Understanding

Substance

ABUSE PREVENTION

Toward the 21st Century:
A Primer on Effective Programs

Acknowledgments

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Foreword

The Center for Substance Abuse Prevention (CSAP) in the Substance Abuse and Mental Health Services Administration is the Nation's lead agency for substance abuse prevention. In addition to funding studies to test research-based models, CSAP spreads the word about proven program interventions that will enhance the efforts of prevention practitioners, policymakers, and evaluators.

CSAP places special emphasis on disseminating "best practices" materials to the field. Practitioners and policymakers across the country are not always certain about the effectiveness of a particular program or its appropriateness for their community. This document assesses the effectiveness of programs in CSAP's High-Risk Youth (HRY) Demonstration Grants Program. After rigorous review of final reports submitted by grantees, seven model programs were identified as having been well implemented and well evaluated, and having produced consistently positive results. Several have been replicated, and others have been adopted in communities or schools. By encouraging the adoption of these best practice models in the field, CSAP is promoting the implementation of effective programs.

Many HRY grantees are still at work in the field or analyzing findings that extend beyond their project reports. As these results become available, CSAP will continue to disseminate information about effective program models. These models will be the building blocks for a National Registry of Effective Programs, which will include successful programs sponsored by other Federal agencies, State and local governments, and the private sector. CSAP will promote these outstanding program models and facilitate their adoption in communities across the country—through grant programs, training and technical assistance, and publications—so that we can solidify and extend the progress that has been made in preventing substance abuse in our Nation.

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Chapter 1

Introduction and Overview

Background: Substance Abuse Prevention Programs Targeting High Risk Youth

Substance use is one of today's most challenging health and social problems. Further, it is more pervasive in the United States than in any other industrialized nation. Early involvement with any drug is a risk factor for later drug use and criminal activity, and the more severe the early involvement, the greater the risk that anti-social behavior will emerge in the future. Early use of alcohol, tobacco, or illicit drugs has been linked clearly to later substance abuse (Kandel, 1980, 1982; DuPont, 1989; cf. Catalano, Kosterman, Hawkins, Newcomb, & Abbott, 1996). Thus, young people, a particularly vulnerable at-risk population, are a key target for prevention efforts.

It is because of their perceived vulnerability and malleability that youth have been the focus of most substance use prevention and intervention programs. In fact, focusing on young people from early childhood through adolescence has long been recognized as central to an effective substance abuse prevention strategy. Ever since the first major outbreak of substance use among youth in the 1960s, prevention programs directed at children and youth (and their families and schools) have been key elements in broader primary prevention efforts at Federal, State, and local levels. Youth-oriented prevention programs and initiatives have proliferated throughout the country, and several generations of programs, models, and theoretical frameworks for prevention have evolved.

The Center for Substance Abuse Prevention's Role

Since its establishment in 1986, the Center for Substance Abuse Prevention (CSAP, originally the Office for Substance Abuse Prevention, or OSAP) has played a critical leadership role in the development of substance abuse prevention theory, programming, and research. An important part of CSAP's mission within the broader context of its parent agency, the Substance Abuse and Mental Health Services Administration (SAMHSA), is to generate new knowledge about the impact and effectiveness of prevention efforts. Much of the information driving this knowledge development effort has been accumulated over the past 11 years in the form of data collection, analysis, and reports of findings from CSAP's diverse array of demonstration grant programs.

Among the first of these programmatic efforts was the High Risk Youth (HRY) Demonstration Grant Program, which awarded grants to community-based organizations, universities, and local agencies. Similarly, the venue of these programs has varied in terms of population density, geographic location, and point of contact with participants. Further, these programs have attempted to assist parents and their preschool children, preadolescents, adolescents, and communities as a whole, providing them with the skills, knowledge, and support to resist or desist from substance use. Special initiatives have focused on violence prevention, HIV/AIDS prevention, the needs of adolescent females, the disabled, and specific ethnic/cultural groups.

In the past 11 years, CSAP has amassed information about these programs' processes and outcomes. The agency has undertaken an effort to formalize, synthesize, and extract lessons, based on hard scientific evidence regarding the ability of intervention programs to successfully effect decreased substance use among target populations. The information extracted from the grants has been formalized in the High Risk Populations DataBank. The purpose of this document is to present the theoretical framework for CSAP's HRY programs, as well as the findings from selected effective programs.

The Evolution of Prevention Theory and Programming

Over the past decade, CSAP's substance abuse prevention programs have provided direct services to tens of thousands of children, youth, families, and communities across the country. In addition, they have been a fertile proving ground for prevention research, theory, and technology. As a result of these efforts, a framework for better understanding the causes, etiology, and sequela of substance use has evolved. As noted by Johnson, Amatetti, Funkhouser, and Johnson (1988) in a review of current substance abuse prevention research and theory, "Because prevention...is an evolutionary field that is continuously growing from the thinking and experiences of researchers, planners, practitioners, and evaluators, the current knowledge base will change, expand, and emerge in new combinations, providing better tools with which to address [substance abuse] problems." The evolving framework is constructed around two concepts—risk and protection—and their interplay.

Risk-Focused Prevention

The professional literature offers a rich body of research on risk factors for substance use and abuse among children, youth, and young adults. The major strength of this research is its predictive value: The more risk factors a child or youth experiences, the more likely it is that he or she will experience substance abuse and related problems in adolescence or young adulthood. However, risk factor research does not usually claim causative links between risks and later problems.

Many risk factors experienced by individuals in childhood are associated not just with substance abuse but with an array of health, mental health, and behavioral problems. School failure, for example, is a strong predictor of substance abuse, juvenile delinquency, and other problem behaviors (Battistich, Schaps, Watson, & Solomon, 1996). As the research on risk factors has accumulated, an increasingly vivid picture has emerged of a complex web of interrelated risks and problem behaviors. Researchers have also found that the more the risks in a child's life can be reduced, the less vulnerable that child will be to subsequent health and social problems (Hawkins, Jenson, Catalano, & Lishner, 1988).

Grouping risk factors by domain

In one very straightforward theoretical framework of substance use, six life domains—individual, peer, family, school, community, and society—are used. It is important to note that these domains interact with the individual placed at the core of the model, and that all stimuli are processed, interpreted, and responded to based upon those characteristics that the individual brings to the situation (see Figure 1). The primary strength of this

model is that it provides a framework in which to understand the interactive effects of risk and protective factors. Additionally, it provides guidance about which factors should be targeted by a diverse array of prevention programs.

This "Web of Influence" depicts the domains that affect substance use and other problem behaviors. The Web has been used as the organizing principle underlying the development of the High Risk Populations DataBank. While programs work to effect positive change in one or more of these domains, thereby increasing resiliency and enhancing protective factors, the domains are also important in understanding outcomes. Since each prevention program has as its ultimate goal to prevent, postpone, or reduce substance use, and since substance use itself is a complex product of occurrences in the other domains, it has been extracted and maintained as a separate outcome domain.

Inclusion of protective factors

Exposure to even a significant degree of risk factors in a child's life does not necessarily mean that substance use or other problem behaviors will inevitably follow. Many children and youth growing up in presumably high-risk families and environments emerge relatively problem free. The reason for this, according to many researchers, is the presence of *protective factors* in these young people's lives. Protective factors balance and buffer risk factors (Hawkins, Catalano, & Miller, 1992). In contrast to a paradigm that focuses exclusively on reducing risk, with an emphasis on negative or pathological aspects of an individual's life, protective factor research looks at what is positive and healthy in young people. As with risk factors, protective factors can be found in each of the major domains of life experience.

Figure 1
The Web of Influence
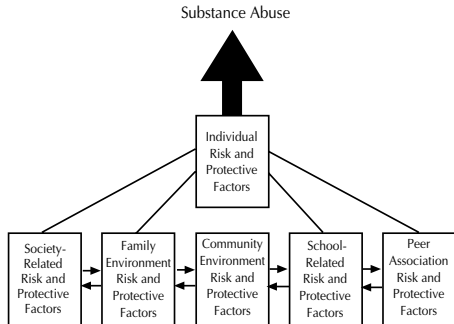
A focus on resilience

One might conclude that risk factors and protective factors are opposite sides of the same coin. It is logical to assume, for example, that the opposite of a particular risk factor—e.g., success in school, as opposed to school failure—would also predict the opposite: health and personal success instead of problem behavior. Yet the correlations are not exact.

Many in the substance abuse prevention and youth development fields have argued, moreover, that an emphasis on protective factors implies a significantly different worldview from an emphasis on risk factors (Henderson, 1996; Wolin & Wolin, 1993). According to critics of risk-focused prevention, the approach concentrates on essentially negative elements in an individual's life and environment, stressing deficits rather than strengths and blaming the victim. Wolin and Wolin (1995) label this the "Damage Model." By contrast, some critics maintain, building on and enhancing protective factors is a more promising approach because it stresses positive elements in individuals and environments.

An important shift from risk-focused prevention theory in recent years has been a focus on *resilience.* As a concept in the youth development and prevention fields,

the term originated in the longitudinal studies of Garmezy and Streitman (1974), Emmy Werner (1986), Michael Rutter (1979), and others who examined the developmental qualities of children and youth who prevailed and succeeded despite risk factors such as poverty, substance-abusing parents, and dysfunctional families. Garmezy has defined resilience (Hazelden, 1996) as an absence of deviant outcomes regardless of exposure to risk. Wolin and Wolin (1995) define it as successful adaptation despite risk and adversity. According to one recent review of the literature (Hazelden, 1996), factors contributing to resilience in young people include

- A strong relationship with a parent or caring adult who provides a nurturing environment early and consistently.
- Feelings of success and a sense of mastery so young people can name something they do successfully and can build self-respect.
- Strong internal and external resources such as good physical health, self-esteem, a sense of humor, and a supportive network that includes family, school, and community.
- Social skills, including good communication and negotiating skills, and the ability to make good decisions and to refuse activities that may be dangerous.
- Problem-solving and thinking skills that help to generate alternatives and solutions to problems.
- Hope that odds can be overcome with perseverance and hard work.
- Surviving previous stressful situations—each time a young person masters a difficulty, that experience helps her or him face the next difficulty.

Developing resilience in young people and promoting specific strengths such as

these within multiple domains has been and continues to be a major focus of the HRY Demonstration Grant Program.

Risk and Protective Factors by Domain

One legacy of the widespread drug use and rebellion among youth in the mid-1960s was a vast body of research on the causes and correlates of youthful problem behavior. As a result, the literature on risk factors is more extensive than for protective factors and resilience. Further, risk and protective factors may vary considerably according to an individual's age, psychosocial development, ethnic/cultural identity, and environment. What follows, therefore, is a brief summary of the literature that presents a current consensus on risk and protective factors that are generally considered to be among the most important for substance abuse prevention policy and programming. This consensus, in turn, has guided the development of the HRY grant programs reviewed in the following chapter.

Risk Factors

Knowledge about specific risk factors, as noted by Hawkins, Catalano, & Miller (1992), is crucial in preventing substance abuse and related problem behaviors. Hawkins emphasizes, however, that risks exist in multiple domains and preventionists should work to reduce risks across domains. In addition, common risk factors predict diverse behavior problems. When a particular risk factor is reduced, according to Hawkins, it may affect a diverse set of problems in the community. Further, although levels of risk may vary from one community and ethnic/cultural group to another, effects of risk factors are fairly consistent across races, cultures, and social classes.

Personal/individual

Many of the most important risk factors affecting substance use and abuse can be categorized as uncontrollable variables. Foremost among these are **genetic predispositions** toward alcohol use (CSAP, 1993a, p. 8). **Age and gender** are also important. Individuals are considered to be most vulnerable to substance use during the period from early adolescence through young adulthood. The earlier the age at onset of drug use, the greater the risk for later substance-related problems (Kandel, 1982).

More amenable to change are personal **attitudes and predispositions** related to drug use. Highly correlated with use or nonuse of drugs, for example, is an individual's **perception of risk** (Brounstein, Altschuler, Hatry, & Blair, 1989). Within recent years, an increase in youthful drug use has been associated with decreased perceptions of risk (Johnston, O'Malley, & Bachman, 1995). Other predispositions include **increased levels of impulsivity, hostility, or disinhibition; increased alienation from the dominant values of society; and greater levels of rebelliousness** (CSAP, 1993a, p. 7).

Substance abuse prevention programs often aim at correcting or overcoming **deficits in social skills.** Principal among these are **early aggressive behavior** (Hawkins, Catalano, & Miller, 1988) and **alienation** (CSAP, 1993a, p. 9). Also closely linked with substance use and abuse among youth are related problem behaviors such as **juvenile delinquency, violence, teen pregnancy,** and **dropping out of school** (Hawkins, Catalano, & Miller, 1992).

Family

From the prenatal stage through late childhood, the family—parents, caregivers or parent surrogates, siblings, and close relatives—is the main influence in the development of children and youth, and it is also the crucible in which problem behaviors and all their antecedents are shaped. Kumpfer (1993) has observed, for example, that **remaining in an abusive or conflict-ridden family** is far more detrimental to children than divorce. Kumpfer also notes that, according to research, **marital discord** is a stronger predictor of delinquency than family structure (such as a single-parent family). Other major family risk factors include **economic deprivation; reduced supervision, formal controls, and social supports; living in impoverished neighborhoods characterized by high crime rates and alienation; differential family acculturation; and poor family management, discipline, and problem-solving practices** (Kumpfer, 1993; Hawkins, Catalano, & Miller, 1992). Also important in predicting substance use among youth is **parental use of alcohol and drugs** and both **parental permissiveness and positive attitudes toward alcohol and drugs** (Hawkins, Catalano, & Miller, 1988).

School

One of the strongest predictors of substance use and related problem behavior is **school failure** (CSAP, 1993a, p. 11; Hawkins, Catalano, & Miller, 1988). Although to a great extent school failure is shaped by an individual's experiences in early childhood, within the family setting, and during the preschool years, some school-related factors are believed to exacerbate preexisting problems and dispositions. Principal among these are a **negative, disorderly, and unsafe school climate** and **low teacher expectations of student achievement** (cf. Hawkins, Catalano, & Associates, 1992). Closely associated

with an unsafe and disorderly school climate, and also predictive of school-related substance abuse problems, is a **lack of clear school policies regarding drug use** (cf. Hawkins, Catalano, & Associates, 1992).

Peer group

The **negative influence of peers** is well established as one of the most important factors in the onset of drug and alcohol use among youth, and it continues to be important through young adulthood (Swisher, 1992). Nevertheless, all young people are not equally susceptible to real or perceived peer pressure. According to Swisher (1992, p. 11), adolescents who are strongly peer-oriented hold "more negative views of themselves, see themselves as less dependable, more hostile, more likely to disobey adults, less interested in academics, and less future-oriented." Another factor noted by Swisher (1992, p. 12) is weak bonds with traditionally positive norms such as those espoused by the family, community, or religion. Further, peer influence increases in importance as young people move into adolescence. One or more of the preceding vulnerabilities to peer influence can lead to the surest predictor of substance use among youth, **involvement with peers who use alcohol and drugs and engage in other forms of problem behavior** (Hawkins, Catalano, & Miller, 1988).

Community

In a review of research related to community risk factors for substance abuse, Emshoff, Erickson, and Thompson (1992) identified seven that appear to have a direct influence:

- **Community norms that promote or permit substance use.** Mosher (1990) has noted that community norms may favor inappropriate alcohol use among adults while discouraging youthful drinking, thus creating a conflicting message for youth.

- **Poverty/lack of empowerment.**

- **Lack of community bonding and community disorganization**—strongly related to poverty and lack of empowerment.

- **Cultural disenfranchisement**—i.e., a perception among youth that the dominant/mainstream culture is not relevant to them; that they are discriminated against because of their culture, race, or ethnicity; or that little value is attached to their ethnicity and culture.

- **Policies that encourage or fail to discourage substance use**—e.g., tolerance of sales of tobacco and alcohol to minors.

- **Pro-use messages in the general media**—e.g., television shows and popular music.

- **Pro-use messages specifically in advertising (as distinct from other media)**—e.g., youth-oriented cigarette advertising has been consistently linked with the onset of smoking.

Society

Societal-level risks are relevant because all of the previously mentioned systems (i.e., individuals, peer groups, families, schools, and communities) exist within the larger society. Societal-level risk factors relate to **national economic and employment conditions, discrimination, and marginalization of groups.** Impoverishment, employment and underemployment, and discrimination contribute to a society that may marginalize groups of individuals, increasing their risk for substance use and abuse.

Protective Factors

The literature on protective factors and resilience is more diffuse than that for risk factors, and there is less clarity about which factors are most important in the prevention of substance abuse. Nevertheless, a growing consensus exists that in the major domains of youth development, certain protective factors are critically important.

Personal/individual

CSAP's review of the individual domain (CSAP, 1993a, p. 13) identifies three primary categories of protective factors:

- Positive temperament characteristics, which include **social skills and social responsiveness, cooperativeness, emotional stability, positive sense of self, flexibility, problem-solving skills, and low levels of defensiveness.**
- An emotionally supportive parental/family milieu, including **parental attention to children's interests, attachment to parents, orderly and structured parent-child relationships, and parent involvement in homework and school-related activities.**
- Supportive societal institutions that reinforce the child's coping efforts, elements of which include **parental identification and satisfaction, commitment to school, regular involvement in church, and belief in society's values.**

Less easily definable, but perhaps just as important, is **social competence,** including having good communication skills, responsiveness, empathy, caring, a sense of humor, and an inclination toward prosocial behavior (Elias, Zins, & Weissberg, 1997). Social competence also includes **problem-solving skills, a strong sense of autonomy and independence,** and **a sense of purpose and of the future, e.g., goal-directedness.**

Family

Perhaps the single most important family-related protective factor is **positive bonding** within the family setting. As Werner (1990) has observed, "despite the burden of parental psychopathology, family discord, or chronic poverty, most children identified as resilient have had the opportunity to establish a close bond with at least one person [not necessarily the mother or father] who provided them with stable care and from whom they received adequate and appropriate attention during the first year of life" (quoted in Benard, 1991, p. 6). Other key family protective factors include:

- **High levels of warmth and an absence of severe criticism** (Rutter, 1979).
- **A sense of basic trust** (Erickson, 1950/1985).
- **High parental expectations** (Benard, 1990).
- **Clear rules and expectations for children, including children's participation in family chores and responsibilities** (Hawkins, Catalano, & Miller, 1992).

School

Key protective factors within the school setting are similar to those for the family. Principal among these are **caring and support; high expectations; clear standards and rules for appropriate behavior; and youth participation, involvement, and responsibility in school tasks and decisions** (Elias et al., 1997).

Peer group

Given the crucial importance of the peer group in adolescence, one of the most important factors in young people's ability to resist negative peer influences is **involvement with positive peer group activities and norms** (Swisher, 1992). Also helping young people resist negative peer influ-

ences are such **social competencies** as **decision-making skills, assertiveness, and interpersonal communication** (Swisher, 1992).

Community

Protective factors within the community and society are similar to those within the family and school in helping to support and develop individual traits of social competence, self-responsibility, and resilience. Elements found in caring communities include:

- **Caring and support**—social networks and support systems that can promote and sustain social cohesion within the community (Battistich et al., 1996).

- **High expectations of youth**—cultural norms that set high standards of behavior for young people, including clear norms regarding the use of alcohol and drugs, and that also value youth as community members.

- **Opportunities for participation**—ways for youth to function as active and contributing members of the community and participate in cooperative learning and shared decision making (Battistich et al., 1996).

Society

Societal-level characteristics or policies can also work to protect youth from initiating substance use. Messages promoting substance use via media channels may lose their impact if children are taught to become **media literate** or if these same media channels also carry **counteradvertising messages** describing the harmful effects of substance use. Understanding and reinterpreting media messages may reduce their negative impact on individual attitudes and, perhaps, behavior (Lewit, Coate, & Grossman, 1981;

Wallack & De Jong, 1995). Additionally, **decreasing substance accessibility** can also protect youth from initiating use. Substance accessibility can be reduced through a variety of prevention strategies, such as increased prices through taxation, increased purchasing age with enforcement, and stricter driving laws.

An emphasis on protective factors, in short, is consistent with the basic mission of substance abuse prevention programs today, particularly the HRY Demonstration Grant Program. Such an emphasis promotes the healthy development of children, youth, families, and communities. When all the domains of a young person's life support healthy development and promote resilience, young people are more likely to withstand the negative influences and risks to which they will inevitably be exposed.

Assessing the Impact of the HRY Grants

CSAP was established at a time of intense public concern about the drug problem. The highly publicized drug-related deaths of several celebrities had created a sense of urgency and crisis. As a result, in its early years CSAP's emphasis was primarily on addressing the problem through delivery of direct services. The first 130 HRY grants were awarded in 1987 in 42 States; their purpose was to develop innovative programming tailored to meet the needs of identified subpopulations of youth in high-risk environments.

Increasingly, however, it became apparent that CSAP's demonstration programs needed to place more emphasis on rigorously evaluating their impacts and outcomes. Every year the Federal Government promotes prevention efforts through several different agencies and departments, includ-

ing CSAP, the Center for Mental Health Services, the National Institute on Drug Abuse, the National Institute on Alcohol Abuse and Alcoholism, the Department of Education, the Department of Defense, the Department of Justice, and others. All have experienced a move toward greater accountability and identification of prevention program outcomes. Initial legislation providing funding for the earliest grants did not require evaluation; however, CSAP later required that grantees use a portion of their monies for evaluation purposes (Sambrano, Springer, & Hermann, 1997). By the second round of grants, of which 48 were awarded in 1989, CSAP required that a significant percentage of each grant be used for evaluation.

Compiling and disseminating the results of HRY program evaluations is now viewed as an important next step for CSAP, both to promote the effectiveness of substance abuse prevention programming and to disseminate the models and intervention strategies that proved most successful.

Advances in Knowledge: The HRY DataBank

Recognizing the need for a sustained effort to organize the mass of information originating among CSAP grantees, and to present findings and other pertinent information in a form that would be useful in assessing both program effectiveness and scientific acceptability, CSAP launched a new initiative, the High Risk Populations HRY DataBank, in the fall of 1994. This document describes the process used to organize, extract, and code information; the structure and contents of the DataBank; and findings from the best implemented and evaluated grants in the DataBank.

The HRY DataBank is an evaluation-oriented information system with a com-

prehensive unifying framework. It consists of four primary information components:

- Descriptive information (e.g., administrative characteristics including location, number, and types of sites; setting; and targeted population demographics);
- Compilations of specific CSAP demonstration program interventions (prevention strategies);
- Formal characterization of the evaluation methods used; and
- Objective ratings of both strength (direction and magnitude) and credibility of findings.

Procedures for Rating DataBank Findings

For each grant, Proposals, Final Reports, Findings Papers, and annual Evaluation Status Reports were reviewed and coded to extract descriptive information regarding the implementation, population, and administrative characteristics of the program as well as to describe the evaluation methods including sample characteristics, measures used, attrition, and findings. In addition, each report presenting research from an evaluation study measuring change over time against a standard was subjected to expert review. The purpose of this expert review was to rate level of confidence in each finding based upon the characteristics and quality of implementation of the research design. Pairs of trained external evaluators rated each research finding for magnitude and confidence that the data were meaningful. In addition, ratings of confidence, magnitude, and direction were generated across all findings in each outcome domain, resulting in ratings for both individual findings and for the overall domain. Details of the rating procedures are presented in Appendix A.

Table 1

Program Characteristics

Program and grant number	Target age	Target race/ ethnicity	Target gender	Target setting
Across Ages (AA) Grant 2779	11–13 and adults	Mixed	Both	Schools and community centers
The Child Development Project (CDP) Grant 2647	6–12	Mixed	Both	Elementary schools
Creating Lasting Connections (CLC) Grant 1279	11–15 and parents	African American/ White	Both	Community centers/ churches/schools
Dare To Be You (DTBY) Grant 1397	2–5 and parents	Mixed	Both	Community centers/ preschools
Greater Alliance of Prevention Systems (GAPS) Grant 1013	16–18	Mixed	Both	Community agencies
Residential Student Assistance Program (RSAP) Grant 618	13–17	Mixed	Both	Juvenile offenders in residential placements
Smart Leaders (SL) Grant 903	13–17	Mixed	Both	Community centers
Family Advocacy Network (FAN) Grant 1383	11–12 and parents	Mixed	Both	Community centers

Projects included in this review produced either quantitative and/or qualitative data that were rated as reliable and reproducible. In practice, this meant that projects had to both measure change and have an explicit source of comparison against which to gauge the changes observed. Projects often employed separate research designs to evaluate each of their component interventions. The most common design used to evaluate findings was a pre-post design with both treatment and comparison groups. A few evaluation efforts attempted between one and three additional followup assessments. Pre-post designs differed primarily in the means by which youth were assigned to conditions. Most often, blocks (e.g., classrooms, public housing authorities) were assigned randomly to treatment or comparison groups. On occasion, treatment samples were self-selected (i.e., referred for treatment) and comparison samples were matched from waiting lists or demographically similar entities (e.g., schools, public housing authorities). Two studies used an experimental pre-post design with treatment and comparison groups (individuals were randomly assigned to condition). One project employed a cohort-sequential design to assess changes over time in one school.

Rural/ urban	Number of sites	Evaluation
Urban	2–5	Pre-post w/comparison
Rural/urban/ suburban	24	Cohort sequential design w/treatment and comparison
Rural/urban/ suburban	5	Repeated measures w/treatment and comparison
Rural/urban/ suburban	4	Pre-post w/treatment and comparison
Suburban	2–5	Pre-post w/treatment and comparison
Suburban	6	Pre-post w/treatment and multiple comparisons
Rural/urban/ suburban	5–10	Pre-post w/treatment and multiple comparisons
Rural/urban/ suburban	8	Pre-post w/treatment and multiple comparisons

Subsequent to this round of reviews, another set of reviews was undertaken. Here, those programs identified as providing data in which the analysts had at least moderate confidence were again subjected to review by two outside evaluation experts. In this review, the research was evaluated on the basis of quality of program intervention implementation, evaluation research rigor, and the positivity and consistency of findings. Again, details of the review process are presented in Appendix A. Appendix B includes information about how effectiveness ratings were derived and a list of the criteria used by reviewers to be applied to programs.

Characteristics of Programs Included in This Monograph

Interventions and findings discussed throughout this text are based on those grants submitting final reports to the Center for Substance Abuse Prevention by December 31, 1995. Thirty-seven HRY programs were identified as being at least moderately rigorous and well implemented. However, the focus of this monograph is on well-implemented, rigorously evaluated, effective programs. Using these criteria for inclusion, the pool of demonstration grants reviewed decreased to nine. One of the nine programs was dropped from further consideration because its results, while positive, were not always consistent, and the lack of consistency was not readily explainable by an examination of population, implementation, or evaluation factors. Thus, the eight programs presented here represent those that were implemented well, were rigorously researched, and have demonstrated positive effects on substance use and/or key risk or resiliency factors related to later substance use.

Conclusions and implications derived from a systematic analysis of the HRY DataBank are the main focus of this monograph. Chapter 2 presents detailed abstracts from well-implemented, rigorously evaluated, effective programs. Chapter 3 provides a synthesis of the findings from these effective programs as a function of CSAP's prevention strategies and primary outcome of interest—the use of alcohol, tobacco, or illicit drugs. Tables 1 and 2 present information about the geographic distribution of the eight programs, the target populations, and program activities. The format of this report was selected to facilitate inclusion and revision of findings as more and more of the CSAP grantees complete their demonstrations and report their findings, adding to the breadth and depth of our knowledge base.

Table 2

Program Intervention Activities

Activity	AA	CDP	CLC	DTBY	GAPS	RSAP	SL	FAN
Social competence/communication skills	X	X	X	X	X	X	X	X
Peer resistance	X				X		X	X
Coping/stress/anger management	X					X	X	X
Problem solving/decision making	X	X		X	X	X	X	X
Substance abuse education	X	X	X		X	X	X	X
Cultural enhancement		X			X			
Community service	X							
Alternative activities	X	X		X	X		X	X
Leadership training					X		X	X
Tutoring								
Mentoring	X							
Self-esteem building	X			X				
Sex/health education							X	
Violence/gang prevention			X					
Negotiation/conflict resolution			X					
Networking								
Media campaign			X		X			
Entrepreneurship								
General mobilization			X		X			
Environmental change/cooperative teaching		X						
Individual counseling						X		
Group counseling						X		
Family counseling				X				
Family support/self-help groups				X				
Parenting skills/bonding			X	X				X
Training providers	X	X		X	X	X		
Incentives	X			X				

Key: X = fully implemented

Chapter 2
The Eight Model Programs

In this chapter the eight model programs are described. These model programs vary in form and function, and information about program characteristics is presented. The programs use a variety of prevention strategies; target age groups across childhood, adolescence, and adulthood; target a number of ethnic groups; and represent universal, selective, and indicated prevention efforts. Additionally, findings from each program are highlighted. This chapter presents program information in two ways: in brief format, highlighting key programmatic characteristics and findings, and in fuller, more detailed descriptions.

CSAP Center for
Substance Abuse
Prevention

Substance Abuse and Mental
Health Services Administration

Program Findings Sheet

Across Ages (AA)
Temple University

Location
Philadelphia,
Pennsylvania

Program sites
School district
of Philadelphia
inner-city
middle schools.

Across Ages Improve School Attendance

Group	Mean Number of Absences (Years 1 and 3)	Result of *F*-test
Loaded Program (M.P.S.*)	15.4	
Reduced Version (P.S.**)	19.9	$(F_{2,447} = 4.58, p = .01$
Control Group	21.8	

* Mentoring, Life Skills Curriculum, Community Service
** Life Skills Curriculum and Community Service

Target group
180 African-American,
Asian, Latino, and
White sixth-grade
students each school
year.

Program objectives

■ Increase the social, behavioral, and academic competence; self-esteem; and social support networks of 180 middle school youth each project year. Generate supportive parent involvement in classroom and project activities.

■ Promote youth's connection to positive adult and community norms.

■ Foster collaboration among the youth service, aging, and educational systems in Philadelphia.

■ Enhance the capacity of the School District of Philadelphia to address the educational and social needs of targeted youth.

Findings

■ School attendance was dramatically improved for students with exceptionally involved mentors and showed statistically significant improvement for all students with mentors.

■ Older mentors changed students' knowledge and attitudes toward older people, school, and the future from pre- to posttest.

■ Knowledge and attitudes toward alcohol and tobacco and reactions to persuasion to use drugs changed from pre- to posttest for students with exceptionally involved mentors.

Program Reference Number 2779

Evaluation design

- A randomized pretest-posttest comparison group design is used. Pretest and posttest data are collected at the beginning and end, respectively, of each school year.
- From among the sixth-grade classes whose teachers wish to participate in the program, four classes are randomly selected in each school and assigned to one of four groups; group C (2), the comparison groups, receive no intervention.
- Group P.S. receives the life skills curriculum and is required to perform 2 or 3 hours of community service a week; group M.P.S. receives the curriculum, performs community service, and receives mentoring from older adults. Family members of students in both groups participate in weekend activities.
- Process evaluation data are used to provide information about the nature, progression, and intensity of the mentor-youth relationships, as well as feedback from parents, students, and teachers about their involvement and satisfaction with the project.

Program interventions

- Match an elder mentor (55 years or older) with students in the program. Mentors spend a minimum of 4 hours per week in one-to-one contact.
- Teach students personal and social skills, with particular emphasis on helping to reduce peer pressure to experiment with alcohol and drugs.
- Offer community service activities so that young people have an opportunity to provide service to others and become involved in constructive activities outside of school.
- Strengthen the bonds between parents and children and assist caregivers in developing more effective parenting styles through their involvement in the program.

Across Ages (AA)

Program Description

Across Ages (Grant #2779), administered by Temple University's Center for Inter-generational Learning, was a 5-year effort targeting students in three Philadelphia middle schools. Over the course of the project approximately 525 African-American (52%), Asian (9%), Hispanic (9%), and White (16%) students at risk for alcohol and drug use participated at each school.

The Across Ages program included four components: elders mentoring youth, youth performing community service, teachers implementing a classroom-based life skills curriculum, and activities for family members. The core of the program, mentoring, involved older adults (55+ years old) spending a minimum of 4 hours each week (two 2-hour sessions) with the students assigned to them. Mentors met with students for a minimum of 12 months. Mentors were carefully recruited, screened, trained, and matched with one or two youth. Mentors were also carefully supervised and supported by project staff.

Mentoring activities included tutoring, assistance with school projects, recreational activities, attending cultural or sporting events, and performing community service. Mentors take time to develop trusting, nurturing relationships with their youth. Most of these activities took place out of the school setting.

The second component of Across Ages was community service. Here, students visited frail elders in nursing homes. This activity, designed to break down age-related stereotypes among youth, also served to reinforce feelings of competence, teach self-confidence, improve self-concept, and instill a sense of social responsibility.

The third component of Across Ages involved targeted youth in classroom-based life skills curriculum. Teachers were trained to administer the Social Problem Solving and Substance Abuse Prevention modules of the Positive Youth Development Curriculum (PYDC). The PYDC modules consist of 26 lessons, taught at least once a week for about an hour, focusing on stress management, self-esteem, problem solving, and substance and health information, as well as social networks and peer resistance skills.

Lastly, Across Ages offered a series of activities that provided the opportunity for positive interaction among parents, students, and mentors. Meals, transportation, and incentives were offered to participating parents.

The evaluation for Across Ages used a classic pre-post control group design in which one sixth-grade class at each school was randomly assigned to the control group (no intervention, n=189), limited treatment (received PYDC instruction and were required to do community service, n=193), or full treatment (PYDC + community service + mentoring, n=180). In addition, researchers were able to partition the full-treatment group as a function of level of mentor participation (exceptional, average, or marginal), enabling dosage analysis. Attrition rates were low, and contrasts within study groups revealed no significant differences across years on measures of demographic, household composition, or attrition related-variables. As a result, data were pooled within study groups across years, lending power to outcome analyses. Results from Analyses of Covariance, in which premeasures were used as covariates, demonstrated the superiority of the full-treatment group to the limited- or no-treatment control on 7 of 12 dependent measures:

■ Mentored youth (MPS) had somewhat fewer days absent than the limited treatment group (PS). Both treatment groups had significantly fewer days absent than did no-treatment controls ($F_{2,417}$=4d.58, p<.01).

■ MPS treatment youth demonstrated significant improvement in their attitudes toward the future, school, and elders compared with no-treatment controls ($F_{1,316}$=4.34, p<.04) or PS treatment youth ($F_{1,317}$=9.29, p<.002), who scored lowest on these measures.

■ MPS treatment youth increased in the positivity of their attitudes toward older people relative to controls ($F_{1,317}$=8.09, p<.005), as did youth in the PS treatment group ($F_{1,316}$=6.36, p<.02).

■ MPS youth significantly increased their sense of well-being relative to controls ($F_{1,310}$=3.62, p<.03). PS youth maintained an intermediate position between the two.

■ Both treatment groups demonstrated significant gains in their knowledge of older people relative to controls ($F_{1,313}$=7.04, p<.01 MPS vs. C, $F_{1,368}$=5.32, p<.03 PS vs. C).

■ MPS youth demonstrated significant gains relative to controls ($F_{1,271}$= 4.17, p<.05) in their knowledge/perceived ability to respond appropriately to situations involving drug use. PS youth were not different from controls on this measure.

■ Knowledge of community service issues increased significantly among MPS youth compared to controls ($F_{1,208}$=5.10, p<.03). PS youth were intermediate in terms of the gains observed on this measure, but not significantly different from controls.

No treatment vs. control group differences were noted on measures of self-perception; reactions to stress and anxiety; problem-solving efficacy; alcohol, tobacco, and drug knowledge; or substance use. On this final key measure, lack of difference was attributed to the low incidence of reported substance use for sixth graders both at the onset and end of the school year.

In an attempt to determine the impact of the quantity/quality of mentoring on experienced program outcomes, internal analyses in which the sample was post hoc partitioned as a function of mentors involvement (exceptional, average, marginal) were performed. Relative to average or marginally involved mentors, youth matched to exceptionally involved mentors experienced significant gains in knowledge about the potential risks and consequences of substance use ($F_{1,133}$=5.78, p<.02); positive attitudes toward the future, elders, and school ($F_{1,313}$=4.26, p<.05); positive attitudes toward older people ($F_{1,135}$=5.03, p<.03); and knowledge/perceived ability to respond appropriately to situations involving drug use ($F_{1,99}$=5.83, p<.02). In addition, youth with exceptionally involved mentors had significantly fewer days absent (M=7.4 days) than did those having average mentors (M=12 days), who in turn had significantly fewer days absent than did youth matched with marginally involved mentors (M= 25.4 days, $F_{2,138}$=25.03, p<.001).

Taken together, these data demonstrate the effectiveness of matching youth with older adults serving as mentors in improving prosocial values, increasing knowledge of the consequences of substance use, and engendering resilience to help youth avoid later substance use by teaching them appropriate resistance behaviors.

CSAP Center for
Substance Abuse
Prevention
Substance Abuse and Mental
Health Services Administration

Program Findings Sheet

The Child Development Project (CDP)
Developmental Studies Center

Location
Cupertino, Salinas, and
San Francisco, California;
Louisville, Kentucky; Dade
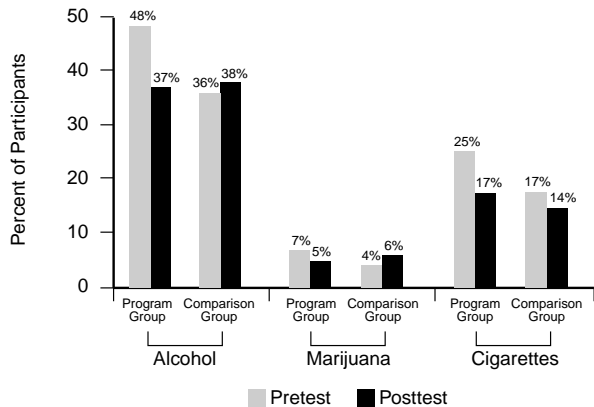County, Florida; and White
Plains, New York

Program sites
Elementary schools.

Target group
Students, families, and
school staff.

Change in Drug Use Over Four Years

Percent of Participants

| | | Alcohol | | Marijuana | | Cigarettes |
Program Group / Comparison Group

Pretest   Posttest

Program objectives

■ Promote attachment to the school community, internalization of the community's
salient norms and values, behavior consistent with school norms and values, and
reduced involvement in drug use and other problem behaviors.

■ Establish a system of mutually reinforcing processes that reduce risk factors (such as
aggressive behavior and poor academic performance) and bolster protective factors
(such as conflict resolution skills and academic motivation) among youth at risk for
substance use.

Findings

■ Students who experience a strong "sense of community" in their schools, compared
with students who experience lower levels of community, also experience greater
enjoyment of class, greater trust and respect for teachers, greater motivation to go
further in school, greater empathy and concern for others, stronger motivation to be
kind and helpful, more sophisticated conflict resolution skills, more frequent acts of
altruistic behavior, greater acceptance of people who are different, higher general
self-esteem, higher academic self-esteem, stronger feelings of social competence,
less loneliness in school, and fewer delinquent acts.

■ Although issues of substance abuse are not directly addressed in the CDP program,
a comprehensive evaluation of the program shows that when well implemented, it
produces significant preventive effects on students' use of alcohol and marijuana,
and marginal effects on use of tobacco.

Program Reference Number 2647

■ In schools where the program led to widespread change in teaching practices, the following effects were shown:
  — Prevalence of alcohol use declined by an average 11% over 4 years in CDP schools, compared with an increase of 2% in matched comparison schools.
  — Prevalence of marijuana use by CDP students declined by 2%, compared with a 2% increase by comparison school students.
  — Prevalence of cigarette use by CDP students declined by 8%, compared with a 3% decline by comparison school students.

Evaluation design

■ Quasi-experimental design, involving two demonstration schools and two comparison schools in each of the districts.
■ Cohort sequential design, beginning with baseline assessments followed by annual assessments for 3 years, using a structured classroom observation system and student and teacher questionnaires.
■ Teacher nominations and rating of students, standardized multiple-choice achievement tests and performance assessments, and review of school records.

Program interventions

■ Train school staffs in revised teaching practices that include cooperative learning activities, activities to enhance interpersonal understanding and relationships, and a literature-based approach to reading in the classroom.
■ Implement schoolwide cross-grade buddy programs and other student service activities.
■ Conduct schoolwide events and activities that involve parents with their children.
■ Provide "homework" activities that involve parents and students in conversations that strengthen family relationships and relate to what the children are learning in school.

Program Reference Number 2647

The Child Development Project (CDP)

Program Description

The Child Development Project (Grant #2647) was a 5-year initiative designed as a comprehensive school-based program to reduce risk and bolster protective factors related to substance use. The program was implemented at 12 demonstration schools in 6 school districts located throughout the United States (6 in the West and 2 each in the South, the Southeast, and the Northeast). Youth populations targeted at each school also varied widely, ranging from 2–95% receiving free or reduced lunch, 26–100% being members of minority groups, and having average achievement test scores ranging from the 24th to the 67th percentile.

The effort attempted to transform the school into a "caring community," in which a student's intrinsic motivation to learn was nurtured, and supportive social relationships, sense of common purpose, and a commitment to prosocial values responsive to children's developmental needs were commonplace. The specific intervention activities cited to accomplish these objectives included:

- Cooperative classroom learning;
- A "values-rich" literature-based reading and language arts program;
- A teaching and problem-solving approach to discipline and classroom management, with regular opportunities for input from the students;
- Classroom and school-community building projects that foster helping, cooperation, and communication among teachers, students, and families; and

- At-home activities that involve youth and their families in conversations and activities relevant to what the students are learning in school.

The basic mode of implementation was a combination of direct training and training of trainers. Initially a small cadre of supervisory staff and teachers were trained by project and school district staff in the spring of 1992. They returned to their schools and assisted project staff to train the faculty there. Over time, trained school staff provided an increasing proportion of services including assistance with cooperative learning, modifying curricula, and implementing the discipline approach.

The outcome evaluation design involved 24 elementary schools in 6 school districts. In each district, two treatment schools were selected based upon their likelihood of embracing the program. They were matched with two comparison schools on the basis of SES, sociodemographic characteristics, and the willingness of the administration to participate as a no-treatment comparison school. A cohort sequential design was employed in which third through fifth graders or fourth through sixth graders (depending on school composition) were assessed each spring. (Kindergarten through second or third grade participated in the intervention, which was school-wide, but in most respects were not assessed as part of the outcome evaluation.) In addition to school records and psychological batteries, the highest grade in each school was asked to complete drug use and delinquency measures.

The strength of the research design was bolstered by high levels of student participation (at least 75% each year) and good initial comparability between treat-

ment and comparison samples (no meaningful differences on gender, ethnicity, percent low income, or substance use), as well as relatively low attrition rates over the course of the program.

Initial evaluations of treatment and comparison schools provided little evidence that the program had a positive effect on students. However, a review of school program implementation revealed that there was considerable variation in the extent to which teaching practices were affected in each school. Internal analyses revealed that 5 of the 12 demonstration schools showed high levels of classroom change relative to their comparison schools. Analyses of student outcomes for these five schools provided considerable support for the program's effectiveness. These analyses revealed a large positive effect on students' sense of school community; moderate positive effects on their liking for school, task orientation toward learning, intrinsic academic motivation, intrinsic prosocial motivation, and use of alcohol and marijuana (i.e., a decline in use among program students and an increase in use among comparison students); and small positive effects on their enjoyment of class, sense of autonomy, conflict resolution skills, commitment to democratic values, concern for others, altruistic behavior, enjoyment of helping others learn, and positive interpersonal behavior in the classroom. These "moderate effects" translate to about 15–20% of students in these five demonstration schools showing positive changes in outcomes that were greater than the largest changes observed among comparison students, and the average program student showed more positive change than roughly 60% of comparison students.

Multilevel regression analyses and structural equation modeling showed that:

■ Students' sense of the school as a community was associated with a wide range of positive outcomes, including increased liking for school and learning motivation, greater concern for others and more frequent altruistic behavior, greater skill at resolving conflicts and an increased sense of efficacy, and reduced involvement in drug use and delinquent behaviors (Battistich, Solomon, Kim, Watson, & Schaps, 1995; Battistich & Hom, 1997).

■ Teacher practices (i.e., warmth and supportiveness, encouragement of cooperation, reduced use of extrinsic control, emphasis on prosocial values, and elicitation of student thinking and expression) were significantly related to students' classroom behaviors (i.e., increased engagement, influence, and positive classroom behavior), which in turn were significantly related to students' sense of community. Moreover, the relationships were found to be virtually identical for classrooms with predominantly poor student populations and those with relatively few poor students (Solomon, Battistich, Kim, & Watson, 1997).

■ Data indicate that students who experience a strong sense of community in their schools, compared to students who experience lower levels of community, also experience greater liking of school, greater enjoyment of class, greater trust and respect for teachers, greater motivation to go further in school, greater empathy and concern for others, stronger motivation to be kind and helpful, more sophisticated conflict resolution skills, more frequent acts of altruistic behavior, greater

acceptance of people who are different, higher general self-esteem, higher academic self-esteem, stronger feelings of social competence, less loneliness in school, and fewer delinquent acts.

■ Although issues of substance abuse are not directly addressed in the CDP program, a comprehensive evaluation of the program shows that, when well implemented, it produces significant preventative effects on students' use of alcohol and marijuana, and marginal effects on use of tobacco. In schools where the full program was well implemented, the following effects were shown:

— Prevalence of alcohol use declined by an average 11% over 4 years in CDP schools, compared with an increase of 2% in matched comparison schools. Use of alcohol by students in CDP program schools declined from 48% to 37%; use of alcohol by students in comparison schools rose from 36% to 38%.

— Prevalence of marijuana use by CDP students declined by 2%, compared with a 2% increase by comparison school students. Use of marijuana by students in CDP program schools declined from 7% to 5%; use of marijuana by students in comparison schools rose from 4% to 6%.

— Prevalence of cigarette use by CDP students declined by 8%, compared with a 3% decline by comparison school students. Use of cigarettes by students in CDP program schools declined from 25% to 17%; use of cigarettes by students in comparison schools declined from 17% to 14%.

Collectively, these findings provide considerable support for CDP's underlying conceptual model, as well as evidence that CDP training had a statistically significant, moderate effect on teachers' classroom practices that, in turn, increased students' sense of community and had positive effects on a number of student outcome variables. Further, treatment-comparison and internal contrasts, using fidelity of implementation as a means to partition schools, demonstrated that when implemented more fully, the program positively affected students' social skills and behaviors, school bonding, and substance use.

Creating Lasting Connections (CLC)
Council on Prevention and Education: Substances (COPES)

Location
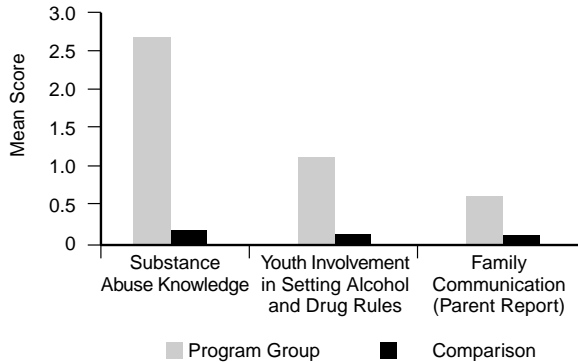Louisville, Jefferson, and Nelson Counties, Kentucky

Program sites
Five church communities in rural, suburban, and urban settings.

Target group
11- to 15-year-old youth at high risk for alcohol and drug use and their families.

CLC Parents Increase Substance Abuse Knowledge Communication and Management Skills

Program objectives
- Increase church community engagement through implementing a successful family recruitment strategy, empowering participants to successfully implement the program and its evaluation.
- Improve participating parents' knowledge and attitudes regarding drug issues, improve their family management skills, and increase their knowledge and use of community services.
- Increase the use of community services, including treatment and rehabilitation services, among participating families when needed.
- Improve the communication and refusal skills of participating youth.
- Delay onset and reduce frequency of alcohol and drug use among participating youth.

Findings
- Increased church community engagement as shown by successful family recruitment and increased levels of empowerment and participation.
- Increased parent resiliency through gains in parents' knowledge and beliefs about alcohol and drug issues, youth involvement in setting alcohol and drug rules, and use of community services.

Program Reference Number 1279

Findings (continued)

- Increased youth resiliency through gains in leveling communication, bonding with family members, and use of community services.
- As family and youth resiliency increased, the following youth alcohol and drug outcomes occurred: delayed onset and reduced frequency of alcohol and drug use.

Evaluation design

- The outcome evaluation included both quantitative and qualitative methods to determine short-term gains (6–7 months) and sustained gains (1 year).
- Families were randomly assigned to a program or comparison group in five church communities. Comparison of the two groups on key individual-, family-, and community-level characteristics found no differences between the two groups.
- An adequacy of performance design using record data and assessments of an expert consultant and program staff as shallow controls determined program effects on church community engagement.
- A randomized block design with repeated measures assessed program effects on family and individual youth outcomes.

Program interventions

- Identify, recruit, assess, and select church communities.
- Form and conduct orientation of church advocate teams.
- Train church advocate teams in an 8- to 10-week training session.
- Recruit families in high-risk environments and hold family-oriented social activities.
- Train parents in relevant alcohol and drug issues.
- Provide training to parents on family enhancement and management, including improving communication about, setting expectations for, and defining consequences for youth alcohol- and drug-related behavior.
- Offer training to parents and youth in constructive decision making.

Creating Lasting Connections (CLC)

Program Description

Creating Lasting Connections was a 5-year HRY demonstration grant (Grant #1279) administered by the Council on Prevention and Education: Substances, Inc. (COPES) in Louisville, Jefferson, and Nelson Counties in Kentucky. The program was designed to work with both community and family systems to identify youth and parents or guardians at high risk for substance use; increase familial resilience to and decrease risk for substance use; provide support services, including appropriate social services referrals, for families in need; and mobilize communities to prevent substance use. The CLC program design is a community-based approach. This program can be implemented through churches, schools, recreation centers, and a wide variety of community organizations that have regular contact with youth and families.

Because churches already foster natural support systems, they were selected as the pivotal community agency from which to implement this culturally appropriate early intervention program for youth at risk for substance use aged 11–15 and their families. Churches have significant contact with parents and youth, have existing social outreach programs, and are linked with other human service providers. Initially, 42 of 132 churches contacted responded favorably to program recruitment letters. COPES conducted a rigorous review of these churches and their communities, finally selecting five with populations in greatest need of program services and having adequate potential for addressing those needs. Additional selection criteria were employed to ensure a balanced mix of geographic location (urban, suburban, rural) and ethnic groups (African-American, White, mixed).

After being selected, church communities developed Church Advocate Teams (CATs) composed of 5–10 church staff and nominated community members. CAT staff underwent an average of 20 hours of training over seven sessions, after which they were tasked with performing outreach activities, identifying and recruiting 11- to 15-year-olds at risk of substance use and their families, scheduling field data collection, and preparing linkages for successful self-referrals with various human service providers.

Overall, 131 youth and their families were recruited for participation in the CLC intervention. The family program involved a 20- to 25-week series of training. Initially, parents and guardians and teens met in separate sessions before meeting as intact families in the final sessions. Participating parents and guardians received about 55 hours of training on substance use issues (20 hours), parenting skills (20 hours), and communication skills (15 hours). Youth received about 15 hours of training concerning substance use issues, communication skills, and refusal skills.

Families requiring substance use intervention or other social services were referred to appropriate agencies by the trainers and/or case manager. CAT members and/or the staff case manager performed telephone and/or in-house followups with participating families for 1 year subsequent to their participation in CLC.

Program function was assessed through the implementation of an extensive

process and outcome evaluation effort. Program outcomes were assessed by means of an experimental treatment and control group design involving three waves of measurement: a baseline assessment prior to group assignment, an immediate postassessment (7 months after beginning participation in the intervention), and a remote postmeasure (12 months after program participation began). Within each church community, families were assigned randomly to treatment or wait-list control condition. The outcome evaluation design also benefited from the relatively low attrition rate (34%), initial comparability of treatment and control groups, and solid checks and quality assurances regarding the integrity of program implementation across sites and years.

Results from this study are complex, deriving from a total of seven experimental sites assessed over 5 years. Still, data indicate that the intervention was effective in increasing a number of resiliency factors, and that these improvements were related to substance use. More specifically relative to controls, participating parents:

■ Realized short-term and sustained gains in level of substance use knowledge and beliefs and their use of community services to help resolve family and personal problems.

■ Reported short-term and sustained reductions in family (both parents) frequency of alcohol use in one site. Further, the level of church community activity was found to mediate sustained reductions in alcohol use across all sites.

■ Reported short-term improvements in communication with their children. However, these perceived gains were not corroborated by youth.

Contrary to expectations, the program had no effect on family management practices relating to the extent of use of family rules. However, when family substance use rules were used, the program directly improved parents' involvement of youth in setting these rules.

Relative to controls, participating youth:

■ Reported using community services when problems arose.

■ Realized short-term and sustained gains in bonding with their mothers. Increased bonding was mediated both by level of church community activity and positive family communication.

■ Reported greater levels of honest communication and bonding with fathers and siblings, though this effect too was mediated by overall levels of positive family communication, decreased parental substance use, and greater involvement of the youth in setting rules and being involved in community activities.

■ Often experienced short-term and sustained delays in the onset of alcohol and drug use as well as the frequency of alcohol and drug use. While the overall effects were small, analyses indicated that gains on these variable measures became most substantial as substance use knowledge increased, family conflict decreased, probability of punishment for transgressing increased, and family bonding and communication increased.

Overall, these data indicate that as the intervention improved family function and community empowerment, parental and youth substance use decreased.
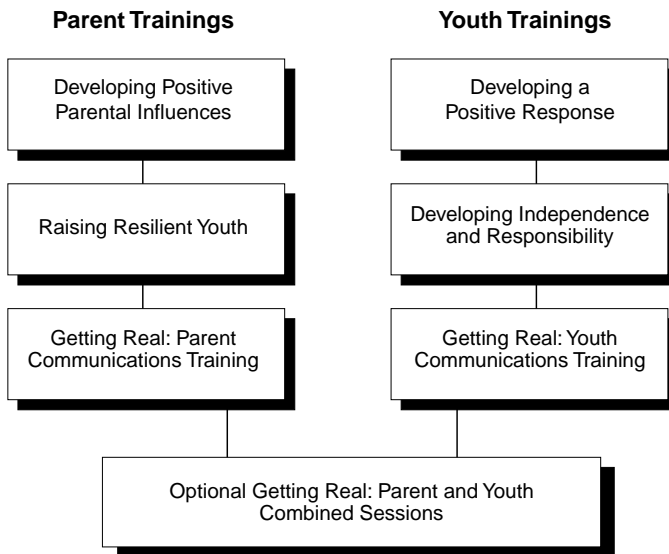
The National Dissemination Model

As a result of the success of the CLC program, COPES has refined this model for nationwide distribution. The revised and updated version of the CLC program is entitled the Creating Lasting Family Connections Program (CLFC).

The figure below illustrates the individual training components that make up the CLFC prevention program model.

Each of the individual Creating Lasting Family Connections parent training modules above is a 5–6 week (2.5 hours a week) module with the exception of the Optional Getting Real: Parent and Youth Combined Sessions, which typically require about three 2.5-hour sessions. Each of the youth trainings is 5–6 weeks and 1.5 hours in length and is designed to be appropriate for youth between the ages of 9–17. It is recommended that youth groups be divided into the following developmental groupings: 9–11, 12–14, and 15–17.

For maximum effectiveness, parents and youth are engaged in all four modules consecutively and simultaneously. However, the CLFC program is designed with the following different implementation options:

■ The modules (parent and youth) can be spread out over a longer period based on participant and provider needs. This is very beneficial because not all families are able to commit to a 20-week program. They can participate in 5-week increments spread throughout the year.

■ The parent trainings can be offered without the youth trainings (consecutively or spread throughout the year).

■ The youth trainings can be offered without the parent trainings (consecutively or spread throughout the year).

■ The parent trainings can be provided as a Training of Impactors for social workers, youth service providers, preventionists, and other caring adults who work with youth.

Parent Trainings

- Developing Positive Parental Influences
- Raising Resilient Youth
- Getting Real: Parent Communications Training

Youth Trainings

- Developing a Positive Response
- Developing Independence and Responsibility
- Getting Real: Youth Communications Training

Optional Getting Real: Parent and Youth Combined Sessions

Dare To Be You (DTBY)
Colorado State University

Location
Montezuma County, Colorado Springs, San Luis Valley, and Ute Indian Reservation, Colorado

Program sites
Community centers and day care and Head Start facilities.

Parental Competency Increased for DARE To Be You Parents

Target group
797 American Indian, Hispanic, African-American, and White parents and their preschool children, ages 2–5, as well as Head Start teachers, day care personnel, and 40 other community members per year who provide support services to target families.

Program objectives
- Increase self-concept and satisfaction with parenting role, internal locus of control, satisfaction with social support networks, relationships with children and knowledge of child development, and child-centered nurturing practices.
- Decrease use of harsh punishment among high-risk parents (of whom 95% will complete the entire first-year program).
- Improve behavior, interactions with parents, and developmental milestones of preschool children at risk for alcohol and drug use (of whom 60% will remain with the program for 2–5 years).

Findings
- Significant and enduring increases in parental self-esteem were observed in both parental competence and satisfaction of the parent role indicators ($p < .001$).
- In the locus of control variable, belief in "chance" and "powerful other" declined significantly ($p < .01$). Child blame also was significantly reduced.
- Positive attitudes toward parenting increased ($p < .05$).

Program Reference Number 1397

Findings (continued)

- Appropriate control techniques increased and harsh punishments declined significantly ($p < .001$).
- Children in the intervention group scored significantly higher on the Minnesota Development Inventory than did their counterparts in the control group.
- Retention rates exceeded expectations, with more than 95% completing all program components in the first year and more than 75% completing at least yearly follow-up surveys.

Evaluation design

- Random assignment of families to experimental and control groups.
- Pre- and posttesting using eight recognized assessment instruments (such as Self-Perception of the Parental Role, Minnesota Development Inventories: Short Form, and the Behavior Checklist for Infants and Children).
- Multivariate analysis of variance, t-tests, chi-square analysis, and correlations were conducted on all variables between pre- and posttests, and followup, and between experimental and control group. Correlations between parents and children were analyzed to identify links between parent skills and youth resiliency characteristics. Both groups were compared for up to 5 years.

Program interventions

- Provide two series of 10- to 12-week workshops for families, consisting of 2-1/2 hour sessions, and include a meal, a parent-child activity, and separate activities for parents and children. Parent sessions emphasize skills building and promote the establishment of a peer support group.
- Provide annual reinforcement workshops for parents. Children are encouraged to attend, and incentives are offered for participation.
- Provide After-Dare monthly support groups in two of the four demonstration sites. Participants choose topics of discussion.
- Offer preschool teacher and day care provider workshops on teaching Dare To Be You concepts in several modes.
- Provide 15- to 18-hour training in Dare To Be You concepts to community volunteers who support target families.

Program Reference Number 1397

Dare To Be You (DTBY)

Program Description

The Dare To Be You program (Grant #1397) was a 5-year grant initiated in 1989. It targeted preschool youth aged 2–5 and their families, preschool teachers, and other community members that support the families. The project was implemented in four ethnically diverse sites across Colorado and included the Ute Mountain Ute community (95% Native American and rural), the San Luis Valley (64% Hispanic and rural), Colorado Springs (53% European American and urban), and Montezuma County (84% European American and rural).

The demonstration project worked directly with parents to increase their knowledge of child development; personal sense of worth, ability to effectively manage their children by increasing their communication and problem-solving skills, personal and parental efficacy and role satisfaction, knowledge and use of child development, and appropriate child-rearing practices. In tandem with the parent training program, trained staff also worked directly with youth, both the target 2- to 5-year-old children and their siblings, to bolster their sense of self-worth, self-responsibility, as well as improve their communication, problem-solving, and reasoning skills. By strengthening these key resiliency factors in both children and parents, the program hoped to prevent later substance use and other problem behaviors.

Parents participated in a 24-hour educational curriculum administered by trained facilitators. The course was administered in weekly sessions, each lasting about 2-1/4 hours, over 3–4

months. Individuals were required to participate in a minimum of 20 hours of class to complete the program. The curriculum included strategies to increase self-responsibility, personal efficacy, self-esteem, communication and social skills, and problem-solving and decision-making skills. Parents also received information on child development and home management strategies. After completing the initial series, families also received boosters in the form of annual programs (2 hours a week for 4 weeks). This followup workshop series was designed to reinforce the skills learned in the first program year. Families could participate in monthly family groups (After-Dare) or periodic community events for ongoing support.

Two- to five-year-old children participated in a core 20-hour educational curriculum that was concurrent with the parent program. Like parents, children had to attend a minimum of 20 hours of activities. The youth program mirrored many of the lessons in the parent program with developmentally appropriate activities for 2- to 3-year-olds and 4- to 5-year-olds: communications, self-responsibility, self-esteem, and problem-solving. Siblings were encouraged to attend and participated in similar age appropriate Dare To Be You activities.

An incentive program was designed to recruit and retain families. It included family meals with every session, a supportive, nonjudgmental attitude that recognized and built upon family strengths, and for each adult family member that completed all classes and surveys, a $200 incentive.

Families were identified by social and community agencies and/or were self-referred because they felt they needed the skills the program offered. Families were recruited and screened by the program staff to meet a risk profile that would pro-

vide a nonstigmatizing and optimal workshop environment: 5–10% of participants had one to two risk factors, 80–90% had two to seven risk factors, and 5–10% had eight or more risk factors. Families wishing to participate were then randomly assigned to either a treatment or a control group. Although site profiles differed on a number of risk characteristics, differences between treatment and control groups within each site and within each cohort were negligible.

The evaluation design included pre- and immediate post-assessments and annual followup assessments with treatment and control groups for two cohorts/site/year (in four sites over 5 years). Data from the first cohort were dropped because of changes in key personnel and implementation. Subsequent to the first program year, the evaluation effort maintained its integrity and was not undermined by attrition, which was low—97.4% of families completed the first program year while 73% and 61% stayed on and completed the second and third program followups, respectively. Attrition analysis revealed few differences between those completing remote followup assessments and those dropping out from the assessment protocol prematurely. The strength of the evaluation design was also bolstered by the fact that treatment and control families were initially similar within each cohort at each site.

Despite the fact that substance use measures were not administered to either parents or children, the latter because of their age, the findings from the research document the success of the intervention in improving a number of parent and child resiliency factors theoretically related to later substance use. Repeated

Measures Multivariate Analysis of Variance revealed that, relative to controls, participants:

■ Experienced significant and enduring increases in parental self-esteem in terms of increased sense of competence, satisfaction with role, and positive attitude about being a parent.

■ Decreased their level of self-blame over time in terms of lacking ability or not exerting sufficient effort, as well as blaming their child for parent-child or family problems.

■ Demonstrated consistent and significant increases in using appropriate control techniques (maturational-oriented, child-centered, overall control), and in decreasing their use of harsh punishments.

■ Showed significant and prolonged increases in the level of satisfaction expressed with the size, felt closeness, amount of contact, and type of support provided by their social network.

In addition, treatment youth showed significant increases in developmental level at both the 1-year and 2-year followup after entering the program relative to controls.

While treatment youth decreased their rate of exhibiting problem behaviors (as reported by parents), so too did control youth. These changes were most likely attributable to maturational changes rather than the program intervention. In addition, the program sought to positively affect parent locus of control. No significant treatment-versus-control effect showed up in the first year, but a significant effect showed up in the second-year followup with the intervention group showing a decline in the belief that powerful others control outcomes.

Lastly, at the point of the 1-year follow-up, treatment parents demonstrated a $2,000 average increase in family income relative to controls. This relative gain was short-lived, as both treatment and control households increased family income by $2,500 the next year. Other measures regarding economic self-sufficiency (mother's educational status, hours worked per week, occupational status, and welfare dependence) were also observed to be similar between treatment and control families over the course of the intervention and assessment.

CSAP Center for
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Substance Abuse and Mental
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Program Findings Sheet

Greater Alliance of Prevention Systems (GAPS)
The Illinois Department of Alcohol and Substance Abuse

Location
Chicago's West Side communities of Garfield Park, Lawndale, and Austin
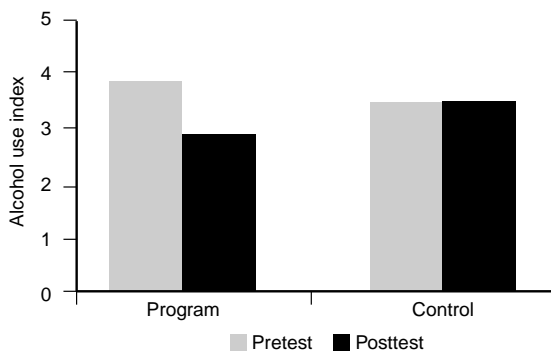
Program sites
Schools, religious institutions, community clinics, workshops, and rallies.

Target group
Community leaders, youth at high risk for substance abuse, and all residents of the target communities.

Program Participants Lowered Alcohol Use

Program objectives
■ Develop life skills; effective coping skills; and improved decision-making, problem-solving, and communication skills among youth at high risk for substance abuse.
■ Increase youth understanding of cultural heritage.
■ Create community consensus on social policies for drug use.
■ Involve residents in reducing community drug problems.

Findings
■ There was a significant reduction in alcohol and tobacco use and a decrease in marijuana use among targeted participants as measured by the Botvin Substance Abuse Inventory ($p < .05$). No significant changes were detected among a comparison group of youth residing in the GAPS targeted community, but not participating in the program.
■ There was a significant increase in self-reported assertiveness skills as measured by the Botvin Assertion Inventory ($p < .01$).
■ There was a significant increase in cultural pride as measured by the Millions Therapeutic Environment Scale ($p < .01$).
■ A networking infrastructure of community-based groups was organized to combat drugs and crime in the three communities. Community vigil marches were successful in closing many drug houses in the community.

Program Reference Number 1013

- A State law was passed outlawing drug paraphernalia, largely due to the efforts of community groups organized under this project.

Evaluation design

- Evaluation of the outcome objectives was based on comparison of pre- and posttest scores from standardized instruments comparing a randomly selected sample of youth in high-risk environments receiving program services and a randomly selected control group of youth who lived in the same community.

Program interventions

- Provide education to demonstrate that accurate and sufficient information presented in a culturally relevant manner can effect behavioral change and reduce incidence and prevalence of drug use.
- Provide alternate activities to help youth learn about their culture.
- Provide a social competence component on peer leadership groups for youth in high-risk environments.
- Provide educational groups for parents to learn about child development.
- Train a core of community leaders ("impactors") to develop and implement a community action plan to change both formal and informal policies in the community with the intent to limit the exposure to and availability of alcohol and drugs in the community.

Program Reference Number 1013

Greater Alliance of Prevention Systems (GAPS)

Program Description

The Greater Alliance of Prevention Systems (Grant #1013) was a 3-year, community-based program administered by the Illinois Department of Alcohol and Substance Abuse in suburban Chicago. The project targeted African-American, Hispanic, and White youth at risk for alcohol and drug problems aged 6–18 throughout the community. The goal of the program was to positively affect their level of risk and motivate them to help in mobilizing community resources to decrease drug and alcohol use throughout the community. GAPS included five main interventions:

- **Social Policy.** This included recruiting, educating, and mobilizing community agencies, organizations, and residents to make them aware of the potential impact they could have on community drug abuse problems. Protest vigils, marches, and community forums were organized.

- **Training Impactors.** The Prevention Partnership met with various parent and community groups on a monthly basis and assisted in establishing timelines for their community-based action plans.

- **Alternate Activities.** The African American Heritage Project involved youth in art, music, and drama projects and activities designed to make them more culturally aware.

- **Information and Education.** Hispanic Alcoholism Services, Inc., made community presentations, held workshops, and disseminated information brochures and posters to make individuals more aware both of the risks of alcohol use and the means to achieve prevention.

- **Social Competence and Skills Building.** Participating youth received peer leadership training incorporating role-playing and cognitive and behavioral strategies. Peer leadership activities included role-playing and discussion and focused on decision making and problem solving, conflict resolution, values clarification, and refusal skills.

The evaluation of GAPS attempted to assess the overall effect of three integrated GAPS components: alternate activities, education and information, and social competence and skills building. The evaluation employed a pre-post design with treatment and comparison groups. A total of 69 participants were randomly selected from among all those actively engaged in two or three of the evaluated program components. The comparison group was composed of 58 same-age youth living in the community, perhaps passively exposed to some aspects of the intervention but not actively participating in any aspect of the program.

Multivariate analyses revealed that the levels of substance use for GAPS participants clearly decreased over time, while use levels of comparison youth remained relatively constant. GAPS participants showed significant decreases in cigarette use ($p<.05$) and alcohol use ($p<.05$) and a marginally significant decrease in marijuana use ($p<.10$), while comparison youth remained the same. In addition, relative to comparisons, GAPS participants demonstrated significant increases in assertiveness ($p<.01$) and cultural pride ($p<.01$). GAPS participants and comparisons were found not to differ on measures of locus of control, self-esteem, or

drug knowledge or attitudes at any point in the study.

Additional analyses attempted to better understand the correlates of substance use in these samples. Three variables were found to be significantly related to overall substance use: positive alcohol, tobacco, and drug attitudes; low levels of assertiveness; and low levels of cultural pride. Given these data, the program staff promote the hypothesis that GAPS may have accomplished much of the observed change in teen substance use by successfully effecting improvements in assertiveness and cultural pride.

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Program Findings Sheet

The Residential Student Assistance Program (RSAP)
Student Assistance Services

Location
Westchester County, New York

Program sites
Six residential child care facilities:
a locked county correctional facili-
ty, a residential treatment center, a
nonsecure residential facility, and
three foster care facilities.

Target group
Institutionalized adolescent chil-
dren of substance abusers who
have committed violent or delin-
quent acts; have been physically,
sexually, or psychologically
abused; have experienced chronic
failure in school; and/or have
experienced mental health prob-
lems, including attempted suicide.

Program objectives
■ Delay the start of and decrease
  alcohol and drug use.
■ Develop peer resistance skills.
■ Improve self-image and sense of self-worth.
■ Improve communication skills and interpersonal relationships.

Percent Use in Past 30 Days
Program Youth Pretest/Posttest

Alcohol: 41%, 22%
Marijuana: 53%, 29%
Tobacco: 60%, 52%

Pretest N = 132, Posttest N = 132

Comparison Pretest/Posttest

Alcohol: 47%, 46%
Marijuana: 41%, 46%
Tobacco: 48%, 52%

Pretest N = 255, Posttest N = 201

Pretest   Posttest

Findings
■ Adolescents in the treatment group showed dramatic reductions in the use of alcohol,
  marijuana, and tobacco from pre- to posttest measures, while in-house comparison
  youth showed relatively unchanged rates of use.
■ At the two most successful sites, counselors reported that they received enthusiastic
  administrative support, as evidenced by attractive offices where private individual
  sessions could be held, provision of a meeting place for groups, consistent scheduling
  of group meetings at times that did not interfere with other residential facility activities,
  and access to dependable transportation for additional off-campus support group
  meetings, such as Alateen and Alcoholics Anonymous.

Program Reference Number 618
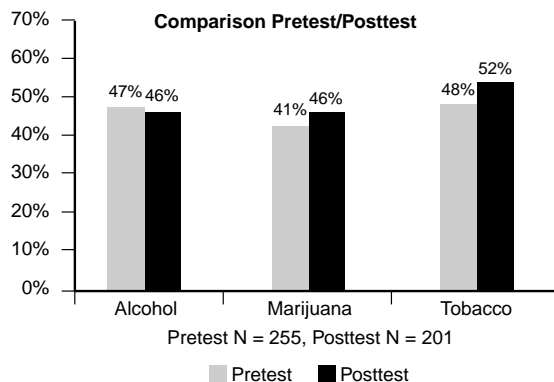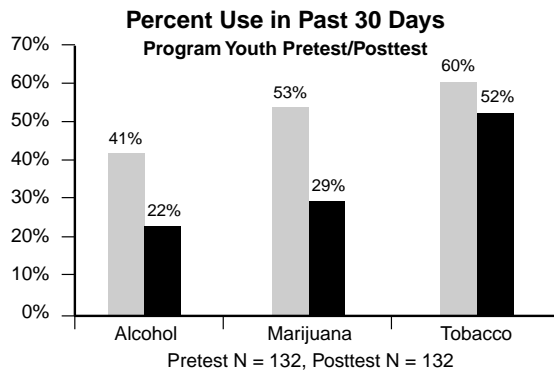
- Change in use of alcohol within last 30 days: 81.8% of those who did not report use at pretest remained nonusers. Of the users at pretest, 72.2% no longer reported use at posttest.
- Change in marijuana use within last 30 days: 83.3% of those who did not report use at pretest remained nonusers. Of the users at pretest, 58.8% no longer reported use at the posttest.
- Change in tobacco use within last 30 days: 78.4% of those who did not report use at pretest remained nonusers. Of the users at pretest, 26.9% no longer reported use at posttest.

Evaluation design

- Pretest and posttest nonequivalent comparison group design.
- Nonrandom treatment and comparison groups: self-selected treatment group and cross-sectional comparison group.
- For youth, a shortened version of the Johnston Questionnaire, a student self-report for drug use, was used to measure drug use; the Rosenberg Self-Esteem Test and the Global Assessment of Functioning were also used to assess psychological measures.
- The Community Oriented Program Environment Scales were used to measure the residents' and staff's perception of the site environment.

Program interventions

- Provide individual and group prevention and intervention services within the residential facilities for the adolescents.
- Train residential facility staff and provide employee assistance programs for staff in need of them.
- Coordinate substance use prevention programs, services, and policies of the facilities.
- Conduct drug assessment for all new residents entering the facility.
- Refer and follow up with residents needing substance abuse treatment out of the residential facility.
- Provide outreach services to encourage self and peer referrals and to provide primary prevention services for nonusers.

Program Reference Number 618

The Residential Student Assistance Program (RSAP)

Program Description

The Residential Student Assistance Program in Westchester County, New York (Grant #618) was a 5-year demonstration program begun in 1988. The program model was based on successful Employee Assistance Programs (EAPs) used by industry to identify and aid employees whose performance and lives had been adversely affected by substance use. Also feeding into the design of this effort were the successful experiences the county had in 1979 when it initially implemented Student Assistance Programs with the county's high school population. A large part of this effort was designed to determine if the program could be adapted and remain effective with very high risk, institutionalized adolescent youth. As such, the residential facilities included in this project included a locked county correctional facility, a residential treatment center for adolescents with severe psychiatric problems, a nonsecure residential facility for juvenile offenders sentenced by the court, and three foster care facilities for abused, neglected, orphaned, or troubled adolescents placed by social service agencies. Participants were primarily 14- to 17-year-olds of African-American or Hispanic origin.

The RSAPs employ highly trained, professional Student Assistant Counselors (SACs), placed full- or part-time in the residential facilities to provide culturally sensitive substance use prevention and intervention services, including:

- Establishing a supervisory partnership between an alcohol, tobacco, and drug prevention agency and the residential child care facility. In this vein, a Residential Facility Staff Task Force composed of clinical, administrative, and line staff meets with the SAC weekly for about an hour to discuss relevant problems and develop plans aimed at remediation.

- Providing training and consultation with the child care, clinical, and teaching staff to increase their awareness and ownership of and skill in implementing alcohol, tobacco, and drug prevention strategies.

- Implementing an EAP for residential child care staff experiencing personal problems.

- Assessing all new residents' substance use upon entry into the facility.

- Assisting residents through developing and leading an Adolescent Resident Task Force. The task force meets for 30–45 minutes weekly and is designed to change the culture and norms of the facility, to decrease the stigma of interacting with SACs, and to increase self-referral for prevention/treatment activities.

- Implementing small educational discussion groups in which 8–10 residents discuss and role-play for about 45 minutes in 6–8 sessions issues related to adolescence, consequences of substance use, family problems, and stress. These sessions are to familiarize residents with the counselor and to begin to change attitudes, behaviors, and feelings regarding alcohol/drug use of the residents.

- Providing individual educational and motivational counseling for residents who have chemically dependent parents (COAs/COSAs) and/or are using

alcohol and drugs. These sessions of 45-minute duration are directed at increasing residents' awareness of the effects of parents' behavior, motivating adolescents to join counseling groups and/or seek treatment, or providing extra time for adolescents who need to discuss issues that may not be appropriate for a group.

- Implementing group counseling for COAs, COSAs, and substance users. These groups help residents identify and resist social and situational pressures to use substances, correct misperceptions about normative substance use, and better understand the effects of their parents' alcohol and drug use. Each of these groups lasts 8–12 sessions and requires 45 minutes each.
- Making substance use treatment referrals outside the residential facility.
- Hosting 12-Step meetings at the facility.

The focus of the evaluation reported is the 125 new entrants who participated in the final year of the RSAP with both pretest and posttest data. A quasi-experimental design included an internal comparison group (youth at the residential site who chose not to participate in the RSAP) and an external comparison group (youth in a residential facility without an RSAP). In total, 201 youth participated in comparison groups. The fall pretest and spring posttest were given at the respective school located at each of the six sites. The entire staff and all adolescents completed written assessments of the milieu at the site. Also, the RSAP counselors were interviewed.

Numerous analyses demonstrated that the services offered by the RSAP were a key ingredient in a marked decrease in

substance use among participants. For alcohol, 81.8% of nonusers remained nonusers, while 72.2% of the users became nonusers; for marijuana, 83.3% of the nonusers remained nonusers, while 58.8% of the users became nonusers; and 78.4% of tobacco nonusers remained nonusers, while 26.9% of the users became nonusers. Several constructed indexes were used and all showed results of similar magnitude and direction. Highly significant decreases in use for the 132 new program youth were found on the paired t-test for the Quantity-Frequency Index ($t_{131}=4.25$, $p=.000$), while a two-group independent t-test for the cross-sectional comparison group showed virtually no change between pretest and posttest ($t_{453}=0.43$, $p=.67$). The authors translated decreased drug use for the 132 new program youth into an effect size of ES=0.46. While the cross-sectional comparison group showed some decreased drug use, it was minimal (ES=0.05). An independent t-test between cross-sectional program and cross-section comparison youth was nonsignificant at pretest but highly significant at posttest ($p=.000$). Extensive dosage analyses (number of hours in the program) explained program effectiveness. A regression analysis for the Quantity-Frequency Index showed the variance accounted for was significant for pretest use ($R^2=61.2\%$), for number of hours ($R^2=8.7\%$), and for site variations ($R^2=3.7\%$). Logistic regressions for success (nonuser remains nonuser, etc.) resulted in an odds ratio of 1.8 for youth receiving 5–11 hours of RSAP. These data indicated that the observed differences over time between program and compar-

ison groups are quite reliable and indicate high levels of program impact.

For the 52 youth who participated in the RSAP who reported no use of any specified substance (alcohol, marijuana, or 11 other substances) at pretest (tobacco excluded), 71% continued to report no use of any substance at posttest. For the 80 youth who reported using alcohol, marijuana, or 11 other substances at pretest, 68% reported decreased use at posttest. Therefore, if effectiveness is measured by nonusers remaining nonusers and users decreasing use, the program has an overall effectiveness of 69% for users and nonusers.

SMART Leaders (SL)
The Pennsylvania State University

Location

Bethlehem, Pennsylvania; Fort Lauderdale, Florida; Jamestown, New York; Milwaukee, Wisconsin; and North Little Rock, Arkansas

Program sites

Five Boys Clubs in large cities, small towns, and intermediate-sized cities. Three clubs are located in or adjacent to public housing projects.

Target group

High-risk Boys Club members between the ages of 13 and 17. Participants included African-American, White, and Hispanic boys and girls.

SMART Leaders Participants Show Less Favorable Attitude Toward Marijuana Use

A 5-point Likert-type scale. A low score indicates a negative attitude toward marijuana use.
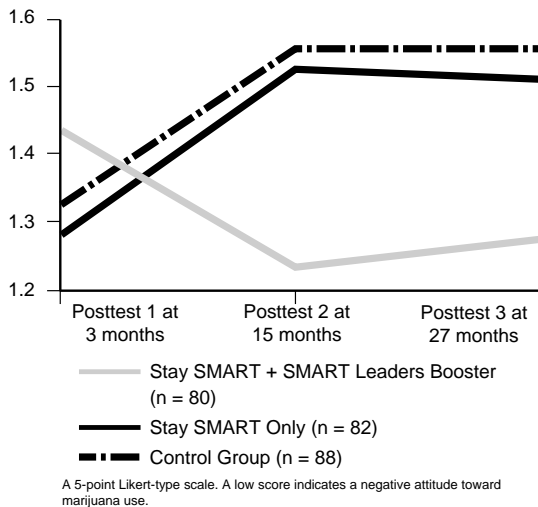
Over 27 months, five Boys Clubs offered the 1-year Start SMART program followed by 2 years of the SMART Leaders booster program (Stay SMART + SMART Leaders group); five clubs offered only the 1-year Stay SMART program without the 2-year booster program (Stay SMART Only group); and four clubs offered no prevention program (Control group).

Program objectives

■ Develop, implement, and evaluate a 2-year booster program.

■ Promote less favorable attitudes toward substance use and delay the onset of substance use.

■ Promote less favorable attitudes toward adolescent sexual activity and decrease sexual activity.

■ Increase knowledge about the prevalence and consequences of substance use and early sexual activity.

■ Improve social skills, including peer resistance skills.

Program Reference Number 903

Findings

Findings are based on outcome data for Cohort 1 youth who participated in four testing occasions over the 27 months of the program in three groups of Boys Clubs: 54 youth in Stay SMART + SMART Leaders group; 52 youth in the Stay SMART Only group; and 55 youth in the no-program Control group.

- At both the 15-month and the 27-month posttests, only youth in the Stay SMART + SMART Leaders group showed significantly less approval of alcohol and marijuana use ($p < .05$), and significantly lower marijuana-related behavior ($p < .05$) than the Control group.

- Both the Stay SMART + SMART Leaders group and the Stay SMART Only group showed significantly less cigarette-related behavior, overall drug-related behavior, and greater knowledge concerning alcohol, tobacco, and illicit drug use than the Control group ($ps < .05$). Both the Stay SMART + SMART Leaders and the Stay SMART Only groups also reported less alcohol-related behavior, more negative attitudes toward adolescent sexual activity, and lower levels of recent sexual activity than the Control group over the 27-month period.

- For alcohol-, cigarette-, and overall drug-related behavior, only the Stay SMART + SMART Leaders group showed more marginally significant or significant positive effects than the Stay SMART Only group and the Control group at the 27-month posttest, suggesting that a pattern of booster program effects may just have been emerging 2 years after the initial Stay SMART program.

Evaluation design

- A pretest-posttest nonequivalent groups design, with multiple posttests, was used.
- All groups were pretested prior to initiation of the Stay SMART program in the two program groups; all groups were posttested at 3, 15, and 27 months after the pretest.

Program interventions

- The SMART Leaders booster program is a 2-year sequential program designed to reinforce skills and knowledge learned in the Stay SMART program. SMART Leaders consists of five 1-1/2 hour sessions in year 1 and three sessions in year 2.

- The curriculum-based program uses role-playing, group activities, and discussion to promote social skills, including peer resistance skills, problem-solving and decision-making skills, conservative group norms regarding substance use and early sexual activity, and knowledge of the consequences and prevalence of substance use and teen sexual activity.

Program Reference Number 903

SMART Leaders (SL)

Program Description

This 3-year CSAP project (Grant #903) implemented and evaluated the SMART Leaders program, a 2-year sequential booster program to the Stay SMART drug prevention program developed by Boys & Girls Clubs of America. SMART Leaders, a 2-year peer leader program, reinforced the skills and knowledge youth learned in Stay SMART, a small group prevention program for 13- to 15-year-old youth. Stay SMART is one component of SMART Moves, the National Prevention Program of Boys & Girls Clubs of America.

Over 27 months, five Boys & Girls Clubs offered the Stay SMART program followed by the 2-year SMART Leaders booster program; five Boys & Girls Clubs offered only the Stay SMART program (Stay SMART Only group); and four Boys & Girls Clubs served as a no-program control group (Control group). Boys & Girls Clubs were located in the East, South, Midwest, and West and were matched on the basis of the intervention participants' demographic and socioeconomic characteristics. Participants were racially diverse and included White, African-American, and Hispanic boys and girls who were approximately 13 years of age at pretest.

Stay SMART (12 sessions; 1-1/2 hours) and SMART Leaders (5 sessions; 1-1/2 hours) are curriculum-based programs that use role-playing, group activities, and discussion to promote social skills, including peer resistance skills, problem-solving and decision-making skills, conservative group norms regarding substance use, and knowledge of the health consequences and prevalence of alcohol, tobacco, and drug use by youth and adults. To progress from Stay SMART to the first and second years of the SMART Leaders booster program, youth were required to participate in 75% of the sessions of each program. The first year of SMART Leaders consisted of sessions on topics including improving self-image, coping with stress, resisting media pressures, and being assertive in pressure situations. The second year of SMART Leaders included several educational/discussion modules on alcohol, tobacco, or illicit drugs. After each year's small-group sessions, SMART Leaders youth participated in activities such as recruiting other youth for Stay SMART, assisting with prevention program sessions offered to younger Boys & Girls Club members, helping with club activities and events, and/or fundraising. Prevention programs were facilitated by Boys & Girls Club staff members.

The outcome evaluation design tested the effectiveness of the SMART Leaders group (n=54) relative to the Stay SMART Only group (n=52) and the no-program Control group (n=55). Project youth were pretested using a self-report questionnaire prior to initiation of the Stay SMART program and were posttested at 3, 15, and 27 months. Only youth who met the attendance criteria and participated in all four testing occasions were included in the data analysis.

The primary method of data analysis was through Repeated Measures Analysis of Covariance, with condition (SMART Leaders, Stay SMART Only, Control) as the independent variable, scores for the three posttests (at 3, 15, and 27 months) as the levels of the repeated measures factor (i.e., the dependent variable), and the pretest score, gender, age, and race/ethnicity as the covariates.

Results from the self-report questionnaire showed the overall effectiveness of the Stay SMART prevention program, and more particularly the effectiveness of the SMART Leaders booster program, in maintaining and furthering the gains made in the initial Stay SMART program.

SMART Leaders and Stay SMART effects relative to Control group

- *Overall drug use.* Across the 27 months, both the SMART Leaders group and the Stay SMART Only group reported significantly less drug-related behavior than the Control group (both $ps<.05$). (Significant effect of condition, $F_{[2, 122]}=3.74, p<.05$)

- *Marijuana behavior.* Youth in the Control group showed the most marijuana-related behavior of the three groups combining across the three posttests. Both the SMART Leaders group and the Stay SMART Only group showed less marijuana-related behavior than the control group across the 27 months ($p<.05$ and $p<.06$, respectively). (Significant effect of condition, $F_{[2, 148]}=3.34, p<.05$)

- *Alcohol behavior.* Combining across posttests, youth in the Stay SMART Only group reported less alcohol-related behavior than the Control group youth ($p<.06$). A similar, marginally significant effect was found for the SMART Leaders group relative to the Control group ($p<.08$). (Marginally significant effect of condition, $F_{[2, 137]}=2.31, p<.11$)

- *Cigarette behavior.* Respondents in both the SMART Leaders group and the Stay SMART Only group showed significantly less cigarette-related behavior than those in the Control group ($p<.05$). Marginally fewer youth in the SMART Leaders group reported recent cigarette use (in the last year) at the 27-month posttest, relative to the Stay SMART Only group ($b=.86, p<.12$) and the Control group ($b=.96, p<.08$). (Condition effect approached significance, $F_{[2, 149]}=2.16, p<.12$)

- *Drug knowledge.* Combining across the three posttests, both the SMART Leaders group and the Stay SMART Only group demonstrated significantly more knowledge concerning alcohol, tobacco, and drug use than did the Control group ($p<.05$ and $p<.001$, respectively). (Significant effect of condition, $F_{[2, 107]}=6.13, p<.005$)

SMART Leaders effects relative to Control

- *Marijuana attitudes.* The SMART Leaders group diverged from the Stay SMART Only group and the Control group. After each of the booster programs (15- and 27-month posttests), the SMART Leaders group perceived significantly fewer social benefits from smoking marijuana than did youth in the Control group ($p<.01$ and $p<.05$, for the 15- and 27-month posttests, respectively) and youth in the Stay SMART Only group ($p<.05$ and $p<.10$, respectively). (Condition ✕ Time, $F_{[4, 270]}=3.78, p<.01$)

- *Alcohol attitudes.* Over time, the SMART Leaders group came to perceive fewer social benefits from drinking alcoholic beverages, while the Stay SMART Only and the Control group came to perceive more social benefits from drinking. At the 15- and 27-month posttests (after each of the booster programs), youth in the SMART Leaders group perceived significantly fewer social benefits from drinking alcohol than did youth in the Control group

($p<.05$ and $p<.01$, respectively). There also was a tendency for the SMART Leaders youth to differ from youth in the Stay SMART Only group at the 15- and 27-month posttests ($p<.11$ and $p<.12$, respectively). (Marginally significant Condition ✕ Time interaction, $F_{[4, 278]}=2.17$, $p<.10$)

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Program Findings Sheet

The Family Advocacy Network (FAN Club)
The Pennsylvania State University

Location

Bethlehem, Pennsylvania;
Fort Lauderdale, Florida;
Jamestown, New York; and
North Little Rock, Arkansas

Program site

Four Boys & Girls Clubs in
large and intermediate-sized
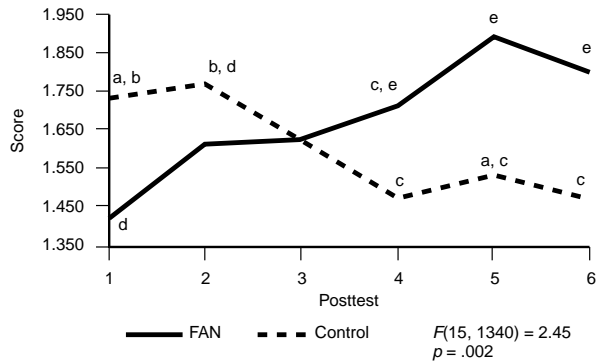cities.

Target groups

High-risk Boys & Girls Club
members aged 11–13 and
their parents. Youth partici-
pants included African-
American, White, and
Hispanic boys and girls.

Mean Alcohol Refusal, by Club and Time
Adjusted for Baseline Differences

$F(15, 1340) = 2.45$
$p = .002$

Across time, within condition, and within condition at any given time means
bearing different superscripts are significantly different at $p < .05$, LSD.
(SM + and SMO groups are not depicted in graph, but both groups scored
between the FAN Club program and the control group.)

Over 27 months, four Boys & Girls Clubs offered the 3-year Start SMART, Stay SMART,
and SMART Leaders prevention program with monthly youth activities and the FAN
Club parent involvement program (FAN Club group); four clubs offered the 3-year drug
prevention program with youth activities (P+ group); four clubs offered only the 3-year
drug prevention program (PO group); and four clubs offered no program components
(Control group).

Program objectives

■ Develop, implement, and evaluate a family involvement component (FAN Club) in
combination with a 3-year primary prevention program for Boys & Girls Club members
in high-risk environments.

■ To strengthen families by creating a bond between youth and their parents, reducing
maternal isolation, providing opportunities for families to participate in pleasurable
activities together, helping parents influence their children to lead drug-free lives, and
providing social and instrumental support for families.

■ Improve the social skills and ability of youth to refuse alcohol, tobacco, and illicit
drugs, promote negative attitudes toward substance use, delay the onset of substance
use, create conservative group norms, and increase knowledge regarding the conse-
quences and prevalence of substance use among youth.

Program Reference Number 1383

Findings

■ There were positive effects over time for the FAN Club group for ability to refuse alcohol, marijuana, and cigarettes as well as negative attitudes toward marijuana use. The no-program control group decreased in ability to refuse alcohol, marijuana, and cigarettes, and showed an increase in favorable attitudes toward marijuana use. The Prevention + Youth Activities group and the Prevention Only group held fairly constant on these four variables.

Specifically, FAN Club youth increased their ability to refuse alcohol across six posttest measures relative to the control group ($p < .002$); FAN Club participants' ability to refuse marijuana increased significantly over time relative to the other two program groups and the Control group ($p < .001$).

■ All three program groups performed better than the control group over time on knowledge regarding substance use ($p < .05$). The Prevention Only group demonstrated more knowledge than the other three groups.

Evaluation design

■ A pre-post nonequivalent groups design with multiple posttests was employed.

■ All groups were pretested prior to initiation of the youth prevention program in the three program groups; posttests were administered at 5, 12, 17, 24, 28, and 35 months after the pretest.

Program interventions

■ The youth prevention program consisted of three sequential, developmentally appropriate programs, Start SMART, Stay SMART, and SMART Leaders. The curriculum-based programs use role-playing, group activities, and discussion to promote social skills, including peer resistance skills, problem-solving and decision-making skills, conservative group norms regarding substance use, and knowledge of the consequences and prevalence of substance use.

■ During months when structured prevention sessions were not being offered, youth in the FAN Club and Prevention + Youth Activities groups participated in monthly activities that stressed non-drug-use norms.

■ FAN Club activities were facilitated by a full-time FAN Club Coordinator who was a staff member of the Boys & Girls Club and a part-time parent assistant from the target population. Activities fell into four categories: (1) basic support activities to help families cope with daily life or specific crises; (2) parent support in social settings; (3) educational program activities designed to provide education, knowledge, or enrichment experiences, and (4) leadership activities in which parents took a major role in planning and implementing.

The Family Advocacy Network (FAN Club)

Program Description

This 5-year grant (Grant #1383), initiated in 1990, implemented and evaluated the effects of a 3-year sequential drug prevention program for early adolescents at risk for alcohol and drug use, combined with monthly youth activities and parent involvement (Family Advocacy Network [FAN] Club group) relative to (1) the 3-year drug prevention program with monthly youth activities but without parent involvement (Prevention Plus Youth Activities group); (2) the 3-year drug prevention program alone (Prevention Only group); and (3) no program (Control group).

Eleven- and twelve-year-old youth at 16 Boys & Girls Clubs participated in the study (four clubs in each of the three intervention groups and four clubs in the Control group). Clubs were located in eight States across the East, South, and Midwest and were matched as closely as possible on the basis of participants' demographic and socioeconomic characteristics. Participants included African-American, White, and Hispanic boys and girls who were approximately 11 years of age at pretest.

The 3-year youth drug prevention program consisted of the Start SMART and Stay SMART programs, components of Boys & Girls Clubs of America's National Prevention Program (SMART Moves); and SMART Leaders, developed by the investigators. These sequential programs were found effective in a previous CSAP grant.

Start SMART (10 sessions; 1-1/2 hours), Stay SMART (12 sessions; 1-1/2 hours), and SMART Leaders (5 sessions; 1-1/2 hours) are curriculum-based programs that use role-playing, group activities, and discussion to promote social skills, including peer resistance skills, problem-solving and decision-making skills, conservative group norms regarding substance use, and knowledge of the health consequences and prevalence of alcohol, tobacco, and drug use by youth and adults. To continue in the 3-year sequential program, youth were required to participate in 75% of the sessions in each program. Each year, when structured prevention program sessions were not taking place, program youth participated in monthly activities designed to stress non-drug use norms and to keep the youth involved in the prevention program.

In conjunction with the 3-year youth drug prevention program, a parent involvement program called the Family Advocacy Network (FAN Club) was implemented for parents of prevention program youth at the four Boys & Girls Clubs serving as demonstration sites. The goal of the FAN Club was to strengthen families in the program by creating a bond between youth and their parents, reducing maternal isolation, providing opportunities for families to participate in pleasurable activities together, helping parents influence their children to lead drug-free lives, and providing social and instrumental support for families. The FAN Club was designed to focus on families' strengths rather than their deficits, to inspire parental confidence and competence, to respond to family cultural preferences and values, to recognize the developmental needs of parents, to be flexible and responsive to parental needs, to encourage voluntary participation by parents, and to include parents as partners in the planning and implementation of the program.

A full-time FAN Club Coordinator and a part-time parent assistant (from the target population) were hired to conduct the FAN Club program. (The FAN Club Coordinator also conducted the prevention program for youth.) FAN Club activities fell broadly within four categories: (1) basic support, (2) parent support activities, (3) educational activities, and (4) leadership activities. Over the 3 years of the program, 44% of the 96 parents of program youth (one parent counted per youth) participated in at least one program activity (on average) per month, not including summers, when parents decided to plan minimal activities. Fifty-four percent of program parents attended a FAN Club activity (on average, not including summers) every other month.

The outcome evaluation design tested the effectiveness of the FAN Club group (n=96) relative to (1) the Prevention Plus Youth Activities group (n=64), (2) the Prevention Only group (n=84), and (3) the no-treatment Control group (n=56). Project youth were pretested prior to initiation of the Start SMART program and were posttested at 5, 12, 24, 28, and 35 months. To avoid the risk of creating suspicion and intimidation that would interfere with parent involvement, parents were not tested.

Outcome measures were analyzed through Repeated Measures Analysis of Covariance with condition (FAN Club, Prevention Plus, Prevention Only, Control) as the independent variable; scores for the six posttests as levels of the repeated measures factor (i.e., the dependent variable); and the pretest score, gender, age, and race/ethnicity as the covariates.

Results from the youth self-report questionnaire indicated positive program effects for youth in Boys & Girls Clubs that offered the 3-year youth prevention program with monthly youth activities and the FAN Club parent program (FAN Club group). Over the 3 years, the FAN Club group reported increasing ability to refuse alcohol, marijuana, and cigarettes, and increasingly negative attitudes toward marijuana use. In contrast, the no-program control group of Boys & Girls Clubs showed decreasing ability to refuse alcohol, marijuana, and cigarettes, increasing favorable attitudes toward using marijuana, and the least knowledge about substances of any of the groups. For the most part, the other two intervention groups held fairly constant over the 3 years on their ability to refuse alcohol, marijuana, and cigarettes, and their attitudes toward marijuana use.

- *Alcohol refusal.* The FAN Club group showed an increase in reported ability to refuse alcohol across the posttest measures, while the Control group showed a significant decrease. The Prevention Plus and Prevention Only groups remained fairly constant. The FAN Club group showed significantly less ability to refuse alcohol than did the Control group at posttest 1, but significantly more ability to refuse at posttests 5 and 6. (Condition ✗ Time $F_{[15, 1340]}$=2.45, p=.002)

- *Marijuana refusal.* The FAN Club group had a significant increase in reported ability to refuse marijuana between posttests 2 and 4, whereas the other three groups showed a decrease over the six posttest periods. The decrease in ability to refuse marijuana was especially marked in the Control group, when at the last three posttests this group showed significantly less ability to refuse marijuana than at the first posttest.

(Condition ✕ Time $F_{[15, 1335]}=2.79$, $p<.001$)

- *Cigarette refusal.* The Control group showed a fairly steady (although not significant) decrease in reported ability to refuse cigarettes across the six posttests. The three treatment groups showed variability in their responses over time but did not differ significantly in their ability to refuse cigarettes from the earlier to the later posttests. Although not significant, reported ability to refuse cigarettes by the three treatment groups generally was higher than that reported by the control group. (Condition ✕ Time $F_{[15, 1330]}=2.72$, $p<.001$)

- *Marijuana attitudes.* Over time between posttests 1 and 4, 5, and 6, the Control group came to perceive significantly more social benefits from using marijuana. The FAN Club, Prevention Plus, and Prevention Only groups remained fairly constant and negative in their perceptions of social benefits of using marijuana. (Condition ✕ Time $F_{[15, 1380]}=1.63$, $p=.06$)

- *Drug knowledge.* Combining across posttests, the FAN Club, Prevention Plus, and Prevention Only groups demonstrated significantly more knowledge of the health consequences and prevalence of alcohol, tobacco, and drug use by youth and adults than did the Control group. (Condition effect, $F_{[3, 128]}=5.32$, $p<.005$)

No significant differences were found among the groups on measures of social skills, attitudes toward alcohol, attitudes toward cigarettes, and substance use behaviors (alcohol, cigarettes, marijuana, and chewing tobacco). This may be more attributable to the young age of program and control group participants (11.35 years old at pretest) than to the lack of program effectiveness. The incidence of alcohol, tobacco, and drug use was very low at pretest and posttests for all groups.

Chapter 3
Synthesis of Effective Prevention Programs

Introduction

The eight programs identified as being well implemented, producing positive effects, and conducting rigorous evaluations represent a diversity of prevention strategies and target groups, yet can be viewed as representing a comprehensive approach to prevention. The purpose of the following discussion is to place these eight programs into the larger context of substance abuse prevention by synthesizing information across programs. In order to achieve this purpose, the discussion highlights how these programs relate to prevention theories generally, as well as how these programs relate to prevention strategies promoted by CSAP in particular.

Three important theoretical concepts can be applied to the eight model programs. The first concept is the level at which the prevention programs are implemented. The programs represent universal, selective, and indicated prevention efforts for youth (Hawkins, Kosterman, Maguin, Catalano, & Arthur, 1996; Kumpfer, 1997). Universal interventions (e.g., The Child Development Project [CDP]) target general population groups without identifying those at particularly high levels of risk. Universal interventions are those that attempt to prevent substance use by addressing the problem within an entire community. All members of the community benefit from prevention efforts, rather than specific individuals or groups within a community. Selective interventions (e.g., Dare To Be You [DTBY]; Smart Leaders [SL]; Involving Parents of HRY in Prevention, Family Advocacy Network [FAN]; Across Ages [AA]; Creating Lasting Connections [CLC];

Greater Alliance of Prevention Services [GAPS]) target those individuals who are at greater-than-average risk for substance abuse. The targeted individuals are identified on the basis of the nature and number of risk factors for substance abuse to which they may be exposed. The cumulative effect of exposure to multiple risks justifies selecting particular youth for intensive preventive efforts. Indicated prevention efforts (e.g., Residential Student Assistance Program [RSAP]) are aimed at individuals who may already display signs of substance use/abuse. These types of programs provide intensive programming for individuals in order to prevent the onset of regular or heavy substance use. The eight programs represent each type of prevention effort and range from programs that are all-inclusive in nature to those that target the most at-risk group of youth, institutionalized youth.

The second theoretical concept is that development occurs across the lifespan and individuals have the potential to change throughout development (Baltes, 1987). As a unit the programs represent a lifespan approach to the prevention of substance abuse. The different efforts addressed developmental issues across childhood and adolescence, as well as issues in adulthood and old age. The programs targeted preschool-aged children (DTBY), elementary school students (CDP), middle school/junior high students (SL, FAN, AA, and CLC), and high school students (RSAP, GAPS). In addition, although these were not the primary target groups, the programs included parents of children and youth (DTBY, CLC, FAN, and AA) and elderly community

members (AA). Effective programs have been identified across a range of ages, highlighting the ability to support effective prevention efforts throughout childhood and adolescence.

The third concept relates to the idea that prevention programs should aim to both reduce risk factors and enhance protective factors by employing a variety of prevention strategies. The prevention strategies used by these programs addressed the needs of the target groups, both developmentally and culturally. Prevention programs are most effective when they are tailored to the specific needs of the target audience of interest (Kumpfer, 1997). Each of the theoretically driven programs aims to reduce risk factors and enhance protective factors related to substance abuse using a multifaceted prevention approach. Multifaceted interventions attempt to prevent substance use via multiple prevention strategies (e.g., combining alcohol, tobacco, and drug education and life skills training) and have been identified as key to producing lasting reductions in the prevalence of substance abuse (Biglan, 1995; Hawkins, Catalano, & Miller, 1996; Institute of Medicine, 1994). The successful programs were those that combined multiple well-implemented prevention strategies tailored to the needs of the target audience.

CSAP'S Prevention Strategies

CSAP has identified six prevention strategies that, in combination, can be used to develop programs focusing on risk and protective factors for substance use (CSAP, 1993a): information dissemination, prevention education, alternatives, problem identification and referral, community-based process, and environmental approaches (CSAP, 1993b). These preven-

tion strategies were not selected to represent the diversity of intervention efforts currently being undertaken in the substance use prevention field, but rather were seen as basic to those efforts. The importance of these six strategies, as an organizational tool, has increased recently as CSAP's emphasis on funding prevention efforts has changed in focus from directly sponsoring innovative demonstration efforts to underwriting State-directed prevention programming. Here, funding is dependent upon a State's adopting or developing programs employing one or more of these prevention strategies. In this vein, it should be noted that these six prevention strategies are not mutually exclusive. A specific intervention might employ one or more of these strategies in attempting to increase resilience to substance use among their targeted population. In fact, each of the eight model programs described in this report employs at least two of the six CSAP prevention strategies, again highlighting the importance of well-implemented, multifaceted programming in effecting change.

Information Dissemination

The aim of information dissemination is to increase knowledge and alter attitudes about issues related to alcohol, tobacco, and drug use and abuse. The information disseminated is information about the nature and prevalence of substance abuse and addiction and the psychological and social effects of substance abuse (CSAP, 1993b). Many information dissemination efforts involve media campaigns (e.g., the seatbelt use promotional campaign). Because the goal of these demonstration programs was not information dissemination at a large-scale level, none of the model programs launched media cam-

paigns. Each of the model programs, however, participated in information dissemination activities by providing basic education efforts about substance use. Information dissemination techniques used included classroom-style education using lectures, discussions, role-play, videos, and books as pedagogical tools (CDP, SL, and FAN). The awareness-raising activities were conducted at multiple levels with youth, parents, teachers, and community leaders. Here, programs like GAPS and CLC sponsored public events and disseminated informational brochures to a broad audience of community members. Programs that achieved success by increasing knowledge of participants included the following:

■ Youth in the AA program increased their knowledge and perceived ability to respond appropriately to situations involving drug use compared with youth in the control group.

■ Youth in the SL program increased their knowledge about alcohol and drugs significantly more than the youth in comparison groups. In addition, these youth had less favorable attitudes toward marijuana than youth in comparison groups.

■ Parents of youth in the CLC program improved their level of substance use knowledge relative to control parents.

■ Youth in the FAN program remained constant while control group members increased in levels of perceived benefits of marijuana use. Additionally, FAN participants had clear gains in substance use knowledge relative to controls.

The increase of knowledge demonstrated in these program findings indicates that basic information dissemination is an effective educational tool to teach the

dangers of substance abuse. In support of this idea, the National Institute on Drug Abuse (1997) posits that alcohol and drug education is a principal prevention strategy for both community-based and family-based prevention programs. Education about the realities of substance use and abuse is essential to any prevention program, as changing knowledge can serve as the basis for changing attitudes and behavior.

Prevention Education

The aim of this prevention strategy is to teach participants critical life and social skills (e.g., decision-making skills, refusal skills, and cultural pride; CSAP, 1993b). The goal of teaching these skills is to promote health and well-being in youth while at the same time preventing problems that may occur without these skills (Schinke & Cole, 1995). Skills deficit is a known risk factor for problem behavior and substance abuse (CSAP, 1993a). Many skills-development initiatives report substantial reductions in tobacco, alcohol, and marijuana use (Botvin, 1995; Botvin and Tortu, 1988; CSAP, 1993a; National Institute on Drug Abuse, 1997). Kumpfer (1997) reports information from a meta-analysis conducted by Stratton that revealed that programs using skills training methods were more successful than programs using lecture methods in reducing risk factors related to substance use and abuse.

Each of the programs provided some variety of life skills training; for example, RSAP's curriculum for life skills was the Prevention Education Series. The model programs that achieved results in this area were:

- GAPS participants showed significant increases in assertiveness and cultural pride relative to comparisons.
- AA program participants showed increased knowledge of older people and increased knowledge of community service issues relative to controls.
- Participating youth of the CLC reported using community services when problems arose and reported increases in bonding and communication with both mothers and fathers compared to control youth. Additionally, participating parents reported improvements in communication with their children relative to control parents.
- Parents in the DTBY program showed significant increases in the use of appropriate control techniques and decreases in the use of harsh punishments of their children compared to control parents.
- The FAN Club group increased its ability to refuse alcohol and ability to refuse marijuana compared with the control group.
- Students in the CDP demonstrated improvement in their development of conflict resolution skills.

Different programs highlighted enhancing different skills based on the nature of their program and the target group included. Although the outcomes from the model programs are diverse, by increasing functioning in these areas, risk for substance abuse was reduced.

Alternatives

An "alternatives approach" to substance abuse prevention is a strategy that assumes that youth who participate in drug-free activities will have important developmental needs met through these activities and will no longer have those same needs met through drug-related activities (CSAP, 1993b). A key aspect of this strategy is the voluntary participation of youth in drug-free activities (CSAP, 1996). Alternative activities often allow youth to enhance their skills and/or knowledge, occupy their unstructured time, and involve them in community service.

In some ways, prevention programs in and of themselves can be alternatives to drug-related activities. In other words, the nature of some programs may interfere with opportunities for problem behavior development (e.g., the timing of prevention program sessions—evening sessions for CLC and after-school sessions for SL and FAN). One aspect of the GAPS program was to involve youth in art, music, and drama projects as part of the African American Heritage Project. Across Ages focused on using an "alternatives" approach to prevention as the primary intervention. The AA program provided drug-free alternative activities for participants, including time spent with mentors doing a number of recreational activities, community service activities (i.e., volunteering at local nursing homes), receiving help with school assignments, and family/mentor weekends. The alternative activities translated into positive outcomes for youth in many areas, such as improved school attendance and performance; improved well-being; and improved attitudes toward the future, school, other people, and elders. Additionally, youth with exceptionally involved mentors demonstrated gains in knowledge regarding the potential risks and consequences of alcohol, tobacco, and drug use relative to youth with average or marginally involved mentors.

It has been demonstrated that involving high-risk youth in activities with mentors improves youth's knowledge, attitudes, and behaviors (Sipe, 1996). Many mentoring initiatives have proven successful, including Campus Partners in Learning (linking college student mentors with middle school students—Tierney & Branch, 1992); Mentoring in the Juvenile Justice System (linking community volunteer mentors with adjudicated youth—Mecartney, Styles, & Morrow, 1994); Linking Lifetimes (linking elder mentors with adolescent youth—Styles & Morrow, 1992); and Big Brothers/Big Sisters (linking community mentors with children and youth at risk for substance use—Tierney, Grossman, & Resch, 1995). Outcomes specifically related to substance use are reported in evaluations of the Big Brothers/Big Sisters program. Evaluations indicated that Little Brothers and Little Sisters were 46% less likely than controls to initiate drug use and 27% less likely than controls to initiate alcohol use throughout the time during the study (Tierney et al., 1995).

In 1996, CSAP speculated that "most people would probably agree that youth are likely to develop fewer substance abuse problems (as well as other problems) when they are surrounded by caring adults, given loving supervision, and offered age-appropriate challenges and opportunities to grow" (p. 19). Across Ages adds more rigorously evaluated findings to the literature by demonstrating that relationships with caring adults and involvement in structured activities outside of the educational arena give youth unique opportunities to develop skills and enhance knowledge.

Problem Identification and Referral

Problem identification and referral is a prevention strategy that involves recognizing youth who have already initially tried drugs or developed substance use problems and referring them to appropriate treatment options (CSAP, 1993b). This is an important aspect of prevention programs targeting high-risk youth, as many youth may already be familiar with substances. Early substance use is a first step to more serious use and abuse (Botvin & Tortu, 1988; CSAP, 1993a; Huizinga, Menard, & Elliott, 1989). None of the model programs measured substance abuse identification and referral as an outcome of interest. Two programs, however, actively worked on these issues:

■ The RSAP program served as a service to help individuals identify either their own substance abuse problems or the substance abuse problems of family members. Based on the need of the participants, individual and group sessions were provided. These services translated into reductions in substance use by RSAP's participants.

■ The CLC program facilitated the identification of substance abuse problems of family members for participating youth and parents. These individuals were then referred to appropriate treatment or early intervention programs.

Prevention programs should be prepared to confront issues of prior use for their participants, particularly when dealing with youth at risk. In this way, programs can work to prevent further use through early intervention strategies.

Community-Based Process

This prevention strategy aims to enhance community resource involvement in substance abuse prevention (CSAP, 1993b). For example, this strategy involves building interagency coalitions and training community members and agencies in substance use education and prevention. The community in which we live serves as an important context for much of our behavior. As members of a community, we generally conform to certain rules or widely held beliefs and attitudes. If most community members do not tolerate use of substances by youth, use may be reduced.

Many of the model programs participated in community-building activities or were programs delivered through community organizations, such as CLC, SL, FAN, and DTBY. In addition, CLC participants showed increased knowledge and use of community agencies. Two programs discussed changes in the community directly related to the prevention effort:

■ The CDP attempted to create a "caring community" via many avenues. The CDP reported that teacher practices improved and were related to children's classroom behaviors. These behaviors, in turn, were related to students' sense of community and achievement.

■ GAPS conducted community-based programming through social policy and a community-wide prevention partnership.

■ Results from CLC demonstrated that the intervention was effective in increasing a number of resiliency factors, and that these improvements were related to substance use. More specifically relative to controls, participating parents and youth realized short-term and sustained gains in their use of community services to help resolve family and personal problems. More interestingly, the level of church community activity was found to mediate sustained reductions in alcohol use.

Improving children's classroom behaviors and increasing their bonding with the school community is an important factor in the prevention of substance abuse. There is a large body of evidence that demonstrates that academic and interpersonal difficulties at school (e.g., Jessor & Jessor, 1977; Smith & Fogg, 1978), as well as suspension or expulsion from school (e.g., Hawkins, Lishner, & Catalano, 1985; Herjanic, Barredo, Herjanic, & Tomelleri, 1979) are associated with increased levels of substance abuse. In addition, commitment to school has been found to be a protective factor in slowing the escalation to regular or heavy marijuana use (Kandel & Davies, 1992). Similarly, improving family functioning is an important factor in effecting positive changes in substance use and related problem behaviors (cf. Kumpfer, 1997). By altering the larger community and its response to families or children in need, the CDP and CLC programs promoted healthy development opportunities for all involved.

Environmental Approach

Altering policy that can reduce risk factors and/or increase protective factors related to substance abuse is an important step in the prevention of substance abuse. Policy changes can translate into community and individual ideals related to substance abuse and adolescent health. Past research demonstrates that adolescent drug use is greater in communities where use is condoned (e.g., Coate & Grossman,

1985), in schools where use is high (e.g., Baumrind, 1985), or in families where use is accepted (e.g., Kumpfer, 1987).

Prevention programs that include this strategy involve active lobbying for policy alterations or additions that will aim to reduce risk factors and enhance protective factors for substance abuse. Examples of these policies may be community laws prohibiting alcohol and tobacco advertisements in close proximity to schools, community policies increasing the barriers youth encounter for obtaining alcohol and tobacco products, and community laws increasing punishments for driving while under the influence.

Because large-scale policy influence was not the goal of these demonstration programs, none of the eight model programs directly tackled these issues. However, the result of one program was a change in policy. The CDP program changed school policy that increased protective factors related to substance abuse. The program altered school policies regarding teacher-student relationships, curricula, cooperative learning, and discipline techniques.

Did These Model Programs Demonstrate Alcohol, Tobacco, and Drug Use Prevention?

Research data are quite clear about the role played by alcohol, tobacco, and drug knowledge, attitudes, and use as precursors to sustained and problematic use. In fact, one of the most consistent findings in this literature is that permissive attitudes toward experimentation with substances and use is related to actual use (e.g., Johnston, O'Malley, & Bachman, 1986; Kandel, 1978; Smith & Fogg, 1978). Similarly, the perception of relatively

low harm from experimentation or use of substances is related to the propensity to use (e.g., Johnston et al., 1986; Brounstein et al., 1989). Lastly, early experimentation or use of alcohol or drugs is a first step to more serious abuse (Huizinga et al., 1989), and early alcohol and drug use is a better predictor of later use than either interpersonal or intrapersonal measures (e.g., Kandel, Simcha-Fagen, & Davies, 1986).

Earlier discussion has illustrated that certain prevention strategies produce positive outcomes for youth and family. Some are specific to alcohol, tobacco, and drug use, while others target risk and protective factors related to use. For example, these programs helped individuals gain skills and knowledge, fostered relationships between youth and family or community members, and enhanced community awareness of substance abuse problems. These achievements translate into reductions of risk factors and increases in protective factors. While these successes are necessary to demonstrate, the fundamental question posed to these programs has not yet been answered, and that is: *"Did these model programs demonstrate alcohol, tobacco, and drug use prevention?"*

Regardless of the approach used or the population served, each program was successful in increasing the latency of first alcohol, tobacco, and drug use, or reducing alcohol, tobacco, and drug use, or in decreasing the risk factors known to be related to later alcohol, tobacco, and drug use. Five programs achieved success in reducing substance use:

■ Youth in RSAP showed decreases in substance use: for alcohol, 81.8% of nonusers remained nonusers, while 72.2% of the users became nonusers; for marijuana, 83.3% of the nonusers remained nonusers, while 58.8% of the

users became nonusers; and 78.4% of tobacco nonusers remained nonusers, while 26.9% of the users became nonusers. Comparison groups did not show these same declines.

■ The SL program increased knowledge about alcohol, tobacco, and illicit drugs and decreased favorable attitudes toward marijuana. Concomitant with those findings, the SL program partici- pants also showed significant decreases in marijuana and tobacco use and a marginally significant decrease in alco- hol use over time.

■ Prevalence of alcohol use declined by an average 11% over 4 years in CDP schools, compared with an increase of 2% in matched comparison schools. Prevalence of marijuana use by CDP students declined by 2%, compared with a 2% increase by comparison school students. Prevalence of cigarette use by CDP students declined by 8%, compared with a 3% decline by com- parison school students.

■ GAPS participants showed increases in assertiveness and cultural pride. In conjunction with those improvements, GAPS data also revealed that levels of participant alcohol, tobacco, and marijuana use decreased significantly over time.

■ CLC found that participant youth expe- rienced short-term and sustained delays in the onset of alcohol and drug use as well as decreased levels of substance use, especially as family bonding, communication, and community agency level of activity increased. In addition, parents of participants demonstrated short- and long-term reductions in their use of alcohol, relative to control parents.

DTBY, FAN, and AA worked with youth among whom the incidence of alcohol, tobacco, and drug use was very low. DTBY worked with parents and preschoolers. These youth were too young for involvement with substances, but the program produced dramatic posi- tive effects on parenting skills, family management, bonding, and communica- tion skills, resulting in decreased problem behavior. DTBY was successful because it effected positive changes on one key risk factor for early onset of and sustained severe substance use—dysfunctional fami- ly environment (Kumpfer, 1987). FAN youth also were too young to demonstrate change in substance use rates, but they demonstrated prosocial changes in their attitudes and in their perceived ability to refuse drugs and alcohol, clear indicators of inoculation. Similarly, youth in the AA program were observed at an age during which the incidence of alcohol, tobacco, and drug use was low. However, the pro- gram did lead to significant positive changes in alcohol, tobacco, and drug knowledge; alcohol, tobacco, and drug attitudes; and school bonding and values related negatively to later substance use. FAN and AA reduced risk factors known to be related to future onset and regular use of substances (CSAP, 1993a). To the extent that the processes set in motion by these programs can be maintained, these youth, their families, and society as a whole will have been well served and better insulated against the ravages of alcohol, tobacco, and drug use.

Conclusions

Despite the fact that prevention strategies and outcomes from the eight programs are diverse, three unifying themes are evident. First, each of the programs, in its own setting and in its own manner, promoted supportive and caring relationships between youth and members of their families, their communities, and their peer groups. Second, each of the effective programs implemented multifaceted interventions targeting the specific needs of its audiences. Third, each of the programs was successful either in increasing the latency of first alcohol, tobacco, and drug use, reducing the frequency of alcohol, tobacco, and drug use, or in effectively reducing risk factors and/or enhancing protective factors related to the development of substance use.

Programs that should be promoted and broadly disseminated are those that have been shown to be efficacious via controlled studies (Hawkins, Catalano, & Miller, 1996). The eight model programs discussed here represent programs with scientifically defensible findings and demonstrate that "Prevention Works." Because of their documented successes, these programs offer opportunities for other agencies, policy makers, and practitioners to implement effective programs in their communities.

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HRY DataBank Methodology

Formation of the HRY DataBank Work Group

CSAP, through its contractor The CDM Group, identified a work group that included members from CSAP, program evaluators, and The CDM Group staff to design and develop implementation of the HRY DataBank. These different staff persons make up the High-Risk Populations Work Group. Members of the work group first met in January 1995 and have met since then on a quarterly basis to discuss document review, coding, and data entry procedures. In addition, the group discusses HRY DataBank products and addresses issues related to future development of the database. The five work group evaluators are also an integral part of the document review process, forming the core of the staff performing evaluation review and coding.

Document Review

After reviewing hundreds of documents for content, project staff determined that the most important documents for the HRY DataBank were the initial grant application, special papers written in response to CSAP calls for findings, and final reports. In 1996, the Evaluation Status Reports (ESRs) were added to this list. Grantee submission of ESRs was required in Continuing Applications as a comprehensive interim evaluation report.

Document Coding

The CDM Group staff and consultant evaluators review grantee documents and extract descriptive and evaluative information using two coding forms. One form was designed to collect descriptive data. A second form was designed to capture information about the evaluation design and methodology and to identify and categorize reported findings. The evaluation coding form is used by consultant evaluators.

Initially, all descriptive information was coded verbatim. Using all of the verbatim information, the final coding schema were defined by a consensus procedure used among senior coders. Rules for categorizing and coding items in each report were formalized in a Coder's Manual, which was distributed to all those coding descriptive information. The manual was used both to train coders and as a handy reference document. In addition, to maximize consistency in coding methodology, a team of coders met regularly to review coding questions and experiences. The manual itself was updated as new coding categories became evident to the team.

Components of the HRY DataBank

Descriptive component

The HRY DataBank contains basic descriptive information on every HRY and PPWI program funded by CSAP. Descriptive data include the following:

- Identifier Data: Grant number, project name, grantee agency, city, state, and funding period.
- Target Population: Age, ethnicity, gender, and risk factors.
- Interventions: Activities and number of sites.

Evaluation component

Although the data in the descriptive component provide an overview of project characteristics and can provide general information about individual grants, the overarching purpose of the HRY DataBank is to provide a systematic record of outcomes. The data related to outcomes give the HRY DataBank its potential as an analytic and/or planning tool. Not all programs were coded for findings. In general, evaluation coding was initiated only for the subset of programs that reported outcomes and documented their intervention implementation and evaluation research methods sufficiently for reviewer understanding. The program evaluation component of the HRY DataBank contains the following data on 147 different HRY initiatives:

■ Evaluation Methodologies: Qualitative and quantitative study designs.

■ Treatment and Comparison Groups: Sample size, level and treatment of attrition, presence and nature of comparison groups; method of assignment to treatment or comparison group; initial comparability of treatment and comparison groups; and method of correcting for noncomparability.

■ Implementation of Intervention Activities: Dosage, outcome measures, and instruments.

■ Findings Identification: Findings for HRY grants are arranged by CSAP domain (individual, peer, family, school, community, and society). In addition, a substance abuse domain is used to isolate findings directly related to changes in drug use, knowledge, and attitudes. When reported, results of statistical analyses are indicated.

■ Findings Ratings: Each reported finding is rated for effectiveness and for level of confidence.

■ Domain Ratings: A program may have findings in several domains. For each program, the domains in which findings have been reported are assigned ratings based on methodological rigor and overall level of effect.

Criteria for Review of Rigorous Evaluation Designs

Teams of two expert evaluation consultants reviewed and coded program evaluation status reports, findings papers, and final reports. To be viewed as producing credible results ("above the line" or ≥3 on a 5-point integrity Likert-type scale), quantitative studies were examined to ensure they possessed relatively rigorous research designs having the following characteristics:

■ **Experimental design** in which participants were randomly assigned to an experimental or control group in which no services were offered, an alternative service to the experimental program was offered, or program services were offered only after a protracted delay.

Or

■ **Quasi-experimental design** in which participants were not randomly assigned to a program treatment or to a comparison group in which they received no treatment. Quasi-experimental designs also include those designs that randomly assign blocks of participants to treatment and comparison conditions (e.g., schools) and cohort sequential designs.

And

■ **Pre- and posttests** were given to both treatment and comparison groups, or

change was assessed through the use of clinically meaningful measures.

- **Reliable and valid instruments with cultural relevance** were used to collect data on the treatment and comparison groups.
- **Appropriate statistical procedures** were consistently used in data analysis.
- **No other internal design** (e.g., high or differential attrition, poor program implementation) or external conditions (e.g., municipality implements an intervention) affecting treatment and/or comparison samples could reasonably explain the observed results.

To be viewed as producing credible results ("above the line"), qualitative studies were examined to ensure that:

- They clearly demonstrated evidence of a **systematic, replicable, unbiased approach** to data collection (e.g., evidence of standard procedures for conducting interviews and focus groups). Where observations were reported, evidence of a protocol or standard format for recording information was required.
- Measures used were reliable, possessing at least face validity, and/or had some standard against which to gauge change (e.g., clinically anchored measures or performance measures).

Quantitative or qualitative programs that satisfied these criteria were judged to be at least moderately rigorous and capable of producing quantitative data in which we have some confidence. These studies were coded completely. Findings from other efforts failing to meet these criteria were not often coded for integrity or effectiveness since, by definition, the credibility of the results reported was suspect.

Assessing Reported Findings

To gauge both direction and magnitude of effect, pairs of reviewers extracted and rated each individual finding reported. Initially, test statistics accompanying a reported finding were translated to reflect an estimated or "rough" effect size. To further prevent incautious use of these estimates as true effect sizes, estimates were further translated into ratings made on a 7-point Likert-type scale, with 1 indicating a highly significant or meaningful negative effect, 4 indicating no meaningful or significant effect, and 7 indicating a highly significant or meaningful positive effect. Effect size translation tables, along with conventions for scoring estimated effect sizes on the Likert-type scale, are presented in Appendix B. Because ratings of direction and magnitude are not exact estimates of effect size, the constructed metric used in the DataBank should serve only as a *guide* for program planners, policy analysts, and researchers looking through the database to identify promising, effective, or ineffective practices.

Quantitative and qualitative findings were also rated for integrity. This rating indicates the degree of confidence the reviewer has in the reported finding. The integrity ratings use a 5-point Likert-type scale on which 1 indicates no confidence and 5 indicates high confidence. In assessing the level of confidence in findings, it was important to consider both the study design from which the finding was extracted and the quality of implementation of that study design. For example, a true experimental study from which there was high and differential attrition inspires little confidence. On the other hand, confidence may be relatively high for data gathered during the course of a well-executed ethnographic study, a rigorously

implemented and analyzed set of focus groups, or a post-only study with a comparison using clinically significant or objective and comprehensive record data.

Domain Ratings

After individual findings related to program objectives were rated for effectiveness and level of confidence, they were grouped by domain, and overall ratings for the effects and level of confidence within each outcome domain were generated. The overall measure of effectiveness is somewhat subjective because the individual raters may have differed to some degree in how they weighted the evidence presented. Level of confidence assessments tended to be less variant because virtually all findings within a domain derived from the same research design.

Consensus Among Reviewers

Pairs of trained evaluator reviewers extracted both the descriptive research and findings information from appropriate program documents. The following criteria were used to determine if the paired reviewers' ratings were unacceptably divergent:

- If an overall rigor/integrity rating by domain was scored a 2 (weak, at best some confidence) by one reviewer and scored a 3 (mixed, some weak, some strong characteristics) by the other reviewer or if their ratings were on opposite sides of the scale (e.g., 2/4).

- If their overall effect ratings by domain were 2 or more points apart (e.g., 5/7).

If the evaluators disagreed, they contacted one another (usually by phone) to discuss the basis for their discrepant ratings. Each evaluator was provided a copy of the co-reviewer's original coding sheets. After consensus was reached, project staff were notified so the acceptable ratings could be entered into the HRY DataBank. Overall, 37 projects were initially identified as meeting these criteria for inclusion.

Reviews for Quality of Implementation

Subsequent to this first set of reviews, if programs produced data in which reviewers felt at least moderately confident, a second set of reviews took place. Here, a pair of outside expert reviewers scrutinized the source documents for information on quality of implementation as well as the quality of the evaluation research reported. In addition, because this review focused on identifying those projects clearly demonstrating their effectiveness, the criteria for inclusion was set higher for research integrity (ratings ≥4), and the positivity of data was reported. Findings were examined for both consistency (across measures within a domain and across domains) and directions of effects. Again, consensus among reviewers was required before any final decision regarding the disposition of a project was made. Eight programs were identified as meeting these criteria for inclusion.

Table B-1

Effect Size for Various Sample Sizes and *p* Values

Total of $n_e + n_c$	*p*=0.05	*p*=0.01	*p*=0.001
50	0.56	0.75	0.95
100	0.33	0.53	0.68
200	0.23	0.37	0.47
300	0.19	0.30	0.38
400	0.16	0.26	0.33
500	0.17	0.23	0.29
800	0.14	0.18	0.23

Table B-2

Effect Size for Various Sample Sizes and Statistics

Total of $n_e + n_c$	*t* value	*F* value	x^2 value
50	0.28 × *t*	0.28 × (SQRT *F*)	0.28 × (SQRT x^2)
100	0.20 × *t*	0.20 × (SQRT *F*)	0.20 × (SQRT x^2)
200	0.14 × *t*	0.14 × (SQRT *F*)	0.14 × (SQRT x^2)
300	0.12 × *t*	0.12 × (SQRT *F*)	0.12 × (SQRT x^2)
400	0.10 × *t*	0.10 × (SQRT *F*)	0.10 × (SQRT x^2)
500	0.09 × *t*	0.09 × (SQRT *F*)	0.09 × (SQRT x^2)
800	0.07 × *t*	0.07 × (SQRT *F*)	0.07 × (SQRT x^2)

Table B-3

Effect Size for Decreased Use Given in Percentages

Before use rate	Decrease of 5%	Decrease of 10%	Decrease of 15%	Decrease of 20%	Decrease of 25%	Decrease of 30%
10	0.36	>1	>1	>1	>1	>1
20	0.19	0.44	0.61	>1	>1	>1
30	0.15	0.32	0.51	0.76	1.12	>1
40	0.13	0.27	0.42	0.59	0.78	1.02
50	0.13	0.25	0.39	0.52	0.67	0.84
60	0.13	0.25	0.38	0.51	0.64	0.78
70	0.14	0.27	0.40	0.52	0.65	0.78
80	0.17	0.29	0.46	0.58	0.72	0.84

Reviewer Criteria for Determining Model Programs

The ratings for dimensions 1 through 9 range from 1 for very low quality to 5 for very high quality.

1. *Theory*—the degree to which the project findings are based on a clear and well-articulated theory, clearly stated hypotheses, and clear operational relevance.

2. *Fidelity of interventions*—the degree to which there is clear evidence of high-fidelity implementation, which may include dosage data.

3. *Sampling strategy and implementation*—the quality of sampling design and implementation, and the strength of evidence concerning sample quality (e.g., data on attrition).

4. *Measures*—the operational relevance and psychometric quality of measures used in the evaluation, and the quality of supporting evidence.

5. *Data collection*—the quality of implementation of data collection (e.g., amount of missing data).

6. *Analysis*—the appropriateness and technical adequacy of techniques of analysis, primarily statistical.

7. *Plausible threats to validity*—the degree to which the evaluation design and implementation addresses and eliminates plausible alternative hypotheses concerning program effects. The degree to which the study design and implementation warrants strong causal attributions concerning program effects.

8. *Integrity*—the overall level of confidence that the reviewer can place in project findings based on research design and implementation. This is the same integrity rating used by reviewers in the original review of the 37 projects.

9. *Utility*—the overall usefulness of project findings for informing prevention theory and practice. This rating is anchored according to the following categories, and combines the strength of findings and the strength of evaluation.

   ■ The evaluation produced clear findings of null or negative effects for a program with well-articulated theory and program design; the study provides support for rejecting the program as a replication model.

   ■ The evaluation produced findings that were predominantly null or negative, though not uniform or definitive.

   ■ The evaluation produced ambiguous findings because of inconsistency in result or methods weaknesses that do not provide a strong basis for programmatic or theoretical contributions.

   ■ The evaluation produced positive findings that demonstrate the efficacy of the program in some areas, or support the efficacy of some components of the program.

   ■ The evaluation produced clear findings supporting the efficacy of well-articulated theory and program design; the study provides support for the program as a replication model.