Getting Results: Developing Safe and Healthy Kids Update 2

Assessing the Effectiveness of Classroom-Based Prevention Programs

California Department of Education
Sacramento • 2001

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An illustrated *Educational Resources* catalog describing publications, videos, and other instructional media available from the Department can be obtained without charge by writing to the address given above or by calling the Sales Office at (916) 445-1260.

Contents

Acknowledgments

Many people were involved in the creation of this second update of *Getting Results*, and their contributions are acknowledged and appreciated.

A research team provided the reviews of prevention curricula and the commentary on effective prevention programs. The team consisted of the following persons:

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Denise Hallfors, Ph.D., is a research associate professor at the University of North Carolina, Chapel Hill, whose current research projects include evaluating the effectiveness of community drug prevention programs on youth outcomes, examining school district response to federal policies requiring science-based substance abuse prevention programs, and evaluating a national substance abuse demand-reduction program.

Dr. Hallfors reviewed the existing research and evaluations of the three classroom prevention curricula that are most widely used in California and summarized that information in Chapter 1.[1]

Amy Sporer, M.S., assisted with the review process. She is a research coordinator, under the direction of Denise Hallfors at the University of North Carolina at Chapel Hill, School of Public Health. Sporer's training is in psychology and psychometrics, primarily the psychological and psychoeducational assessment of children in schools.

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Dr. Sussman wrote the commentary about classroom prevention strategies. He focused on the social influences approach, which research has shown to be especially effective with youths.

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Chapter 1

Introduction

CHAPTER 1

Introduction

Assessing the Effectiveness of Classroom-Based Prevention Programs is the second of a series of updates to *Getting Results: Developing Safe and Healthy Kids*.[3] Although classroom instruction is only one component of a comprehensive prevention effort, students can receive health information and build skills most consistently and directly through this method. Therefore, it is critical that classroom-based curricula be effective.

This update provides information about the instructional component of a comprehensive school-based alcohol, tobacco, and other drug (ATOD) prevention program. It is designed to help districts identify effective classroom-based programs and discontinue use of ineffective programs. It includes:

- An in-depth examination of the research on the most popular classroom-based prevention programs in California
- A detailed discussion of a curriculum strategy that has been shown to be effective in changing students' ATOD use-related behavior
- Action steps for making the instructional component as effective as possible
- Resources for locating classroom-based programs that have been evaluated and determined to be effective or promising

National Principles of Effectiveness

This publication, along with others in the *Getting Results* series, is intended to help educators in California create comprehensive ATOD and violence prevention programs that are based on the National Principles of Effectiveness. The third principle states that schools must "design and implement activities based on research or evaluation that provides evidence that the strategies used prevent or reduce drug use, violence, or disruptive behavior among youth."

According to this principle, *effectiveness* means that strategies must be shown to affect student behavior. This is the premise of all the *Getting Results* publications.

The Safe and Drug-Free Schools and Communities Act (Public Law No. 103-382) and California's Tobacco Use Prevention Education program require school districts to adopt and carry out a *comprehensive*[4] ATOD and violence prevention program in accord with the National Principles of

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[3] *Getting Results* consists of:
- *Part I, California Action Guide to Creating Safe and Drug-Free Schools and Communities* (1998)
- *Part II, California Action Guide to Tobacco Use Prevention Education* (2000)
- *Update 1, Positive Youth Development: Research, Commentary, and Action* (1999).

All *Getting Results* publications were developed by Health & Education Communication Consultants, Berkeley, California, with the assistance of a concept team of educators and research experts who reviewed key research. All publications are available from CDE Press, (916) 445-1260.

[4] Comprehensive programs involve the school and the community; within the school, there are many components, including classroom instruction. See *Getting Results*, Part I, pages 6 and 48 for a fuller discussion.

Effectiveness. *Getting Results*, Parts I and II, cite research findings that a comprehensive, integrated program is the foundation for success and that school districts should design prevention programs that are both comprehensive and responsive to local needs and assets.

In creating their comprehensive programs, districts should adopt a classroom program that has been demonstrated to be effective and meets the needs of its students. Those needs may be identified by the California Healthy Kids Survey or other needs assessment measure.

Prevention Resources Used by California School Districts

The *Alcohol, Tobacco, Other Drug and Violence Programs in California Schools: 1998-99 Annual Report* (2000) summarizes the results of a required annual report submitted to the California Department of Education (CDE) by California school districts. The report included information about the district's predominant classroom-based prevention resources (those for which the primary method of delivery is in a regular classroom setting). Districts were asked to list resources used by at least 50 percent of the district's schools serving a specified grade level. The category excluded resources used specifically in classes for special populations, such as tobacco-cessation courses or those serving pregnant and parenting minors.

Eight hundred eighty-three districts of 1,054 (84 percent) responded to a question about classroom resources. Districts could — and did — report more than one predominant classroom-based resource. Table 1 shows the list of prevention resources that 7 percent or more of those districts said they are using.[5] The table also indicates whether the resource has been evaluated for effectiveness and identifies the conclusions of the evaluations.

As can be seen in Table 1, research studies and/or evaluation reports were found for four of the seven resources. Of those resources with evaluations, one is demonstrated to be effective and one is demonstrated to be promising.

One unevaluated resource (Tobacco Free! Middle School) focuses on only tobacco use. Two of the most frequently used prevention resources — textbooks (22 percent) and materials developed by the American Cancer Society, American Heart Association, and/or American Lung Association (20 percent) — have no published research or evaluation studies about their effectiveness. Research about Here's Looking at You (HLAY), Drug Abuse Resistance Education (DARE), and Quest is summarized in the next chapter. Because research about the effectiveness of Project ALERT was summarized in *Getting Results,* Part I (pages 111–112) and Part II (pages 59-60), it is not included in this update.

[5] Two resources being used by more than 7 percent of districts were designed as pull-out smoking pre-cessation and cessation programs and are not included in the table. These resources are *Helping Teens Stop Using Tobacco* by the Tobacco Awareness Program (TAP) (8 percent of districts) and *TEG: Intervening with Teen Tobacco Users* by the Tobacco Education Group (TEG) (7 percent of districts). The sole published study on TAP and TEG shows them to be effective. This study is described in *Getting Results,* Part II, page 28.

Table 1

Classroom-Based Prevention Resources Used by California School Districts, 1998-99

Name of Resource	Districts Reporting Use of Resource N=883	Focus of Resource	Evaluated for Effectiveness	Effective*
Here's Looking at You (HLAY)	419 (47%)	ATOD	Yes	No
Drug Abuse Resistance Education (DARE)	251 (28%)	ATOD	Yes	No
Textbooks	195 (22%)	Health	No	Unknown
American Heart, American Lung, and/or American Cancer resources	174 (20%)	Tobacco, health	No	Unknown
Quest	113 (13%)	ATOD	Yes	Promising†
Project ALERT	83 (9%)	ATOD	Yes	Yes
Tobacco Free! Middle School	58 (7%)	Tobacco	No	Unknown

* Evidence of effectiveness of HLAY, DARE, and Quest is presented in Chapter 2.

† Only the *Skills for Adolescence* component for grades 6-8 is promising; there is no evidence that *Skills for Growing* (grades K-5) or *Skills for Action* (grades 9-12) are effective.

California school districts are not commonly using classroom-based programs that research shows to be effective in preventing or reducing drug use. How do California school districts compare with other school districts around the country? According to a spring 1999 national survey of 1,907 lead teachers in public and private middle schools (Ringwalt et al. 2000), fewer California districts are using DARE than are districts in other states. However, fewer California school districts are using research-based effective or promising programs than are middle schools nationally. The results of the survey are as follows:

- **DARE (ineffective):** 54.5 percent of middle schools nationally; 28 percent of all school districts in California
- **HLAY (ineffective):** 20.3 percent of middle schools nationally, 47 percent of all school districts in California
- **Quest (promising):** 16.5 percent of middle schools nationally, 13 percent of all school districts in California
- **Project ALERT (effective):** 19.4 percent of middle schools nationally, 9 percent of all school districts in California
- **Life Skills Training (effective):** 11.6 percent of middle schools nationally, less than 7 percent of all school districts in California

Unevaluated Materials

There was no research or evaluation found for three resources used by school districts in their prevention programs: textbooks, materials from three voluntary agencies, and one tobacco-related curriculum. These may or may not be effective. CDE recommends that any resource without evidence of effectiveness be used primarily to supplement a research-based program.

Textbooks

As shown in Table 1, more than one of every five school districts in California use textbooks as one of their primary resources for classroom instruction about prevention. Health education textbooks typically contain units about alcohol, tobacco, and other drugs as well as violence prevention. In addition to providing information about the physical and social consequences of substance use, contemporary textbooks usually contain information about life skills and exercises that allow students to practice these skills.

Research shows that prevention programs are more effective in changing behavior when they use interactive experiences (Tobler 2000). The California State Board of Education's current criteria for adoption of instructional materials for kindergarten through grade 8 specifies that adopted health materials should include many opportunities for active and interactive experiences for students. Non-adopted textbooks, including those at the high school level, should be carefully examined for such opportunities.

Commercially produced textbooks are written by experts and reviewed by other experts and teachers, but they are typically not evaluated in an empirical fashion according to the *Getting Results* criteria of effectiveness. There is therefore no research-based evidence at this time that using health education textbooks **alone** will change student **behavior** related to alcohol, other drug, and tobacco use and violence. Until there is research-based evidence that health education textbooks used alone are effective in changing student behavior, teachers should supplement them with other ATOD and violence prevention resources that have been evaluated and shown to be effective.

Although instructional materials must be based on current and confirmed research, the textbook adoption cycle is for eight years; during that time research continues. Student outcomes (e.g., knowledge of health facts, concepts, and skills) should be evaluated through the use of assessment tools such as those from the national Health Education Assessment Project (see the Resources chapter for information on this tool) to determine whether the materials achieve the educational objectives. It is recommended that the California Healthy Kids Survey be used to monitor prevalence of ATOD use.

Voluntary Agency Materials

Twenty percent of the 883 school districts that responded to the survey said they used instructional resources developed by the American Heart Association, American Lung Association, and/or the American Cancer Society. Although some districts listed the names of specific resources, most simply stated the name of the agency. Table 2 shows a brief description of the resources

developed by these voluntary agencies that were named in the annual survey.

Some resources, such as the Great American Smokeout, involve the entire school and the community and are appropriate components of a comprehensive prevention program. None, however, has been evaluated. Therefore, each should be used together with a classroom-based program that has been proven by research to be effective.

Table 2

Instructional Materials from Three Voluntary Agencies Used by California School Districts, 1998-99

Instructional Material	Developed by	Type of Resource	Districts Using Resource (N=883)	Evaluated for Effectiveness
Great American Smokeout	American Cancer Society	One-day event focusing on being smoke-free	14	No
Heart Power!	American Heart Association	Grades K-8 curriculum and training guides	12	No
Jump Rope for Heart	American Heart Association	Grades K-6 one-day event focusing on benefits of physical activity	4	No
Teens Against Tobacco Use	American Lung Association	Grades 9-12 peer-education curriculum and training guides	3	No
Smoke-free Class of 2000	American Heart Association, American Lung Association, American Cancer Society	12-year smoke-free awareness project, with annual activity kit	2	No

Note: Although 174 districts reported using resources from voluntary agencies, only 35 districts specified resources by name.

Conclusions

In summary, the classroom-based prevention programs that school districts report using either have not been evaluated for effectiveness or are shown by research to be ineffective in changing student behavior. Quest *Skills for Adolescence* is the exception as a promising program.

Resources that have not been evaluated, such as textbooks and materials from the voluntary agencies, should not be used alone. Ineffective programs should be replaced. The remainder of the update contains a discussion of the research on effective and ineffective classroom-based programs.

Overview

Chapter 2 contains reviews of the three most popular classroom programs in California for which there are evaluation data: Here's Looking at You (HLAY), Drug Abuse Resistance Education (DARE), and Quest. Each review is organized according to the criteria of effectiveness used in *Getting Results*, Parts I and II.

The review of the existing research concludes that there is no evidence that HLAY meets the criteria of effectiveness (e.g., studies were not published in peer-reviewed journals, no rigorous designs were used, and the desired changes were not produced). In contrast, sufficient evidence exists to conclude that DARE is not effective. Reputable researchers evaluated DARE by using rigorous designs, published their findings in reputable journals, and concluded that DARE did not produce the desired changes.

One rigorous study (forthcoming in a peer-reviewed journal) showed small but significant behavioral changes from use of the middle school component of Quest, *Skills for Adolescence*. This Quest component is a promising program.

Chapter 3 offers a commentary by a researcher who discusses the disparity between the prevention programs that research shows to be effective and the programs that are widely used in California schools. The commentary also provides in-depth information about using the comprehensive social influences approach to prevention programs, an approach that research shows to be effective in preventing ATOD abuse by youths.

As this publication was going to press, a research study was published about the Hutchinson Smoking Prevention Project (HSPP) (a social influences-based approach) that caused a considerable stir among prevention researchers and educators. In Chapter 3, this program is briefly described and the implications of its evaluation discussed by several research experts. They conclude that before more data analysis of the HSPP is done, one can only say that this particular prevention approach, used with a particular population of students, was ineffective by grade 12 and two years thereafter. Further research in the evolving world of prevention programming and thoughtful debate on research findings are needed.

Chapter 4 offers some suggestions for maximizing the effectiveness of classroom-based prevention education by using the Planning Sequence for Safe and Drug-Free Schools in *Getting Results*, Part I. The steps include assessing whether the prevention resources being used in the district's classrooms are research-based and, if they are not, transitioning to ones that are; using the program as it was designed; continuing to assess prevalence of student ATOD use; and ensuring that curriculum is only one component of a comprehensive program.

Chapter 5 contains information about obtaining the research-based classroom programs featured in *Getting Results* and an assessment tool suggested for use with unevaluated resources, such as textbooks.

Appendix A lists the classroom-based programs rated effective and promising by *Getting Results*; the U.S. Department of Education Expert Panel; Centers for Substance Abuse Prevention, Model Programs; and Blueprints for Violence Prevention. Appendix B contains summary tables of research conducted on the three prevention programs reviewed in Chapter 2.

Reference

Ringwalt, C.L., Ennett, S.T., & Vincus, A.A. (2000). Use of effective substance use prevention curricula in middle schools. Presentation at the Annual Meeting of the American Public Health Association, Boston, Massachusetts, November 12–16, 2000.

Chapter 2

Reviews of Prevention Programs

CHAPTER 2

Reviews of Prevention Programs

The three most commonly used resources in California classrooms for which there are evaluation data are Here's Looking at You (HLAY), DARE (Drug Abuse Resistance Education), and Quest. This update commenced with a thorough search for research studies and evaluation reports about the effectiveness of those programs.

Criteria of Effectiveness

Getting Results, Parts I and II, presented 12 criteria that leading researchers say should be met for a prevention program to be considered effective. The criteria may be stated as questions to be answered by a school district that is reviewing or selecting a classroom-based prevention program. The first two sets of questions relate to a program's theory base and the rigor of its evaluation design in determining student outcomes; these questions can be answered by reviewing research and evaluation studies. If the research shows the program to be effective, the district should use the third set of questions to decide whether the program is appropriate for its particular use.

Logic and Theory

Determined by reviewing research and evaluation studies

1. Is the program based on theory that is accepted by experts in the field?
2. Does the theory provide a logical explanation of why the program should work?

Rigor of Evaluation

Determined by reviewing research and evaluation studies

3. Did the program produce the desired changes in the target population?
4. Was the research conducted by reputable researchers and published in a reputable journal (preferably a peer-reviewed or refereed journal)?
5. Did the study use a rigorous evaluation design?
6. Did the study show few negative effects?
7. Was the study replicated at more than one site?
8. Was the program implemented by school staff in the study?

District-specific Issues

Determined by district self-assessment

9. Were the students in the research similar to students in our district — socially, ethnically, and culturally?
10. Does the program appear to be cost-effective?
11. Does the program address a perceived, pressing need in the district?
12. Is the program a logical piece of our districtwide, comprehensive effort?

Fidelity of Implementation

Merely adopting a research-based program for the classroom is not enough. To be effective, a prevention program must be taught as it was designed. This principle is called *fidelity of implementation* and means that all lessons and steps in the lesson should be taught unless specified otherwise by the program's developer. Without this adherence to the program's design, the program will not "work." In other words, if not all the lessons were taught as designed, then the program may not necessarily be considered effective.

Effectiveness of the Programs

Any program can make the claim that it is based on research. This claim does not mean the program has been *evaluated* for effectiveness. Effective programs are not only based on research about what works, they also show (1) how the particular components of the program can affect substance abuse behaviors or at least some known mediators of behavior (for example, increased bonding with school or with positive peers); and (2) that it produced the desired changes in students as evidenced by evaluations of the curriculum.

This chapter summarizes findings from the evaluation studies and reports on HLAY, DARE, and Quest. The three programs were evaluated according to the first two sets of criteria of effectiveness in *Getting Results:* (1) logic and theory; and (2) rigor of evaluation. Table 3 shows to what extent each criterion was met by each program.

The most important overall criterion is *whether the program produced the desired changes* (criterion 3). However, the relationship of criterion 3 to others in the category "Rigor of Evaluation" should be noted. A program that produced the desired changes would be considered unassailably effective if the research was conducted by reputable researchers and published in reputable journals, used a rigorous design, showed few negative effects, and was replicated at more than one site. Alternatively, if the program produced the desired changes, but the evaluations were not conducted by reputable researchers or published and did not use rigorous designs, and so forth, it would be considered only promising. Finally, if evaluations by reputable researchers were published and concluded that the program did not produce the desired changes yet used rigorous designs and were replicated, it would be considered definitely ineffective.

Table 3

Ratings of Effectiveness for Here's Looking at You, DARE, and Quest

Getting Results Criteria of Effectiveness	Here's Looking at You	DARE	Quest
Logic and Theory			
1. Program is based on theory	2	2	2
2. Theory provides logical explanation	2	2	2
Rigor of Evaluation			
3. Program produced desired changes	3	3	2
4. Research conducted by reputable researchers published in reputable journal(s)	3	1	2
5. Studies use rigorous design	3	1	2
6. Studies show few negative effects	2	2	2
7. Studies replicated at more than one site	2	1	2
8. Program implemented by school staff in study	1	3	1

1 = Criterion was fully met. 2 = Criterion was moderately met. 3 = Criterion was not met.

Here's Looking at You

Review and Summary by Denise Hallfors, Ph.D., and Amy Sporer, M.S.

According to the *Alcohol, Tobacco, Other Drug and Violence Programs in California Schools: 1998-99 Annual Report* (2000), 419 local educational agencies (LEAs) of 883 (47 percent) report that they are using Here's Looking at You (HLAY), making it the single most widely used program in the state.

We reviewed all available studies related to HLAY. Most were unpublished but cited by (and available from) the distributor, ACG/United Learning. Although these studies were provided as evidence of program effectiveness, most measured only knowledge gain or knowledge and the ability to make decisions in hypothetical situations. These are weak outcomes as increases in knowledge are no guarantee that behavior will change. Moreover, the reports lacked information about the reliability and validity of evaluation instruments so it is not known, for example, whether the decision-making questions are good examples of how a student will behave in a real situation. Appendix B contains summaries of the studies.

Most studies evaluated HLAY 2000, and a few evaluated an even earlier version. All studies of HLAY (two published, seven unpublished) are more than seven years old; most are more than ten years old. The program was significantly updated in 1999, but it is not known whether or how these changes might influence current program effectiveness.

The program is currently being evaluated by Farley and Associates, under contract to ACG/United Learning.[6] The contract authorizes a two-year evaluation of fourth- and fifth-grade students in Chicago who are exposed to the HLAY curriculum. In the second year, they will evaluate outcomes for those students in the 5th and 6th grades and compare the outcomes with those for students in a control group of schools. The outcomes are student use behaviors, knowledge, attitudes, and intentions. However, evidence of effects on student use behaviors will be very limited, because the oldest students will still be at an age when use of substances is very low.

In the following section, we will review HLAY by using the criteria of effectiveness from *Getting Results.*

[6] Evaluations of HLAY have not been published in journals. The authors of this review recommend that an independent funding source, such as the Robert Wood Johnson Foundation (RWJF) or the National Institute on Drug Abuse, issue an RFP for an effectiveness trial of HLAY and that the results be published in a peer-reviewed journal. The program is one of the two most widely used programs in the country and, as such, deserves a full evaluation of efficacy and effectiveness. RWJF is currently funding a similar study of the DARE program. HLAY does seem to adhere to accepted principles, such as those outlined in NIDA's *Preventing Drug Use Among Children and Adolescents: A Research-Based Guide,* and evaluation of the effects of the program would make a contribution to both science and field practice.

The program is based on theory that is accepted by experts in the field.

There are two types of theories pertaining to the evaluation of programs: *program impact theory* and the program process theory. The *program impact theory* describes the cause-and-effect sequence through which the program is expected to prevent substance use. The program process theory describes how and what the program will provide: the "essential ingredients" (e.g., lesson plans, teaching strategies) to cause the desired effects.

JoAnn Farley, current HLAY evaluator, reports that the program is designed to:

> (1) provide students with current information about alcohol, tobacco, and other drugs; (2) teach social skills; and (3) provide students with opportunities to bond with their schoolmates, families, and communities. . . . Properly implemented, this program, through student learning, acquisition of key skills, and development of bonding with important institutions, is designed to impact the behavior and attitudes toward the use and abuse of alcohol, tobacco, and other drugs.

HLAY's program impact theory does not provide an explicit explanation of why or how the combination of information, social skills, and bonding should affect students' behavior and their attitudes toward the use and abuse of ATOD.

HLAY lessons were designed to reduce risk factors for ATOD use and promote protective factors, but there is no information about how the lessons do this. Descriptions of the lessons say that the lessons reduce risk factors by "explain[ing] the consequences of drug use and provid[ing] transfer activities for students to their homes and communities." HLAY addresses protective factors "by giving students the skills to build healthy friendships and make good decisions." Apparently, HLAY draws from both the social influences model and the social development model (Catalano & Hawkins 1996) for its program theory. The social influences model hypothesizes that students can be "inoculated" against social influences that promote substance use. The model further specifies the necessary components of a prevention program: lessons that present basic information, normative social influences, and informational social influences. The social development model describes the role of risk and protective factors and how these factors lead to students bonding with either prosocial or antisocial institutions and peers, leading to either positive or negative outcomes related to substance abuse and delinquency.

The next step in evaluating program theory is to examine whether the content of the curriculum actually addresses the components that are theorized to be important and whether those components are adequately covered. *Making the Grade* (1999) described HLAY content as based on the social influences model, with very good coverage of refusal, decision-making, and assertiveness skills, and adequate coverage of normative education, awareness of social influences, advertising pressures, stress management, communication skills, and social skills.[7] Drug Strategies did not look, however, for evidence of the curriculum's effectiveness in reducing risk factors, increasing protective factors, or promoting bonding. A review of the content related to these concepts would be useful.

[7] The Drug Strategies organization relied on a panel of experts in prevention, public health, and education to guide the development of its review of school alcohol, tobacco, and other drug use prevention programs in *Making the Grade.*

An evaluation of the program would also look for evidence that students showed increased bonding with prosocial institutions and peers and had more protective factors and fewer risk factors. Unfortunately, it is difficult to "inoculate" students against risk factors. Increasing the protective factors, which are often demographic (e.g., gender, ethnicity, age, social class) or environmental (family structure and functioning, home neighborhood, school), is also difficult.

The theory provides a logical explanation of why the program should work.

There is no explicit logical explanation provided for why the program should work except by reducing risk factors and increasing protective factors. HLAY states that children with higher risk factors (found in the family, peers, schools, and communities) have increased chances of developing a problem with drug use. HLAY defines protective factors as (1) establishment of healthy friendships with peers who do not use tobacco, alcohol, or other drugs; and (2) opportunities for decision making. However, there is no description of how the program intervenes at those two levels. The program theory should be evaluated for at least two outcomes: (1) whether HLAY-exposed children increase their prosocial bonding skills and their decision-making skills through practice; and (2) whether these initial or proximal outcomes lead to decreased drug use in late middle school and high school.

The program produced the desired changes in the target population.

No published studies to date have found significant effects on outcome variables related to students' exposure to the HLAY program. Reviewed unpublished studies showed some short-term effects on knowledge gain or knowledge and the ability to make decisions in hypothetical situations. Appendix B provides detailed information on the findings of each evaluation.

The research was conducted by reputable researchers and published in a reputable journal (preferably a peer-reviewed or refereed journal).

Two evaluation studies were found in the published literature, and neither one showed positive findings. Nine studies were listed in the HLAY promotional materials, but none were published in any journal.

The studies use a rigorous evaluation design.

Many studies were found to have weak designs or insufficient information about instrumentation or other methods.

The studies show few negative effects.

Two of the evaluations showed that students in the control group did better than students exposed to HLAY. Both studies also showed negative effects for students exposed to HLAY. One showed the incidence of use of chewing tobacco was worse for students exposed to HLAY; another showed that HLAY students' knowledge was worse in three grade levels.

The studies were replicated at more than one site.

Although evaluations were conducted at multiple sites, none of them was replicated (each of the evaluations used different measurement instruments, different grades, and different designs).

The program was implemented by school staff in the studies.

This appears to be true in most of the reviewed studies, although in some studies implementation is not specified.

Summary

HLAY uses the components of two well-known theoretical models: the social influences model and the social development model. A review of the curriculum showed that it had adequate or very good coverage of concepts from the social influences model, but no similar review of curriculum coverage of the social development model (i.e., enhancing protective factors and decreasing risk factors) has been done. The description of theory found in HLAY materials and in the current evaluators' report failed to articulate how the program would address risk and protective factors among youths and how the specific program activities were expected to prevent substance abuse. Such a description is an important first step before the program can be evaluated.

No published studies to date have found significant effects on important outcome variables from exposure to the HLAY program. Reviewed unpublished studies showed some short-term effects on knowledge gain or on knowledge and the ability to make decisions in hypothetical situations. Findings should be interpreted with caution; the design and instrumentation were poorly reported and appear to be generally weak. No follow-up studies have been done to show the persistence of any positive effects. Because of the lack of peer-reviewed studies and the weakness of unpublished study designs, HLAY should not be considered a research-based program that works.

References

Catalano, R. F., & Hawkins, J. D. (1996). "The social development model: A theory of antisocial behavior," *Delinquency and crime: Current theories.* Edited by J. D. Hawkins. New York: Cambridge University Press, pp. 149–197.

Making the grade: A guide to school drug prevention programs (1999). Washington, DC: Drug Strategies.

DARE

Review and Summary by Denise Hallfors, Ph.D.

DARE (Drug Abuse Resistance Education) was created in 1981 as a joint project of the Los Angeles Police Department and the Los Angeles Unified School District. Since then, the program has grown through aggressive marketing and considerable public support and funding. In 1993 a reported 6 million students were exposed to DARE at a cost of $750 million (Hansen & McNeal 1997). Most of these students received a version of DARE that had been implemented with 5th grade students in elementary schools.

The *Alcohol, Tobacco, Other Drug and Violence Programs in California Schools: 1998-99 Annual Report* shows that 251 (28 percent) of California's school districts use the DARE program, making DARE the second most popular program in the state. DARE is the only ATOD prevention program that is taught by a police officer and not by the classroom teacher. DARE is used even more widely in other states outside California. A recent survey of 81 school districts in 11 states found that 82 percent of districts use the DARE program, indicating that it is by far the most popular program in the country.

The 1994 revision of the curriculum has not been evaluated in peer-reviewed published research studies, however. The DARE Web site <*http://www.dare.com*> says that only one study has evaluated DARE since the major curriculum revision in 1994. That report was published in the March 1999 newsletter of the Pennsylvania Commission on Crime and Delinquency, *The Justice Analyst,* and findings are discussed further below.

The remainder of this section reviews evaluation findings according to the criteria of effectiveness in *Getting Results.*[8]

The program is based on theory that is accepted by experts in the field.

No specific information about a theory base for DARE was found in any of the reviewed documents. However, Richard Clayton and colleagues (1996) from the University of Kentucky concluded that the DARE curriculum contains elements of the informational, affective, and social influence approaches to drug abuse prevention. *Making the Grade* (1999) described DARE content as based on the social influences model, with good coverage of rehearsal and role plays and adequate coverage of normative education, awareness of social influences, advertising pressures, refusal skills, decision making, stress management, communication skills, social skills, and assertiveness skills.[9]

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[8] A large number of unpublished evaluation studies on DARE have been done. Therefore, we chose only peer-reviewed published studies that were either meta-analyses of studies with rigorous designs or rigorously designed studies with one or more years of follow-up. The exception is the inclusion of the one study conducted on the most recent update of the DARE curriculum.

[9] The Drug Strategies organization relied on a panel of experts in prevention, public health, and education to guide the development of their review of school alcohol, tobacco, and other drug use prevention programs in *Making the Grade.*

The curriculum was originally developed from prototype versions of two Project SMART programs, experimental curricula that were neither fully developed nor equally successful (Hansen & McNeal 1997). Approaches adopted by DARE directly from Project SMART include resistance skill training, self-esteem building, stress management, demonstration of a public commitment, and information about short-term consequences. Additional information on gangs and legal issues surrounding drug use were included.

The theory provides a logical explanation of why the program should work.

DARE provides no clear explanation of why the program should work. The DARE Web site states, "Like similar Life Skills curriculum, DARE reinforces resistance to peer and media pressure among children who have not become substance-involved and emphasizes law enforcement authorities as partners with the community in promoting individual safety and common efforts against drugs and crime. It, therefore, can be used to complement other universal prevention interventions, as well as interventions for high-risk youth, such as Student Assistance Programs."

DARE has many features in common with other universal drug prevention programs using informational, affective, and social influences approaches. The defining aspect of DARE is that lessons are presented by a police officer. There is no clear explanation to account for why uniformed police officers are the optimal agent to influence children not to use drugs or why they are the best teachers to teach children resistance skills, self-esteem, or stress management. The benefits of using DARE are positive public perceptions of and genial relations between the police and the schools.

The program produced the desired changes in the target population.

DARE is by far the most studied prevention program in the country. Almost all peer-reviewed published reports have shown DARE to have small positive effects that gradually deteriorate. Positive effects are seen mostly in mediator variables rather than in drug use variables. Mediator variables are thought to influence behavior by raising resistance to or reducing risk for drug use. Tested mediator variables include self-esteem; resistance to peer pressure; family, teacher, and police bonds; acceptance of risky behaviors (Dukes, Ullman, & Stein 1995); a manifest commitment not to use drugs; social and life skills; normative beliefs; stress management skills; and beliefs about consequences (Hansen & McNeal 1997).

A seminal study by Ennett and colleagues (1994) meta-analyzed results from eight well-controlled studies to find the overall sizes of short-term effects on important mediator and outcome variables. All six outcomes tended toward the positive (indicating positive effects), but most were small; the largest was for the variable knowledge of alcohol, tobacco, and other drugs. Other outcomes included social skills (including resistance to peer pressure), positive attitudes toward police, anti-drug attitudes, increased self-esteem, and self-reported drug use. All effects were significant except the composite drug use variable. When individual drugs were examined separately, only tobacco use showed a

significant effect with DARE; marijuana use actually showed a negative effect but was not statistically significant. Other programs categorized as interactive programs showed much larger effects than did DARE on outcomes. For example, they showed an effect size of 0.18 for drug use (compared with 0.06 for DARE) and an effect size of 0.75 for social skills (compared with 0.19 for DARE).[10]

Because the DARE program is implemented before most young people have initiated any drug use, follow-up longitudinal studies have been critical in assessing whether DARE is effective in preventing future drug use behavior. Longitudinal studies have shown that the short-term effects of DARE deteriorate over time. Richard Clayton published the first rigorous longitudinal study of DARE in the *Journal of Preventive Medicine* in 1996. Schools were randomly assigned to DARE (23 schools) or regular prevention programs (eight schools). Regular prevention consisted of drug education units, taught as part of the standard health education curriculum (the exposure varied in content and amount at the teacher's discretion but was generally much smaller than that of DARE). Students received the program in 6th grade and were surveyed one year after completion of the program and again five years after completion. No significant differences were found between students in DARE and students in the comparison group for cigarette, alcohol, or marijuana use, either during the 7th grade (one year after completion of the program) or after the full five years. DARE students did show significant positive effects in attitude toward drugs, ability to resist peer pressure, and estimated level of drug use by peers after the first year; but at year five, even these variables were no longer significantly different between the two groups.

Study participants were again assessed ten years after the DARE program, when they were approximately 20 years old (Lyman et al. 1999), to determine whether any residual effects could be found. No significant differences were found between the two groups on the drug use variables. The only significant finding related to DARE status was lower self-esteem among members of the DARE group; however, because the theoretical basis of DARE could not account for this finding, the authors concluded that this outcome may be attributed to chance.

As this update was going to press, DARE administrators announced that the program is being redesigned. The new DARE program will focus on grades 7 and 9 and will continue to reach out to elementary grades. According to DARE, the curriculum will be based on proven research strategies and will use DARE police officers as facilitators rather than instructors to give students more involvement in the lessons. Furthermore, the Robert Wood Johnson Foundation is funding a five-year evaluation of the new DARE program with 50,000 students in six metropolitan areas.

[10] These results did not come from using the current version of DARE, which has not yet been evaluated.

The research was conducted by reputable researchers and published in a reputable journal (preferably a peer-reviewed or refereed journal).

Published studies, conducted by highly regarded researchers, have consistently shown DARE to have very modest short-term effects and no long-term effects. The positive effects that have been cited by DARE officials have generally been from unpublished studies and reports. There are two exceptions: one from a study led by Richard Dukes and one led by Joseph Donnermeyer. Dukes and colleagues published a series of articles in *Evaluation Review* on a longitudinal study of the DARE program. The first report showed significant effects of DARE on the four short-term study outcomes: self-esteem; resistance to peer pressure; family, teacher, and police bonds; and acceptance of risky behaviors. Dukes's findings showed higher effect sizes for resistance to peer pressure and acceptance of risky behaviors than those calculated by Ennett et al. (1994). At the three-year follow-up study, however, no significant differences in drug use or in mediating variables between students exposed to DARE or comparison students were found (Dukes, Ullman, & Stein 1996). At the six-year follow-up study, Dukes found a single gender-related significant difference among eight outcome variables: male DARE participants were less likely to report use of illegal drugs, not including marijuana (Dukes, Stein, & Ullman 1997). All other variables for both genders were nonsignificant.

Joseph Donnermeyer and Russell Davis (1998) published a study in the *Journal of School Health* that compared drug involvement with self-report of prevention program involvement (from a list of ten programs) among 11th grade students in 36 randomly selected high schools in Ohio. About 42 percent of students reported that they had never participated in school-based prevention, and 27 percent said they had participated in DARE in elementary school. No attempt was made to corroborate whether students had actually participated in these programs, and the extent that students could accurately recall such information is not known. Nevertheless, Donnermeyer and Davis's results showed that the more exposures to prevention programs that students had, the lower the drug involvement. The study design was not appropriate for determining causality and was particularly weak in determining causal relationships between drug involvement and any one program.

The only study that evaluates the revised DARE curriculum was not published in a peer-reviewed journal but in a newsletter *The Justice Analyst* (March 1999) published by the Pennsylvania Crime Commission. The study selected seven DARE and seven non-DARE schools in the state in a nonrandom process that attempted to match schools' socioeconomic factors. Schools were not identified as high schools even though students in the 9th grade were surveyed. Students were asked whether they had ever participated in DARE or other prevention programs, and results were analyzed following the model of Donnermeyer's Ohio research. Results were mixed, with DARE students reporting significantly less use of other drugs (e.g., crack, cocaine, inhalants, tranquilizers) or use of smokeless tobacco. DARE students were also more likely to indicate "a lot of respect"

for DARE officers but not for other police officers or teachers. DARE students, however, were significantly more likely to have tried marijuana, and fewer DARE students answered affirmatively that they had "never used drugs and never will" (55 percent compared with 61 percent). More DARE students than students in the control group also said they "had never used drugs but may in the future." Students who said that they had been exposed to DARE and another program showed better results than students who had either never participated in a program or participated only in DARE; the most positive results were found for students who had not participated in DARE at all but had participated in other prevention programs.

The studies use a rigorous evaluation design.

All the studies cited above except those by Donnermeyer and Davis (1998) and the study cited in *The Justice Analyst* (Pennsylvania Commisson 1999) used an appropriately rigorous evaluation design for determining the effectiveness of the prevention program.

The studies show few negative effects.

In a few studies, the DARE program has shown negative effects. For example, in some studies students in DARE have actually shown more use of marijuana (Clayton et al. 1991) and hallucinogens (Wysong, Aniskiewicz, & Wright 1994) than control groups have over time. As noted above, *The Justice Analyst* study (1999) also indicated some negative findings for DARE students related to marijuana use and intent to use drugs. This phenomenon has sometimes been referred to as the "boomerang effect" when education meant to prevent use of drugs actually results in higher use.

The studies were replicated at more than one site.

Studies on DARE have been replicated widely. The meta-analysis by Ennett and colleagues (1994) is particularly useful in looking across studies for results.

The program was implemented by school staff in the studies.

The DARE program is implemented by police officers.

Summary

Although DARE shows some positive short-term effects in students' knowledge and attitudes, there is little or no evidence that DARE has an impact on behavior (i.e., prevents drug use) either one year after the program or five years later. The goal of drug prevention programs is to prevent actual drug use; therefore, DARE cannot be considered an effective program.

In addition, one study showed DARE to have a negative impact on students' self-esteem. The one study that was cited as evaluating the revised curriculum does not provide any additional support for the DARE program. That study, along with the meta-analysis cited in this report, show that other programs are more effective than DARE in preventing substance use.

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Quest

Review and Summary by Denise Hallfors, Ph.D. and Amy Sporer, M.S.

Originally developed as a "Skills for Living" program for high school students, Quest International has expanded its programs to cover three age groups: *Skills for Growing* (SFG) for grades K–5, *Skills for Adolescence* (SFA) for grades 6–8, and *Skills for Action* (SFC) for grades 9–12. Lions Clubs International (LCI) has supported the introduction, promotion, and dissemination of these programs worldwide. Evaluation data are not available for the most current versions of all Quest programs.

Lions-Quest programs are reported to be "serving more than two million young people each year in more than 30 countries," with corporate offices represented in 20 countries. Quest International's Web site may be found at <*http://www.quest.edu*>. Lions-Quest programs are used by 113 (13 percent) of California's school districts, as reported by the *Alcohol, Tobacco, Other Drug, and Violence Programs in California Schools: 1998-99 Annual Report* (2000).

The Quest International Web site states that the mission is "to empower and support adults throughout the world to nurture responsibility and caring in young people where they live, learn, work, and play" <*http://www.quest.edu*>. The programs are comprehensive and preventive by design and incorporate the school, family, and community environments. Components of the program are based on research "with a strong focus on key elements of prevention" *Making the Grade* (1999). Components are also consistent with principles of prevention from *Preventing Drug Use Among Children and Adolescents: A Research-Based Guide* (National Institute on Drug Abuse 1997). The developers report that the programs have undergone multiple revisions and cultural adaptations. Published program materials are available in 11 languages.

The Quest curriculum aims to give children many opportunities to learn, practice, and apply thinking skills (e.g., problem solving, decision making, and goal setting) and emotional–social skills (e.g., communication, making friends, and refusal skills). These interactions are introduced in school, home, and community settings in an attempt to reinforce the behaviors through consistent modeling. The participation of parents and the community is also encouraged through involvement in classroom activities and service-learning community projects.

The curriculum is unusually long (88-118 lessons/year for SFG, 103 lessons/year for SFA, 48 lessons/year for SFC; some lessons take more than one class period to implement). To assist teachers, developers have designed each curriculum unit in accord with competency skills developed by the U.S. Department of Labor Secretary's Commission on Achieving Necessary Skills (SCANS) (1991) for the world of work. A guide is provided that correlates the curriculum units with the SCANS competencies for success.

The U.S. Department of Education's Expert Panel on Safe, Disciplined, and Drug-Free Schools gave the middle-school component, *Skills for Adolescence*, a designation of

promising.[11] The panel noted that the skill-building activities in the program are based on research and clearly contribute to the attainment of the stated goals. The program content and examples take into consideration the diverse needs of students, and content delivery takes into consideration multiple learning styles.

In the following section, all three programs will be reviewed collectively according to the criteria from *Getting Results*. Findings from research studies on specific programs will be presented in a subsequent section. Appendix B presents a summary table of research.

Review of All Lions-Quest Programs

This section reviews findings on all three components of Quest according to the criteria of effectiveness in *Getting Results*.

The program is based on theory that is accepted by experts in the field.

Quest International materials state that the Lions-Quest programs are based on research and the following theories and models of a child's development of positive behaviors and attachments: the information-rational model (Ajzen & Fishbein 1973, 1980), social bonding theory (Hirschi 1969), social learning theory (Akers 1977; Akers et al. 1979; Bandura 1977), the social development model (Hawkins et al. 1986; Solomon et al. 1985; Hawkins & Weis 1985; Weis & Hawkins 1981; Elliot, Huizinga, & Ageton 1982; Kim 1981; Jessor 1982), self-derogation theory (Kaplan, Martin, & Robbins 1982; Kaplan 1980; Kaplan, Martin, & Johnson 1986), and moral development theory (Kohlberg 1981).

As discussed in the review of Here's Looking at You, the next step in evaluating program theory is to examine whether the content of the curriculum addresses the elements that are theorized to be important. *Making the Grade* (1999) described the content of *Skills for Growing* (grades K–5) as having very good coverage of awareness of social influences, advertising pressures, refusal skills, decision making; and adequate coverage of normative education, stress management, communication skills, social skills, and assertiveness skills.[12] Rehearsal and role play (interactive techniques) were deemed good. *Skills for Adolescence* (grades 6–8) had adequate coverage of awareness of social influences, advertising pressures, refusal skills, decision making, stress management, communication skills, social skills, and assertiveness skills but had inadequate coverage of normative education. Rehearsal and role play (interactive techniques) were described as very good. *Skills for Action*

[11] The panel was composed of educators, researchers, evaluators, program developers, and representatives from local and state educational agencies, businesses, institutions of higher education, and medical and legal communities. Its task was to develop and oversee a process for identifying and designating ATOD and violence prevention programs as promising and exemplary. See Appendix A for the list of expert panel programs.

[12] The Drug Strategies organization relied on a panel of experts in prevention, public health, and education to guide the development of its review of alcohol, tobacco, and other drug use prevention programs used in schools.

(grades 9–12) had adequate coverage of normative education, awareness of social influences, advertising pressures, refusal skills, decision making, stress management, communication skills, social skills, and assertiveness skills. Rehearsal and role play (interactive techniques) skills were good.

The theory provides a logical explanation of why the program should work.

According to Quest International, the program is designed to promote social and emotional development. The program has two primary goals: (1) to help young people develop positive social behaviors (e.g., self-discipline, responsibility, good judgment, and getting along with others; and (2) to help young people develop positive commitments (e.g., prosocial bonds and attachments) to their families, schools, peers, and communities by leading a healthy and drug-free life.

The suggested rationale is that a nurturing *external* environment that encourages the development of critical life skills supports young people's *internal* conditions to develop positive social behaviors and relationships and discourages the development of risk behaviors, such as violence and substance abuse. Research cited by the developers suggests that an environment that supports the comprehensive development of cognitive, social, and emotional skills also promotes positive social behaviors, which become a part of a child's overall standard of behavior (Elias et al. 1997; Goleman 1995; Mayer & Salvey 1995).

Quest does not articulate, however, how the program fosters a nurturing external environment through its program curriculum. It implies that the lesson plans focus on students' cognitive, social, and emotional skills, which in turn promote positive social behaviors, and that positive social behaviors lead to a lower likelihood of drug use.

The program produced the desired changes in the target population.

The most recently published evaluation of *Skills for Adolescence* showed a small but significant delay of initiation of substance use (particularly cigarettes and marijuana) and a delay in transition to additional substances for students in the Quest group compared with a control group. No evidence of effect on substance use was substantiated in any of the unpublished studies; such behavior was rarely measured.

The research was conducted by reputable researchers in a reputable journal (preferably a peer-reviewed or refereed journal).

Only one study of Quest programs *(Skills for Adolescence)* has been accepted for publication (2001) in the peer-reviewed journal, *Addictive Behaviors.* This evaluation was conducted by researchers at the Urban Institute, RAND, and the University of Memphis, with funding from the National Institute on Drug Abuse.

Quest International provided several in-house evaluation reports. These reports were submitted to the U.S. Department of Education. The Safe and Drug-Free Schools office examined the evaluations for a review by its expert panel. Abstracts from three dissertation studies were also found; all studies were done in the early 1990s.

The studies use a rigorous evaluation design.

The study to be published in *Addictive Behaviors* used a rigorous experimental design. The remaining unpublished studies had relatively weak designs (e.g., no randomized control trials) and reported only short-term effects.

The studies show few negative effects.

Negative effects of the program were not reported.

The studies were replicated at more than one site.

Although most data were collected from multiple schools, studies were not replicated at different sites.

The program was implemented by school staff in the studies.

In all studies the teachers at each school implemented the program.

Review of Unpublished Reports on Specific Quest Components

Quest: *Skills for Growing* (Grades K–5)

Sehwan Kim and Molly Laird conducted an evaluation of *Skills for Growing* in 1995. The study was conducted prior to the latest versions of the curriculum, which was revised in 1998. Evaluators used a quasi-experimental design, with pre- and post-tests administered at six- or seven-month intervals to an intervention group (1,304 students exposed to the curriculum) and comparison group (612 students). Students were selected from 14 schools in North America: 13 in the U.S. and one in Canada. All schools included both experimental and control groups. Classrooms were randomly assigned to each group, matched by grade level. All students were assessed by teachers using the Student Assessment Survey (an instrument developed by the evaluators), but different domains within the survey were assessed for different grades.

Students in K–1 were assessed in eight school sites. The intervention group showed a significant positive impact on only health-oriented behaviors (e.g., caution expressed about harmful substances, demonstrates some healthy eating habits) compared with that of the control group. Student responsibility, social behavior, and rule-abiding behavior were also evaluated, but no significant differences between groups were found.

Students in grades 2–3 were assessed at 11 school sites; no significant differences were found between intervention and comparison groups on any of the dependent measures (e.g., attitude toward their classroom environment, student life skills, drug knowledge, and the student's behavioral intention to either use drugs or not).

Students in grades 4–5 were assessed at ten school sites; for the intervention group the study showed a significant positive effect on life skills, conflict resolution skills, and the students' attitude toward their classroom environment compared to that of the control group.

No negative effects were reported for any group. The program was implemented as intended by the regular classroom teachers.

Quest: *Skills for Adolescence* (Grades 6–8)

Molly Laird, Michael Syropoulos, and Steven Black conducted an evaluation in 1996. They used a quasi-experimental design with a stratified random sample of schools from six areas of Detroit, Michigan. The first year of the study was used as a pilot for refining the process and outcome measures to increase the reliability of the data collection method. The second-year sample consisted of 12 schools; regular classroom teachers were randomly assigned to intervention (151 students) and comparison groups (176 students). Immediately after the intervention and follow-up five months later, students were tested on the Anger Management Test (Laird 1993), and their academic and achievement test records were examined. The teachers also maintained a daily log of individual students' behavior and attendance.

The quality of implementation was also measured to determine the effects of fidelity to the curriculum on student outcome measures. Teachers in the intervention group received training in the curriculum and in data collection methods. Teachers in the comparison group were also trained in data collection methods and attended research meetings on general issues of cooperative learning. An "implementation fidelity" variable was created by a composite score of a teacher questionnaire (measuring the extent of curriculum coverage) and investigator observations of the intervention teachers' use of prevention material. On average, teachers covered only 40 of the 103 lessons.

The intervention group maintained a low rate of misconduct events, while the comparison group's rate increased at post-test follow-up. Misconduct included truancy, insubordination, verbal abuse, loitering or trespassing, refusal to identify self, smoking in school or on school property, gambling, demonstration, disruptive conduct, and unauthorized use of materials or equipment. When all the truancy reports were totaled for the entire study, the SFA students were shown to have a lower number of misconduct events compared with that of the control group; the evaluators suggest that this finding offers support to their hypothesis that SFA would reduce school absences. The intervention group members also increased their knowledge of how to handle anger situations; the gains in knowledge and positive attitudes were significant and were maintained at the five-month follow-up. No negative effects were reported. Students taught by teachers with the highest implementation fidelity scores had the highest knowledge gains.

Three dissertations evaluated *Skills for Adolescence.* Gloria Heinemann (1990) evaluated the effect of *Skills for Adolescence* on students' self-esteem enhancement and academic achievement by using a quasi-experimental design with 1,177 middle school students in a northern California school district. Three hundred eighty-four intervention students and 793 control students were pre- and post-tested on the Coopersmith Self-Esteem Inventory (CSEI), and the Comprehensive Test of Basic Skills (CTBS). The analyses showed no significant relationship between intervention and comparison students on enhancement of self-esteem or academic achievement. A random sample of the original participants in the intervention and comparison groups was delay-tested on the CSEI. The follow-

up testing showed a significant decrease in the School-Academic area of self-esteem on the CSEI among the limited-English-proficient students of the intervention group and a significant increase of CSEI School-Academic subtest scores by 8th-grade students in the intervention group.

Norman Ray (1990) found a significant increase in self-concept scores (as measured by the Piers-Harris Children's Self-Concept Scale) on post-tests and pre-tests in a study of 142 students exposed to the program (no comparison group).

Lloyd Goldsmith (1990) found no significant difference between intervention students and nonequivalent comparison students on a change in self-esteem scores (as measured by the Coopersmith Self-Esteem Inventory), but there was a significant difference in attitude toward school: intervention students were more positive than were comparison students. Both groups were Mexican American 6th-graders in a county in south Texas.

Quest: *Skills for Action* (Grades 9–12)

In 1998 Quest researchers Laird, Bradley, and Black evaluated the impact of the *Skills for Action* service-learning component on students in 25 high schools in seven states, with funding from the W. K. Kellogg Foundation. They used a quasi-experimental design, administering a pre-test in January and post-test in June to intervention and comparison groups over one school semester. Three surveys, created or modified from existing surveys by the evaluators, were used to measure changes in social development (e.g., empathy or motivation to help others), communication skills, career or job skills, interest in future community service, and self-reports of risk behaviors, including risk for school dropout. The number of students that could be linked or matched for each survey varies between 542 and 753 because of attrition.

The intervention students maintained a low risk for dropping out of school, whereas the comparison students increased their risk of dropping out as the semester progressed (p = .059). Attitudes about interpersonal competence in helping others and responsibility to the community showed an overall increase in the intervention group compared with the comparison group. Few other significant effects were found. The evaluators suggest that the modest findings could be due to the control groups' exposure to service-learning in other classes and the post-testing at the end of the year when students are potentially less engaged in schoolwork.

Summary

A report from a new study, funded by the National Institute on Drug Abuse and accepted for 2001 publication in a peer-reviewed journal, describes analyses of short-term follow-up data on more than 6,000 middle school students. Schools were assigned randomly to be in either a control group or an experimental group. The experimental group was exposed to Quest *Skills for Adolescence*, and the control group was exposed to the usual prevention programming. The report shows small but

significant effects on the delay of initiation of substance use (particularly cigarettes and marijuana) and a delay in transition to additional substances (e.g., from drinking alcohol to using marijuana) for the Quest group. Authors note that none of the schools implemented the entire program; most teachers delivered approximately 40 of the 103 lesson plans in the curriculum.

The U.S. Department of Education's Expert Panel on Safe, Disciplined, and Drug-Free Schools gave the middle-school component, *Skills for Adolescence*, a designation of promising.[13] However, as yet there is no research evidence that *Skills for Growing* and *Skills for Action* are effective.

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Chapter 3

Let's Use Effective Drug Abuse Prevention Programs: A Researcher's Commentary

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Let's Use Effective Drug Abuse Prevention Programs: A Researcher's Commentary

This chapter contains an essay by Steve Sussman, Ph.D., the developer of a comprehensive social influences prevention program that focuses on tobacco: Project TNT (Project Towards No Tobacco Use). In his commentary, Dr. Sussman points out that of the nine effective programs that have been presented in *Getting Results,* only two were being used by California districts in 1998-99: Project ALERT (used by 9 percent of schools) and Life Skills Training (used by 2 percent). Although schools may be tempted to use heavily marketed programs that are easy to implement, Dr. Sussman states that schools cannot afford to use programs that are ineffective.

Dr. Sussman outlines the evolution of drug abuse prevention programming and offers detailed information on an effective approach in preventing alcohol, tobacco, and other drug use: comprehensive social influences programming. His commentary concludes with suggestions for overcoming the many real barriers to providing good prevention programs for students.

Commentary by Steve Sussman, Ph.D.

Youths gradually or suddenly join the 15 percent of the adult population that suffers from drug abuse.[14] However, prevention is a remedy for the problem. Prevention that works well is effective for addressing multiple issues. In addition to decreasing drug abuse, prevention programs can also reduce students' violent and disruptive behavior and mood disorders; increase youths' involvement in the community and their attendance at school; and improve their grades (Eggert et al. 1994; Jessor 1984; Johnson, MacKinnon, & Pentz 1996).

There is a large gap between programs that are implemented widely and programs that have been shown to work well to reduce unhealthy risk behavior. Alcohol, tobacco, and other drug (ATOD) abuse prevention programs that are aggressively marketed are the ones most often selected and used. However, the most widely used programs for the prevention of ATOD abuse and violence have failed to show evidence of effectiveness or have not been evaluated adequately (*Alcohol, Tobacco, Other Drug and Violence Programs in California Schools* 2000). In other words, if effects were claimed, these effects were on knowledge or attitudes alone, not behavior, or they were based on individual testimonials or weak evaluation designs (e.g., small groups rather than large groups).

The Use of Effective Programs

In Chapter 2 Denise Hallfors and Amy Sporer of the University of North Carolina reviewed three widely implemented programs: HLAY, DARE, and Quest. Their reviews underscore what the available research evidence shows: two of those programs are ineffective. I hope and believe that the programs will be reinvented and evaluated and will be shown to be effective in preventing risk behavior. A change in students' knowledge and attitudes about drugs is a precursor to behavioral change (the ultimate criterion of the effectiveness of drug abuse prevention programs). In the meantime, which programs have been shown to be effective?

Getting Results was designed by CDE to help educators select exemplary and promising programs.[15] For educators, other practitioners, and researchers, the publication is one of the best compilations of useful prevention information available. Parts I and II of *Getting Results* present several programs that work well. Generally, the knowledge, attitudes, and behavior of students using these programs were compared with those of students in control groups within rigorously careful evaluation designs that measured behavior at least one year after the program was implemented. This was done to demonstrate effectiveness.

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[14] With nicotine addiction, the total rises to 30 percent.

[15] Exemplary programs have been proven to be effective through the use of rigorous research designs. Promising programs have not yet been shown to be effective but are based on models or logic that deserve further testing. Promising programs might also show results related to behavior but have weak evaluation designs.

See Table 4 (page 38) for the classroom-based programs that have been reviewed as being effective in *Getting Results* and the sources of the reviews. Across both parts of the *Getting Results* series, a total of nine effective classroom-based programs are presented. (There are many other effective programs in *Getting Results* that are not classroom-based or school-based.) Are these programs being used in California? In 1993 none were represented among the 12 curricula most commonly used in California districts (Southwest Regional Laboratory 1993). By 1998 Project ALERT had reached 9 percent of schools in California, Life Skills Training had reached 2 percent, but none of the other effectively classroom programs were represented (*Alcohol, Tobacco, Other Drug and Violence Programs in California Schools* 2000). In brief, exemplary and promising programs are hardly being used in California. Something is wrong here.

The History of Effective Drug Abuse Prevention Programming

Back in the early 1970s, there were no known effective drug abuse prevention programs. Scare tactics, values clarification, or mere provision of information on long-term physical consequences had little impact on drug-use behavior. In fact, activities such as the use of ethical/moral decision making, instruction in values clarification, or a focus solely on intrapersonal skills could be harmful (Tobler 2000).

Then in 1976, Richard Evans and his colleagues at the University of Houston made an interesting discovery. In early adolescence, youths very rapidly begin trying tobacco and then other drugs. Early adolescence was determined to be a critical period for the onset of drug use. In addition, various social influences were identified to be among the strongest reasons youths began to use drugs. Youths perceive that drug use is acceptable and occurs widely among peers and adults. In spite of efforts to reduce the supply of drugs, youths report that alcohol, tobacco, and other drugs are readily available. This research group reasoned that if youths could be "inoculated" in a safe context against these influences (analogous to an injection at the doctor's office), they would not begin to use drugs (Evans 1976; also see Ellickson's piece in *Getting Results,* Part I 1998, 91). This belief was the beginning of social influence programming. Many generations of social influence programs subsequently evolved. Gradually, the content of social influence programming became more comprehensive and fine-tuned.

Early programs focused on direct confrontation of social influences (e.g., training in refusal skills, public commitment to refrain from using tobacco). The focus of these programs soon broadened to include more of an emphasis on normative education (e.g., changing the social norms), life skills instruction (e.g., listening and conversation skills, decision making), and instruction in activism (e.g., letter writing to those who portray tobacco use positively). This comprehensive approach is, perhaps, 40 percent more effective than the more narrow one (Tobler et al. 2000).

"Comprehensive social influences programming" (as it is now called, or "comprehensive life skills programming" [Tobler et al. 2000]) is the best approach to universal prevention

Table 4

Effective Classroom-Based Prevention Programs Reviewed in *Getting Results*

Program Title	Program Approach and Focus	Outcomes	*Getting Results* Review
The Alcohol Misuse Prevention Study	Alcohol; social influences approach (grades 6–8)	Showed effects on alcohol misuse over at least 3 years	Part I, pages 92-93
Life Skills Training	ATOD prevention, life skills, and social influences approach (grades 7–9)	With exposure to 60 percent or more of the lessons, showed effects on cigarette smoking, and alcohol, marijuana, and drug use 6 years post-program	Part I, pages 102-103
Project ALERT	ATOD prevention; social influences approach (grades 7–8)	Showed effects on marijuana and cigarette smoking 15 months post-program	Part I, pages 111-112 Part II, pages 59-60
Project STAR (Midwestern Prevention Project)	ATOD prevention, school-based social influences approach with community components (grades 6–7)	Showed effects on cigarette smoking, alcohol use, and marijuana use for over 3 years post-program	Part I, pages 113-115 Part II, pages 86-87
The Minnesota Heart Health Program	Tobacco use prevention, communitywide intervention with school component, social influences approach (grades 7–10)	Showed effects on smoking 5 years post-program	Part II, pages 81-82
The Tobacco and Alcohol Prevention Program (TAPP)*	Tobacco and alcohol prevention; social influences approach (grades 6–7)	Effect on smoking prevalence 2 years post-program in 1 of 2 cohorts	Part II, pages 60-61
Programs to Advance Teen Health (PATH)	Tobacco prevention, social influences approach	Showed effects on experimental smokeless tobacco use approximately 1 year post-program	Part II, pages 62-63
Project Towards No Tobacco Use (TNT)	Tobacco use prevention and cessation, social influences approach (grades 6–8)	Showed effects on onset and weekly use of smokeless tobacco and cigarette smoking 2 years post-program	Part II, pages 63-66
Project SHOUT	Tobacco use prevention, social influences approach (grades 7–12)	Showed effects on smoking over 4 years post-program	Part II, pages 76-79

* This program is no longer in print. The new version of TAPP is called All Stars.

of drug abuse to date. *Universal* drug use prevention programs are meant to reach all subjects in a particular context. These programs' primary goals are to keep a school or community drug-free and prevent youths from initiating use of alcohol, tobacco, or other drugs. Comprehensive social influences programs are intended to be most relevant to young teens. Family-based programming, instruction on emotional development, and provision of tobacco facts are relatively likely to be important to younger children, whereas motivation enhancement is relatively likely to be important to older teens and young adults (Sussman et al. 1995).

There are several research sources that now describe the components of effective teen drug abuse prevention programs (e.g., Centers for Disease Control and Prevention 1994; Donaldson et al. 1996; Glynn 1989; Hansen 1992; Silvestri & Flay 1989; Sussman et al. 1995; Tobler 1986; Tobler et al. 2000; U.S. Department of Health and Human Services 1994). Effective programs have three components: theory/substantive content (material), process (means of delivery), and modality features (settings of delivery).

Substantive Contents. A comprehensive prevention curriculum based on the social influences approach can be categorized into three main types of lessons: basic information, normative social influence-oriented, and informational social influence-oriented (Sussman et al. 1995).

Basic information lessons are intended to introduce the program, involve youths, and address the following issues: listening/involvement (e.g., keeping an open mind), long- and short-term physical consequences (e.g., cigarette breath, shortness of breath), and decision making and public commitment. By providing correct information about the course of addiction and disease, a teacher can correct cognitive misperceptions about drug use outcomes. For example, the myth is that continued cigarette smoking helps one learn how to smoke correctly. However, the truth is that the human body's warning signals of poison (e.g., coughing and nausea) are triggered, ultimately "give up," and diminish.

Normative social influence refers to direct pressures to comply with drug offers to win group acceptance. Lessons designed to counteract those social pressures address changing the social norm and learning how to say no. For example, youths tend to think that although they do not approve of drug use, their peers are much more approving of drug use. In a typical activity on changing the social norm, youths stand in groups under Approve or Disapprove signs regarding the use of a drug, and a conservative shift in attitude results as almost the entire group is observed to disapprove of use. Interestingly, changing young teens' perceptions of social norms appears to influence them more than teaching them how to refuse. In fact, several studies have found that perceived peer disapproval, negative expectations about drug effects, and relatively low estimates of prevalence rates influence the effectiveness of drug abuse prevention programs, not teaching teens how to refuse drugs (see Donaldson et al. 1996; MacKinnon et al. 1991). Training in refusal skills may be an effective strategy among those teens who are not curious about drug use but generally only if it is closely linked to changing their perceptions of social norms (Donaldson et al. 1996; Sussman et al. 1995; Tobler 2000). If training in refusal skills alone is offered,

teens may come to believe that everyone uses drugs and that drug offers will be everywhere. Therefore, their use of refusal skills may decrease, and their intention to conform to such perceived pressures by using drugs may increase.

Informational social influence refers to covert, indirect pressures to adopt attitudes favorable to drug use. The lessons counteract those pressures by modifying prevalence overestimates (through taking group polls); raising social awareness of adult and media influences (and learning social skills to obtain correct information); and "correcting" ads and writing to policymakers (activism). A lesson involving modification of prevalence overestimates involves making a comparison. For example, the teacher calculates how many students in a classroom or other group self-report using a drug in the last seven days. Then the teacher has each student make a judgment regarding how many peers in the room have used that drug in the last seven days. The anonymity of the respondents is protected, and the results are carefully tallied. The results are then presented to the class. Youths see that they tend to overestimate ATOD use among their peers. They then see there is much less pressure to use drugs than they previously thought (few youths actually use them).

Processes of Delivery. Regarding processes of delivery, programs that are highly interactive (interaction among teacher or facilitator with students and students with each other) are the most successful (Tobler 2000). Eliciting pertinent prevention information from students by asking a series of questions is preferable to the didactic approach because it reduces resistance to the message and encourages discussion and consensus among group members. Group members are also likely to value self-generated information. Training of instructors may be needed to lead such programs.

High-intensity interactive programs (i.e., around 16 hours) are more effective than lower-intensity programs (i.e., 6 hours). Delivery of a daily program is superior to more intermittent delivery, although it is more important to provide all lessons of a program, even if they are presented over many weeks, than to deliver only a part of the program. The use of booster lessons to supplement a drug abuse core prevention program may significantly enhance program effects, especially when repeated over a number of years (Sussman et al. 1995).

Prototype Lessons in a Comprehensive Prevention Curriculum Based on the Social Influences Approach

Basic Information

Listening/involvement

Long- and short-term physical consequences

Decision-making and public commitment

Normative Social Influence

Changing the social norm

Refusal skills—learning how to say no

Practice in refusal skills

Informational Social Influence

Modifying prevalence overestimates

Raising social awareness of adult and media influences

"Correcting" ads and writing to policymakers (activism)

Previously, I mentioned that social influence programming was analogous to an inoculation. One receives a "shot" of education to be able to resist drug use in high-risk situations. If the program "dosage" is reduced (i.e., lessons or steps of the lesson, such as application activities, are dropped), if intervals between a "dose" are changed frequently (i.e., the schedule of implementation is erratic), or if new "ingredients" are added to the injection (i.e., new material is provided), the inoculation may not work. One must implement a research-based program as it was intended.

Delivery Modalities. By receiving instruction in several ways, youths hear a consistent message from both the school and community, and program effects are most likely to be maintained. Systemwide approaches achieve the largest effects (although methodological designs often are less strong than are studies of single schools). School-based instruction is a central means of delivering programming because youths are a captive audience. Evidence also indicates that this mode of delivery can be successful (Sussman et al. 1995; Tobler 2000).

Getting Past the Hurdles for Educators

Educators are asked to do so many things: attend events, accept an increased workload and voluntary duties, take additional training—all with a positive spirit. Drug abuse prevention is just one more responsibility. There are at least three hurdles for educators in providing effective prevention programming (Petosa 2001).

The first obvious hurdle is **feasibility**. Small budgets, limited staff training, and lack of time make it difficult to launch a program. Programs that are widely used may be considered successful in terms of implementation. These widely implemented programs do communicate the message, "Don't use drugs"; however, they have not been shown anywhere to affect ATOD behaviors.

There are at least two solutions to this problem. One is that widely implemented programs should be reinvented to become effective. Close partnerships between educators and researchers are needed for a program to be both realistic to implement and rigorously evaluated. Another option is that effective programs should become more widely implemented with fidelity. This can happen as school-based programs become partners with more and more groups. Project TNT (Towards No Tobacco Use) is a good example. Although *Getting Results*, the U.S. Department of Education Expert Panel, the Centers for Disease Control and Prevention, and the Centers for Substance Abuse Prevention Model Programs have listed Project TNT among effective programs, it has not been widely disseminated in California.

The second hurdle is one of **priorities**. ATOD prevention programming is not the primary goal of educational systems. Some may argue that it is the youths' own business what they want to do in their personal lives. If they do develop ATOD problems, it is their parents' responsibility to help them. On the other hand, ATOD abuse is not

simply a personal problem; it is a communitywide problem. Prevention programming can bolster students' school attendance and improve their cooperative behavior at school, their grades and standardized test scores, and a school's ranking in the state. It does so by improving students' self-care (Eggert et al. 1994; Petosa 2001).

The third hurdle is one of **knowledge (skills)**. Delivery of effective programs requires training. For example, if educators learn how to teach students to estimate correctly the prevalence of drug use among their peers, that is a step forward. This lesson involves "threading a needle." The teacher must establish trust with the students, ensure the anonymity of data collected, and may need to understand that this type of lesson has been used over a million times with the same results (i.e., it is a reliable finding). Not only does good programming take training; teachers must also teach the lessons of a program as they were designed (and proven effective).

Unfortunately, some people may think that only knowledge instruction—as in academic lessons in history or social studies—is sufficient to change drug use behavior. Knowledge alone will not lead to behavioral change. For example, alcohol use may kill teen drivers, but knowledge of that fact will not stop teens from drinking and driving. Students' behavioral skills, prosocial motivation, negative attitudes toward ATOD use, and the choice not to use drugs are the signs that a program is working.

Overcoming those hurdles is not easy; however, they are surmountable. The *Getting Results* series provides information on programs that do and do not work. Realizing that school involvement and drug abuse are inversely related (Jessor 1984) can make it easier to defend drug abuse prevention programs. The educator can help students to pursue lifestyles conducive to learning. There is nothing like the experience of using an effective drug prevention program. The students like it, they really seem to change, and the educator becomes much happier.

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The Hutchinson Smoking Prevention Project: A Response from the Research Community

As this update was being written, an article appeared in the *Journal of the National Cancer Institute* (Peterson et al. 2000) that created headlines in the media and confusion among school-based prevention educators. The article reported the results of a long-term evaluation of a school-based tobacco use prevention program — the Hutchinson Smoking Prevention Project (HSPP) — and concluded that social influence-based programs do not work. This conclusion leaves school staff with some thorny problems: *Getting Results* says social influences curricula are the "state of the art" and have been shown to work under rigorous evaluation conditions, yet now research appears to demonstrate that this was wrong.

It is too early to draw this conclusion. The HSPP study does point to the need for a careful reexamination of the theoretical approaches currently underway in the ATOD prevention field. Among other things, it calls for further investigation into the effectiveness of life skills curricula and strong school-community designs. Although the strength of the HSPP study was its rigorous research design, some experts in prevention research say it is still too soon to jump to conclusions.

Several researchers submitted a formal response to the *Journal* (Sussman et al. 2001) that questioned the conclusions of the HSPP study. This response has been used to guide answers to the questions as noted below. A review and summary of HSPP, written by William B. Hansen, will appear in *Getting Results,* Update 3 (in prep.).

What is the Hutchinson study?

The Hutchinson Smoking Prevention Project was a 15-year study funded by the National Cancer Institute (NCI) designed to test a school-based "state-of-the-art" smoking prevention program. The study consisted of 8,388 students from 40 school districts in Washington state who were randomly assigned to intervention and control groups. Students in the control group received health curricula normally taught in those districts. Students in the intervention group participated in HSPP yearly from grade 3 through grade 12. HSPP is characterized as a social influence program and contains all the components recommended by the NCI-sponsored expert advisory panel and by the Centers for Disease Control and Prevention's guidelines for tobacco use prevention programs in school.

What were the major findings from the study?

Students completed questionnaires in their senior year and again two years after high school; saliva samples of the seniors were tested to verify the students' self-reports. At grade 12, the smoking prevalence rates for the control group (25.7 percent) and the intervention group (25.4 percent) were nearly identical. This trend was

maintained at the two-year follow-up. Students who participated in HSPP were no different from nonparticipating students, and researchers conclude that HSPP had very little to no impact on smoking prevalence.

The evaluation concluded that social influences approaches were shown not to work. Is this a valid assessment?

No, this conclusion is not definitive given the rather substantial body of evidence to the contrary. A recent meta-analysis by Tobler and colleagues (2000) that included 207 universal school-based drug prevention programs (including 138 social influence-related programs) clearly reveals the efficacy of comprehensive social influence programming. In the context of all the other studies, many of which are well designed with rigorous methods and large sample sizes, it is not clear whether HSPP can disprove the rest of the studies.

There are other possible interpretations of the HSPP data. It is possible that social influences approaches do not work equally well with all youths in all situations. The HSPP study was conducted in predominantly white suburban and highly rural schools; the schools were relatively small; and 11.3 percent of the students reported having tried a cigarette prior to 3rd grade, which is a little higher than the national average. The conclusion of HSPP may not be applicable to all students, particularly those in urban settings.

Further, the HSPP investigators have not yet presented data about whether the program had any impact on tobacco use during middle school or early high school or whether it affected key mediators of change. To date comprehensive social influences programming has been found to be among the most effective with tobacco and other drug use among middle school youths for at least one year after the program (and up to six years after implementation). The earlier in life one begins to smoke, the more likely one is to smoke as an adult, and the more likely one is to use tobacco more heavily. Preventing tobacco use among young people is likely to affect both the duration and intensity of total use of tobacco (U.S. Department of Health and Human Services 1994).

Before more data analysis is done, one can only say at this time that this particular prevention approach, when used with a particular population of students, was ineffective by 12th grade and two years thereafter.

What did HSPP add to our knowledge of prevention?

The HSPP study is a reminder of the vital need for further research. We need to define more precisely what is and is not a social influence approach and the "active ingredients" in effective tobacco use prevention approaches. We also need more work on understanding the effect of environmental contexts, including school-level or district-level cultures, on youths' smoking behavior.

We also have a responsibility to ensure that the findings from studies with the potential for impact on policy and practice are interpreted in a thoughtful, balanced manner. In the meantime it continues to be important to use curricula that have been shown to be effective with the kinds of students served by the school district. A careful review of the curriculum and its research base is a critical step in selecting a classroom program that really meets the needs of students (see Chapter 4).

Other Responses

In response to the publication of the Hutchinson study findings, the Centers for Disease Control and Prevention (CDC) (2001) sent recommendations to the field about school-based programs.

> CDC recommends that school-based programs, in order to be effective, involve much more than classroom curricula alone. Schools should implement curricula within a broader context of strictly enforced school tobacco-free policies; active parent and community involvement; tobacco cessation services for students and staff; and coordination of these programs with community and media efforts to reduce tobacco use.
>
> CDC recommends that the curriculum components of a comprehensive program be based on programs that have demonstrated long-term efficacy in research trials.
>
> Additionally, CDC recommends that school-based tobacco use prevention programs be integrated into comprehensive school health education because tobacco use is one of several risk behaviors that place young people at an increased risk for serious health problems both now and in the future.
>
> Although more research is needed, the Surgeon General's report, Reducing Tobacco Use (2000) concluded that we know more than enough to act now. The report concludes that educational strategies conducted in conjunction with community- and media-based activities can postpone or prevent smoking onset in 20 to 40 percent of adolescents.

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Tobler, N. S., Roona, M. R., Ochshorn, P., Marshall, D. G., Streke, A. V., Stackpole, K. M. (2000). School-based adolescent drug prevention programs: 1998 meta-analysis. *Journal of Primary Prevention,* 20:275–336.

U.S. Department of Health and Human Services (2000). *Reducing tobacco use: A report of the Surgeon General.* Washington, DC: Government Printing Office.

U.S. Department of Health and Human Services (1994). *Youth and tobacco: Preventing tobacco use among young people: A report of the Surgeon General.* Washington, DC: Government Printing Office.

Chapter 4

Effective Classroom-Based Prevention Programs: Action Steps

CHAPTER 4

Effective Classroom-Based Prevention Programs: Action Steps

This chapter summarizes some alternatives to using ineffective curricula and expands on the suggestions. Action steps for selecting effective programs are illustrated in Figure 1, "Planning Sequence for Safe and Drug-Free Schools."[16] The sequence begins with the following steps: (1) establish and work with a broad-based advisory council; (2) assess local needs and establish measurable goals and objectives based on those needs; and (3) select research- and evaluation-based strategies [or curricula] that are developmentally appropriate, affect behavior, and promote youth development. When these strategies and curricula have been implemented, take the next step: (4) evaluate progress toward meeting goals and objectives and revise the strategies accordingly. This update addresses steps 3 and 4.

Select Research- and Evaluation-Based Strategies or Curricula

Determine whether the classroom-based prevention program(s) being used in your school district are research-based (i.e., have been evaluated for effectiveness):

- See Table 1 in this update for an assessment of effectiveness for the most popular prevention programs in California.
- See Table 4 in this update for a list of effective classroom-based programs from *Getting Results.*
- See the list of programs that other agencies have listed as effective and promising (Appendix A).
- If your program does not appear in these tables, see whether marketing materials indicate that it has been evaluated and found effective. Look for additional published research to substantiate claims being made in the marketing materials. Apply the criteria of effectiveness in Chapter 1 to analyze the evidence.

If your prevention curriculum is ineffective, stop using it and select a program that research shows to be effective. Apply the district-specific criteria of effectiveness to potential programs:

- Were the students in the research similar to students in our district — socially, ethnically, and culturally?
- Does the program appear to be cost-effective?
- Does the program address a perceived, pressing need in the district?
- Is the program a logical piece of our districtwide, comprehensive effort?

Chapter 5, "Resources," contains information on obtaining the effective programs cited in *Getting Results.*

[16] Figure 1 is taken from *Getting Results,* Part I, page 20.

Figure 1

Planning Sequence for Safe and Drug-Free Schools

Supplement the Research-Based Program

If you are using materials that have not been evaluated and whose effectiveness is therefore unknown (such as health textbooks; resources from the American Cancer Society, American Heart Association, and/or the American Lung Association; district-developed curricula), continue to use these materials only as supplements to a research-based program.

Use the Program as Designed

An effective program subscribes to a particular theory of behavioral change and is developed according to that theory. All the "ingredients" of the program are necessary for the theory to work: the number, length, and sequencing of lessons; the teaching and learning techniques; and the level of information. To use a medical comparison, a vaccine that is shown by research to be effective (i.e., it prevents infection) is unlikely to be effective if the dosage is reduced, intervals between doses in a series are changed, boosters are ignored, or the age of people who need the vaccine is changed.

Foster Positive Youth Development

There is more to drug use prevention than a curriculum package. Positive youth development is an approach and a way of thinking rather than a program. The role of adults is to foster a sense of connection among and with students and help young people to develop the capacity to enjoy life. Schools that students see as caring communities foster student academic achievement and healthier lifestyles.

The youth development approach emphasizes the importance of a comprehensive approach that research on effective prevention also supports. The classroom prevention program should, therefore, be only one component of a larger program that involves families and the community and that consistently reinforces messages about the dangers of ATOD use and violence.

Asset building, youth development, and connectedness are described in *Getting Results,* Update 1.

Evaluate to Assess Progress

Regardless of what classroom program you are using, assess the prevalence of ATOD use at regular intervals by using the California Healthy Kids Survey. CDE recommends that districts use the Tobacco module of the survey in addition to the core survey and other modules (e.g., the Resiliency module).

Chapter 5

Resources

CHAPTER 5

Resources

This section contains ordering information on research-based effective programs for classroom use. A summary of each program is found in *Getting Results.*

Alcohol Misuse Prevention Study

From *Getting Results*, Part I, pages 92-93

NOTE: The AMPS curriculum materials are not being actively marketed at this time. Materials have not been updated since 1992 but will be sent on request.

Contact:
Deborah Kloska
University of Michigan Survey
Research Center
2340 Institute for Social Research
P.O. Box 1248
Ann Arbor, MI 48109-1248
(734) 647-0587

Child Development Project

From *Getting Results*, Update 1, pages 46-48

This program was found to be effective in changing students' attitudes and behaviors related to interpersonal relationships, academic engagement, liking of school, and conflict resolution skills. Other studies have found these behaviors linked to lower ATOD use. See Update 1 for those studies.

Contact:
Denise Wood, Information Coordinator
Developmental Studies Center
2000 Embarcadero, Suite 305
Oakland, CA 94606-5300
(510) 533-0213, (800) 666-7270, ext. 239
(800) 666-7270, ext. 281 (to order materials)
FAX (510) 464-3670
e-mail: *denise_wood@devstu.org*
http://www.devstu.org/ObeyPorter.html
http://www.devstu.org/cdp

Life Skills Training

From *Getting Results*, Part I, pages 102-103

Contact:
Steven A. Brod
Princeton Health Press, Inc.
115 Wall Street
Princeton, NJ 08540
(800) 636-3415
(609) 921-0540
FAX (609) 921-3593
e-mail: *PHPInfo@aol.com*
http://www.lifeskillstraining.com/

Minnesota Heart Health Program

From *Getting Results*, Part II, pages 81-82

The classroom-based component of this school-community program is called the Minnesota Smoking Prevention Program.

Contact:
Ann Standing
Hazelden Information and Educational Services
15251 Pleasant Valley Road
P.O. Box 176
Center City, MN 55012-0176
(800) 328-9000, ext. 4030
FAX (651) 213-4577
e-mail: *astanding@hazelden.org*
http://www.hazelden.org

Project ALERT

From *Getting Results*, Part I, pages 111-112; Part II, pages 59-60.

Contact:
Judy Davidson, Ed.D.
RAND Corporation
725 S. Figueroa Street, Suite 1615
Los Angeles, CA 90017
(213) 623-0580
FAX (213) 623-0585
e-mail: *info@projectalert.best.org*

Project Northland

From *Getting Results*, Part I, pages 112-113

Contact:
Ann Standing
Hazelden Information and Educational Services
15251 Pleasant Valley Road
P.O. Box 176
Center City, MN 55012-0176
(800) 328-9000, ext. 4030
FAX (651) 213-4577
e-mail: *astanding@hazelden.org*
http://www.hazelden.org

Project PATH (Programs to Advance Teen Health)

From *Getting Results*, Part II, pages 62-63

Contact:
InterVision
261 E. 12th Avenue
Eugene, OR 97401
(541) 345-3455
(800) 678-3455
e-mail: *denise@intervisionmedia.com*

Project SHOUT (Students Helping Others Understand Tobacco)

From *Getting Results*, Part II, pages 76-79

NOTE: This program is no longer available. Photocopies of program materials may be obtained upon request.

Contact:
Amelia Arroyo
Graduate School of Public Health
San Diego State University
9245 Sky Park Court, Suite 221
San Diego, CA 92123
(619) 594-2395
FAX (619) 594-2998
e-mail: *aarroyo@projects.sdsu.edu*

Project STAR (Midwestern Prevention Project)

From *Getting Results*, Part I, pages 113-115

NOTE: This program is not currently available. The developers of Project STAR are currently developing a training of trainers program to widely disseminate this program. Training and technical assistance on this project are expected to be available by the end of 2001.

Contact:
Karen Bernstein
Institute for Prevention Research
University of Southern California
1000 South Fremont, Unit 8
Alhambra, CA 91803
(626) 457-6687
e-mail: *karenber@usc.edu*

Project TAPP (Tobacco and Alcohol Prevention Program)

From *Getting Results*, Part II, pages 60-61

NOTE: The TAPP curriculum is no longer available. The new version of TAPP is called All Stars (Core Program).

Contact:
William B. Hansen, Ph.D.
Tanglewood Research, Inc.
7017 Albert Pick Road, Suite D
Greensboro, NC 27409
(336) 662-0090
FAX (336) 662-0099
e-mail: *billhansen@tanglewood.net*
http://www.tanglewood.net

TNT (Project Towards No Tobacco Use)

From *Getting Results*, Part II, pages 63-66

Contacts:
Sande Craig (to arrange for training)
(626) 457-5887
e-mail: *szcraig@hsc.usc.edu*

Steven Sussman, Ph.D.
(to arrange for technical assistance)
University of Southern California
Institute of Prevention Research
1540 Alcazar Street
CHP 209
Los Angeles, CA 90033
(323) 442-2589
e-mail: *ssussma@hsc.usc.edu*

To order the teachers' guide and workbooks, contact:
ETR Associates (800) 321-4407

Other Exemplary and Promising Programs

Appendix A contains a chart of all exemplary and promising classroom-based curricula identified by Blueprints for Violence Prevention; Centers for Substance Abuse Prevention; and the Safe, Disciplined, and Drug-Free Schools Expert Panel.

Blueprints for Violence Prevention

http://www.colorado.edu

The objective of Blueprints, a project of the Center for the Study and Prevention of Violence, was to identify outstanding violence prevention programs and describe the theoretical rationale, the core components of the program as implemented, the evaluation designs and results, and the practical experiences of those implementing the program at multiple sites. Visit this site to learn about the ten model programs that met these rigorous selection criteria and promising programs that met some of the criteria.

California Healthy Kids Resource Center

http://www.californiahealthykids.org/

This project of the California Department of Education has a Web site with access to the curricula designated exemplary and promising. The curricula are available for loan at no charge and are sent anywhere in California. Research summaries, school health laws, consultant services, and links to other health education Web sites are also available.

Centers for Substance Abuse Prevention, Model Programs

http://www.samhsa.gov

The Web site provides access to materials on how to implement and evaluate your community's model substance abuse prevention program, request training and technical assistance from program developers, or link to numerous prevention and funding resources. Visit this site for the latest in science-based substance abuse prevention and to order publications on all model programs free of charge.

U.S. Department of Education, Safe, Disciplined, and Drug-Free Schools Expert Panel

http://www.ed.gov/

The panel oversaw a valid and reliable process for identifying effective school-based programs that promote healthy students and safe, disciplined, and drug-free schools. Visit this site to find out more about the panel's selection of promising and exemplary programs.

Assessment Tools

Health Education Assessment Project

Council of Chief State School Officers
State Collaborative on Assessment in Student Standards

Contact:
Robin Sinks
Long Beach Unified School District
(562) 997-0632
e-mail: *rsinks@lbusd.k12.ca.us*

California Healthy Kids Survey

WestEd
4665 Lampson Avenue
Los Alamitos, CA 90720
(888) 841-7536
http://www.wested.org

Appendix A

Exemplary and Promising Programs

Rated by

California Department of Education, Getting Results
U.S. Department of Education Expert Panel
Centers for Substance Abuse Prevention, Model Programs
Blueprints for Violence Prevention

Table developed by

Healthy Kids Program Office
California Department of Education

Exemplary and Promising Programs: Comparison of Recommendations

Programs with Crossover Recommendations	CDE Getting Results	USDE Expert Panel	CSAP Model Programs	Blueprints
Life Skills Training	■	■	■	■
Project Northland	■	■	■	■
Project STAR	■	■	■	■
Bullying Prevention Program	▲		▲	▲
Child Development Project	▲	▲	▲	
Multisystemic Therapy	▲		▲	▲
Project ALERT	▲	▲	▲	
Seattle Social Development Project	▲	▲		▲
Strengthening Families Program: For Parents and Youth 10-14		▲	▲	▲
T.N.T. (Project Towards No Tobacco Use)	▲	▲	▲	
All Stars		●	●	
Athletes Training and Learning to Avoid Steroids (ATLAS)		●	●	
Big Brothers Big Sisters	●			●
CASASTART		●		●
Creating Lasting Family Connections		●	●	
Functional Family Therapy	●			●
I Can Problem Solve (ICPS)		●		●
Lions-Quest Skills for Adolescence	●	●		
Minnesota Smoking Prevention Program	●	●		
Nurse Home Visitation	●			●
PATHS Curriculum (Promoting Alternative Thinking Strategies)		●		●
Perry Preschool Program	●			●
Positive Action		●	●	
Preparing for the Drug-Free Years (PDFY)		●		●
Project ACHIEVE	●		●	
Project PATH	●			●
Quantum Opportunities	●			●
Reconnecting Youth	●		●	
Students Managing Anger and Resolution Together (SMART Team)		●	●	

■ Programs recommended by all four groups or panels ▲ Programs recommended by three groups or panels
● Programs recommended by two groups or panels

Exemplary and Promising Programs Selected by One Group or Panel

CDE Getting Results	USDE Expert Panel	CSAP Model Programs	Blueprints
Brain Power	Aggression Replacement Training	Across Ages	Baltimore Mastery Learning
Project SHOUT	Al's Pals: Kids Making Healthy Choices	Brief Strategic Family Therapy	Fast Track
Project TAPP	Community of Caring	Communities Mobilizing for Change on Alcohol	Intensive Protective Supervision Project
Yale-New Haven Primary Prevention Project	Facing History and Ourselves	Community Trials Project	Parent-Child Development
	Growing Healthy	Coping Power	Preventive Intervention
	Let Each One Touch One Mentor	Dare to Be You	Preventive Treatment Program
	Linking the Interests of Families and Teachers (LIFT)	Early Risers "Skills for Success"	Project Status
	Lions-Quest Working Toward Peace	Fairfax Leadership and Resiliency	School Transitional Environment Program
	Michigan Model for Comprehensive School Health Education	Family Advocacy Network	Syracuse Family Development Research Program
	OSLC Treatment Foster Care	Family Effectiveness Training	Treatment Foster Care
	Peace Builders	The Incredible Years Series	Yale Child Welfare Project
	Peacemakers Program: Violence Prevention for Students in Grades Four through Eight	Keep a Clear Mind (KACM)	
	Peers Making Peace	Nurse-Family Partnership	
	Primary Mental Health Project	Preparing for Drug-Free Years	
	Responding in Peaceful and Positive Ways (RIPP)	Project SUCCESS	
	Say It Straight Training	Project Towards No Drug Use	
	SCARE Program	Residential Student Assistance Program (RSAP)	
	Second Step: A Violence Prevention Curriculum	SAFE Children Project	
	Social Decision Making/Problem Solving	Skills, Opportunity, and Recognition (SOAR)	
	Teenage Health Teaching Modules	Smart Leaders	
	The Think Time Strategy	The Social-Competence Promotion Program for Young Adolescents	
		STARS for Families	
		Stop Teenage Addiction to Tobacco (STAT)	

Appendix B

Summary Tables of Research on Here's Looking at You, DARE, and Quest

Here's Looking at You: An Evaluation of the Available Research

Study	Published?	Version	Design	Sample	Findings	Strengths/Limitations
Barrett, C. J. 1989. Substance Abuse Prevention: A program evaluation (Master's thesis, Southern Connecticut State University).	Unpublished master's thesis	HLAY 2000	Quasi-experimental, pre- and post-test, comparison group	Grades 5 and 6 in 10 Danbury, CT, elementary schools. Four hundred intervention students in 7 schools and 286 comparison students in 3 schools, one school had both intervention & comparison groups within.	• Significant change of "total" test score from pre- to post-test was noted in both the intervention and comparison groups. • No difference was found between the two groups.	• The instrument was developed to measure HLAY 2 and was not assessed for reliability or validity. • Only knowledge scores contributed to significant positive change. • No behavioral measures (e.g., drug use, truancy) were used. • Pre-test level independent t-tests of homogeneity showed group equivalence by grade level, gender, and test scores.
Bubl 1988. Evaluation of the Here's Looking at You, 2000 curriculum in rural Marion County, Oregon, schools (Master's thesis, university not provided).	Unpublished master's thesis	HLAY 2000	Quasi-experimental, pre- and post-test, comparison group	Grades 4, 5, 6, 7-9, & 10-12 268 experimental students in 16 classrooms and 103 comparison students in 5 classrooms	• Drug knowledge significantly increased. • "Perceived social skills" increased. • "Better implementation was related to better results."	• The complete report and the specific results were not provided. • The comparison group had only 24 students in any grade level. • The reliability and validity of the instrument were not established. • No examples of the test questions were provided. • The social skills dimensions were measured in a limited number of groups, especially "Making Friends" (Grades 6–9 only), and "Decision-making" (Grades 10 –12 only).

Here's Looking at You: An Evaluation of the Available Research (Continued)

Study	Published?	Version	Design	Sample	Findings	Strengths/Limitations
Chace-McNiel, C. 1990. Learning objectives critique of HLAY 2000 Curriculum Plan (Technical report, Comprehensive Health Education Foundation, Boston, MA).	Unpublished technical report	HLAY 2000	Process evaluation: Cost breakdowns, teaching concerns, teacher training availability information, review of whether grade-level curriculum meets learning objective.	N/A	N/A	The study was not an outcome evaluation.
Connelly, T. 1990. Drug and Alcohol Survey (Wappingers Central School District, Office of Special Counseling Programs).	Unpublished district-level technical report	HLAY 2000	Needs assessment done in 1986 and again in 1990, used as pre- and post-test. Although not stated when HLAY was implemented, 27 prevention programs were implemented during this period, including HLAY.	Grades 7-12 The number of students in 1986 was greater than 2,500, and the number was not stated for 1990.	Drug and alcohol measures showed reduced use.	• No information is provided about the age of the students responding in 1986 or in 1990 for group comparison. • Results are provided as frequencies only. • The study has weak, post-hoc design with no way to attribute findings to HLAY.

Here's Looking at You: An Evaluation of the Available Research (Continued)

Study	Published?	Version	Design	Sample	Findings	Strengths/Limitations
Elman, L. 1990. Here's Looking at You, 2000 Evaluation (technical report, Tacoma Public Schools, Tacoma, WA).	Unpublished technical report	HLAY 2000	• Quasi-experimental design: 2nd and 4th graders in each of three groups were tested one time (baseline/control, experimental 1/tested after year 1, and experimental 2/tested after year 2). • Quasi-experimental design: two groups of 8th graders. Comparison (pre-test only), experimental (pre-test and post-test).	Elementary and middle school students in Tacoma public schools The baseline/control group consisted of 498 students, the experimental 1 group included 576 students, and the experimental 2 group included 544 students. The grade 8 groups consisted of 462 comparison students and 687 experimental students.	2nd and 4th grades: • The year 1 and year 2 groups showed a significant gain compared with the control group in the knowledge of drugs and the knowledge of refusal skills. 8th grade: • The post-test of the experimental group showed a significant gain in the knowledge of drugs and the knowledge of refusal skills compared with the control group and the pre-test results of the experimental group.	• The study has a weak design (no post-test for 8th grade comparison; post-test for only 2nd and 4th grade students). • Changes were in knowledge only; it is not known how refusal skills were measured. • No equivalency testing was done between experimental and comparison groups.

Here's Looking at You: An Evaluation of the Available Research (Continued)

Study	Published?	Version	Design	Sample	Findings	Strengths/Limitations
Hopkins, R. H., Mauss, A. L., Kearney, K. A., & Weisheit, R. A. 1988. Comprehensive evaluation of a model alcohol education curriculum.	Published in a peer-reviewed journal • *Journal of Studies on Alcohol,* 49(1), 38-50, 1988.	HLAY (I)	Quasi-experimental, pre-and post-tests (longitudinal follow-ups at one-month, one-year and two-year intervals after the intervention). Cross-sectional data were analyzed, and pre-tests were used to determine group equivalence between the experimental and comparison groups.	Grades 4-12 in five school districts (two large urban, one suburban, two small suburban or rural) located in Seattle and Portland. A total of 6,808 students (75.1% white, 49.9% male) for both the experimental and comparison groups.	• Knowledge improved at several grade levels but was unchanged or worse in three of the levels. • Self-concept, assuming responsibility for a problem, and approval for adults to use alcohol in moderation improved at most levels. • Long-term effects were suggested to mediate problem behavior, but the results were minimal and unsystematic.	• Reliability of test items was varied, but was very low for many; validity was not offered. • This is an evaluation of the first version of HLAY introduced by the developers.
Kelly 1989. Here's Looking at You, Two: Curriculum evaluation (technical report, Human Organization Science Institute, Villanova University).	Unpublished technical report	HLAY 2000	Quasi-experimental, with comparison, pre- and post-tests with a one-year follow-up	Grades 4-11 in five districts of Pennsylvania, 1,698 experimental students and 1,005 comparison students. (There was a very high dropout rate. Only two of the five school districts had a substantial number for analysis.)	Year 1: • There was a significant increase in drug knowledge for the experimental students, but not on self-esteem, coping, and decision making. Year 2: • No gains for HLAY over controls on any measure.	A high dropout rate was noted.

Here's Looking at You: An Evaluation of the Available Research (Continued)

Study	Published?	Version	Design	Sample	Findings	Strengths/Limitations
Kim, S., McLeod, J. H., & Shantzis, C. 1993. An outcome evaluation of Here's Looking at You, 2000.	Published in a peer-reviewed journal • *Journal of Drug Education,* 23(1), 67-81, 1993.	HLAY 2000	Pre- and post-test (8-month interval) of eight junior high schools, two of which were randomly selected to serve as control schools.	Grades 7-8 in eight schools of a rural North Carolina county, 170 experimental students and 58 control students	No significant differences between the experimental and control groups were noted.	• No equivalency testing was done between experimental and control groups. • A very large number of dropouts was noted.
Landry, R. G. 1990. Summary of Grand Forks, North Dakota, evaluation of HLAY 2000 (technical report, Board of Educational Services and Applied Research, University of North Dakota).	Unpublished technical report	HLAY 2000	Cross-sectional, one-time survey data comparing survey results by type of program reported to be used at each school	Data from grades 11-12 Students compared by curricula of exposure (822 of 10,938 students were exposed to HLAY 2000)	• Students' knowledge was the same across all curricula. • Students' self-esteem was better for HLAY. • Students' use of cigarettes, marijuana, and other drugs was better for HLAY. • Students' use of chewing tobacco was worse for HLAY.	• The study has a weak design. • No test of equivalence existed among compared student groups, and only one cross-sectional survey was used. • Reliability of the instrument is not known.

DARE Research Reviewed

There are many unpublished evaluation studies on DARE (Drug Abuse Resistance Education). In this update, only peer-reviewed published studies that were either meta-analyses of studies with rigorous designs or rigorously designed studies with one or more years of follow-up have been included. The exception is the inclusion of the one study conducted on the most recent update of the DARE curriculum.

Study	Published
Clayton, R.R., Cattarello, A.M., Day, L.E., & Walden, K.P. Persuasive communication and drug abuse prevention: An evaluation of the DARE program.	In L. Donohew, H. Sypher, & W. Bukowski (Eds.) (1991). *Persuasive communication and drug abuse prevention* (pp. 295–313). Hillsdale, NJ: Earlbaum.
Clayton, R.R., Cattarello, A.M., & Johnstone, B.M. The effectiveness of Drug Abuse Resistance Education (Project DARE): 5-year follow-up results.	(1996). *Preventive Medicine*, 25, 301–318.
Donnermeyer, J.F. & Davis, R.R. Cumulative effects of prevention education on substance use among 11th grade students in Ohio.	(1998). *Journal of School Health*, 68(4), 151–158.
Dukes, R.L., Stein, J.A., & Ullman, J.B. Long-term impact of Drug Abuse Resistance Education (D.A.R.E.): Results of a 6-year follow-up.	(1997). *Evaluation Review,* 21(4), 483–500.
Dukes, R.L., Ullman, J.B., & Stein, J.A. An evaluation of D.A.R.E. (Drug Abuse Resistance Education), using a solomon four-group design with latent variables.	(1995). *Evaluation Review,* 19(4), 409–435.
Dukes, R.L., Ullman, J.B., & Stein, J.A. Three-year follow-up of Drug Abuse Resistance Education (D.A.R.E.).	(1996). *Evaluation Review,* 20(1), 49–66.
Ennett, S.T., Tobler, N.S., Ringwalt, C.L., & Flewelling, R.L. How effective is Drug Abuse Resistance Education? A meta-analysis of project D.A.R.E. outcome evaluations.	(1994). *American Journal of Public Health,* 84(9), 1394–1401.
Hansen, W.B. & McNeal, R.B. How D.A.R.E. works: An examination of program effects on mediating variables.	(1997). *Health Education and Behavior,* 24(2), 165–176.
Lyman, D.R., Milich, R., Zimmerman, R., Novak, S.P., Logan, T.K., Martin, C., Leukefeld, C., & Clayton, R. Project D.A.R.E.: No effects at 10-year follow-up.	(1999). *Journal of Consulting and Clinical Psychology*, 67 (4), 590–593.
Making the grade: A guide to school drug prevention programs.	(1999). Washington, DC: Drug Strategies.
Pennsylvania Commission on Crime & Delinquency. Assessment of the D.A.R.E. program in Pennsylvania.	(1999, March). *The Justice Analyst,* 13(1), 1–10.
Rogers, E.M. *Diffusion of innovations* (4th ed.).	(1995). New York: The Free Press.
Wysong, E., Aniskiewicz, R., & Wright, D. Truth and DARE: Tracking drug education to graduation and as symbolic politics.	(1994). *Social Problems,* 41(3), 448–472.

Quest Programs: An Evaluation of the Available Research

Study	Published?	Version	Design	Sample	Findings	Strengths/Limitations
Eisen, M., Zellman, G. L., Massett, H. A., & Murray, D. M. 2001. Evaluating the Lions-Quest "Skills for Adolescence" drug education program: First year behavioral outcomes.	Accepted for publication in peer-reviewed journal • *Addictive Behaviors,* forthcoming.	Skills for Adol-escence	Experimental; schools pair-matched within districts on 6th grade prevalence of recent use, randomly assigned to intervention or control group. Study students surveyed annually in grades 6-8. One-year follow-up still to be analyzed.	Grade 6 in 34 middle schools in four school districts in Los Angeles, Detroit, and Washington, D.C.: 7,426 multiethnic students. One-year post-test data from 6,239 7th graders.	• For pretest nonusers, recent cigarette smoking and lifetime marijuana use were significantly lower for intervention group. • Hispanics in intervention group less likely to ever and recently drink and to recently binge-drink. • For pre-test users, significant delays in transition from drinking to smoking, drinking to marijuana use, and binge-drinking to marijuana.	• Strong study design • Fidelity of implementation was limited to eight "key sessions" out of 40. • Instruments used standard items. • Need for active parental consent may have biased the sample. • Schools were randomly assigned to condition but self-selected into study. • No negative effects were reported.
Goldsmith, L. 1990. An evaluation of the influence of the Skills for Adolescence Program on the self-esteem and attitude toward school of sixth-grade Mexican-American students (doctoral dissertation, Baylor University, 1990). *Dissertation Abstracts International,* 51(4), 1119-1281.	Abstract from unpublished doctoral dissertation	Skills for Adol-escence	Quasi-experimental, pre- and post-tests (eight-month interval) with a non-equivalent comparison group	Sixth-grade Mexican-American students in a south Texas county	• There was no significant difference between the intervention group and the comparison group on self-concept scores, as measured by the Coopersmith Self-esteem Inventory. • There was a significant increase in positive attitude toward school for the intervention groups compared with the nonintervention group.	• There was no measure of behavioral changes. • The numbers (Ns) were not reported in the abstract. • No negative effects were reported.

Quest Programs: An Evaluation of the Available Research (Continued)

Study	Published?	Version	Design	Sample	Findings	Strengths/Limitations
Heinemann, G. 1990. The effects of the Lions-Quest "Skills for Adolescence" Program on self-esteem development and academic achievement at the middle school level (doctoral dissertation, University of the Pacific, 1990). *Dissertation Abstracts International,* 51(6), 1890-2018.	Abstract from unpublished doctoral dissertation	Skills for Adol–escence	Pre- and post-test design with an additional follow-up on a random sample of the original sample.	Middle school students in northern California: 384 intervention students and 793 comparison students.	• No significant difference between the intervention and control students on enhancement of self-esteem or academic achievement, as measured by the Coopersmith Self-esteem Inventory (CSEI) and the Comprehensive Test of Basic Skills. • On follow-up there was a significant decrease in the School Academic area of the self-esteem on the CSEI for the limited-English-proficient control students and a significant increase of this same score among 8th grade intervention students.	• There was no measure of behavioral changes. • No negative effects were reported. • There was no information in the abstract about design or assignment of students to intervention and comparison group.
Kim, S. & Laird, M. 1995. An outcome evaluation of Lions-Quest *Skills for Growing,* First Edition, Grades K-5. Charlotte, NC: Database Evaluation Research.	Unpublished internal report	Skills for Growing	Pre- and post-test (six- to seven-month interval), random selection of classrooms to intervention or control group	Grades K–5 in 13 U.S. schools and one Canadian school: 1,304 intervention students and 612 comparison students All schools had both intervention and comparison students.	• Grades K-1 (eight schools): Significant positive impact was shown in the "health-oriented behaviors" of the intervention group; no other differences were found between the experimental (E) and control (C) groups. • Grades 2-3 (11 schools): No difference was found between the E and C groups. • Grades 4-5 (10 schools): Significant positive impact for the intervention group on "life skills," "conflict resolution," and the students' attitude toward their classroom environment.	• Evaluation conducted before the latest program revisions. • The instrument used, the Student Assessment Survey, lacked sensitivity; nearly all of the survey items were skewed to the extreme ends. Additionally, many of the behavioral dimensions were measured with only one or two survey items (e.g., health-oriented behaviors). • No negative effects were reported.

Quest Programs: An Evaluation of the Available Research (Continued)

Study	Published?	Version	Design	Sample	Findings	Strengths/Limitations
Laird, M., Bradley, R., & Black, S. 1998. The final evaluation of Quest International's Skills for Action. Newark, OH: Quest International.	Unpublished internal report	Skills for Action	Random assignment of students to intervention or control group by classroom. Pre- and post-test (five- to six-month interval).	Twenty-five high schools in seven states Total sample varied between 542 and 753, dependent upon the ability to link pre- and post-test scores on three different surveys.	• The intervention group maintained a low risk for dropping out of school, while the control group experienced an increase in dropout risk. • Intervention group: overall increase on attitudes about interpersonal competence in helping others and responsibility to the community compared with the control group.	• Some control group students were exposed to the intervention. • The Life Review Survey measured risk behaviors; however, reliability and validity of the instrument were not provided. • No negative effects were reported.

Quest Programs: An Evaluation of the Available Research (Continued)

Study	Published?	Version	Design	Sample	Findings	Strengths/Limitations
Laird, M., Syropoulos, M., & Black, S. 1996. An Evaluation of Lions-Quest Skills for Adolescence. In Quest International, *Lions-Quest Skills for Adolescence.* Newark, Ohio: Quest International.	Unpublished internal report	Skills for Adol–escence	Stratified random sample of schools and a random assignment of teachers to intervention and control groups, pre-test and post-tests (at the end of the intervention and a five-month follow-up).	Grades 7 and 8 in 12 schools from six geographic regions of Detroit, MI, 151 intervention students and 176 comparison students.	• From equivalent baseline rates, a low rate of misconduct events (e.g., truancy, insubordination, verbal abuse) was maintained by the students who received the intervention compared with an increase in the control group. • There were no significant differences found between the two groups on a measure of prosocial behavior. • Significant gains in knowledge and positive attitudes by the intervention students, which was maintained at the five-month follow-up. • The more faithfully teachers implemented the program, the better were the gains in student knowledge.	• On average teachers implemented only 40 of the 103 lessons. • Each teacher was responsible for rating students' behavior, a measure that was found to be unreliable in a pilot study. • No negative effects were reported.

Quest Programs: An Evaluation of the Available Research (Continued)

Study	Published?	Version	Design	Sample	Findings	Strengths/Limitations
Ray, N. 1990. The effects of participation in the Lions-Quest Skills for Adolescence Program on student self-concept at the middle school level (Adolescence) (doctoral dissertation, University of La Verne, 1990). *Dissertation Abstracts International,* 51(1), 82-153.	Abstract from unpublished doctoral dissertation	Skills for Adol-escence	Quasi-experimental, pre- and post-tests (eight-week interval). There was no comparison group.	142 middle school students	• There was a significant increase in self-concept scores, as measured by the Piers-Harris Children's Self-Concept Scale. • There was an increase in scores for girls (compared with boys) and white and black students (compared with Hispanic).	• There was no control group. • There was no measure of behavioral changes. • No negative effects were reported.