

# Characteristics of Effective Substance Abuse Prevention Programs For High-Risk Youth

## INTRODUCTION

**F**OR THE PAST thirty years, public agencies and private foundations have supported research that has produced information about the initiation and prevalence of substance use among youth and the behavioral, social, and educational outcomes associated with this use. Practitioners and researchers have tested strategies and programs that prevent the use of substances and support positive youth development. Recognizing the need for prevention programs, they have become concerned about how to make prevention activities as effective as possible for specific populations. For programs that serve high-risk youth (HRY), this is a particularly important point. Most of the available research, especially recent multi-program analysis of effective programs, have focused on programs that target a general youth population, typically in school settings (Paglia and Room, 1999). Little prevention research has been conducted about the strategies and programs that are effective for reaching youth who are specifically identified as being at risk of becoming substance abusers (Paglia and Room, 1999). More information is needed about prevention programs and strategies that target high-risk youth, and that are implemented in a variety of settings in both schools and the community.

The National Cross-Site Evaluation of High Risk Youth Programs, conducted by the Center for Substance Abuse Prevention (CSAP) within the Substance Abuse and Mental Health Services Administration (SAMHSA), begins to meet this need for systematic data on effective design and implementation of substance abuse prevention programs serving youth in high risk circumstances. The findings reported here use information on the relative effectiveness of 46 study programs in preventing substance use among participating youth relative to comparison youth within each site, and detailed information on the prevention strategies delivered to participating youth in each site. The analyses produce statistical findings concerning those program characteristics that are associated with greater prevention effectiveness for youth at risk.

Authored by:

**J.Fred Springer,**

**EMT Associates, Inc.,**

**Jack Hermann, ORC/Macro, Inc.,**

**Soledad Sambrano,**

**Center for Substance Abuse Prevention**

# The History of Prevention Programs

## PREVENTION PROGRAMS

**H**ANSEN (1997) SUGGESTS that the development of prevention program interventions has involved three phases in which the focus of prevention was increasingly refined.

1. Common Sense, Ideology, or Intuition
2. Theory-Driven
3. Data-Driven

This third and current phase is "data-driven" by findings from etiologic research on risk and protective factors for substance use, and increasingly by systematic research on interventions and their effectiveness in preventing substance use. Most programs now focus on producing statistically meaningful changes in two types of variables—mediating variables (e.g., risk and protective factors) that help account for drug use, and drug use outcomes (e.g., delaying drug use initiation and reducing the level of use).

In the data-driven phase, evaluations of individual prevention programs, particularly those with rigorous outcome designs, have supported efforts to identify effective prevention programs program characteristics, and contextual conditions. However, applying the information from one program to another is difficult. Each individual study captures a unique program implemented in a unique set of circumstances. Typically, individual studies do not use similar evaluation designs, do not document the same outcomes, do not use consistent program components, and do not look for similar design characteristics as explanations of program effectiveness. Researchers and program directors are understandably cautious when it comes to applying findings from an individual program evaluation to other programs.

Over the past 15 years, researchers have more effectively synthesized findings of individual program evaluations by conducting multi-program analyses, using advanced procedures such as

meta-analysis (Tobler, 2000) and multilevel modeling (Kreft and De Leeuw, 1998). Several findings about effective prevention program characteristics have emerged from these studies.

- Programs using interactive methods of delivery were more likely to produce intended outcomes than programs using non-interactive methods (i.e., didactic instruction with little student interaction).
- Smaller programs have been found to be more effective than large programs.
- Programs that had system-wide interventions – targeting students, peers, family, schools, and community - were more effective than those targeting only youth.
- Programs that emphasized comprehensive life skills and social influences (i.e., peer and social pressures and development of resistance skills) were more effective than others.

Tobler, 1986; Tobler and Stratton, 1997; Tobler et al., 2000

The least effective programs were knowledge-only programs (programs whose focus was only on teaching youth about substances), affective-only programs (programs that emphasized self-esteem, values clarification) or combinations of knowledge plus affective strategies (Tobler et al., 2000, Hansen, 1992).

Despite the contributions these studies have made to prevention programming, application of the findings is constrained by the uniformity of setting, and limited application to youth at high-risk. Nearly all multi-site analyses of youth substance abuse prevention programs have used data primarily from school-based programs. Universal school-base programs are not designed for high-risk youth, and effective programming for the general student population may not work for youth who are at risk for developing drug abuse behaviors.

# Data and Method

## DATA AND METHOD

**G**IVEN THE LACK of information on characteristics of effective programs for high-risk youth, the current CSAP cross-site evaluation of HRY programs provides a unique opportunity to advance our understanding of what works for these youth. In 1995, CSAP initiated this national evaluation of the HRY demonstrations to assess the projects that were funded in 1994 and 1995 (Sambrano, Springer, & Hermann, 1997). The prevention programs in this study varied widely in terms of their organizational setting, service setting, intervention strategies and methods of delivery, and intensity. Two-thirds of the programs were held after-school, the remaining during school hours. They ranged in duration between eight weeks to three-year-long programs, and the focus of their programming ranged from highly didactic to highly interactive programming, with interventions varying in focus from substance use information, social skills building, mentoring, recreation, and academic and vocational support. This variance, coupled with a substantial sample of programs (N=46), provides an excellent opportunity to explore those program characteristics that were most effective in reducing substance use among high-risk adolescents. The measure of program effectiveness used here is a statistical measure of “effect size”. This measure summarizes the substance use outcome difference between prevention program participants and comparison youth. The larger the positive effect size, the more effective the program is.

### The cross-site evaluation design includes several important features:

- 1) A common instrument, the CSAP National Youth Survey, used to collect individual outcome data across all study sites;
- 2) A viable comparison group constituted in each study site to help assess program effects;
- 3) Data collected from 6,031 treatment and 4,579 comparison youth at four points in time, including two follow-up points after program exit, allowing identification of longer term program effects;
- 4) Data on exposure to prevention services collected for each program participant, and totaling more than 217,000 intervention exposures, that allows assessment of the effects of differential exposure to prevention activities; and
- 5) Data systematically collected on program-level variables to assess program characteristics that contribute to effective prevention.

The design allows the effectiveness of programs to be tested through measurement of changes in substance use over time compared to changes in similar youth who did not receive program services. While overall study findings are reported elsewhere (CSAP, 2002a, 2002b, 2002c), this article focuses on determining which program characteristics were most effective in producing positive effects.

DISCUSSION

**T**HE FINDINGS FROM the CSAP Cross-Site Evaluation of High-Risk Youth Programs adds valuable knowledge to prevention programming regarding best practices for the implementation of effective prevention programs for high-risk youth. The following points highlight the important findings and note some implications for prevention programming for selected populations.

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- Program Content.** Program content is critical to improving adolescent behaviors. Programs with strong behavioral life-skills programming were clearly more effective than programs emphasizing other content in changing substance use and school connectedness. Recreation-focused, “positive alternative” programs also demonstrated patterns of positive effect, though the number of programs was small. Programs that focused on providing information about cigarette, alcohol, and other drugs were significantly less effective. The weakness of knowledge-only and affective programming has been long recognized in prevention

Discuss

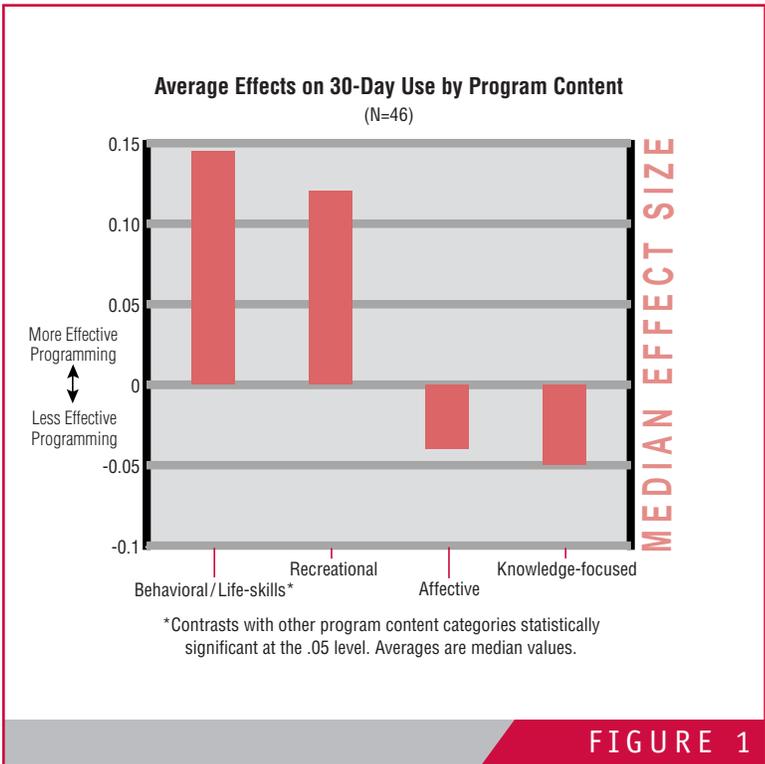


FIGURE 1

research, and is confirmed again in this study of programs serving youth at high risk.

# sion

- Program Delivery Method.** The findings confirm and elaborate the importance of the way in which prevention messages and lessons are conveyed in programs. Clearly, as demonstrated in other research and reiterated here, effective programming must use interactive rather than passive, classroom style learning methods. Furthermore, techniques that focus on building positive connectedness with peers or supportive adults, and methods that encourage youth to think through their own positions and circumstances are promising.

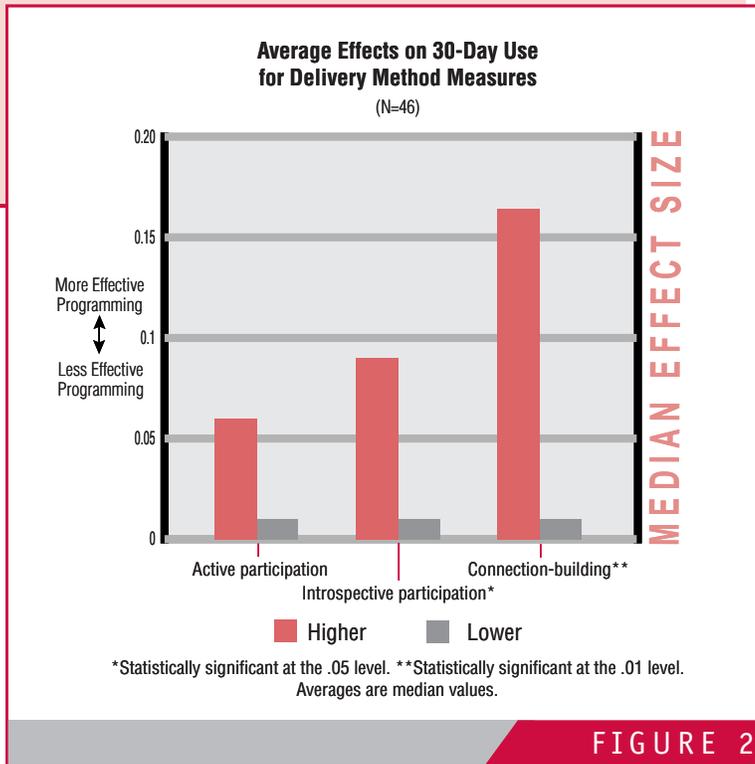


FIGURE 2

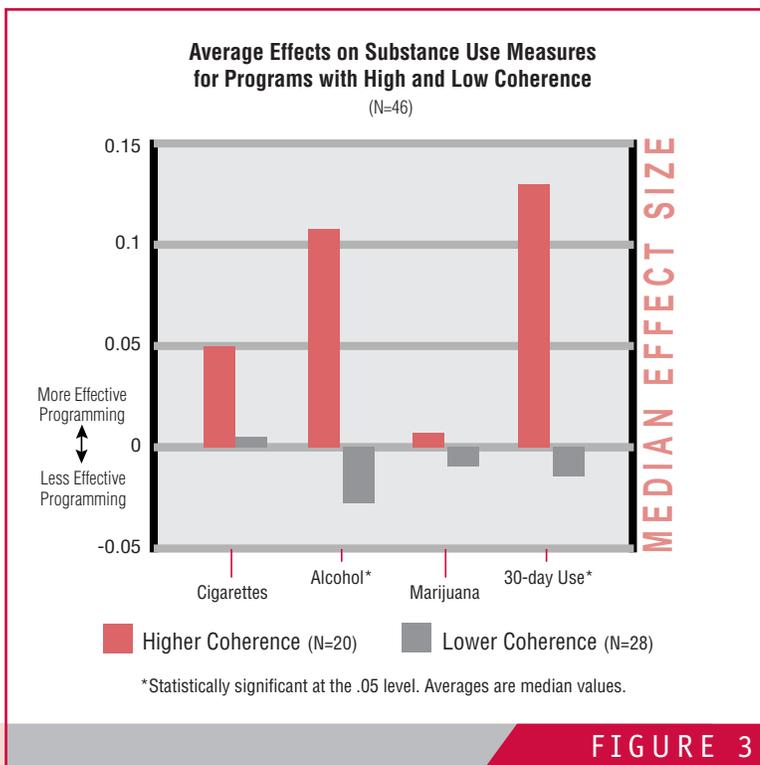


FIGURE 3

- Program Coherence.** Programs with coherent program theory that includes clear links between outcome objectives and program activities are more effective than programs with less clearly articulated theory. The positive outcomes of coherent programming are enhanced by consistent well-organized schedules of activity. These findings suggest that CSAP's emphasis on logic models, evidence-based program design, and strong planning and implementation can improve program effectiveness, and should be a continuing focus in prevention programs.

- Contact with Youth.** The average amount of program contact was not significantly related to program effectiveness, suggesting that the amount of contact by itself is less important than other attributes of effective programs identified here. However, programs with more intense contact (i.e., more hours per week) achieved more positive outcomes. Program planners should design programs that provide four or more hours of service per week. This intensity of service is apparently more important for outcomes than duration or total number of hours of contact themselves.

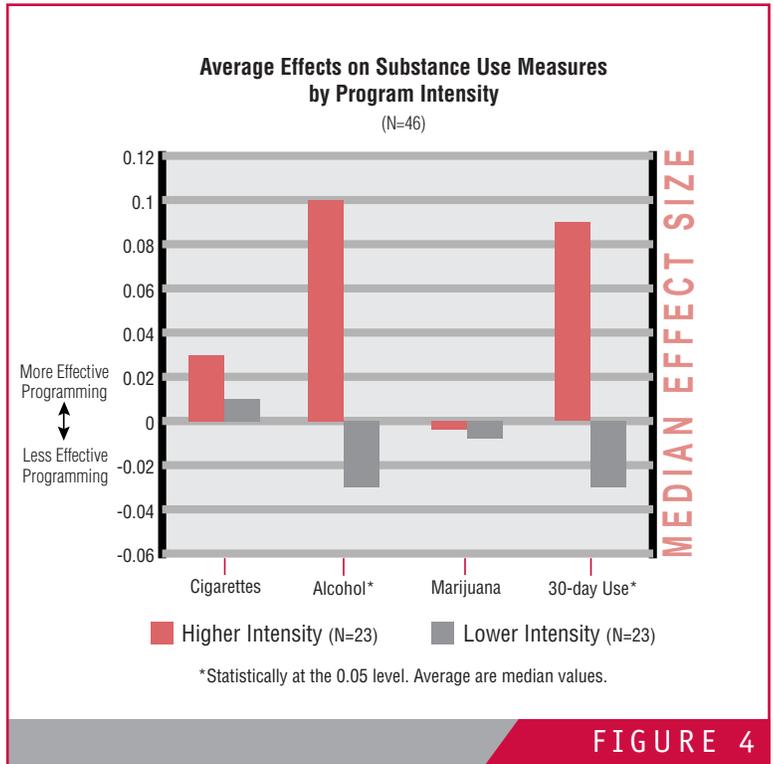


FIGURE 4

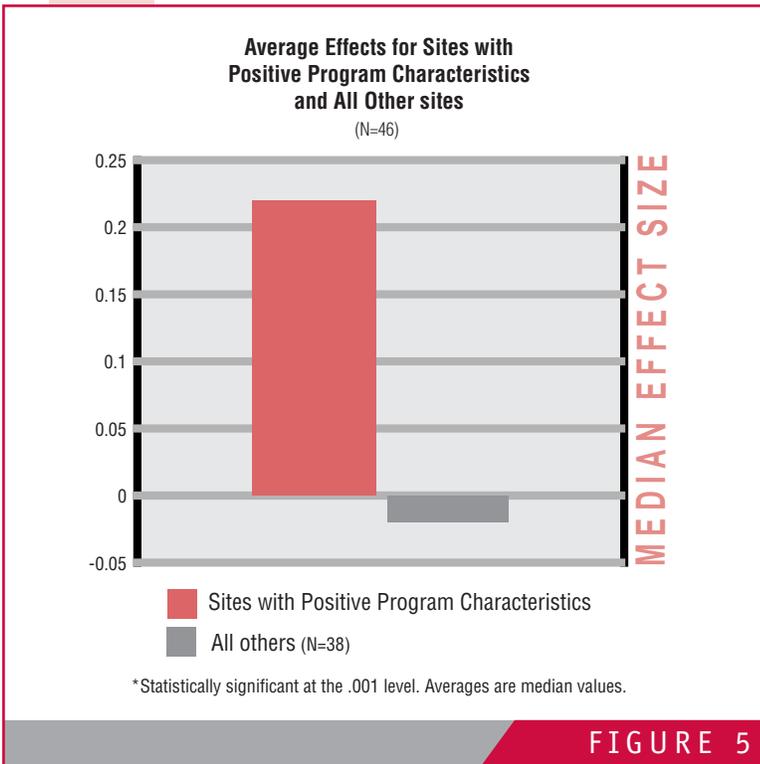


FIGURE 5

- Analyses of Evidence-Based Programs.** The National Cross-Site Evaluation of High Risk Youth Programs identified the evidence on effective program characteristics identified to the left. The influence of these evidence-based program characteristics on outcomes was substantiated in a comparison of findings between the more evidence-based programs and other programs. Programs with more positive program components were significantly more likely to positively impact substance use patterns than other programs. Not only were these findings supported in an analysis of change between program entry and exit, but they were also extended to the 18-month follow-up period of the study.

# Conclusion

## CONCLUSION

**T**HROUGH IDENTIFYING THE design and implementation features that characterize more effective prevention programming in real community settings, these findings begin to unravel the complex knot of interconnected influences of setting, organization, and program design that can strengthen or diminish program effects. They also provide practitioners and policy makers with important concrete guidance concerning what elements of design or implementation are

important to achieve intended effects within a particular setting. Furthermore, they substantiate research on evidence-based programming with a large sample of high-risk youth. There are clearly programmatic approaches to addressing substance abuse among high-risk adolescents that are more effective than others. Programs that adopt evidence-based prevention principles are significantly more likely to have been effective in reducing substance use than other programs among high-risk youth and these effects are long lasting.

### Self-Assessment Tool:

When designing your prevention program, keep in mind that content must focus on behavioral life-skills and positive alternative approaches. Prevention program designers and implementers should de-emphasize activities that focus on information about drugs and their harmful effects or on attitudes toward substance use, and instead should focus on effective interactive activities.

#### DO:

- Include activities that develop and strengthen behavioral life skills, such as refusal skill building, anger management, conflict resolution, social skills, and academic skills.
- Actively engage youth in thought provoking and meaningful activities that encourage team building.

#### DON'T:

- Focus on didactic activities in which youth “receive” information through lectures, videos or other similar means. Rely on classroom style approaches where youth work individually on activities.

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**Authors:** J.Fred Springer, EMT Associates, Inc., Jack Hermann, ORC/Macro, Inc., Soledad Sambrano, Center for Substance Abuse Prevention

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**Tactics** (tak'tiks) n. **1.** a plan for promoting a desired end.  
**2.** the art of the possible.