

# **National Study of Delinquency Prevention in Schools**

## **Chapter 1 Introduction to the Study**

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## **Introduction to the Study**

The National Study of Delinquency Prevention in Schools (NSDPS) was undertaken to develop a comprehensive account of the levels of problem behavior in United States schools and of what schools do to prevent problem behavior and to promote a safe and orderly environment. In this first major report from the study, we aim to provide a description of the full range of activities schools undertake to reduce or prevent problem behavior – including delinquency, drug use, and violence.

The study contrasts sharply with much evaluation research that is directed at assessing the effectiveness of specific practices. Evaluation is sometimes defined as activity to learn what was done, how, and with what effect. But the present research was *not* undertaken to assess the effectiveness of specific instances of prevention or intervention activities. Much evaluation research examines isolated programs or a circumscribed set of activities or arrangements and seeks to determine their effects. Good contemporary evaluation research usually also assesses the strength and integrity of program implementation (Sechrest, West, Phillips, Redner, & Yeaton, 1979). But many program evaluations and most instances in which evaluators measure the quality (strength and integrity) of program implementation lack ecological validity (Brunswick, 1947). Because the research is designed to focus on one or a small number of specific realizations of a program or practice, it lacks a sufficiently representative design to describe typical practices or the typical degree of strength and integrity attained when programs are applied outside of the experimental context. In contrast, the present research was designed to assess the nature, extent, and quality of prevention and intervention activity directed at problem behavior and school safety in a representative sample of the nation's schools.

### **Growth in Development of Prevention Programs**

Recent years have seen growth in the development and application of prevention programs — most of these directed at adolescents and based in schools, but some directed at other groups. Wilson-Brewer et al. (1991) identified 83 violence prevention programs in 20 states. They obtained survey responses from 51 of these programs, and the data indicate that most of these had been initiated recently. These programs had multiple sources of support: Most were funded by foundations (52%), and many operated on fee-for-service (44%), state funds (34%), federal funds (32%), or city sponsorship (30%). Most of these programs reached the target populations (typically adolescents and young adults) indirectly by working with teachers (41%), school administrators (32%), and a variety of other intermediaries. Middle and high schools were the predominant loci of the programs (62% of programs in each of these school settings). Only 21% reported any type of outcome evaluation; even counts of individuals affected were relatively rare.

A large number of programs directed at alcohol, tobacco and other drug use and more recently at violence have been sponsored by the Center for Substance Abuse Prevention (CSAP, 1994). Between October 1987 and September 1994 CSAP made 363 grants directed at high risk

youths, mostly (56%) to not-for-profit organizations and 11% to educational systems (although many more of these programs operate in or are focused on schools).

The Bureau of Alcohol, Tobacco and Firearms (BATF) promotes and sponsors GREAT programs; the Administration on Children, Youth and Families (ACYF) sponsors a major youth gangs and drug prevention program; important initiatives are sponsored by the National Institute for Child Health and Development, the Department of Education, the Centers for Disease Control and Prevention, the Office for Juvenile Justice and Delinquency Prevention; and research and demonstration programs are supported by the National Institute on Drug Abuse and other Institutes. In addition, many foundations are involved in supporting programs to prevent problem behavior. Among them: Arizona Community Foundation, Bell of Pennsylvania, Best Foundation, CAP Cities/ABC, Eisenhower Foundation, Foundation for New Era Philanthropy, Foundation for the National Capital Region, Goldseker Foundation, Grantmakers in Health, GTE Corporation, Hogg Foundation, IBM, J.M. Foundation, Robert Wood Johnson Foundation, Henry J. Kaiser Family Foundation, Weing Kaufman Foundation, Kellogg Foundation, Nathan Cummings Foundation, National Masonic Foundation, New York Community Trust, Okura Foundation, Pew Charitable Trust, Pool Health Care Trust, Santa Clara Community Partnership, Kansas Health Foundation, Winston-Salem Foundation.

Continued growth in these programs may be expected in part because national reports have directed attention to their importance and called for further development. One of the national education goals is directed at increasing safety (Office of Educational Research and Improvement, 1993). *Healthy People 2000* (U.S. Department of Health and Human Services, 1991) called for teaching conflict resolution skills in half the nation's schools by the year 2000. The National Institute for Child Health and Human Development has sponsored developmental efforts on adolescent decision making to reduce violence and other risky youth behavior (Baron & Brown, 1991). And the National Institute of Justice *Program Plan* for recent years has called attention to school-based prevention programs.

*School as a locus of intervention.* The school is a key locus for intervention not simply because adolescents spend so much time there. It is the primary institution aside from the family that has access over extended periods of time to most of the population of young people (G. Gottfredson, 1981, 1987a; Martin et al., 1981). Until school dropout becomes a major problem (mostly after grade 9), this access is almost universal. Despite complaints that the schools cannot be expected to do everything and some persons' views that schools ought not have roles in socializing the young beyond narrow educational bounds, the school offers a realistic opportunity for delivering interventions to reduce delinquency. The reality of programming directed at youths is that the lion's share of money spent by government agencies on children and youths is spent on education – probably upwards of 85% in the states and about 42% of federal spending (Holmes, Gottfredson, & Miller, 1992).

## **School-Based Interventions**

School-based prevention programs take on a number of distinguishable forms. Although few programs resemble a pure type, some of the more prominent kinds of interventions believed to have potential are (1) social competency programs directed at high-risk individuals or at the general population of adolescents, (2) behavior management programs whether applied in the school or through the involvement of parents, (3) programs directed at environmental change to increase the effectiveness of school management or behavior management in schools, (4) programs to increase the bonding of individuals to the social order, (5) programs to exclude weapons or intruders from school, or limit the availability of weapons, (6) programs to improve opportunities for surveillance, (7) programs to provide recreation or productive youth activity, and (8) programs that provide information. Each of these types is discussed briefly in turn in the following paragraphs. Actual programs generally combine features of more than one ideal type, so that many social competency programs also include components that provide information, many programs contain recreational elements, and so on.

### **Social Competency Programs**

One set of programs known as "social competency" interventions is directed at self-restraint. These are also often called cognitive-behavioral interventions. Social competence programs generally involve: (a) developing people's skills in identifying the antecedents of problems in the cues they perceive from others, their environment, and their own state of arousal, (b) increasing the probability that people will hesitate before taking impulsive action, (c) improving individuals' capacity to process information with reference to the desirability of alternative outcomes, and (d) establishing behavioral repertoires for coping with events with potential to lead to harm. Some of these programs involve parent training to help them teach cognitive behavioral self-management to their children (e.g., Spivak and Shure's, 1976, Interpersonal Cognitive Problem Solving or Camp and Bash's, 1985, Think Aloud program); others are administered by teachers (e.g., Botvin's, 1989, Life Skill Training or the Weissberg et al., 1990, Social Problem Solving Program). (See Elias et al., 1994. See also Baron & Brown, 1991.) These programs are most effective when they teach social competency content using behavioral strategies such as rehearsal and role-playing (D. Gottfredson, Wilson & Najaka, in press).

Single-project evaluation research has demonstrated that social competency promotion programs that make use of high levels of modeling and practice, provide specific and frequent feedback about new behaviors, provide cues to prompt the behavior, and use techniques to generalize the new behavior to different settings can reduce crime (Arbuthnot & Gordon, 1986; Arbuthnot, 1992; Shapiro & Paulson, 1998; Tremblay et al., 1991; Tremblay et al., 1992; Tremblay et al., 1994; Tremblay et al., 1995; McCord et al., 1994) and substance use (e.g., Kaufman et al., 1994; Botvin et al., 1990; Botvin, Baker, Renick, et al., 1984; Botvin, Baker, et al., 1995; Shope, Copeland, Marcoux, & Camp, 1996; Caplan et al., 1992). They can also work to reduce anti-social behavior and other conduct problems (e.g., Amerikaner and Summerlin, 1982; Elkin et al., 1988; Feindler et al., 1984; Conduct Problems Prevention Research Group,

1999a, 1999b; Coie, 1997; Shure & Spivack, 1979, 1980, 1982; Weissberg & Caplan, 1994). These interventions have been shown to be efficacious in trials with pre-school (Shure & Spivack, 1979, 1980, 1982), elementary (Amerikaner & Summerlin, 1982; Conduct Problems Prevention Research Group, 1999a; Coie, 1997; Elkin et al., 1988; Gesten et al., 1982; Gesten et al., 1979; Greenberg et al., 1995; Hudley, 1994; Pepler et al., 1991; Weissberg, Gesten, Rapkin, et al., 1981), junior high (Botvin et al., 1990; Botvin, Baker, Renick, et al., 1984; Botvin, Baker, et al., 1995; Ellickson & Bell, 1990; Ellickson et al., 1993; Kaufman et al., 1994; Shope, Copeland, Marcoux, & Kamp, 1996; Caplan et al., 1992; Feindler et al., 1984; Weissburg & Caplan, 1994), and senior high (Arbuthnot & Gordon, 1986; Arbuthnot, 1992; Hecht et al., 1993; Sarason & Sarason, 1981; Eggert et al., 1990; Severson et al., 1991; Shope, Copeland, Maharg, & Dielman, 1996) students. Social competency promotion programs can be applied to the general population or to a targeted subpopulation of high-risk individuals. Meta-analyses (quantitative synthesis of evidence from many studies) imply that effective delinquency programs often incorporate cognitive-behavioral approaches to developing social competencies (Izzo & Ross, 1990; Lipsey, 1992).

### **Behavior Management Programs**

A well developed technology exists for intervening with individual youths who display impulsive, aggressive, or conduct disordered behavior (Kazdin, 1987). A logical extension of such effective behavioral methods is their application in classrooms and schools. Research on classroom management documents effective practices (Brophy, 1983; Doyle, 1986; Emmer & Aussenker, 1989; Evertson & Harris, 1992; D. Gottfredson, 1992a). Similarly, schools can involve parents in behavior management, including home-based backup reinforcement for school behavior (Atkeson & Forehand, 1979; Barth, 1979) and programs to provide parents with training in behavior management (Dishion & Andrews, 1995). Bry (1982) and Bry and George (1979, 1980) have demonstrated a behavioral program directed at tardiness, class preparation and performance, behavior and attendance in which students earned points contingent on their behavior using trips for a backup reinforcer. Bry and George's intervention improved behavior after students had been exposed to the intervention for two years and positive effects were found five years after the program ended.

The same principles can be applied to entire classrooms. A Good Behavior Game (a group contingency management program developed by Barrish, Saunders & Wolf, 1969) has repeatedly been shown to be efficacious in reducing disruptive behavior misconduct (Barrish et al., 1969; Bostow & Geiger, 1976; Darveaux, 1984; Fishbein & Wasik, 1981; Grandy, Madsen, & De Mersseman, 1973; Harris & Sherman, 1973; Hegerle, Kesecker, & Couch, 1979; Johnson, Turner, & Konarski, 1978; Kosiec, Czernicki & McLaughlin, 1986; Medland & Stachnik, 1972; Phillips & Christie, 1986; Swiezy, Matson, & Box, 1992; Warner, Miller, & Cohen, 1977) and aggressive behavior (Dolan et al., 1993; Huber, 1979; Saigh & Umar, 1983) in elementary classroom, preschool, library, and a comprehensive school for slow-learning disruptive students.

## **Environmental Competence in Guardianship**

A variety of interventions are directed at enhancing the capacity of school and other environments to signal appropriate and inappropriate behavior or to improve mechanisms for watching for and responding to student behavior.

*Defining norms.* One impressive line of research and demonstration to limit conflict in schools has been undertaken in Norway (Olweus, 1991, 1992a; Olweus & Alsaker, 1991). Olweus noted that certain adolescents, called "bullies," repeatedly victimized other adolescents. Typical bullies were characterized as displaying an "aggressive reaction pattern combined (in the case of boys) with physical strength" and as representing "a more general conduct disordered, antisocial and rule-breaking behavior pattern." Olweus also noted that the victims of bullying tended to be neglected by the school. Although they were known to be targets of harassment, the problem was largely ignored by adults who failed to actively intervene and thus provided tacit acceptance of the bullying.

A program was devised based on the notion that, "Every individual should have the right to be spared oppression and repeated, intentional humiliation, in school as in society at large." The campaign directed communication to redefining bullying as wrong. A booklet was directed to school personnel, defining the problem and spelling out ways to counteract it. Parents were sent a booklet of advice. A video illustrating the problem was made available. And questionnaire surveys to collect information and register the level of the problem were fielded. Information was fed back to personnel in 42 schools in Bergen, Norway. Reassessment implied considerable diminution in the problem – results consistent with an interpretation that the environments had become more competent in establishing norms as a result of the campaign.

*School-wide capacity-building or behavior management.* The application of behavior management programs on a school-wide basis is a form of environmental competency enhancement. But the employment of these methods is not straightforward. Schools and school systems generally have guidelines for school personnel in the form of discipline codes and reactive strategies, and evidence shows that variations in school discipline practices are indeed related to levels of victimization in schools (G. Gottfredson & Gottfredson, 1985). But, most violence occurs in urban schools serving relatively high crime, disorganized, and high proportion minority populations, and in schools which themselves suffer problems of low staff morale and difficulty in recruiting and retaining first-rate personnel. Problem schools are often overwhelmed by problems, despite the heroic efforts of educators to cope with them (Emmer, 1992; G. Gottfredson, 1987b).

Effective programs to reduce disorder have, nevertheless, been demonstrated in schools with multiple problems. In one of these (D. Gottfredson, 1988), a structured organization development method (Program Development and Evaluation; PDE; G. Gottfredson, 1984a; G. Gottfredson, Rickert, Gottfredson, & Advani, 1999) was applied in a three-year effort to reduce disorder in a troubled Baltimore City school. The program designed, implemented, and refined

interventions to increase the predictability of responses to students' disciplinary infractions, increase rewards for appropriate behavior, and increase prosocial peer and teacher support. The program was effective in reducing disorder.

The PDE method – in which researchers work with school personnel to define goals and objectives, develop program theory, plan for and monitor the implementation of program design choices, and assess outcomes – was also applied in programs in seven secondary schools (D. Gottfredson, 1986). District personnel used PDE to develop a general plan and then used the PDE method to make school-specific plans for school improvement and implementing interventions. The effort increased the clarity and consistency of school rules, student success, and attachment; and it reduced problem behavior as well as staff morale and other indicators of school capacity.

In another study, eight schools participated in a program to increase the clarity of school rules and to promote their application in a fair, firm, and consistent way (D. Gottfredson, Gottfredson, & Hybl, 1993). Again, in the context of an organization development framework, extensive administrator and teacher training was coupled with the development of school mechanisms for attending to and responding to student behavior using guidelines for teacher and administrator responses. Teachers were trained to use effective classroom organization and management techniques. Computerized behavior tracking was used to promote the clarity and consistency of responses to student behavior. Evaluation showed that the program's effectiveness differed from school to school in approximate proportion to the quality of program implementation, and it was effective in reducing conduct problems in high implementation schools.

Related approaches to reducing problem behavior on the way to and from school have been attempted in several places. Kenney and Watson (1996) engaged students in applying a four-part planning method (SARA) often recommended for use in community-oriented policing. Students identified safety problems and proposed methods to ameliorate them. Reductions in student fear were observed. G. Gottfredson, Gore, & Jones (1998) engaged school faculty and students in planning to prevent problem behavior in improve attendance in a very disorganized school. The approach to planning was simple and low key to overcome resistance to more formal approaches to planning. After two years, attendance rose about 5% above historical levels and teacher morale and perceptions of safety improved, although the school remained very disorderly.

## **Other Interventions**

*Increasing Bonding.* Prevention programs have applied a number of intervention models apparently aimed at increasing social bonding. This has included use of cooperative learning techniques (Johnson & Johnson, 1989; Slavin et al., 1990) to increase rewarding academic experiences and liking for school, mentors to provide positive role models and prosocial adults to whom youths may become attached (Hahn, Leavitt, & Aaron, 1994; LoSciuto et al., 1996), field trips to the community and discussions of laws and social problems as part of some forms of law-

related education (D. Gottfredson & Gottfredson, 1992). Other programs involve scholastic goal-setting and incentives for improved performance (Mac Iver, 1993).

A number of culture-specific programs, such as Afro-centric rites of passages programs and programs to instill a sense of awareness and pride in cultural roots or traditions may be regarded as bonding programs that promote values education and attachment to a social group.

*Excluding weapons and intruders.* A number of approaches to reducing crime have focused on mechanisms to limit access to schools by intruders or to prevent weapons from coming into schools (Butterfield & Turner, 1989). A range of approaches are used, including efforts to control entry into schools through the use of checkpoints and identification systems, metal detectors, and security patrols or officers who challenge intruders (Quarles, 1989; Gaustad, 1991). Sometimes school doors are fitted with electromagnetic locks that open when a fire alarm is set off. Although such programs are controversial, some experience implies that they can be effective and these are worthy of more systematic tests (Aleem & Moles, 1993).

*Improving opportunity for surveillance.* Some schools are designed in a manner that makes it easy to observe who enters the building and what people in the building are doing. Other schools, including many older urban schools, employ architecture that makes observation difficult. When school design makes surveillance difficult, some schools are retro-fitted with video cameras to monitor hallways, stairs, and entrances and with “panic bars” on exit doors so that an alarm is triggered if a door is opened from the inside. In extreme cases, portions of school buildings are physically walled off so that no one can enter areas that are difficult to monitor. To the best of our knowledge, there have been no formal evaluations of these approaches, but taking steps to improve opportunity for surveillance are plausible methods for improving school safety.

*Recreation and youth employment.* Recreation programs include regular after-school recreation programs with or without an instructional component, police athletic leagues, safe haven programs, and late night recreation programs. Programs to employ youths during the summertime are also generally intended to provide constructive activity. Sometimes these purely recreational or employment programs are combined with program elements of another program type, which increases their plausibility and delinquency prevention potential. Often, a rationale for recreation programs is that they provide supervision for youths who would otherwise be unsupervised in after-school hours. D. Gottfredson (1997) reviewed the evidence about alternative or recreational activities and concluded that there is little reason to believe that typical recreation programs will be helpful in reducing delinquency and that they have the potential to increase it if they bring high-risk youths together.

*Information Programs.* At one time, many drug prevention programs were primarily informational in nature. The provision of information is still a part of most drug prevention programs, and a few programs are still almost exclusively informational in nature. Crime

prevention programs that provide information about the conditions under which crime occurs so that citizens can take steps to limit their exposure to risk remain common.

*Hybrid Programs.* Most prevention programs are hybrids in the sense that they combine elements that resemble two or more of these ideal program types. For example, Botvin's Life Skills Training program (Botvin et al., 1984) is mainly a social competence program, but it includes a large segment that is informational. The Drug Abuse Resistance Education (DARE) curriculum (Bureau of Justice Assistance, 1988) implemented by police officers is very widely applied and highly regarded (Police Research Center, 1995; Ringwalt & Greene, 1993) program directed at enhancing upper elementary children's social skills, particularly in recognizing and resisting peer influence to use drugs; and it also focuses on drug information, decision skills, and self-esteem – making it a hybrid program. Another example of a school-based program that mixes some social competency training with drug information is the Project ALERT curriculum disseminated by the Best Foundation (1993). Pentz et al. (1990) have employed multiple methods (including parents and the media) directed at adolescent social skills. The GREAT programs are also hybrids, similar to DARE. An ambitious approach to gang suppression and intervention (Spergel, 1990) is another hybrid program that emphasizes mobilizing communities to improve their safety and protect others, utilize environmental design techniques to enhance guardianship, and take other steps. A critical element in the model is a special focus on providing safe, gang-free schools by involving key individuals in and out of the school to improve guardianship.

A great many things can potentially be done in schools by those who seek to reduce or prevent problem behavior. Some of these things have been the object of scientific study. Others have not. A series of recent reviews and summaries (Botvin, 1990; Brewer, Hawkins, Catalano, & Neckerman, 1995; Eron, Gentry, & Schlegel, 1994; Hansen, 1992; Hansen & O'Malley, 1996; Hawkins, Arthur, & Catalano, 1995; Institute of Medicine, 1994; Schinke, Botvin, & Orlandi, 1991; Tobler, 1992; Weissberg & Greenberg, 1997) attest to the potential of preventive interventions, leading to the optimistic slogan “prevention works.” The recent reviews by D. Gottfredson (1997, in press) are somewhat more circumspect about the broad potential of preventive interventions to reduce problem behavior and drug use but also illustrate the potential of these interventions.

## **The Problem of Implementation**

Wilson-Brewer et al.'s (1991) survey of violence prevention programs identified four main areas of barriers to success: (1) Almost all programs had difficulty securing sufficient and stable funding to acquire staff, operate programs of significant scale and duration, and maintain continuity over time. (2) Half of programs working with school systems faced overworked, stressed, and burned-out teachers. When school personnel are asked to implement a program they have not selected, they feel overburdened with work, or they do not perceive support for programs of sufficient scale, they resist implementation. (3) Programs – especially those involving gang activity – saw denial of the existence of serious safety problems (despite clear

problems) as a barrier to effective programs. (4) About a third of programs lacked the expertise, money, or assistance to evaluate their activities.

To these obstacles may be added those identified by Elias et al. (1994) in their review of competence promotion programs: factors related to the readiness of organizations to implement change. As they put it, "A program consisting of potent and validly conceived mechanisms and processes may not succeed because the host environments are not able to support those processes (Zins & Ponti, 1990)" (p. 24). Among the factors facilitating or hindering implementation are organizational climate and norm structure, the organization's history of response to innovations, the balance of new and experienced administrators, the articulation of goals with the programs, staff morale, administrator leadership and communication, role definitions, educator involvement in planning, and staff resentment of troublesome students (Corcoran, 1985; G. Gottfredson & Gottfredson, 1985, 1987). Each factor may facilitate or hinder implementation; if morale is high, implementation is easier to achieve, if low, it is harder.

Implementation of effective prevention efforts is likely to be most difficult in schools and communities in which rates of crime, delinquency, and school disorder are greatest. In such places morale – a sense that members of the community can count on each other to achieve goals – may be low and problem responses may be focused on responses to crises or immediate problems rather than on diagnosing problems and planning solutions. In disorganized schools or communities, organizational obstacles may thwart the implementation of efficacious strategies with sufficient strength and fidelity, and the organizations may fail to improve implementation over time.

The barriers that prevention programs face can be put in context by recalling that problems of implementation have plagued programs in crime and delinquency for decades. The bibliography of literature on the rehabilitation of criminal offenders by Lipton, Martinson and Wilks (1975) is best remembered by many for the generalization in Martinson's (1974) summary "With few and isolated exceptions, the rehabilitative efforts that have been reported so far have had no appreciable effect on recidivism." The Lipton et al. review was not alone among disappointing reviews (Whitehead & Lab, 1989; Wright & Dixon, 1977).

But the conclusion that "nothing works" was not a correct conclusion to draw from this literature. The National Research Council Panel on Research on Rehabilitative Techniques (Sechrest, White, & Brown, 1979) noted that flaws in evaluation methods and – more important – limitations in the strength and fidelity of implementation of programs do not justify the conclusion that effective programs cannot be applied. Lipsey (1992) conducted a meta-analysis of 443 juvenile delinquency treatment programs to examine the relation of program characteristics, subject characteristics, researcher characteristics, and evaluation design to program effects. Lipsey found that effects overall were small, but that the "dosage" of treatment program and features of the treatment program itself were associated with the size of effects. More structured, behavioral, and multimodal treatments were more effective. Lipsey's "dosage" is equivalent to strength of implementation and his other findings about structure and

implementer characteristics suggest fidelity of implementation to a program plan. Lipsey and Wilson (1998) examined a subset of studies involving more serious delinquents and found that duration of treatment, integrity of treatment implementation, program age, and involvement of mental health treatment personnel were predictive of size of interventions' effects.

These issues of strength and integrity of program implementation are bound to influence the effectiveness of school-based prevention programs as well. Prior research on this topic implies that the most important initial question to be answered in an evaluation of school-based prevention programs is not "what works?" but "what was done?"

### **Evaluations Probably Overestimate the Effectiveness of Interventions**

Evaluations and other research has shown that some kinds of interventions to reduce problem behavior can be effective. For example, we cited evidence earlier that behavioral and cognitive behavioral interventions have repeatedly been shown to be effective in reducing problem behavior or improving attendance. In many cases, however, the evidence derives from optimal or at least good implementations of the intervention in question. Often investigators train implementers, monitor their behavior, correct implementation errors, or are directly involved in the application of the method being studied. In some cases, the evidence is derived from schools that were especially amenable to program implementation. For example, the developer and principal evaluator of one popular instructional program routinely requires that 80% of faculty vote to adopt the program by secret ballot before the program will be attempted in the school (Jones, Gottfredson & Gottfredson, 1997; Mathews, 1999; Walberg & Greenberg, 1998). This location selection bias in evaluations of this program, named "Success for All" by its developers is not emphasized in their descriptions of it (Slavin, Madden, Dolan, & Wasik, 1996) who titled their recent account *Every Child, Every School: Success for All*.

In research or demonstration programs, the capacity of the school to serve as an implementation site is likely to be greater than the typical school – evidenced at least in part by its willingness to participate in a research project. In addition, the particular implementers (teachers or others) are likely to be selected for their willingness to implement a program, cooperate with evaluators, and their ability quickly to learn to put new methods in place. In all of these respects, they are likely to produce better instances of implementation than would be achieved in the average school, let alone schools where many youths are engaged in high levels of problem behavior or where faculty are demoralized.

Schools and their personnel differ in the extent to which they are able or willing to produce strong and faithful implementations of intended programs. For example, Botvin, Batson, et al. (1989) reported variation in the quality of implementation across teachers in an experiment in nine urban schools. In another study of eight urban schools, Botvin, Dusenbury, et al. (1989) reported that the amount of Life Skills Training material covered by teachers ranged from 44% to 83%. Positive effects of the program were found only for a high implementation group (with a mean completion rate of 78%), not for the low implementation group (mean of 56% delivery). In

a third study by Botvin et al. (1990), coverage of the curriculum ranged from 27% to 97%, with 75% of students exposed to 60% or more of the material. The level of implementation was strongly related to the effectiveness of the intervention.

Health and mental health researchers refer to the distinction between intervention *efficacy* (an efficacious intervention can work) and *effectiveness* (how well the intervention does work when applied in typical settings by typical practitioners). In this language, some interventions to reduce or prevent problem behavior have been shown to have efficacy, but almost no interventions have been shown to be generally effective. If efficacious interventions are ineffective, it is likely that flawed implementation is a large part of the reason.

## **Hypothesized Factors Leading to Successful Program Implementation**

The National Study of Delinquency Prevention in Schools (NSDPS) was designed to allow an examination of the following categories of factors as potential explanations of the successful implementation of prevention programs:

*Organizational capacity.* Organizational capacity means the capacity of the school to implement strong programs. This includes, but is not limited to, the school's capacity to implement delinquency programs or arrangements to promote a safe environment. Our conception of organizational capacity is general, and schools lacking organizational capacity are expected to have difficulty implementing sound instructional programs of all types, to have difficulty marshaling parental and staff support for innovations, and projecting a competent, effective image to the community. Elsewhere (G. Gottfredson & Gottfredson, 1987) we have referred to the limited *infrastructure* for program development in a school with limited organizational capacity. Limited organizational capacity is indicated by poor staff morale, a history of failed programs or other innovations in the past, and a sense of resignation about the possibilities for improving the school. Experience implies that when schools score low on the Morale scale of the Effective School Battery (G. Gottfredson, 1999), improvement programs are difficult to implement. Reviews of factors associated with implementing and sustaining innovations (Berman & McLaughlin, 1978; McLaughlin, 1990), evaluations of school-team approaches to reducing school crime (Social Action Research Center, 1979, 1980), and our own work (D. Gottfredson, Gottfredson, & Hybl, 1993; D. Gottfredson & Gottfredson, 1992; D. Gottfredson et al., 1998; G. Gottfredson, 1982; G. Gottfredson, Gottfredson, & Cook, 1983; G. Gottfredson & Gottfredson, 1987) on implementing and evaluating delinquency prevention programs and programs to manage student behavior all imply that organizational capacity is important for implementation.

Turnover in personnel or unpredictability in staff responsibilities is expected to undermine the orderly execution of many school functions, including the application of activities to promote a safe and orderly environment and other prevention activities. Turnover is related to expectations or intentions to quit a work environment and to organizational commitment (Mobley, Griffith, Hand, & Meglino, 1979; Porter & Steers, 1973; Porter, Steers, Mowday, &

Boulian, 1974), and so organizations with high levels of turnover may have more difficulty implementing high quality prevention activities not only because of the direct effects of instability in staffing but also because of the organizational climate concomitants of turnover.

*Leadership and staff traits and past accomplishments.* Leadership means orienting a group towards goals and objectives; providing incentives, feedback, and supervision to further those goals and objectives; arranging the support needed and removing obstacles; and planning the steps and arrangements necessary to move towards goals. Research on leadership implies that two (initiating structure and consideration; Fleishman, & Harris, 1962) or more (Clark & Clark, 1990; G. Gottfredson & Hybl, 1987; Yukl & Van Fleet, 1992) dimensions are useful in describing leadership behavior. Educational research implies that the leadership of a principal or of another responsible party in a school is important in improving educational programs (Hall, 1987; Hall, Hord, Huling, Rutherford, & Stiegelbauer, 1983; Hord, 1981). Workers' general ability has been found to be a robust predictor of quality of work performance across a wide range of occupations (Schmidt & Hunter, 1998; Schmidt, Ones, & Hunter, 1992), measures of the ability or literacy of teachers are important predictors of test score gains (Ferguson, 1991; Ferguson & Lad, 1996) in studies in two states and in a recent meta-analysis (Grenwald, Hedges, & Laine, 1996). Another personality trait, conscientiousness, has also been identified as a relatively robust noncognitive predictor of performance across a broad range of occupations (Sackett and Wanek, 1996). Conscientiousness is one of five broad personality dispositions helpful in summarizing information about personality (Digman, 1990; Goldberg, 1992). Workers high in conscientiousness are dutiful, organized, and dependable. Finally, G. Gottfredson (1994) has shown that an inventory of the past accomplishments of school principals distinguishes those who have been identified by their professional organizations as outstanding achievers. Accordingly, leadership behaviors, traits and past accomplishments of leaders or program implementers are expected to be related to quality of program implementation. We have not attempted to measure general ability in the NSDPS because we assumed that principals would regard this as intrusive and reduce response rates in our surveys. But we have measured leadership behaviors and conscientiousness.

*Budget and resources.* Adequate funding and other resources are presumably required for the successful implementation of any intervention. This includes budget support for such things as materials needed, payment of workers, transportation, or supplies. Presumably it is not *total* budget resources allocated to education or to a school that is required for the successful implementation of specific preventive interventions. Instead, what is required may be resources available for that specific intervention or the control over money or resources by those who operate the program or activity, so that it can be allocated in needed ways. The availability of needed resources should facilitate implementation and their lack thwart it.

*Organizational support – training, supervision and support.* Most of today's state of the art approaches to the prevention of problem behavior were not a part of the pre-service training of many of today's educators. Some approaches, such as the use of behavioral techniques, have been understood for many years. But even such established methods were not always included in

the curriculum of teacher training institutions in previous decades. More recent methods, such as cognitive-behavioral training and an emphasis on normative expectations for behavior, are less likely to have been a part of the preparation of most of elementary and secondary educators now working. Accordingly, it is to be expected that training of school personnel will be necessary for the implementation of a variety of preventive interventions in schools. The quality of implementation will probably depend on the extensiveness and quality of training. Quality of training is assumed to include features such as the use of behavioral modeling (Goldstein & Sorcher, 1973; Sorcher & Goldstein, 1972) methods, opportunities to anticipate and resolve obstacles to application of the method, and follow-up training or coaching.

Supervision and support are facets of leadership behavior that are important components of organizational support. Supervision provides direction for worker behavior when workers require direction; and it provides coaching, scaffolding, and corrective feedback when that is required; and it can encourage striving for superior performance when it is linked with social or other rewards.

*Program structure conducive to integrity to program models.* We expect that the quality and strength of implementation of many interventions will depend on the availability of structures that promote full and faithful implementation. Such structures include manuals specifying the procedures to be used; written implementation standards specifying such things as how much, to whom, when, and with what duration interventions are to be applied; and quality control mechanisms such as procedures for observing, documenting, or comparing actual implementation with standards for implementation.

*Integration into normal school operations, local initiation, and local planning.* (a) Some activities or programs are easier to integrate into school activities than are others. Schools are characterized by certain pervasive regularities (Sarason, 1971). For example, almost all secondary schools hold classes and in most, students move from one time-designated subject-matter class to another. Large numbers of people tend to move from class to class at the same time, followed by periods of relative quiet with instruction or study occurring. Activities that fit into classroom and class periods are easier to integrate into school activities than activities that could disrupt the school schedule. (b) Most of the people inhabiting the school are “regulars” – that is they are there every day for most of the day. When individuals who are not “regulars” enter the school it usually upsets scheduled activities somewhat. For example, when an adult must substitute for an absent adult teacher, the class is more disorderly than usual and the orderly flow of instruction tends to be disrupted. All of these features of schools are remarkably similar from school to school, so much so that a school might seem highly unusual if even one of these features were altered. We expect that prevention interventions which are matched to the regularities of the typical school will tend to be implemented in stronger form than those which either go outside of the regularities of the school or disrupt it. For example, activities which disrupt class schedules by pulling students from classes or requiring people to leave the premises will be difficult to implement. Activities which involve “regular” inhabitants of the school will operate more dependably than those which rely on persons who are occasional inhabitants

(visitors). (c) Some parts of school programs are mandated by state or local education agency regulations, and other activities or arrangements arise locally through the choices, initiative, or habitual ways of acting of school insiders. Programs, activities, or arrangements attempted through the intervention of school outsiders often generate resistance. Sometimes this is because they are not well matched with the regularities of the school to which a school's inhabitants are accustomed. Sometimes this is because the proposed innovation competes with priorities of those in a school. Sometimes it is because of a history of ill will or resentment. Whatever the reason, activities developed or selected by school insiders may be easier to implement in schools. (d) Quantitative synthesis of previous research (Lipsey, 1992) has suggested that interventions implemented by researchers are usually more effective than those implemented by others. Several interpretations of this observation are possible. One is that research personnel make use of more information, more valid information, or more effective techniques in devising interventions. A second interpretation is that research personnel attend more to problems of strength and integrity of program implementation.<sup>1</sup> We hypothesize, that the use of information in selecting or designing prevention activities is important, and that those schools making use of more or better information will implement sounder programs. Information may be provided by researchers or experts, technical assistance providers, media, or other sources.

*Feasibility.* People arrive at the school pretty much all at once at a designated common starting time in the morning and most formal activity ends in the afternoon when most persons leave the premises. Few people come and go during the school day except at its beginning and end. Activities that take place during the regular school day can be more easily implemented than those that take place outside this time interval. Other obstacles also sometimes impede feasibility. These may include the requirement for special resources or materials not generally available, transportation, and so on.

*Level of disorder.* Finally, everything is easier to accomplish in an orderly school. Certainly this is true of instruction. School disorder is expected to make the implementation of any intervention more difficult to implement, and this includes interventions to prevent or reduce disorder. School orderliness is an element of organizational capacity (listed first above), but we list it separately because of its special importance in the present context.

This list of factors linked to implementation level is derived from our efforts to understand the success and failure of implementation of programs directed at reducing delinquency in schools. It is distilled from the review of factors associated with implementing and sustaining innovations (Berman & McLaughlin, 1978; McLaughlin, 1990), evaluations of school-team approaches to reducing school crime (Social Action Research Center, 1979, 1980), research on the role of leadership in improving educational programs (Hall, 1987; Hall, Hord, Huling, Rutherford, & Stiegelbauer, 1983; Hord, 1981); the more general research on leadership (Clark & Clark, 1990; Yukl & Van Fleet, 1992); reviews of effective school reforms (Miles, 1980, 1986;

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<sup>1</sup>Another possibility is that researchers tend to select schools where implementation is easier to achieve as research sites.

Miles, Farrar, & Neufeld, 1983), a review of organization development efforts in schools (Fullan, Miles, & Taylor, 1980); and research on the implementation of instructional programs (Fullan & Pomfret, 1977) as well as from our own work (G. Gottfredson, 1982; G. Gottfredson, Gottfredson, & Cook, 1983; G. Gottfredson, 1987b; D. Gottfredson, Gottfredson, & Hybl, 1993; D. Gottfredson & Gottfredson, 1992) on implementing and evaluating delinquency prevention programs and programs to manage student behavior.

## **Goals and Objectives of the Project**

Putting effective prevention programs in place requires that the field confront the problem of quality of implementation and build effective strategies to enhance it. The first aim in the present research, therefore, has been to describe the range of prevention program types being implemented in school-based programs and to test the validity of factors hypothesized above as affecting implementation. The present study addresses these issues. It also seeks to devise workable measures of quality of prevention activity implementation that can be put into operation through surveys of program implementers, to provide a description of what is being done and how well, and to provide a first thorough account of the nature and extent of what schools now do to prevent problem behavior and to promote safe and orderly environments.

*Classification and description of existing programs.* The first product of the present effort is a classification of school-based prevention activities in terms of rationale (objectives) and program model. A taxonomy was needed to allow for estimates of the incidence of each type and combination of types. This report provides these estimates.

*Empirical validation (tests) of predictive factors.* A second product is a set of empirical predictors of success in implementing prevention programs. These research-based indicators, which are based in observable features of program design, location, arrangements, staffing, and so forth should be useful in (a) selecting promising activities or programs, (b) allocating the appropriate level and type of assistance necessary to foster high quality implementation, and (c) understanding why certain programs do not produce the expected results. They should find additional applications as program assessment tools.

*Program assessment tools.* In the course of this research we have constructed instruments to assess the level and content of prevention activity as well as brief survey-based assessments of school organizations, individuals, program materials, training, structures and arrangements. A number of these indicators have been shown to be predictors of quality or extensiveness of program implementation and should have use as tools to diagnose program problems and pinpoint areas where assistance or development is needed if a program is to be successfully implemented.

## Plan of the Research

The design for the research called for the collection of five main kinds of information by executing an equal number of steps.

1. Examples of prevention and intervention models being used in schools were collected, examined and classified to develop a comprehensive taxonomy of activities. To locate activity types, we scrutinized lists of activities recommended by government agencies, technical assistance providers, professional organizations, promotional literature, regional educational laboratories, and the scientific literature. The resulting taxonomy guided the development of other data collection instruments. This first step was completed at the end of 1996.
2. Principals in a national probability sample of schools were surveyed to identify activities their schools had in place to prevent or reduce delinquency, drug use, or other problem behavior or to promote a safe and orderly school environment. They indicated if their school had activities of various types, named the activities, and provided the names of individuals who could provide details about each activity named. The resulting lists of school prevention and intervention programs were used to sample prevention activities in a subsequent step. Principals also described features of their schools and reported on past experiences with the implementation of programs and on school staffing. These surveys were conducted in the spring, summer, and early fall of 1997.
3. Individuals knowledgeable about school prevention activities (called “activity coordinators”) were surveyed to obtain detailed descriptions of specific prevention activities and to describe certain features of their school. To conduct these surveys, we developed a set of fourteen activity coordinator questionnaires corresponding to fourteen categories in our taxonomy of prevention models. To the extent possible, the questionnaires for all categories were parallel. Thus, although the specific content of questionnaires for different areas was appropriate for activities of each type, the nature of information sought was parallel. Wherever possible each questionnaire sought information about the extent to which best practices were used, about the extensiveness of student exposure, about training, and so forth. Activity coordinators also reported about themselves and about school support and supervision for prevention activities. These surveys were conducted in the spring of 1998.
4. Teachers and students in participating schools were surveyed to obtain their reports of their own participation in prevention activities, about prevention activities in the school, and to obtain reports about victimization, safety, delinquent behavior, school orderliness, and other aspects of school climate. These surveys were conducted in the spring of 1998. Generally, all teachers in participating schools were sampled, and a sufficient number of students were sampled to produce an estimated 50 respondents per school.

5. Principals were surveyed for a second time in the spring of 1998. They reported about school wide disciplinary policies and practices, crimes occurring in the school, certain school-wide arrangements such as scheduling, architectural features of the school, and other characteristics of the school about which the principal was the most appropriate informant. Principals also reported about their own practices, biographical history, and personality style.

Table 1.1 summarizes the surveys conducted and the type of information collected in each. The table also shows that certain archival information is also available – drawn from the Common Core of Data maintained by the U.S. Department of Education or provided by the mailing list vendor.

The sample was designed to describe schools in the United States and to describe schools by level and location. Accordingly a sample of public, private, and Catholic schools, stratified by location (urban, suburban, and rural) and level (elementary, middle, and high) was drawn. A probability sample of 1287 schools (143 for each cell in the sample design) was selected with the expectation that if a response rate of 70% could be achieved there would be 300 schools responding at each level and 300 schools responding from each location (about 100 per cell or 900 schools overall).

## **Conducting Surveys and Participation Rates**

*Phase 1 Principal Survey.* In conducting the phase 1 principal survey (PQ1), we determined that of the 1287 entities sampled, 7 were found to be closed and one not to be a school – leaving 1279 schools in the sample. In addition, the location or level classifications were found to be incorrect for some schools, so the number of actually sampled schools is sometimes greater and sometimes less than 143 per cell.<sup>2</sup> Overall, useful responses were received from 848 schools in PQ1, 66.3% of those from which responses were sought. Table 1.2 shows that the participation rates ranged from a low of 59.0% among urban high schools to a high of 74.6% among rural elementary schools.

The effort that was required to obtain completed questionnaires from schools far exceeded our expectations. One indication of the difficulty involved are the counts of telephone contacts with schools that were required to obtain cooperation. In all, we *completed* 8,783 telephone calls to schools to request PQ1 data. The number of calls per school ranged from 0 (some schools returned questionnaires without having to be called) to 36. The average number of telephone calls made to schools that had to be called at least once was 7.9 completed calls. In addition, survey materials were resent once by Federal Express to 964 schools that had not responded.

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<sup>2</sup>The location codes obtained from the mailing list vendor (the original source of which was the Common Core of Data developed by the U.S. Department of Education) were often in error. It appears that many schools were misclassified as to location in the CCD. Efforts were made to identify and reclassify misclassified schools.

Table 1.1  
*Measures Employed in the National Study of Delinquency Prevention in Schools*

What is measured	Source of Information					
	Archives	Principal		Teachers	Students	Activity coordinators
Grade levels	T	T			T	
Demographic characteristics	T	T		T	T	
School safety				T	T	
Victimization				T	T	
Drug use, violence, other delinquent behavior, crime			T		T	
School climate — morale, discipline related, organizational capacity		T	T	T	T	T
Level of implementation of or exposure to prevention activities			T	T	T	T
Correlates of problem behavior					T	
Leadership style of principal			T	T		
Personality			T			T
Biographical information			T			T
Organizational origins of activities			T			T
Funding sources			T			T
Nature & extent of training			T	T		T
Program/activity features			T			T
Staff stability vs. turnover		T				T
Relation of implementers to developers			T			T

*Note.* PQ1 = Principal Questionnaire for Program Identification; PQ2 = phase 2 Principal Questionnaire. Certain additional information collected by Westat for a small number of schools that were site-visited and in a survey of local education agency personnel is not covered by the present report.

Table 1.2

*Principal Phase 1 Questionnaire Response Percentages by Level and Location*

Location	School Level			Total
	Elementary	Middle or junior high	High, vocational, combined	
Rural/non-urban				
<i>N</i> responding	106	95	106	307
% responding	74.6	69.3	73.1	72.4
<i>N</i> sampled	142	137	145	424
Suburban				
<i>N</i> responding	92	105	85	282
% responding	64.8	70.0	62.0	65.7
<i>N</i> sampled	142	150	137	429
Urban				
<i>N</i> responding	92	88	79	259
% responding	62.2	61.1	59.0	60.8
<i>N</i> sampled	148	144	134	426
Total				
<i>N</i> responding	290	288	270	848
% responding	67.1	66.8	64.9	66.3
<i>N</i> sampled	432	431	416	1279

*Note.* The initial sample contained 1287 entities – 143 per cell in a frame with three categories of location and three categories of school level. Of the 1287 entities, seven were found to be closed and one not to be a school – leaving 1279 schools in the sample. In addition, the location or level classifications were found to be incorrect for some schools, so the number of actually sampled schools is sometimes greater and sometimes less than 143.

Many schools still indicated to our callers that they had not received or had misplaced the questionnaires, and our response was to mail another set of replacements. This was done for 531 schools (42% of the sample). Replacements for “lost” questionnaires were resent twice to 118 schools (9%) and three times to 21 schools (2%). When we could obtain school telefax numbers, we sent faxes to nonresponding schools. One telefaxed request was sent to 225 schools and two telefaxed requests were sent to 13 schools. Information about effort required to obtain data in phase 1 is summarized in Table 1.3.

Cooperation from schools was more difficult to obtain than we anticipated. We noted a reluctance to cooperate with surveys on the part of many principals, who often see themselves as overburdened with surveys and are cynical about their value. Some districts have erected barriers to research. Evidently a growing number of district data collection requirements, educational dissertation research projects, and requirements that programs be evaluated has led to greater resistance to research in recent years — although few of these evaluations or dissertations contribute to the literature. We speculate that the large number of evaluations – often required by funding agencies – that contribute little or nothing to knowledge because they are not even published, actually become an obstacle to the development of knowledge because they make serious research more difficult to conduct.

*Collaboration by Westat in Phase 2 Data Collection.* In view of the difficulty in obtaining data from schools, we sought ways to bring greater resources to the research. NIJ personnel assisted us in working with the Department of Education to bring about a merger of our ongoing study and resources intended to address similar problems in the form of a contract ED had with Westat, Inc., to gather information about school violence and programs sponsored by the Safe and Drug Free Schools and Communities Act. We proposed that Westat assist in collecting student and teacher surveys in a sample of about 600 secondary schools, and that the data collected by GAInc and Westat be shared. A memorandum of understanding was agreed upon by ED and NIJ to formalize the cooperative enterprise.

One implication of the involvement of Westat (under contract from ED) was that the teacher and student survey instruments had to go through an approval process at the ED and then the OMB approval process. That process was completed just in time to collect data in the spring of the 1997-98 school year. A second implication was that a somewhat revised approach to recruiting secondary schools to participate in the second phase of surveys was taken. In keeping with traditional ED and Westat approaches, first State Departments of Education and then local education agencies were approached to seek their concurrence with the surveys to be conducted in the second phase (another principal questionnaire, program implementer questionnaires, student questionnaires, teacher questionnaires, and – to answer questions important to ED – local education agency questionnaires). This change in strategy was not adopted for phase two surveys of elementary schools, except for those elementary schools in school districts in which Westat would be seeking the participation of secondary schools.

Table 1.3  
*Steps Taken to Obtain Responses in Phase 1 Principal Survey*

Initially Planned	Implemented
	Heads up mailing to 1287 principals indicating that questionnaire will be coming
Initial mailing of 900 questionnaires	Initial mailing of 1287 questionnaires  1213 reminder post-cards
Telephone contact with school to seek return	1112 schools required calls because they did not return materials without one; 8,783 completed phone calls; 7.9 telephone contacts per school that initially failed to respond (range 1-36)  38 requests for district approval for principal to answer questions filed  964 second survey deliveries by Fed Express with questionnaires, personal note, letters from National Association of Elementary School Principals and National Association of Secondary School Principals
Replacement mailings of survey materials	670 ADDITIONAL replacement delivery to principals who lost or discarded materials (531 once, 118 twice, 21 three times)  6 principals interviewed  ±751 mailings with letter from NIJ director  238 telefax requests for completion

Westat personnel identified “on-site coordinators” in secondary schools and GAInc personnel identified “on-site coordinators” in elementary schools. These individuals assisted in the collection of the surveys conducted in the second phase.

Because a primary purpose of the research is to learn about the implementation of prevention activities, participation in phase 2 logically depends on participation in phase 1. Nevertheless, because excluding those schools that did not participate in phase 1 from the collection of data about school safety, victimization, and other characteristics of principals, teachers, students, and schools would necessarily limit the representativeness of those data, we decided to make an effort to include in the phase 2 data collection effort every school that had not affirmatively refused in phase 1. A short form prevention activity screener was used to identify over the telephone or by telefax prevention activities for schools that had failed to provide this

information in phase 1. Teacher and student questionnaires were sought only in secondary schools. Principal and prevention activity questionnaires were sought in all schools in the sample (unless they had affirmatively refused to participate in phase 1).

As expected given the extensive effort to secure participation in phase 1, we were not highly successful in obtaining cooperation from schools that had failed to participate in that first phase. Accordingly, final response rates may be viewed essentially as the product of phase 1 and phase 2 response rates. For example, if we obtained a 70% response rate in phase 1 and a 70% response rate in phase 2 we would expect to obtain a 49% response rate ( $.7 \times .7 = .49$ ). For some categories of schools we exceeded this expectation, and for some categories we did not.

*Phase 2 Principal Survey.* In conducting the phase 2 surveys, an additional school was found to have been closed, leaving 1278 schools in the sample. Table 1.4 shows the phase 2 response rates and number of respondents to the phase 2 principal questionnaire. Again, obtaining cooperation was most difficult in urban schools, where completed phase 2 principal questionnaires were obtained for 45.5% of the sample. Rural schools were more cooperative, and we obtained completed phase 2 principal questionnaires from 57.1% of rural schools. Participation ranged from a low of 39.6% for urban high schools to 58.4% for rural middle grades schools.

*Student Survey.* We sought the completion of student questionnaires in all secondary schools. Westat personnel obtained rosters of students, and students were systematically sampled (separately by sex or grade level where it was possible to obtain that information) using a sampling fraction that was expected to yield 60 student respondents per school. Usable questionnaires were completed by 16,014 students. Table 1.5 shows information about participation rates for schools in the student survey. Schools with poor levels of student participation are treated as nonparticipants in Table 1.5. Overall, 36.4% of the secondary schools from whom participation was sought in student surveys participated at a useful level. As before, the table shows that participation was better in rural schools than in urban schools, and it was better in middle/junior high schools than in high/vocational/combined schools. Participation ranged from a low of 22.8% of urban high schools to 50.4% of rural middle/junior high schools.

*Teacher Survey.* We sought the completion of teacher questionnaires in all secondary schools, and usable questionnaires were completed by 13,103 teachers. Table 1.6 details the participation rates. Again, the table shows that rural schools were much more cooperative than suburban or urban schools. Participation ranged from a low of 39.0% of urban high schools to 59.1% of rural middle/junior high schools.

Although principals of Catholic schools participated in the phase 1 and phase 2 principal surveys at rates comparable to public school principals, few Catholic and private schools cooperated with efforts to include students and teachers in surveys, as Table 1.7 shows. Only 9 of the 31 Catholic secondary schools in the sample participated in student surveys, and only 17 of 105 private schools participated. The low rates of participation by Catholic and private schools,

Table 1.4

*Principal Phase 2 Questionnaire Response Percentages by Level and Location*

Location	School level			Total
	Elementary	Middle or junior high	High, vocational, combined	
Rural/non-urban				
<i>N</i> responding	81	80	81	242
% responding	57.0	58.4	55.9	57.1
<i>N</i> sampled	142	137	145	424
Suburban				
<i>N</i> responding	67	72	60	199
% responding	47.5	48.0	43.8	46.5
<i>N</i> sampled	141	150	137	428
Urban				
<i>N</i> responding	71	70	53	194
% responding	48.0	48.6	39.6	45.5
<i>N</i> sampled	148	144	134	426
Total				
<i>N</i> responding	219	222	194	635
% responding	50.8	51.5	46.6	49.7
<i>N</i> sampled	431	431	416	1278

*Note.* The initial sample contained 1287 entities – 143 per cell in a frame with three categories of location and three categories of school level. Of the 1287 entities, eight were found to be closed and one not to be a school – leaving 1278 schools in the sample. In addition, the location or level classifications were found to be incorrect for some schools, so the number of actually sampled schools is sometimes greater and sometimes less than 143.

Table 1.5

*Phase 2 Student Questionnaire School Participation Percentages by Level and Location*

Metropolitan status	School level		Total
	Middle or junior high	High, vocational, combined	
Rural/non-metro			
<i>N</i> participating	69	56	125
% participating	50.4	38.6	44.3
<i>N</i> sampled	137	145	282
Suburban			
<i>N</i> participating	57	41	98
% participating	38.0	29.9	34.1
<i>N</i> sampled	150	137	288
Urban			
<i>N</i> participating	56	31	87
% participating	38.9	23.1	31.3
<i>N</i> sampled	144	134	278
Total			
<i>N</i> participating	182	128	310
% participating	42.2	30.8	36.6
<i>N</i> sampled	431	416	847

*Note.* Classification of schools by level and location reflects school status known to research team at time of phase 2 survey. Participation is defined as completion of a usable number of student questionnaires. (See Appendix B.)

combined with the relatively small number of such schools in the representative sample, implies that it will seldom be appropriate to examine separate estimates for these schools.

*Activity Coordinator Survey.* Activity questionnaires were used to obtain detailed descriptions of the nature, level, and quality of implementation of specific prevention activities. These activity questionnaires also sought additional information about the school. From the total sample of prevention activities identified in phase 1, we sampled one activity in each of 14 categories per school. In addition, we sampled all D.A.R.E. and peer mediation programs because of special interest in these particularly popular prevention programs. This sampling could result in up to 16 activities sampled per school. Sometimes, the principal had named the same individual as knowledgeable about two or more of the activities that turned up in our sample. When this occurred, we made an effort to determine in a telephone inquiry of the school's principal whether each activity still existed in the school and to get the principal to identify different individuals capable of describing each of the sampled activities. If we were

Table 1.6

*Phase 2 Teacher Questionnaire School Participation Percentages by Level and Location*

Metropolitan status	School level		Total
	Middle or junior high	High, vocational, combined	
Rural/non-urban			
<i>N</i> responding	81	75	156
% responding	59.1	51.7	55.3
<i>N</i> sampled	137	145	282
Suburban			
<i>N</i> responding	70	54	124
% responding	46.7	39.4	43.2
<i>N</i> sampled	150	137	287
Urban			
<i>N</i> responding	70	53	123
% responding	48.6	39.6	42.4
<i>N</i> sampled	144	134	278
Total			
<i>N</i> responding	221	182	403
% responding	51.3	43.8	47.6
<i>N</i> sampled	431	416	847

*Note.* Classification of schools by level and location reflects school status known to research team at time of phase 2 survey. Participation is defined as completion of a usable number of teacher questionnaires.

Table 1.7

*Survey Participation Rates by School Auspices*

Survey	Auspices		
	Public ( <i>N</i> = 1041)	Catholic ( <i>N</i> = 88)	Private ( <i>N</i> = 149)
Principal Phase 1			
<i>n</i> responding	696	63	89
% responding	66.9	71.6	59.7
Principal Phase 2			
<i>n</i> responding	537	47	51
% responding	51.6	53.4	34.2
Student			
<i>n</i> secondary schools	711	31	105
<i>n</i> responding	284	9	17
% responding	39.9	29.0	16.2
Teacher			
<i>n</i> secondary schools	711	31	105
<i>n</i> responding	359	15	29
% responding	50.5	48.4	27.6

Table 1.8  
*Program Coordinator Survey Response Rate*

	<i>N</i>	% of all	% of requested
Initially sampled activities	8043	100.0	—
Determined to exist <sup>a</sup>	5067	63.0	—
Determined not to exist, de-selected <sup>a</sup>	796	9.9	—
Existence undetermined <sup>a</sup>	2180	27.1	—
Activities remaining in sample at survey time	7247	90.1	—
De-selected <sup>b</sup>	127	1.6	—
Sent incorrect booklet <sup>c</sup>	16	0.2	—
Potential responses	7104	88.3	100.0
Responded	3691	45.9	51.9
Refused	668	8.3	9.4
Other non response	2745	34.1	38.6

<sup>a</sup> At time of phase 2 pre-survey telephone inquiry

<sup>b</sup> De-selected to avoid overburdening individual respondents. Each individual was limited to describing two activities.

<sup>c</sup> Program Coordinator Questionnaire for the wrong activity type sent through researcher error.

unsuccessful in this attempt to “unburden” respondents by obtaining substitute respondents, we re-sampled so that a person was not asked to describe more than two activities. A summary of the result of effort to obtain completed Activity Coordinator questionnaires is presented in Table 1.8. Of 8,043 initially sampled activities, we sent booklets for 7,104 activities to identified individuals. Of these, 3,691 were completed (45.9% of all sampled activities and 51.9% of the activities for which completion was requested).

*Level of Effort Required to Collect Phase 2 Data.* Here we provide information about the level of effort required to collect phase 2 data by summarizing the amount of contact with schools required to obtain the principal and activity questionnaires from elementary schools.

Of the 432 elementary schools in the *initial* sample, 102 had affirmatively refused to participate. We made no further contact with these schools. Of the 330 remaining schools, 20

never refused and also never provided any information or otherwise participated and we did not initiate phase 2 activity. This left 310 elementary schools at which we directed effort to collect phase 2 data. These 310 schools were contacted by telephone or telefax a total of 2,993 times. These telephone contacts were frustrating because the most common outcome, occurring for 69% of the calls, was the requirement that we call back again at another time. The mean number of calls per school in phase 2 was 9.7. The range in the number of contacts per school was 1 (refusing schools) to 25 (difficult cases). A quarter of the schools required more than 13 phase 2 contacts.

To reduce the problem that we had observed for phase 1 of schools indicating that they had not received or had misplaced survey materials, we did not use the U.S. postal service for delivery or return of survey materials. Instead, we used a service provided by United Parcel Service that allowed us to track the status of each item and tell school personnel the name of the adult who had signed when the item was received. Although this service was expensive, it very much reduced the problem of misplaced survey materials. Use of this procedure required a minimum of two additional contacts with UPS for each school (out and return) plus more contacts whenever there was a delay in delivery or return, or when a school claimed that a package was not received.

Information has not been tabulated for the secondary schools for which Westat handled the data collection. That effort was funded at a higher level, involved a larger staff, and made use of Federal Express rather than UPS delivery. It was complicated by the requirement of obtaining concurrence of the districts in which schools were located, and was made more difficult by the additional burden of teacher and student surveys (see Crosse, Burr, Cantor, & Hantman, 2000).

*Reasons for Nonparticipation.* Additional exploration of patterns of nonparticipation was made by examining information about the location of schools in the sample from the 1990 census of population using school zip code to geocode the schools. Details of the correlations of zip code level community characteristics with survey participation are provided in Appendix Table B1.1. Urbanicity was the most robust correlate of participation. We also tried to understand refusal by tabulating the reasons given by those who affirmatively refused to participate in the phase 1 principal survey. In some cases, a policy of not participating in surveys was cited. Most often, however, principals indicated they were too busy or the burden imposed was too great. Details are shown in Appendix Table B1.2. Additional insight into school and district nonparticipation is provided by Crosse et al. (2000).

## **Organization of the Remainder of the Report**

Chapter 2 describes the nature and extent of problem behavior in schools. It organizes reports by principals, teachers, and students, about crime and problem behavior. It also presents information about student and teacher perceptions about the safety of their schools. Comparisons with some other sources of information about problem behavior in schools are made.

Chapter 3 describes activities in schools to prevent or reduce problem behavior or to promote a safe and orderly environment. It begins by describing the development of a comprehensive classification of prevention activities, programs, and arrangements in schools. Then empirical evidence on the extent of deployment of these activities is summarized. It describes school wide policies and arrangements, school rules and discipline practices, and the nature and extent of discretionary activities to prevent problem behavior or promote safety in schools.

Information about program intensity and the extent to which school activities employ “best practices” is summarized in Chapter 4. This chapter explains the importance of program intensity and fidelity to good practices. It describes the measures of intensity and fidelity to good practices employed in the present research, provides a structure for assessing the adequacy of school prevention activity, and describes the variability observed in program quality.

Chapters 5 and 6 summarize evidence about the correlates of program quality – testing some hypotheses about the conditions and arrangements that make quality program implementation possible.

Finally, Chapter 7 offers recommendations based on information developed in this inquiry, and it offers speculations about potentially useful practices.

Appendices contain details about measurement and methods that are not necessarily described in the body of the report. For example, information about the content of scales used to measure constructs involved in the research and about their measurement properties is provided in appendices.