced drinking and expectations for future drinking, increases in knowledge, more realistic attitudes toward drinking	Emshoff and Anyan (1991)
Circle of Friends	Youth living in distressed neighborhoods	Alternative extracurricular activities, AOD education, peer mentors, peer tutors, workshops for parents,	No	Increased AOD knowledge; improved attitudes toward school, community, and family; improved test scores; decreased dropout rates and reduced disciplinary problems	Southeast Regional Center for Drug-Free Schools and Communities (1994)
COAP (Children of Alcoholic Parents)	Preschool children of alcoholics	Curriculum focusing on promoting self-esteem, learning about alcoholism, and coping skills	No	More parents seeking social service referrals, children more open to discussing family issues	Western Regional Center for Drug-Free Schools and Communities (1995)
Community Crusade Against Drugs	Youth living in distressed neighborhoods	Life skills development, tutoring, mentoring, alternative activities, summer camp	No	Improved math and reading scores, more students returning to regular schools from alternative schools	Southeast Regional Center for Drug-Free Schools and Communities (1994)
Educational Enhancement Program for At-Risk Students	Middle school students	AOD prevention instruction, problemsolving skills training, personal computer training	No	Increased AOD knowledge and computer skills	Western Regional Center for Drug-Free Schools and Communities (1995)

Table 1 (continued)

Name of Program	Participants	Intervention	Control/ Comparison	Outcomes	Citation
Family Augmenting Approach to Prevention	Youth living in distressed neighborhoods	Mentoring, case management	No	Improved bonding, school attendance and achievement, skills development, parental involvement, and cultural/racial pride	Southeast Regional Center for Drug-Free Schools and Communities (1994)
Family Focus Project	Youth and parents from a high-crime neighborhood	Before-school and afterschool programs, life skills for youth, tutoring, conflict resolution classes, life skills curriculum for parents	No	Increased self-esteem for youth and parental involvement, decreased crime rates	Western Regional Center for Drug-Free Schools and Communities (1995)
Hugs Not Drugs	Elementary school youth	AOD education, peer educators, parent resource center, DARE (Drug Abuse Resistance Education)	No	Increased school attendance and parental involvement, decreased suspensions	Midwest Regional Center for Drug-Free Schools and Communities (1994)
Lacrosse and Academic Teams	Youth from high-crime neighborhoods	Life skills, tutoring, athletics	No	Improved academic performance, decreased absenteeism and suspensions	Southeast Regional Center for Drug-Free Schools and Communities (1994)
McKinley Elementary School	Elementary school students	Support groups, AOD prevention curricula, interpersonal and leadership skills	No	Decrease in suspensions	Midwest Regional Center for Drug-Free Schools and Communities (1994)

Table 1 (continued)

Name of Program	Participants	Intervention	Control/ Comparison	Outcomes	Citation
Peer Support Retreats	Middle school and junior high school students	Peer support retreats with life skills training, AOD education	Yes—but data for control not available	Decreased AOD use, increased AOD knowledge, less positive attitude toward AODs, increased self-esteem	Glider et al. (1992)
Preschool Stress Relief Program	Head Start students and their parents	Teaching stress relief and coping skills	No	Decrease in stress symptomatic behavior, less anger, increased knowledge of how stress affects the body	CSAP (1993)
Preventing Abuse with Life Skills	Rural African-American children in grades K-5 and their parents	Life skills training, AOD education, teaching positive alternatives to AOD use	No	Increase in AOD awareness, improvements in self-image	Southeast Regional Center for Drug-Free Schools and Communities (1994)
PRIDE Singers and Performers	High-risk middle school and high school students	Designing and performing shows that depict handling peer pressure, good decisionmaking skills, and healthy alternatives to AODs	No	Improved grades and class attendance	Southeast Regional Center for Drug-Free Schools and Communities (1994)
Project LEAD	Middle school and high school students	Curriculum on AOD prevention, self-concept, decisionmaking, academic achievement, and sexually transmitted diseases	No	Positive changes in decisionmaking, AIDS knowledge, birth control knowledge	CSAP (1993)

Table 1 (continued)

Name of Program	Participants	Intervention	Control/ Comparison	Outcomes	Citation
Sail Teams	Junior and senior high school students living in public housing	AOD education, alternatives to drug use, life skills training, mentoring of younger students	No	Increased AOD knowledge; decreased dropout rates, suspensions, and discipline problems; improved grades	Southeast Regional Center for Drug-Free Schools and Communities (1994)
Scullion School program	African-American, low-income students	Afterschool program, tutoring, affective education, AOD education	No	Decreased absences	Midwest Regional Center for Drug-Free Schools and Communities (1994)
Self-Esteem Building Through Performing Arts	African-American youth living in public housing	Steelband practice and performance, tutoring	No	Increased academic performance and parental involvement	Southeast Regional Center for Drug-Free Schools and Communities (1994)
Stevens Middle School	African-American middle school students	AOD education, Afrocentric approach to social skills development, clubs, tutoring, conflict management, health fairs	No	Fewer AOD incidents at school and misconduct referrals, improved test scores	Midwest Regional Center for Drug-Free Schools and Communities (1994)
Student to Student Substance Abuse Prevention Project	Elementary school students and their parents living in high-crime neighborhoods	Mentoring, alternative activities, skits about AOD use, parent training sessions on tutoring skills and AOD issues	No	Increased AOD knowledge and reading scores	Southeast Regional Center for Drug-Free Schools and Communities (1994)

Table 1 (continued)

Name of Program	Participants	Intervention	Control/ Comparison	Outcomes	Citation
SUPER II (Substance Use Prevention Education Resource II)	Youth ages 11-17 and their parents	AOD information, skills training for youth and parents	No	<p><i>Youth:</i> Decreased AOD use, more AOD knowledge, higher levels of peer resistance</p> <p><i>Parents:</i> Increased levels of AOD knowledge, knowledge of good communication, family functioning, and esteem for youth</p>	Bruce and Emshoff (1992)

Six programs utilized quasi-experimental designs to test the effectiveness of their interventions.⁵ The approaches and outcomes used by these programs are fairly representative of the approaches and outcomes produced by the programs with less rigorous designs. These studies are described below as programs that have demonstrated effectiveness where other programs remain merely suggestive. The programs include SMART Moves, the Life Skills Training program, the Foundations Program, ADEPT Drug and Alcohol Community Prevention Project, the Juvenile Substance Abuse Prevention Project, and YouthNet.

SMART Moves

One of the most widely recognized and successful programs targeting economically disadvantaged youth living in high-risk environments is the SMART Moves program of the Boys & Girls Clubs of America. SMART Moves, a curriculum adapted from the Life Skills Training model developed by Botvin (1983), focuses on enhancing personal and social competency and teaching resistance skills, along with age-appropriate AOD education. Three tailored programs are offered for youth ages 6 to 9, 10 to 12, and 13 to 15. In addition to SMART Moves, the Boys & Girls Clubs of America provide youth with opportunities for recreation and cultural enrichment, citizenship and leadership development, and health and physical education. More than 1,600 local Boys & Girls Clubs operate across the country, and SMART Moves is the Boys & Girls Clubs' most widely disseminated program (C. Crutchfield, personal communication, August 1995).

Research by St. Pierre and colleagues (1992) used a pretest/posttest, nonequivalent control group design to compare participants from five Boys & Girls Clubs implementing the SMART Moves module for youth ages 13 to 15 (i.e., the Stay SMART program) with yearly booster sessions to five clubs offering the Stay SMART program alone and four Boys & Girls Clubs not offering the program. Boys & Girls Clubs across the country were represented in the study. At the 27-month followup, youth who had participated in the Stay SMART program alone and the Stay SMART program with booster sessions were less likely to use

⁵ A seventh program, Peer Support Retreats, employed a quasi-experimental design, but data were not available for the control group. Thus, outcomes reported in the study were based on pretest/posttest comparisons for the treatment group alone.

cigarettes, marijuana, and alcohol than youth in the control group (i.e., clubs not offering the program). Increases in drug knowledge also were shown in clubs offering the Stay SMART program (with and without the booster sessions) compared to the control group. The booster program demonstrated additional effects for alcohol and marijuana attitudes.

Additional evidence of the effectiveness of the SMART Moves program comes from a national study by Schinke and colleagues (1992). Using a quasi-experimental, pretest/posttest design with a nonequivalent control group, Schinke and colleagues compared five public housing developments with Boys & Girls Clubs to five public housing developments that had installed Boys & Girls Clubs with the SMART Moves curriculum and five public housing developments without Boys & Girls Clubs. In housing developments with clubs, the researchers found 25 percent lower presence of crack, 22 percent less overall drug activity, greater parental involvement, and fewer damaged and unoccupied buildings than found in public housing projects without Boys & Girls Clubs. In addition, police reports for the areas indicated 13 percent fewer juvenile arrests in housing developments with clubs than for those without. Housing projects with the SMART Moves program had lower overall rates of drug activity and crack presence than housing projects with the Boys & Girls Club alone, although the difference was small. It is clear that the programming offered by the Boys & Girls Clubs of America, even in the absence of a specific drug prevention curriculum such as Smart MOVES, is an effective approach to prevention.

Life Skills Training

The Life Skills Training curriculum adapted for use in SMART Moves was originally designed for and tested on white, middle-class youth. While the program was found to be effective in the prevention of cigarette smoking, marijuana use, and immoderate alcohol use among white, middle-class youth, the generalizability of the results to minority and high-risk populations was an open question (Botvin, Baker, Dusenbury, Tortu, and Botvin, 1990). The Boys & Girls Clubs studies provide some useful evidence regarding the appropriateness of this curriculum to high-risk youth. Using quasi-experimental research designs in school settings, Botvin and his colleagues offer additional evidence for the usefulness of this approach with high-risk youth in reducing smoking behavior and decreasing intentions to use alcohol and illicit drugs (Botvin et al., 1989; Botvin et al., 1994). Moreover, Botvin and

colleagues (1994) found that youth who had completed the Life Skills Training course had significantly more negative attitudes toward AODs. Botvin and colleagues (1994) adapted the Life Skills Training curriculum to include a culturally focused intervention approach for high-risk minority youth in New York City public schools; the approach involved storytelling, videotapes, and peer leaders. This approach, however, was no more effective than the generic Life Skills Training approach for high-risk youth, indicating that under some circumstances, drug prevention programs developed for majority low-risk populations can be used successfully with high-risk youth.

Foundations Program

The SMART Moves program and Botvin's Life Skills Training program both seek to demonstrate impacts on substance use. More commonly, programs designed for economically disadvantaged youth focus on impacting intermediate outcomes and reducing risk factors associated with future drug use. Some programs target very young children. The Foundations Program of Latrobe, Pennsylvania, trains teachers to implement a life skills curriculum for preschool and Head Start children. This curriculum focuses on development of nurturing friendships, decisionmaking and healthy coping strategies, development of self-esteem and self-confidence, and drug education. Statistically significant differences were found between program children and comparison group children on drug knowledge, coping, and decisionmaking skills (CSAP, 1993).

ADEPT Drug and Alcohol Community Prevention Project

Some programs, though not producing all expected outcomes, show positive change in areas that have been associated with the future onset of drug use. The ADEPT Drug and Alcohol Community Prevention Project, operating in New Orleans, Louisiana, targets latchkey children ages 6 to 12. In an afterschool program created by ADEPT, children engage in free play, creative dramatics, and homework. In 16 of the 24 schools implementing the program, youth also receive self-esteem building classes. Although no effects on self-esteem were found, students who participated in the self-esteem building classes experienced a significant increase in their verbal and math scores; students in the program who did not participate in self-esteem building classes experienced no increase (Ross, Saavedra, Shur,

Winters, and Felner, 1992). Interestingly, the program component targeted to improve self-esteem had no such effect but did significantly affect school performance. The relationship between program components and outcomes is complex and often defies simple intuition.

Juvenile Substance Abuse Prevention Project

Using a comprehensive, community-based approach to drug prevention for economically disadvantaged youth, the Juvenile Substance Abuse Prevention Project in Miami, Florida, provided a broad range of educational, recreational, social, and mental health treatment services to youth and parents living in county housing developments. Compared to a control group, the program improved their self-esteem, knowledge of the dangers of AOD use, cultural awareness and pride, child behavior in family relationships, and school attendance, and they lowered their dropout rates (Southeast Regional Center for Drug-Free Schools and Communities, 1994). Parents' knowledge of the harmful effects of AODs also increased.

YouthNet

Also using a comprehensive, community-based approach, YouthNet in Kansas City, Missouri, offers outreach, case management, counseling, and alternative and extracurricular activities to youth living in high-risk environments. YouthNet outreach workers and counselors worked with junior high youth to provide necessary services (e.g., tutoring, formal counseling, and medical care) to improve the child's school performance. The program also paired middle schools with community centers to offer extracurricular activities. Although the sample size was too small for statistical analysis, results indicated that program youth were more likely than comparison youth to show a greater change in drug attitudes, to say they would try to stop friends from using beer and cigarettes, to be more likely to have conventional (i.e., nondeviant) friends, and to be less likely to drop out of school (Lucas and Gilham, 1992).

Programs for Children of Substance Abusers

The relationship between family substance abuse and future substance abuse by youth has been well established, particularly with respect to alcohol (e.g., Eskay and Linnoila, 1991; Hesselbrock, Bauer, Hesselbrock, and Gillen, 1991). Children of alcoholics are more likely to become alcoholics than are children of nonalcoholics (Schuckit, 1991), and evidence indicates parental alcoholism also is related to children's use of other substances (Sher, 1991). Family, twin, and adoption studies have demonstrated the importance of genetic factors in alcoholism, with children adopted away from alcoholic parents having a significantly enhanced risk of alcoholism compared to adopted children of nonalcoholics. Environmental factors also have been shown to play an important role in the development of alcoholism. Alcoholic families are characterized by lower levels of family cohesion and higher levels of conflict as compared to nonalcoholic families (Sher, 1991). While the complex interplay of genetic and environmental variables has yet to be fully understood, the dysfunctional family environment created by alcoholism clearly puts these youth at greater risk for substance use.

Most children of alcoholics, though they are four times more likely to become alcoholics than children of nonalcoholics, do not become alcoholics themselves (Schuckit, 1991). Therefore, although these programs are prevention focused, they also provide young people with more general skills for coping with AOD use in the family.

Table 2 following this page profiles the seven prevention programs reviewed by CSR that identified children of alcoholics and abusers of other substances as the target population for AOD prevention efforts. These programs serve youth over a broad age range, from preschool to high school, though most target youth prior to entrance into junior high, and they are more therapy oriented than prevention programs for other populations of high-risk youth. Special emphasis is placed on helping youth cope with the negative effects of parental substance abuse through counseling, support groups, and education about alcoholism and coping strategies. Four of the ten programs offer counseling, and two provide youth support groups. Four programs involve parents in family therapy, individual counseling, or parental skills training classes. Outcomes for younger children include improved behavior (e.g., lower rates of acting out and delinquency) and decreases in depression. Three programs presented

Table 2

Programs for Children of Substance Abusers

Name of Program	Participants	Intervention	Control/ Comparison	Outcomes	Citation
STAR (Students Together and Resourceful)	Children of alcoholics in grades 6-8	Education on alcohol and alcoholism, life skills training, social support groups	Yes	Increases in peer involvement, social support, internal control, and self-esteem; decreases in loneliness and depression	Emshoff and Anyan (1991)
Stress Management and Alcohol Awareness	Children in grades 4-6	Information on alcoholism, self-esteem enhancement, training in coping strategies	Yes	More use of positive coping strategies, less depression, more favorable teacher ratings	Emshoff and Anyan (1991)
CODA	Children ages 4-10 whose parents are drug abusers	Individual play therapy, family interaction groups	No	Decreased family conflict and child problem behaviors, increased cohesion	CSAP (1993)
Heros and Sheros	Children ages 6-14 whose parents are in treatment for substance abuse	Individual, group, and family counseling; life skills training; vocation awareness; mentoring; recreation	No	Improved attitude toward school, increased positive school experiences and self-esteem, improved self-identity	Western Regional Center for Drug-Free Schools and Communities (1995)

Table 2 (continued)

Name of Program	Participants	Intervention	Control/ Comparison	Outcomes	Citation
Strengthening Families	Children of substance abusers ages 3-14 and their parents	Parenting training, life skills training for children, alcohol and other drug (AOD) information, play therapy	No	Improved parental disciplinary behavior, child behavior, and family relationships; Increased prosocial skills in children	Emshoff and Anyan (1991)
Student Assistance Program (SAP) ¹	Senior and junior high school students with family, school, AOD, or other personal problems. About one-half are children of alcoholics	School-based individual counseling and group sessions focusing on coping and socioemotional issues, AOD education	No	Decreased AOD use, increased school attendance	Dryfoos (1990); Emshoff and Anyan (1991)
Young Children of Substance Abusers Project	Children ages 6-12 and their AOD-abusing mothers	Skills training for parents and children on parenting, building family relationships, communication	No	Decreased family conflict, increased family cohesion, improved family organization	CSAP (1993)

¹ This program is listed under Prevention Programs for Substance Users and Programs for Youth Failing in School and/or At Risk of Dropping Out as well.

evidence of having fostered better family functioning (increased cohesion, less family conflict, improved parental disciplinary behavior) among individuals who had participated. Two programs targeting youth in junior high or high school both reported reduced AOD use, although neither one used a rigorous evaluation design.

Two programs for children of substance abusers have achieved significant outcomes using experimental designs. These two—STAR (Students Together and Resourceful) and the Stress Management and Alcohol Awareness Program—are discussed in the following sections.

STAR (Students Together and Resourceful)

STAR is a school-based prevention program for sixth- through eighth-grade children. During 18-week sessions, students learn about alcohol; alcoholism; the effects of alcoholism on family dynamics; and life skills, including decisionmaking, communication, problemsolving, relaxation, assertiveness, and peer resistance. Students also receive social support from peers. The program uses a unique technique to recruit participants; a film depicting an alcoholic family and the consequences of alcoholism on the family's three children is shown to the entire student body at a school. Following small group discussions on the film, students are told about the formation of a group that will continue to discuss the issues raised in the film. This allows students to avoid explicit self-identification, which can be stigmatizing and embarrassing to young people, while reaching a larger population of children of alcoholics than programs that recruit participants from parents who are in treatment or rehabilitation centers.

In a study using a random assignment pretest/posttest design, Emshoff and Anyan (1991) administered a battery of instruments to students and then admitted them to the program or placed them in a waiting list control group. Following the intervention, all students were tested a second time. The control group was given the intervention and, upon its conclusion, tested a third time. Emshoff and Anyan found that participants reported increased peer involvement, greater social support, and increased internal control and self-esteem and decreases in loneliness, depression, and control from powerful others. No significant effect on alcohol use was found; however, the number of participants using alcohol was very small at pretest and posttest so a significant decrease in alcohol use could not occur.

Stress Management and Alcohol Awareness Program

The Stress Management and Alcohol Awareness Program also has demonstrated effectiveness in impacting mediating variables for substance use among children of alcoholics. This program serves elementary school fourth- through sixth-grade children, providing them with information on alcoholism, self-esteem enhancement, and coping strategies. In addition to weekly group sessions, which occur over an 8-week period, the children meet 3 to 4 hours per week with a trained college undergraduate who helps the child develop a specific competency he or she chooses. Results of a pilot program found that compared to a randomized control group, participants used more positive coping strategies, experienced less depression, and were rated more favorably by teachers (Emshoff and Anyan, 1991). Despite the emphasis on enhancing self-esteem, self-esteem remained unchanged.

Prevention Programs for Substance Users

Table 3 following this page highlights the eight prevention programs identified as targeting youth who are substance users. These programs differ from treatment programs in that they focus on preventing future AOD use rather than on current substance use. These programs typically target youth who are experimental users or users of "gateway" drugs (i.e., alcohol, tobacco, and marijuana) rather than on youth exhibiting serious, chronic substance use problems.

Three of the eight programs target youth who have been arrested for AOD offenses. A fourth program targets youth who have violated their school's AOD policies. These programs use a diverse range of interventions, including teaching tobacco cessation strategies; touring a trauma unit at a local hospital; and providing in-home family therapy, individual counseling, and, most commonly, life skills training. Six of the programs reported an effect on substance use. Unlike other populations where actual use may be too small to demonstrate significant change, the substance-abusing youth population is one in which measures of use are an appropriate gauge of effectiveness.

Table 3

Prevention Programs for Substance Users

Name of Program	Participants	Intervention	Control/ Comparison	Outcomes	Citation
Contra Costa County (CA) Educational Program	Youth arrested for driving under the influence (DUI)	Alcohol and other drug (AOD) education, life skills	Yes	Increased AOD knowledge, stronger attitudes against DUI, less risky alcohol and auto behaviors Compared with nonparticipants, youth had lower number of repeat offenses.	Kooler and Bruvold (1992)
Personal Growth Class (PGC) ¹	9th- through 12th-grade students with chronic attendance problems, previous dropouts, youth with low grades or histories of substance use	Social support, social and personal skills training in small-group classes	Yes	Decreased drug use, improved grades, increased school bonding, higher self-esteem	Eggert et al. (1995)
Adolescent Tobacco Education Program	Youth in grades 6-12 referred to juvenile court for tobacco violations	Tobacco education and cessation strategies, communication skills classes for parents, counseling	No	43% quit using, 37% reduced use at 6- to 18-month followup	Southwest Regional Center for Drug-Free Schools and Communities (1995)

¹ This program is listed under Programs for Youth Failing in School and/or At Risk of Dropping Out as well.

Table 3 (continued)

Name of Program	Participants	Intervention	Control/ Comparison	Outcomes	Citation
Adolescent Trauma Prevention Program	Youth 18 and under arrested for AOD offenses	<i>Hospital-based education:</i> tour of trauma unit, films about accidents occurring because the driver was under the influence, group discussions	No	Change in attitudes toward driving after drinking, riding with someone who has been drinking, and preventing a friend from driving drunk; changes still evident after 1 year, though not as strong	Dearing et al. (1991)
Early Intervention to Delinquent/Drug Using Adolescents ²	Substance-using adjudicated youth ages 13-19	Botvin's Life Skills Training compared with a combined values clarification and anti-violence (VC/AV) model	No	Increased AOD knowledge, more negative attitudes toward marijuana The VC/AV model showed more positive changes in reducing the number and frequency of illegal behaviors	Friedman and Utada (1992)
Positive Options Program	Students who violate school AOD policy and their parents	Evening sessions for families stressing skills development, improved communication, and decisionmaking; referrals to counseling	No	Decrease in AOD use throughout the school	Southeast Regional Center for Drug-Free Schools and Communities (1994)
Prime Time	Gateway drug users ages 10-15 and their parents	Structured in-home family therapy, parenting skills training	No	Decreased levels of family violence and AOD use among both children and adults	CSAP (1993)

² This program is listed under Programs for Juvenile Offenders as well.

Table 3 (continued)

Name of Program	Participants	Intervention	Control/ Comparison	Outcomes	Citation
Student Assistance Program (SAP) ³	Senior and junior high school students with family, school, AOD, or other personal problems. About one-half are children of alcoholics	School-based individual counseling and group sessions focusing on coping and socioemotional issues, AOD education	No	Decreased AOD use, increases in school attendance	Dryfoos (1990); Emshoff and Anyan (1991)

³ This program is listed under Programs for Children of Substance Abusers and Programs for Youth Failing in School and/or At Risk of Dropping Out as well.

Two of the eight programs used a comparison or control group strategy in their evaluation efforts. These were the Contra Costa County (CA) Educational Program and the Personal Growth Class (PGC) program.

Contra Costa County (CA) Educational Program

The Contra Costa County (CA) Educational Program is an intervention for youth under age 18 who have been arrested for driving under the influence (DUI) of alcohol. Youth referred by juvenile probation officers are enrolled in 18-hour classes held on three consecutive Saturdays. In these classes, youth learn about DUI laws and the effects of AODs on driving as well as alternatives to AOD use and DUI. They also receive life skills training. Unlike most drug prevention programs, which focus exclusively on a "no use" message, this program includes strategies to help youth avoid driving while under the influence of alcohol or other drugs (e.g., having a designated driver, calling parents for a ride, using public transportation, and sleeping over at the party). Participants develop their own DUI prevention plan, which may not include total abstinence. Pretest/posttest comparisons found self-reported increases in DUI knowledge, stronger attitudes against DUI, and less risky alcohol and driving behaviors (Kooler and Bruvold, 1992). To provide a more objective measure of behavioral change of the desired outcome of reduced DUI recidivism, juvenile court records were examined to collect data on repeat offenses. Program participants were significantly less likely than nonparticipants to be arrested for DUI offenses in the future.

Personal Growth Class

The PGC program was designed to target youth who are chronic truants. Eggert and colleagues (1990) found high levels of drug and alcohol use among chronic truants, with 73 percent reporting that they used AODs while skipping school. Thus, this program targets substance-using youth who are at risk of dropping out of school. The PGC program involves a daily 1-hour class within a regular high school curriculum. The classes have a teacher-to-student ratio of 1:12. The curriculum focuses on social and personal skills training in four areas: self-esteem enhancement, decisionmaking, personal control and coping, and interpersonal communication. The curriculum is offered within the context of a supportive,

caring environment and a positive group process. The PGC program was implemented and evaluated in five urban, Northwestern high schools. The evaluation—which included a pretest, a posttest following program completion, and a 10-month followup—found that compared to a randomized control group, PGC participants demonstrated a decline in use of hard drugs as well as drug control problems and consequences. In contrast, the control students showed increases in drug use and drug use problems and consequences over time (Eggert et al., 1995). Participants improved their grades while the control students' grades declined; they also experienced increases in self-esteem and school bonding while the control students did not.

Programs for Juvenile Offenders

Research has shown that early adolescent criminal behavior is highly correlated with substance use (e.g., Dryfoos, 1990; Gerstein and Green, 1993). State Youth Development Centers for juvenile offenders commonly include treatment for those youth with identified substance use problems. Many more adjudicated youth would benefit from programs seeking to prevent drug use before experimentation becomes more serious and drug use becomes firmly entrenched. Programs that work with juvenile offenders typically target both drug use and delinquent behavior with interventions that are multifaceted and designed to target multiple risk factors. Table 4 following this page presents four programs that specifically target adjudicated youth. Three of the programs are discussed in the following sections: Early Intervention to Delinquent/Drug Using Adolescents, South Alabama Youth Services' (SAYS) Drug Education Program, and Colorado's Adventures in Change. One program contrasts and compares two different prevention models, and the other two programs were designed to teach youth about alternatives to drug use.

Early Intervention to Delinquent/Drug Using Adolescents

Friedman and Utada (1992) tested two drug prevention models with Philadelphia youth who had been placed in day treatment programs by the juvenile justice system. The more effective intervention for this population was a program that combined Values Clarification (VC), a sociocognitive procedure in which individuals systematically explore and develop their own value systems, with an Anti-Violence (AV) curriculum that teaches youth

Table 4
Programs for Juvenile Offenders

Name of Program	Participants	Intervention	Control/ Comparison	Outcomes	Citation
Early Intervention to Delinquent/Drug Using Adolescents ¹	Substance-using adjudicated youth ages 13-19	Botvin's Life Skills Training compared with a combined values clarification (VC) and anti-violence (AV) model	No	Increased alcohol and other drug (AOD) knowledge, more negative attitudes toward marijuana. The VC/AV model showed more positive changes in reducing number and frequency of illegal behaviors.	Friedman and Utada (1992)
South Alabama Youth Services	First-time juvenile offenders	Teaching of problemsolving skills and drug-free alternatives	No	Increased AOD knowledge, reduced recidivism	Southeast Regional Center for Drug-Free Schools and Communities (1994)
Adventures in Change	Adjudicated youth ages 15-18	Affective education, drug-free alternatives, life skills	No	No increase in AOD use, prosocial bonding	Stein et al. (1992)
Operation I Care	First-time offenders ages 10-20	Life skills training, drug education	No	Increased AOD knowledge	CSAP (1993)

¹ This program is listed under Prevention Programs for Substance Users as well.

to examine the consequences of their actions and make rational decisions about behavior. Youth were randomly assigned to receive either the VC/AV program or Botvin's Life Skills Training. The study did not include a comparison to a no-treatment condition. Both programs reported success in increasing AOD knowledge and creating more negative attitudes toward marijuana, although neither one impacted use. The VC/AV program produced additional benefits of reducing illegal behaviors, going to bars, and the amount of money spent on drugs. Both programs delivered their curricula during 24 1-hour sessions over a 10-week period. The sessions were facilitated by professionals having extensive experience working with troubled youth.

South Alabama Youth Services' Drug Education Program

The South Alabama Youth Services' (SAYS) Drug Education Program (Southeast Regional Center for Drug-Free Schools and Communities, 1994) targets first offenders in the juvenile justice system. Using small group sessions, interactive experiences, and individual counseling, the program provides drug education and teaches youth about healthy alternatives to AOD use. Although the evaluation of the SAYS program did not employ a rigorous design (i.e., one including a comparison group), SAYS indicates that awareness, knowledge, and perceptions of the negative consequences of AOD use increased among youth. The program also suggests that it has positively affected recidivism rates.

While none of the programs listed in Table 4 demonstrated a reduction in AOD use, the Early Intervention to Delinquent/Drug Using Adolescents and SAYS programs suggested effectiveness in reducing other delinquent behavior. Because delinquency is highly correlated with drug use, reduction in delinquency may produce long-term outcomes on substance use; however, this can only be determined through longitudinal research.

Adventures in Change

Colorado's Adventures in Change program (Stein et. al., 1992) serves juvenile offenders committed to the State Division of Youth Services. This program, like SAYS, combines drug education with a focus on alternatives to drug use. The program provides youth with a 15-day wilderness experience and involves them in other alternative activities

with adult volunteers. Although the program was not rigorously evaluated, the program reported an increase in approval for friends' prosocial behavior and no increase in AOD use over time. While most studies consider a "no change" finding to be indicative of program failure, Stein and colleagues (1992) speculate that without services, incidence of AOD use would increase over time. Without a control group, it is difficult to determine the exact effect of the program, but with this very high-risk population, incremental program effects of no change (not positive but also not negative) may represent a significant achievement.

Programs for Youth Falling in School and/or At Risk of Dropping Out

Considerable evidence exists in the literature that problems in school—low expectations, low grades, misbehavior, and truancy—put young people at considerable risk for substance use and that substance use, in turn, is a strong predictor of school dropout. Both substance use and dropping out of school have serious long-term, negative consequences for disadvantaged youth. Programs that target youth experiencing trouble in school—be it academic failure, inappropriate behavior, school disengagement, or truancy—have the twofold goal of keeping youth in school and preventing substance use.

Table 5 following this page identifies 20 programs that target youth at risk of failing in school and/or dropping out. As with most AOD prevention programs, multicomponent programs offering a range of services were most prevalent; only three programs offer a single-component strategy (two programs used mentoring and one directed youth to alternative educational placements). The most common program components were life skills training (used by 11 programs); academic skill building (used by 10 programs); and counseling, both individual and family (used by 9 programs). Community service was employed by five programs. Thirteen programs (65 percent) are school based. Twelve programs (60 percent) reported outcomes that focused on school outcomes alone (academic performance, attendance, and student behavior) or school outcomes and psychosocial attributes (self-esteem). Six programs (30 percent) reported a combination of AOD- and school-related outcomes.

Few of these programs have undergone rigorous evaluations. Only three employed a control or comparison group strategy to test the effectiveness of their intervention: PGC

Table 5

Programs for Youth Failing in School and/or At Risk of Dropping Out

Name of Program	Participants	Intervention	Control/ Comparison	Outcomes	Citation
Project Success	Middle school students at risk of school failure	Individual, group, and family counseling; tutoring; parenting skills training; community service	Yes	Small increases in alcohol and other drug (AOD) use compared with large increases in comparison group, improved grades and school attendance	Western Regional Center for Drug-Free Schools and Communities (1995)
River Region Human Services School-Based Prevention Program	Children in grades 2-5 with two or more identified risk factors, including poor academic performance, and their parents	Weekly individual and group counseling for children, monthly counseling for parents	Yes	Decreased acting out, distractibility, and immaturity	Reynolds and Cooper (1995)
Personal Growth Class (PGC) ¹	Students in grades 9-12 with chronic attendance problems, previous instances of dropout, low grades, or histories of substance use	Social support, social and personal skills training in small-group classes	Yes	Decreased drug use, improved grades and self-esteem, increased school bonding	Egert et al. (1995)

¹ This program is listed under Prevention Programs for Substance Users as well.

Table 5 (continued)

Name of Program	Participants	Intervention	Control/ Comparison	Outcomes	Citation
Alpha	4th- and 5th-grade students disengaged in school or exhibiting behavior problems	Individual and family counseling, intensive academic instruction, life skills, AOD awareness education, workshops and counseling for parents	No	No students reported for AOD use or treatment, improved academic achievement and social behavior, increased school attendance and parenting skills	Southeast Regional Center for Drug-Free Schools and Communities (1994)
Beta Program	Middle school students exhibiting lack of school commitment and/or family dysfunction	Tutoring, counseling, community service, parent training	No	Low rates of AOD use and delinquency, improved math and reading scores and self-concept, decreased problem behaviors	Southeast Regional Center for Drug-Free Schools and Communities (1994)
Cherokee County Schools COPE Mentoring Program	Middle school students at risk of academic failure, behavior problems	Mentoring	No	Improved grades, self-confidence, and self-esteem; decreased suspensions; increased school attendance	Southeast Regional Center for Drug-Free Schools and Communities (1994)
Conflict Resolution Component	Elementary and secondary school students at risk of suspension or expulsion	Academic, vocational and affective skills training; conflict resolution; group counseling; employment and community services	No	All students who have completed the program have transitioned to other educational placements	Western Regional Center for Drug-Free Schools and Communities (1995)
The Connection Center	Students with attendance and truancy problems and family dysfunction	Intensive case management and crisis intervention	No	Improved school attendance and productivity	Western Regional Center for Drug-Free Schools and Communities (1995)

Table 5 (continued)

Name of Program	Participants	Intervention	Control/ Comparison	Outcomes	Citation
Early Prevention and Intervention Program	Youth ages 10-16 at risk of dropping out and youth with chronic academic failure and behavior problems	Life skills, AOD education, supervised work, fieldtrips	No	Students felt better liked by peers, less angry, more assertive	Southeast Regional Center for Drug-Free Schools and Communities (1994)
Fletcher-Johnson WAVE, Inc.	Youth in grades K-9 with poor academic records	Remediation, community service, life skills training	No	Improved grades, school attendance, and self-esteem	Southeast Regional Center for Drug-Free Schools and Communities (1994)
Fresh Start	Elementary and secondary students exhibiting behavior problems	Mentoring, tutoring, community service, instructions on avoiding AOD use and anger resolution, decisionmaking, parent training classes	No	More parental involvement; fewer detentions and behavior referrals; increased attendance, academic success, and feelings of self-worth; decreased tardiness	Western Regional Center for Drug-Free Schools and Communities (1995)
Gateway High School	Students failing in regular high schools	AOD education, peer counseling, life skills, positive school activities	No	Improved grades and school attendance, decreased school disruptions	Western Regional Center for Drug-Free Schools and Communities (1994)
Hispanic Family Intervention Program	Hispanic youth ages 10-15 experiencing academic difficulty, classroom behavior problems, or emotional problems	Coping skill enhancement, AOD education, and academic skill building	No	Improved school performance, self-esteem, and behavior	Cervantes (1993)

Table 5 (continued)

Name of Program	Participants	Intervention	Control/ Comparison	Outcomes	Citation
Peer Buddies	Middle school students with high absentee rates and poor grades	Summer employment caring for a disabled student	No	Decreased levels of school dropout and absenteeism, improved grades	Southeast Regional Center for Drug-Free Schools and Communities (1994)
Project Step Ahead	Youth ages 11-14 with poor academic performance	Social, academic, and creative skills building activities; parent effectiveness training	No	Increased academic performance and knowledge of AOD use, improved self-awareness and self-respect	CSAP (1993)
Santa Monica High School Alliance	High school students with poor attendance and low grade point averages	Case management, counseling, work experience, parent education, crisis intervention	No	Decreased disciplinary referrals, suspensions, expulsions, recommendations for transfers, and violence on campus	Western Regional Center for Drug-Free Schools and Communities (1995)
Student Assistance Program (SAP) ²	Senior and junior high school students with family, school, AOD or other personal problems. About one-half are children of alcoholics	School-based individual counseling and group sessions focusing on coping, socioemotional issues, and AOD education	No	Decreased AOD use, increased school attendance	Dryfoos (1990); Emshoff and Anyan (1991)

² This program is listed under Programs for Children of Substance Abusers and Prevention Programs for Substance Users as well.

Table 5 (continued)

Name of Program	Participants	Intervention	Control/ Comparison	Outcomes	Citation
Student Mentoring Project	Students in grades K-12 experiencing academic difficulties	Mentoring	No	Decreased tardiness, absences, and unacceptable behavior; increased homework completion, academic achievement, social skills, and self-esteem	Western Regional Center for Drug-Free Schools and Communities (1995)
SUCCESS	Students in grades 4th-6th experiencing academic failure	AOD education and resistance training, tutoring, social skills development, individual and family counseling, fieldtrips, workshops for parents on family management	No	Increased school attendance, decreased behavior problems	Southeast Regional Center for Drug-Free Schools and Communities (1994)
Zero Tolerance/ Zero Loss	Students at risk of suspension or who have dropped out	Assessment and direction to alternative education settings	No	Decreased violence and weapons possession on school grounds	Western Regional Center for Drug-Free Schools and Communities (1995)

(discussed above and not presented below), Project Success, and the River Region Human Services School-Based Prevention Program.

Project Success

Project Success, a school-based prevention program in Irvine, California, for seventh-through ninth-grade students and their families (Western Regional Center for Drug-Free Schools and Communities, 1995), provides a range of services including individual, group, and family counseling and academic peer tutoring. Students referred to the program by teachers or support staff are administered a battery of instruments to assess particular needs. Students are reassessed after 6 months and may stay in the project for up to 2 years. Students also receive opportunities to perform community service, and parenting skills training is provided for students' parents. According to the program, Project Success students experienced small increases in drug use between seventh and eighth grade. State and local comparison groups, however, experienced large increases in drug use during this time period. Participants also experienced improved grades and school attendance.

River Region Services School-Based Prevention Program

The River Region Services School-Based Prevention Program in Jacksonville, Florida, works with second- through fifth-grade children. Like PGC, this program targets youth with multiple risk factors. Children are referred to the program with two or more of the following risk factors: poor academic performance; personal problems (e.g., low self-esteem or difficulty with peers); family problems; behavior problems; medical problems; truancy; and involvement in the criminal justice system. The children attend one individual and two group counseling sessions weekly for 18 weeks. The group sessions focus on developing life skills, such as communication and decisionmaking skills, and coping strategies. Parents participate in one or more monthly counseling sessions, which focus on parenting skills and family dynamics. Compared to a waiting list control group in an experimental design, children in the treatment group demonstrated decreases in acting out (e.g., lying, arguing, disobeying, complaining, and aggression); distractibility (e.g., restlessness, difficulties concentrating, underachieving, and attention seeking); and immaturity (e.g., rejection from peers, nervousness, fearfulness,

stealing, and crying easily), as measured by the Walker Problem Behavior Identification Checklist (Reynolds and Copper, 1995).

Programs for Other Special Populations of High-Risk Youth

Table 6 following this page lists four programs for other special populations of high-risk youth. These programs target pregnant teenagers, deaf and blind students, and Native American youth. Three of these programs—ASPEN (Adolescent Substance Prevention Education Network), the Drug-Free Program at West Virginia Schools for the Deaf and Blind, and the Indian Council Prevention Program—represent unique efforts to assist special populations in avoiding drug use.

ASPEN (Adolescent Substance Prevention Education Network)

Substance use during pregnancy has been linked to neonatal complications and infant mortality. The ASPEN program was designed to prevent and/or reduce drug use behavior in pregnant teenagers in rural Illinois, protecting both the mother and the fetus (Sarvela and Ford, 1993). Clients at participating health clinics were given an eight-module educational program while they waited to see their physician for prenatal care. The modules focused on health and nutrition, the effects of AOD use during pregnancy, stress, and decisionmaking. The modules were self-administered, and participants completed one module per visit. After youth completed each module, a trained health care worker asked questions related to the information in the module. A pretest/posttest nonequivalent control group design was used, with the control group receiving regular prenatal services. While both groups increased their knowledge of the effect of AODs, the treatment group showed greater gains in knowledge. Both groups showed a decrease in use of alcohol and cigarettes, and significantly more participants in the program indicated that they had reduced their intake or quit using drugs at posttest. Additional outcomes include health benefits: program participants had significantly lower rates of diabetes, anemia, sexually transmitted diseases, and spontaneous abortion.

Table 6
Programs for Other Special Populations of High-Risk Youth

Name of Program	Participants	Intervention	Control/ Comparison	Outcomes	Citation
ASPEN (Adolescent Substance Prevention Education Network)	Pregnant teens	Self-administered educational modules focusing on drugs and pregnancy	Yes	Greater decrease in use of alcohol and cigarettes among participants; increased AOD knowledge; lower rate of diabetes, anemia, and sexually transmitted diseases	Sarvela and Ford (1993)
Drug-Free Program at West Virginia Schools for the Deaf and Blind	Deaf and blind students	AOD education, deaf and blind community members as role models, skills training, alternative activities	No	Increased AOD knowledge, enhanced decisionmaking skills, improved socialization skills, decreased suspensions and tobacco use, no suspensions for AOD use	Southeast Regional Center for Drug-Free Schools and Communities (1994)
Indian Council Prevention Program	Native American youth	Cultural Native American activities combined with AOD prevention curriculum to influence education, self-awareness, and decisionmaking	Yes	Decreased AOD use	Parker (1990)
Summer Camp	Native American youth	5-day summer camp with AOD education and life skills training	No	Decreased AOD use, increased attitudes toward responsible driving and peer resistance	Conner and Conner (1992)

Drug-Free Program at West Virginia Schools for the Deaf and Blind

Deaf children are at a particular risk for substance use because of communication problems. Deaf teenagers may not receive appropriate information about AODs because many parents of deaf children never learn or are poor at sign language and because the deaf community often is not well informed about prevention issues (Southwest Regional Center for Drug-Free Schools and Communities, 1994). West Virginia Schools for the Deaf and Blind administer a comprehensive AOD prevention program to students in the elementary through high school levels that features training in communication and AOD prevention for teachers, life skills training and alternative drug-free activities for student, and use of deaf and blind community leaders as role models to discourage AOD use. Although this program has not been rigorously evaluated, student surveys and teacher observations report increased knowledge of negative influences and risk factors of AOD use, enhanced decisionmaking skills, improved socialization skills, fewer suspensions, decrease in tobacco use, and no suspensions for AOD use in 2 years.

Indian Council Prevention Program

Contrary to public perception, most ethnic minority groups report a lower prevalence of substance use than whites (Austin and Pollard, 1993). The exception, however, is Native American youth, who use AODs at much higher levels than other segments of the population (Conner and Conner, 1992). The Indian Health Service has identified alcohol, substance abuse, and diseases associated with alcohol as the most significant health problems affecting Native American communities (Parker, 1990).

The Indian Council Prevention Program for Native American youth in Rhode Island incorporated cultural materials into a standard drug prevention curriculum to test the hypothesis that the teaching of cultural traditions would constitute a more effective prevention approach. Parker (1990) reports that in the study, all nine participants (100 percent) remained in the program while less than half (44 percent) of comparison group participants in a standard drug prevention program maintained involvement. Participants in the Indian Council Prevention Program indicated that they were attracted to the program because of the cultural material and only later became interested in the prevention material.

Study results showed a greater reduction in drug use for Indian Council participants and a significant correlation between increased cultural affiliation and decreased AOD use.

SUMMARY OF PROMISING PROGRAMS

The 67 programs summarized in Tables 1 through 6, and the 18 programs discussed in this report of promising drug prevention programs, present a myriad of approaches to substance use prevention among high-risk youth. Programs for economically disadvantaged youth and youth who are failing in school and/or at risk of dropping out offer life skills training in combination with other services (most commonly alternative drug-free activities for economically disadvantaged youth and academic skill building for youth who are failing or at risk of dropping out of school), and both reported their biggest impact on school-related outcomes. The most common outcome of promising programs for juvenile offenders was a change in AOD knowledge (experienced by three of four programs). Programs for children of substance abusers are more clinically oriented than other programs, with 60 percent providing counseling or support groups and gearing outcomes toward improving personal coping and family functioning. Programs for substance users demonstrated the biggest impact on substance use, with 75 percent of the programs demonstrating an impact on reducing use.⁶

Building on the risk and resiliency literature, nearly all the programs use multifaceted approaches to prevention designed to decrease risk factors and increase protective factors. Examples of components that decrease risk factors or increase resiliency include mentoring to increase the level of social support and conveyance of positive social norms; life skills training to improve decisionmaking and problemsolving capabilities, communication skills, resistance, and coping strategies; tutoring and remediation to improve academic performance and school bonding; individual therapy to reduce behavior problems; group therapy to bolster interpersonal skills and peer bonding; family therapy and parenting

⁶ These programs are not necessarily more successful than programs for other populations. Rather, this group does not experience the floor effect of low rates of substance use at baseline that makes immediate impacts on use difficult to demonstrate, particularly in the absence of a comparison group.

skills training to improve family communication and family functioning; and community service to increase community bonding.

These programs targeted and positively effected a range of outcomes. Most programs reported more than one positive outcome. School outcomes were the most commonly cited. Slightly more than half of the programs (i.e., 35) reported success in one or more of the following school-related areas: school achievement (22 programs), school attendance (17 programs), suspensions or disciplinary problems (17 programs), dropping out (5 programs), and school bonding (2 programs). About half of the programs (i.e., 33) reported effecting a change on one or more of the following AOD outcomes: AOD use (20 programs), knowledge (19 programs), and/or attitudes (7 programs). About one-third (i.e., 23) of the programs reported changes in psychosocial attributes and skills (e.g., self-esteem, decisionmaking, and coping). One-fifth (i.e., 14) of the programs reported positive changes in family dynamics through increased parental involvement (6 programs), reduced family conflict and improved family relations (6 programs), and improved parenting skills (2 programs). Fifteen percent (i.e., 10) of the programs reported a positive change in crime (5 programs) and problem behaviors (5 programs). Because the majority of these outcomes are based on pretest/posttest assessments of change without the benefit of a comparison group, it is impossible to determine the extent to which positive change can be attributed to the intervention and how much would have occurred naturally.

One-fifth (i.e., 14) of the programs used comparison or control groups and provide a better basis on which to discuss program effects. Even with the most carefully selected comparison groups, preexisting differences between the treatment and comparison groups may lead to differential outcomes independent of the intervention. Hence, these conclusions must remain tentative, as is the state of much evaluation research in AOD prevention among high-risk youth. Half of the 14 programs using comparison groups demonstrated a change in AOD use.⁷ Five of these seven programs employed some type of life skills training, usually

⁷ A larger percentage of these more rigorous studies reported positive changes in behavior than was found in the population of 67 studies. This is likely due to the publication bias of journals toward more objective measures of success in prevention work. Moreover, researchers who invest significant resources into a comparison group strategy are likely to be more motivated to include the most powerful measures of program effectiveness in their design.

in combination with other program components such as AOD education, parenting skills workshops, and alternative activities. Three programs offered life skills training but did not report any effects on substance use; two of these three programs targeted children in preschool and fourth through sixth grades, when actual use is comparatively rare, and descriptions of the third program, STAR, note that few of the children of alcoholics in the study were substance users at baseline.

Five of the fourteen programs produced outcomes in the psychological attributes (e.g., self-esteem, coping, and loneliness). Some version of personal and social skills training or life skills training was common among four of the five programs.

Approximately one-third (i.e., 5) of the 14 programs produced a change in school-related behaviors such as improved attendance and academic achievement and reduced dropout rates. The programs used a variety of strategies to effect change. ADEPT used self-esteem enhancement and homework sessions; YouthNet used case management; PGC provided life skills training and social support; and Project Success and the Juvenile Substance Abuse Prevention Project provided a comprehensive range of educational, counseling, and recreational activities to youth and parents. No one strategy appears to be more successful than others in effecting school-related behaviors.

These 14 studies, which present a range of prevention strategies for a diversity of ages and populations, represent too small a sample to draw firm conclusions about what works best for high-risk youth. However, life skills training appears as a common thread running through several programs that effected actual substance use and/or enhanced resiliency through improving interpersonal and coping skills.

CONCLUSIONS AND RECOMMENDATIONS

There is little question that effective strategies for reducing the risk of AOD involvement in high-risk youth exist. The program development side of prevention, however, is far ahead of the research side, which has yet to build a solid base of knowledge regarding the efficacy of different types of programs for various populations of high-risk youth. CSR

offers the following recommendations to improve the Nation's capability to prevent drug use among high-risk youth:

- *Recommendation 1: Make the inclusion of rigorous evaluation of short-term effects a requirement for receipt of Federal funding. Far too few rigorous evaluations exist to demonstrate effectiveness in a field where hundreds of programs have been implemented and new programs and approaches constantly are developed. While all 67 programs highlighted in this review claim success, most of their claims have not been scientifically verified. The programmatic side of prevention work has had sufficient time to generate many promising approaches to preventing AOD use in high-risk youth. The time has come to require demonstrations of effectiveness so time and money are not wasted on ineffective approaches and strategies and so youth are helped in the most effective and efficient manner.*
- *Recommendation 2: Use a stricter criterion of demonstrated outcomes to determine and report program success in publications and awards recognizing exemplary prevention programs. Just as it is critical that evaluation capacity be a requirement for Federal funding, it is important that the ability to demonstrate success be a criterion for official awards for effectiveness. Too frequently programs recognized as exemplary have not been required to demonstrate positive outcomes, or these positive outcomes have not been reported in publications bestowing official recognition on these programs. Greater discretion should be exercised when making awards, and programs should be rewarded on outcomes not program practices. Too little is known about the most effective program practices for high-risk youth to judge success using a strictly programmatic criteria such as the number of clients served, the diversity of programming, and the theoretical model of the intervention.*
- *Recommendation 3: Fund more longitudinal studies to determine the long-term effects of AOD prevention strategies and to enhance the field's understanding of the relationship between reducing specific risk factors and*

later substance use behavior. Most contemporary prevention programs focus on reducing risk factors and building resiliency in youth. Rather than waiting to target AOD behaviors directly once they have occurred, these programs seek to bolster personal and interpersonal competency, improve family relationships, improve parenting skills, provide social support outside the family, and enhance academic achievement and school bonding. While this approach is grounded in theory and research that has identified the corollaries of substance use, there has been little research on the long-term ability of this approach to delay or reduce AOD involvement in high-risk youth. Longitudinal studies are needed to determine the true efficacy of interventions that seek to improve personal and social skills, to bolster family relationships, and to increase attachments to conventional institutions such as schools and churches.

- *Recommendation 4: Replicate only those programs that have been proven effective through rigorous research.* New programs and approaches—or new twists to old approaches—constantly are developed. While there clearly is room for innovation and improvement in the prevention field, unless these new approaches can empirically demonstrate positive outcomes, they present little added value to the field as a whole. Given the plethora of programs that currently exist—and the strong, yet largely unproven, claims of their success—resources may be better used to test, refine, and replicate these models, rather than creating new programs. However, program replication should be undertaken only with models that have demonstrated effectiveness at achieving outcomes. Social programs often are replicated because they are aggressively marketed and not because they demonstrate success (Replication and Program Services, 1994).

The prevention field shows considerable promise in reducing the risk of substance use among high-risk youth. Programs have demonstrated that they can produce positive, short-term effects. However, much work remains to be done to build a stronger foundation of knowledge that can firmly support long-term efforts to help high-risk youth avoid the dangers of AOD use in both adolescence and adulthood.

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