

CHAPTER 1

Structuring School-Based Interventions to Achieve Integrated Primary, Secondary, and Tertiary Prevention Goals for Safe and Effective Schools

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INTRODUCTION

In 1992, C. Everett Koop and his associates in the medical field declared interpersonal violence to be the number one public health problem in this country (See Koop & Lundberg, 1992). Little has changed within our society during the ensuing years to alter this assessment. Destructive forms of youth behavior now routinely include violent, delinquent acts, school failure and dropout, bullying and sexual harassment, and substance abuse. Gunshot wounds have replaced auto accidents as the leading cause of paralysis among young people (Centers for Disease Control, 1994). Today's youth engage in a broad range of destructive and risky forms of behavior that pose a danger to themselves, others, and the larger society (Loeber & Farrington, 1998).

Evidence suggests that the United States has evolved into the most violent developed country in the world (Grossman, 1995; Osofsky, 1997; Satcher, 2000, 2001; Zimring & Hawkins, 1995). Tragically, between 4,000 and 5,000 U.S. children and youth die from gunshot wounds each year. Although the school shooting tragedies of the mid- to late-1990s seem to have abated, there are continuing reports of student conspiracies to commit such acts that have been detected before the fact. Furthermore, U.S. males under the age of 25 die at a rate approximately 15 times higher than that of any other developed country (Osofsky, 1997). Our society seems to be caught up in an epidemic of violence, a substantial portion of which is accounted for by youth under the age of 19 who use handguns and other weapons to settle disputes (Fagan, 1996). Most of these involved youth are males although females seem to be narrowing the gender gap in the areas of juvenile crime and gang activity (Hawkins, 1996).

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Grossman (1995), in his seminal book titled *On Killing*, argues persuasively that our society inadvertently desensitizes vulnerable children and youth to violence and socializes them to accept it as a means for coping with their social environs and life's challenges. He believes that this cultural shift accounts for much of the tragic youth violence that we are experiencing today. Grossman documents the remarkable increases in the aggravated assault and incarceration rates over the past 30 years that have occurred in parallel with each other. He blames the flood of media violence as a key driving force in the casual acceptance of violence among today's children and youth, especially among those who come from at-risk backgrounds.

These trends represent unfortunate societal changes in which very serious forms of interpersonal conflict, self-destructive behavior, and violations of societal codes have occurred among our children and youth. Other, unfortunate changes have occurred in less socially visible areas including the attitudes and beliefs we hold about each other, the social fragmentation that is rampant in our society, and the incivility which is routinely displayed in our daily interactions with each other. These forms of adult behavior, in particular, provide very poor models for our children and lead to unhealthy socialization practices, which are predictably reflected in our children's values, attitudes, and behavior toward others.

Equally compelling is the growing rift between the informational "haves" and "have nots" as well as the large proportion of poorly educated Americans. With respect to literacy, according to an international comparative study conducted by the government of Canada (Organisation for Economic Co-operation and Development, Statistics Canada, Literacy, Economy, and Society, 1995), the United States had a higher concentration of adults at the *lowest* of five levels of literacy (approximately 20%) than any of the major industrial countries other than Poland. Conversely, the United States had among the *highest* percentages of literacy in the two highest levels (again, approximately 20%). This diminishing "middle class" of literacy is compounded further by the high proportions of persons with an insufficient education. As reported by the National Institute for Literacy (1999), more than 40% of all American adults fall below the benchmark level on the National Adult Literacy Survey of 1993.

These high levels of illiteracy translate directly into high rates of high school dropout with dramatic consequences in life outcomes. In contrast to about 80% of adults 25 and over with bachelor's degrees and 65% of high school graduates participating in the labor force in 1998, only 43% of high school dropouts were employed (U.S. Department of Labor, 1998). The unemployment rate for high school dropouts 25 and older was almost double that of persons with 4 years of high school and almost four times higher than college graduates. With recent dropouts, the picture is even more dismal. Of the 1997–1998 dropouts, more than one in four was unemployed. Sadly, the profile of illiteracy and high school dropout falls disproportionately on individuals with low income and/or persons of color. For every year between 1972 and 1994, persons from low-income backgrounds were twice as likely to drop out than their middle-class counterparts (National Center for Educational Statistics, 1996). Differences among ethnic groups in achievement in all academic areas, including

dropout, remain highly evident on nearly all measures (e.g., U.S. Department of Education, *Digest of Educational Statistics*, 1999).

To be effective in solving these unprecedented challenges now facing us, our society must first collectively own our problems and demand effective solutions. We also must make a firm commitment to addressing the front end of these massive social problems through good faith *prevention* efforts rather than continuing our reactive posture of trying to control them through incarceration, suspension, toleration of high rates of illiteracy and school dropout, and/or the routine assignment of individuals to highly segregated alternative and special education programs.

It is essential that we engage in a national dialogue that recognizes the problems of violence and academic underachievement (especially literacy); we need to acknowledge they are not separate and unrelated problems, but are interwoven. As will be shown through the ensuing content of this volume, the prevention strategies that directly target one of these problem areas tend to have indirect, positive effects on the other target area. Although many chapters herein are, indeed, presented as separate intervention strategies for specific problems (e.g., study skills), we have also attempted to include chapters that bring to bear *integrated* systems of prevention and remediation practices (see Ikeda et al., this volume).

In particular, with respect to violence and destructive behavior, we believe that as a society, we must eschew violence in all its forms as well as the attitudes and less salient, behavioral precursors that can lead to it (e.g., aggression, mean-spirited teasing and bullying, sexual harassment, endorsement of antisocial beliefs such as “fight back, ask questions later,” and so forth). That is, we must (a) change the norms and expectations around aggressive attitudes and behavior and how we relate to each other interpersonally, and also (b) directly address the known risk factors associated with future violent and delinquent behavior by targeting and intervening with at-risk children and youth early in their lives—well before they become invested in these unfortunate beliefs, acts, and behavior patterns (Eddy, Reid, & Fetrow, 2000; Walker et al., 1996).

As a nation, we have undertaken some aspects of raising public awareness and behavioral expectations regarding prevention, especially with respect to school violence. However, we remain extremely concerned about the substantial and persisting investment in reactive and punitive approaches, at both societal and school levels, as a primary strategy for addressing the challenges presented by behaviorally at-risk youth. The reliance by schools on such punitive approaches as suspension, expulsion, and “zero tolerance” policies are ultimately doomed to failure, or at best maintenance of the status quo, unless they are counterbalanced with equally strong investments in comprehensive prevention efforts that can (a) divert at-risk children from a destructive life path early in their lives and school careers, and (b) teach replacement forms of behavior, skills and strategies that lead to positive interpersonal relationships, facilitate academic success, and foster attachment and bonding to the schooling process.

With respect to academic achievement, we propose similar approaches wherein we also change the norms and expectations around achievement outcomes, and directly address the known risk factors associated with illiteracy, school failure, and underachievement early in the lives of children and youth. In recent years, our country has

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engaged in an intensive effort to change such norms and achievement expectations through the instrument of school reform, most notably through the specification of high academic standards (Carnine, 1995, 1997). However, we also question the wisdom of this well-intentioned effort if the end product of raising the achievement expectations “bar” is another set of punitive and reactive programs for students (e.g., retention for failing high stakes tests, no social promotion) and schools (e.g., identification as a “poor quality” school, firing of staff) without equal or more intensive prevention efforts.

Prevention as a Cost-Effective Solution to Promoting Positive Development and Preventing Problems of Those At Risk

Our primary focus in this book is on *prevention*, achievable through the implementation of *evidence-based* intervention approaches. Although this book, like its first edition, describes evidence-based remedial programs, we see a developmental prevention focus as representing long overdue policy and corresponding practices that will allow effective responding to the myriad challenges confronting today’s children and youth. In the professional literature and in popular usage, prevention is typically more often thought of as a “process” rather than as a “goal or outcome” that can be realized through early intervention. We believe it is more useful to think of prevention in terms of *goals and outcomes* and the application of interventions as a *means of achieving them*. Aside from the conceptual clarity that this formulation introduces, it also helps in avoiding the polarization among constituencies that so often occurs around prevention versus intervention issues.

Thus, in public health parlance, interventions designed to keep problems from emerging are said to address *primary prevention goals and outcomes*; in contrast, interventions designed to reverse or preclude harm from exposure to known risk factors are referred to as addressing *secondary prevention goals and outcomes*. Finally, intervention strategies that reduce, rather than reverse, harm among the most severely involved individuals are known as *tertiary prevention approaches*. Ultimately, any comprehensive and cost-effective system for delivering more positive outcomes for our children and youth must incorporate these three types of prevention efforts—which must be achieved through *coordinated* interventions that meaningfully involve at-risk individuals, parents and caregivers, and teachers and peers. Achieving this important goal will require substantial changes in current policy and practice(s).

Effective Prevention Programs Are Known

It is interesting to observe the daily frustrations expressed by teachers, school administrators, policy makers, and the general public about not knowing what to do to reduce behavioral and academic problems or prevent them in the first place. This volume is predicated on the currently available bodies of knowledge supporting the premise that it is not just a question of knowing *what* to do but, rather, of whether we are aware of what we need to do, and *whether we are willing to do it*. This premise is reflected elegantly in McGill-Franzen and Allington (1991) who, with respect to pro-

moting positive reading outcomes, maintain that it is not a matter of knowing what to do, but having the will to do it.

Much *is* currently known about how to address prevention goals and outcomes among today's children and youth in the areas of behavioral adjustment and school achievement. For example, in the realm of social behavior, some recent compilations and syntheses of the existing knowledge base relating to the prevention of youth violence, antisocial behavior patterns, delinquency, and high-risk forms of behavior provide a useful roadmap for policy makers and leaders in this regard (see Greenberg, Domitrovich, & Bumbarger, 1999; Loeber & Farrington, 1998; Satcher, 2000, 2001). Similarly, in reading, we have seen the National Institute on Child Health and Human Development (NICHD) report from the National Reading Panel (2000) entitled *Teaching Children to Read: An Evidence-Based Assessment of the Scientific Research Literature on Reading and Its Implications for Reading Instruction*. A joint product of six major educational organizations—including the American Federation of Teachers, the National Educational Association, the American Association of School Administrators, and the Educational Research Service—has produced an evidence-based document, entitled *What Works: An Educator's Guide to Schoolwide Reform* (American Federation of Teachers, National Educational Association, the American Association of School Administrators, & Educational Research Service, 2000), which reviews the research on 24 schoolwide prevention programs.

The crux of the problem seems to be mustering the will to address the promotion of positive outcomes and prevention of destructive behavior patterns *before* they begin emerging in the lives of our growing at-risk youth population. Given the press on existing intervention resources and the natural resistance to addressing problems either early in their trajectories or early on in the lives of vulnerable, at-risk children and youth, it is not surprising that our prevention actions are anemic (i.e., “Band Aid” interventions that can be delivered quickly without necessary training and investment of financial resources). The view that prevention means “spending money you don't have on problems that do not yet exist” remains much too popular.

Prevention *works* and is well worth the investment (Barnett, 1985; Greenwood, 1999). However, for reasonable prevention goals and outcomes to be realized, resources must be freed up to create a more balanced approach among primary, secondary, and tertiary forms of prevention. We need to invest more resources and to implement effective prevention programs that may require considering the painful task of reallocating *remedial* intervention and support resources from older youth with identified and serious problems to younger children whose current risk status may be unacceptably high.

PREVENTION OF VIOLENCE AND DESTRUCTIVE BEHAVIOR

We will use the remainder of this chapter to flesh out the major themes of this book as follows:

1. We can accomplish more and produce better outcomes through systematic and comprehensive planning wherein we invest in early intervention using evidence-based treatments for purposes of prevention.

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2. We should apply evidence-based and proven, remedial interventions in careful coordination with the assessment of increased risk status and subsequent identification of severe problems.

Using the problems of antisocial and destructive behavior as examples, we will make the case that attention to the above themes will prove far more cost effective in the long run than wagering that children who are pervasively exposed to adverse risk conditions will either (a) be unaffected by them, or (b) will outgrow their problems, without the need for systematic supports, services, and timely intervention. Using the knowledge base on what we know about the etiology and treatment of antisocial behavior, we will illustrate *what we need to know* and *what we need to do* to promote more positive behavioral adjustment outcomes.

As examples of what we need to know, we will describe the path that at-risk children follow from initial risk exposure to later destructive outcomes, the risk and protective factors that operate to accelerate or buffer against the development of antisocial behavior patterns, and the two most critical developmental periods for waging effective prevention efforts. With respect to what we need to do, we will illustrate the role of schools as providing an optimal context for achieving prevention goals and outcomes, and provide examples of evidence-based interventions for achieving primary, secondary and tertiary prevention goals, along with implementation guidelines and recommendations. We will conclude with a call for school psychologists to be allowed to assume a greater role as prevention specialists among the array of current roles they are currently asked to perform in schools.

What We Need to Know: The Path From Risk Exposure to Destructive Outcomes

Child development is powerfully influenced by the operation of *risk* and *protective* factors in a person's life. Table 1 provides a listing of risk factors that are associated with destructive outcomes and a parallel listing of protective factors that can buffer and offset the damaging effects of exposure to risks.

Risk factors are regarded as causal factors, or proxies for same, operating in a developing individual's life; they can lead to unfortunate outcomes and a diminished life quality. In contrast, protective factors are those protective events and influences that shape development in a positive way and/or that serve to reduce or buffer the impact of risk factors.

Owing to the unfortunate social and economic conditions experienced by a substantial portion of our society, many developing children are exposed to a broad range of risks that operate across differing contexts. These contexts commonly include the family, school and neighborhood, community, and larger society; risks within these contexts tend to operate in an overlapping fashion (Hawkins, Catalano, & Miller, 1992). As a rule, the more proximal the risk factors, the greater their influence. Thus, family-based risks are considered to have the greatest impact on the developing child while general societal risks (e.g., social conflict, media violence) are considered to have the most indirect

TABLE 1

**Risk and Protective Factors Associated With Antisocial
and Criminal Behavior**

RISK FACTORS				
Child Factors	Family Factors	School Context	Community and Cultural Factors	
prematurity	Parental characteristics: teenage mothers single parents psychiatric disorder, especially depression substance abuse criminality antisocial models	school failure	socioeconomic disadvantage	
low birth weight		normative beliefs about aggression	population density and housing conditions	
disability		deviant peer group	urban area	
prenatal brain damage		bullying	neighborhood violence and crime	
birth injury		peer rejection		
low intelligence	Family environment: family violence and disharmony marital discord disorganized negative interaction/ social isolation large family size father absence long-term parental unemployment	poor attachment to school	cultural norms concerning violence as acceptable response to frustration	
difficult temperament		inadequate behavior management	media portrayal of violence	
chronic illness			lack of support services	
insecure attachment			social or cultural discrimination	
poor problem solving				
beliefs about aggression				
attributions		Parenting style: poor supervision and monitoring of child discipline style (harsh or inconsistent) rejection of child abuse lack of warmth and affection low involvement in child's activities neglect		
poor social skills				
low self-esteem				
lack of empathy				
alienation				
hyperactivity/ disruptive behavior				
impulsivity				

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Table 1 continued

PROTECTIVE FACTORS			
Child Factors	Family Factors	School Context	Community and Cultural Factors
social competence	supportive, caring parents	positive school climate	access to support services
social skills	family harmony	prosocial peer group	community networking
above-average intelligence	more than 2 years between siblings	responsibility and required helpfulness	attachment to the community
attachment to family	responsibility for chores or required helpfulness	sense of belonging/bonding	participation in church or other community group
empathy	secure and stable family	opportunities for some success at school and recognition of achievement	community/cultural norms against violence
problem solving	supportive relationship with other adult	school norms concerning violence	a strong cultural identity and ethnic pride
optimism	small family size		
school achievement	strong family norms and morality		
easy temperament			
internal locus of control			
moral beliefs			
values			
self-related cognitions			
good coping style			

effects. Patterson, Reid, and Dishion (1992) argue that the quantity and duration of risks matter; that is, the *more* risks one is exposed to and the *longer* the exposure, the greater their negative impact upon the individual's well being, life status, and school-related behavior and performance (see also Loeber & Farrington, 1998).

Numerous longitudinal studies, conducted over the past three decades, have documented the progression from early risk exposure to destructive behavioral manifestations, which, in turn, set the at-risk child up for short-term, negative outcomes that predict longer-term, more serious outcomes (Loeber & Farrington, 1998; Patterson et al., 1992). Currently, thousands of at-risk children and youth are progressing along this well-traveled path. As a general rule, the earlier intervention occurs in this progression,

the greater the likelihood that the child will be successfully diverted from this path and its associated damaging outcomes which play out over the long term (Eddy et al., 2000; Reid, 1993).

Some risk factors seem to operate generically and are associated with multiple and diverse negative outcomes. Others seem to be more directly associated with specific outcomes. For example, Vance, Fernandez, and Biber (1998) conducted a comprehensive analysis of 26 risk and 28 protective factors in terms of their impact on the educational progress of a sample ($N = 652$) of adolescents with very severe behavioral and achievement problems. The sample members were about 15 years old and had an average of 14 risk and 14 protective factors each operating in their lives. Only 1 of the 26 risk factors (substance abuse) was significantly related to the adolescents' educational progress in a negative sense. In contrast, 8 of the 28 protective factors were significantly related to educational progress in a facilitative sense; one additional factor, living at home, was *negatively* related to educational progress. Interestingly, only two of the eight contributing protective factors dealt with academic dimensions. In contrast, four dealt with social relationships and the remaining two were focused on social supports and mentoring.

Risk factors that appear to operate *directly* in the development of antisocial or destructive behavior include the following: (a) getting in trouble with the teacher, (b) failure to engage and bond with the process of schooling, (c) being socially rejected by teachers and peers, and (d) failing academically, especially in reading. There are a host of nonschool-based risk factors that function *indirectly* to impair school adjustment and achievement, including poverty, chaotic and dysfunctional family environs, drug and alcohol abuse by caregivers, neglect, and physical, emotional, and sexual forms of abuse (Hawkins et al., 1992). Children coming out of family situations where they are exposed to such risks are more likely to develop antisocial behavior patterns and to lack school-readiness skills (Loeber & Farrington, 1998; Patterson et al., 1992). In addition, exposure to these risks is likely to negatively impact an at-risk child or youth's life chances and overall quality of life.

Schools themselves can do very little to influence these nonschool risk factors, as their influence occurs outside the school setting and they have very likely registered their negative, destructive effects well before the child enters school. The expertise and resources of public health, including mental health systems, and social service agencies, are necessary to address these risks prior to school age. Doing so in a cost-effective manner remains a great challenge for our society, but, as shown in the chapter by Eddy, Reid, and Curry (this volume), there are effective and reasonably efficient interventions to accomplish this goal.

A key role for schools—and the goal of prevention programs—is to *enhance protective factors* in academic, social-emotional, and mentoring-support domains in order to buffer and *offset the negative effects of risk factors*, particularly in the areas of school adjustment and achievement (Hawkins, Catalano, Kosterman, Abbott, & Hill, 1999). As part of this process, we argue that it is very important for educators to include a specific analysis of the risk and protective factors potentially operating in a vulnerable child's life upon

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entering school, and especially for those children who early on are referred for evaluation and/or specialized assistance or placement. For more information on the evaluation and decision-making processes based upon this approach to assessing student risk status and strengths, see Walker and Sprague (1999) and Sprague et al., this volume.

What We Need to Know: Critical Developmental Periods for Waging Prevention Efforts

The following refrain is often heard in the rhetoric surrounding at-risk children and youth: “It’s never too early to attempt prevention or too late to intervene.” The important wisdom to be gleaned from this observation is that mounting prevention efforts as early as possible in a child’s life can be a highly cost-effective strategy. Equally important, one should *never give up* on any child or youth because of age, regardless of how far along a destructive pathway he or she happens to be. At-risk children or youth should *never* be written off because they are perceived as being past the point where the investment of intervention supports and services will make a meaningful difference in their lives. In particular, at-risk youth need to stay engaged with schooling for as long as possible because of its protective influences that operate over the preadolescent and adolescent age spans (Hawkins et al., 1999).

Because of what we know about the general condition of risk associated with impaired school adjustment, we believe that the developmental periods prior to the beginning of school (0–5) and during the K–Grade 5 elementary school years represent the two most critical opportunities for mounting preventive initiatives to offset later problematic outcomes, including school failure and delinquency. These two periods have everything to do with enhancing school adjustment and academic success and set the stage for coping with the challenges of adolescence. Children who come to school free of neglect and abuse, healthy in a physical and emotional sense, vaccinated, and ready to learn are far more likely to successfully negotiate the complex demands of the schooling process than those who are not. Similarly, those who get off to a good start in school, who learn to read at grade level by the end of Grade 3, and who do not display a challenging behavior pattern are more likely to experience school success and its many protective benefits (Citizens Crime Commission, 2000; Hawkins et al., 1999).

What We Need to Do Prior to School

Because at-risk children can be identified very early in their lives before a multitude of risks are able to register their damaging effects, “home-visiting” programs can create more positive preschooling (i.e., home) environments and increase the likelihood of positive later adjustment. The Olds Nurse Home Visitation Model (Olds, Henderson, Tatelbaum, & Chamberlin, 1986; Olds et al., 1999) and the Healthy Start Program (Duggan et al., 2000) are well-known examples of home visiting programs that can be effective in preventing child abuse and neglect as well as longer-term destructive outcomes (e.g., delinquency). The OLDS and Healthy Start models begin with hospital-

based screening of family risks and births to identify children who are at risk for abuse and neglect and then link families to health and child development services including crisis intervention, referrals to medical services, advocacy, parent education and training, family violence prevention, substance abuse services, and life-skills modeling. Both of these programs are voluntary, begin services provision during the prenatal period just prior to birth, and continue to provide family and child services for up to 2 years.

The OLDS and Healthy Start programs share the following key features. They:

1. Advocate a wellness approach,
2. Identify risks to children and their families at the earliest point of detection,
3. Create a voluntary system of family support services through collaborative agency partnerships, and
4. Ensure sensitivity to diversity and delivery of culturally competent services and supports.

The OLDS model has been extensively investigated through longitudinal research and has been shown to reduce child abuse and neglect as well as parental substance abuse; it also has been proven, as noted above, to be instrumental in the prevention of delinquency in adolescence (Olds et al., 1999). The effects of Healthy Start have been less extensively evaluated and to date have been assessed primarily by pre/post comparisons, demographic analyses, and consumer satisfaction measures, all of which tend to show positive outcomes (See Duggan et al., 2000). Treatment-control group comparisons for Healthy Start are currently underway.

As potentially effective as home visiting programs are in preventing and offsetting home- and community-based risk factors, their positive effects may be reduced if they are not followed up with a continuum of services that track and support at-risk families and their children during the preschool years. It is highly recommended that such families and their children access social services, child development opportunities, and preschool education in the 0–5 age range in order to strengthen parenting skills and to prepare children for the schooling process.

What We Need to Do Upon School Entry: Enhancing School Adjustment

As we discussed earlier in the chapter, it is of paramount importance for every child to get off to the best possible start in their school careers (Walker et al., 1998). The two greatest risks for school failure are (a) the display of a very challenging behavior pattern (i.e., antisocial behavior, aggression, opposition-defiance, bullying, etc.) and (b) early school failure, especially in learning to read. A challenging behavior pattern that is allowed to elaborate over the elementary and middle school years can lead to a youth being pressured to leave school early because of the aversive nature of his or her

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behavioral characteristics (Patterson et al., 1992; Schorr, 1988; Walker, Colvin, & Ramsey, 1995). Reading failure ultimately contributes to early school leaving because it is so essential to academic success.

In our view, all children should be screened at the point of school entry for their status in relation to these two risks. Chapters in this volume by Feil, Walker, and Severson; by Simmons et al.; and by Shinn, Shinn, Hamilton, and Clarke describe procedures for the early identification and treatment of children at risk for challenging behavior patterns and for reading failure. Those students who are clearly identified as school-failure risks should (a) have their reading skills carefully monitored and (b) be targeted for secondary and sometimes tertiary interventions, including specialized assistance, instruction, and intervention, until they are brought up to acceptable performance levels in each domain.

What We Need to Do Over the Long Term: Creating Schools as the Context for Achieving Prevention Goals and Outcomes

In a recent review of school-based mental health services, Hoagwood and Erwin (1997) noted that 75% of mental health services for children are currently delivered within the context of schools. Angold (2000) argues that approximately 20% of today's school-age students could qualify for a psychiatric diagnosis using the American Psychiatric Association's *Diagnostic and Statistical Manual* (DSM-IV) criteria. Thus, student populations in the K-12 grade range represent a substantial demand for mental health services in the forms of screening and assessment, services and supports, and implementation of formal interventions designed to address intractable social-emotional and academic problems. However, Walker and his colleagues (Walker, Nishioka, Zeller, Severson, & Feil, in press) recently analyzed national data on the referral and service of students with emotional and behavior disorders in school and found that slightly less than 1% on average of the public school population is served annually under the auspices of the Individuals with Disabilities Education Act (I.D.E.A., 1997).

There is an obvious need for providing prevention services generally for the positive social development of students, based on the diversity and intensity of need. Equally obvious is the importance of addressing school success and achievement. It has long been recognized that schools have the relatively unique ability to access the vast majority of at-risk children and to pull together the resources and expertise necessary to address their problems in a coordinated fashion (Hoagwood & Erwin, 1997).

We see three factors that must be addressed in this context. The first is establishing, as an overarching school mission, the creation of a school environment that serves to ameliorate the effects of *known risk variables*. Too often, schools place responsibility for this problem elsewhere and do not see themselves operating as a possible protective factor to enhance an individual student's life chances. For example, in a recent study of school administrators, Allington, McGill-Franzen, and Schick (1997) reported that the school leaders they interviewed saw the problems of students as primarily stemming from outside of school factors and conditions. Allington et al. (1997) stated

that “these administrators understood the problem as one of under-prepared children rather than schools unprepared to educate children with diverse backgrounds, experiences, and interests” (p. 231). Regardless of the pressure or influence of outside-the-school, known risk factors—indeed, precisely *because* of these known risk factors—the school’s mission *must not* reflect a passive status quo (i.e., a “throw up one’s hands” attitude) that relies on others to make a difference in the lives of our vulnerable, at-risk children and youth.

Second, schools must be able to access and implement, with solid treatment integrity, proven intervention approaches, and be supported in doing so by our society. As but one illustration of unfortunate school practices, the widespread use of the DARE (Drug and Alcohol Resistance Education) program and the continuing use of group counseling approaches with at-risk adolescents provide compelling examples of our tendency to reinvest in program approaches that either *do not work* or are actually *iatrogenic* (Dishion & Andrews, 1995).

Third, to maximize their effectiveness, schools must become better partners with families and community agencies in consortia that implement community-wide prevention initiatives. Examples of such positive partnerships are presented in the chapter herein by Paine and Kennedy Paine. As has been emphasized earlier in this chapter, it is particularly important that school-based personnel collaborate effectively with agencies and professionals who work with at-risk families and their children in the 0-to-5 developmental period. Family resource centers that are attached to and serve anywhere from 1 to 6 schools each, depending on school size, are a viable option, in this regard, and are being implemented on a trial basis in a number of states, including Kentucky, California, and Oregon. The connection with families, agencies, and professionals in this age range allows for the possibility of addressing outside of school risk factors that can severely impair school adjustment, academic performance, and overall school success. At present, however, such partnerships seem to be the exception rather than the rule.

Evidence-Based Interventions for Achieving Primary, Secondary, and Tertiary Prevention Goals

We will use the following example of a school-based approach to the prevention of antisocial, aggressive behavior patterns that (a) targets the entire school site as well as individual students for systematic screening, assessment, and intervention; (b) provides for matching the intensity and nature of interventions with the severity and intractability of students’ adjustment problems; and (c) emphasizes the fostering of positive school climates and safe learning environments for all students. Examples of proven interventions designed for achieving primary, secondary, and tertiary outcomes for at-risk students within the schooling context are briefly described.

Walker and his colleagues have developed an integrated approach for school districts’ use in addressing the challenges presented by students who are at risk for destructive and antisocial behavior patterns (see Sugai, Horner, & Gresham, this volume). This overall approach is based on the premise that in order to produce consistent, socially

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valid behavior changes, we must intervene directly and comprehensively within and across *all* school settings in which problem behaviors are observed. This integrated model incorporates interventions designed to achieve, respectively, primary, secondary, and tertiary goals and outcomes with at-risk student populations. Further, it addresses the needs of *all* students in a given school including those who are judged to be not at risk.

Walker et al. (1996) based this model on the following assumptions, observations and recommendations about school interventions:

1. Students who are at risk for developing antisocial patterns of behavior and their correlated negative outcomes are more likely to be punished and excluded than to have their problems addressed in a positive and inclusionary manner.
2. Schools typically have maintained a reactive, punishment-oriented posture in relation to at-risk students. This approach fails to recognize the need to identify students early on who show the signs of these problems, and mount comprehensive, sustained interventions that can divert them from this path at the beginning stages of their school careers.
3. The intractability and severity of student adjustment problems are rarely appropriately matched to available interventions that can remediate or ameliorate them. Too often, very simple interventions are applied in this regard in an attempt to solve complex student problems and vice versa.
4. School interventions for at-risk students from minority backgrounds are rarely contextualized in relation to the nuances of their cultural backgrounds; in addition, teacher interactions with minority at-risk students tend to be based on low-performance expectations, are critical rather than constructive, are short in duration, and also are often punishment oriented.
5. To achieve maximum efficacy, school interventions need to incorporate *universal*, schoolwide features that address the needs of all students as well as *specific* features that address the individual needs of those students who do not respond to the universal, schoolwide intervention.
6. Intervention responses to students with severe problem behaviors tend to be developed and implemented by individual teachers rather than by a team of committed staff members.
7. Efforts to improve interventions for students with severe problem behaviors must be organized into a comprehensive and strategic building- or district-level plan that ranks as one of the top three school-improvement goals for at least two years (see Sugai et al., this volume).

Prevention strategies and interventions appropriate for at-risk students should address and systematically take into account these observations about the effective delivery of evidence-based interventions in today's schools. Doing so will help make it possible for proven interventions to be adapted to the needs of target students and school site conditions for maximal impact.

Within any school setting, it is possible to identify three types of students as follows: (a) typically developing, non-at-risk students; (b) students with an elevated risk status for developing antisocial behavior problems; and (c) students who show signs of *life-course-persistent* antisocial behavior patterns and current or future involvement in delinquent acts (Larson, 1994; Moffitt, 1994; Walker et al., 1995). It should be clear that these three "types" of students are consistently observed in the academic domain as well.

Life-course-persistent, antisocial behavior refers to at-risk students who have been socialized to antisocial behavior and delinquency, within the family context, by exposure to such risk factors as incompetent and inconsistent parenting practices; poverty; unhealthy beliefs and attitudes; physical, emotional, and sexual forms of abuse; drug and alcohol involvement; and so on (Hawkins, 1996; Loeber & Farrington, 1998). As a rule, these children and youth require the most powerful services, supports, and interventions available to us in order to impact their problems, sometimes even at just minimal levels.

These three student types are ordered along a severity-of-risk continuum, which, at one extreme, predicts the emergence of negative developmental outcomes, including delinquency and adult criminality. Members of each student group, arrayed along this continuum, are candidates for differing levels or types of intervention that represent correspondingly greater specificity, complexity, comprehensiveness, expense, and intensity (Eddy et al., 2000; Reid, 1993). Figure 1, on page 16, clarifies the relationships among these intervention levels/types and degree of student risk status.

This figure illustrates the application, to school-based problems, of the public health field's taxonomy for differing types of prevention (Larson, 1994). In this conceptualization, prevention and intervention are not viewed as distinct or mutually exclusive dimensions; but rather, different types of interventions and approaches are used to achieve specific prevention goals and outcomes (e.g., primary, secondary, tertiary).

Examples of some appropriate interventions for *primary*, *secondary*, and *tertiary* forms of prevention are matched by student type in Figure 1.

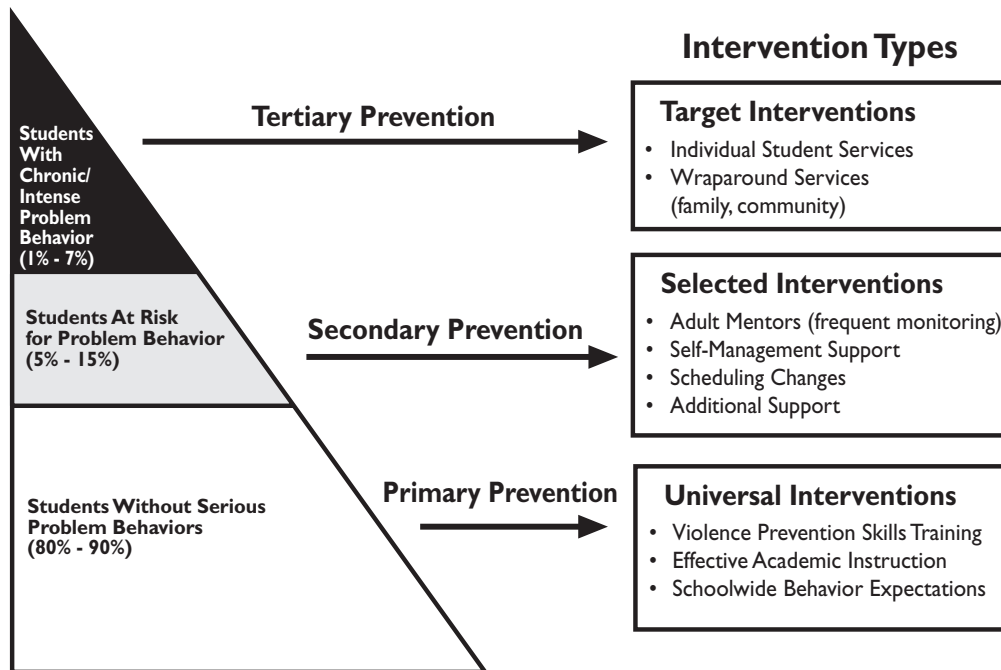
Primary prevention strategies focus on enhancing protective factors on a school-wide basis to keep minor problems and difficulties from developing into more serious ones and preventing children from ending up at greater risk. Interventions used to achieve primary prevention goals are applied to *all* students in the same way at the same "dosage" level. An example of this strategy in the area of antisocial behavior is *Effective Behavior Support* (EBS; see Sugai et al., this volume). In the EBS model, primary prevention strategies focus on teaching *all* students and staff school-based rules and expectations, and establishing disciplinary policies and procedures that are designed to enhance the smooth operation of a school environment. Similarly, by teaching the skills for school success (e.g., being prepared, getting to class on time, asking for help, completing and turning in homework; see the chapter by Gleason, Archer, and

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FIGURE 1

Preventing Violent and Destructive Behavior in Schools: Primary, Secondary, and Tertiary Systems of Intervention



Note

Walker, H. M., Horner, R. H., Sugai, G., Bullis, M., Sprague, J. R., Bricker, D., & Kaufman, M.J. (1996). Integrated approaches to preventing antisocial behavior patterns among school-age children and youth. *Journal of Emotional and Behavioral Disorders*, 4, 194-209. Reprinted with permission.

Colvin, this volume), we increase the likelihood that all students will profit from instruction. These universal intervention approaches have perhaps the greatest potential for use by schools in establishing a positive school climate and as a scaffold, or support structure, for the delivery of proven techniques for diverting at-risk students from a path leading to later negative or destructive developmental outcomes. In our view, this integrated approach is greatly underutilized in the majority of today's schools where its impact could be effectively maximized.

Secondary prevention involves interventions that provide behavioral or academic support, mentoring, skill development, and assistance to more severely at-risk students. Students who do not respond to universal interventions, implemented on a schoolwide basis, become candidates for more intensive, individually tailored interventions that are more expensive. These interventions typically are applied on an individual or small group basis. Interventions for achieving secondary prevention goals are often referred to as "selected." That is, such students select themselves out as candidates for more intensive interventions by demonstrating their nonresponsiveness to schoolwide interventions, thereby indicating their need for more powerful supports and services.

Examples of secondary prevention strategies include small group social skills lessons, behavioral contracting, specialized tutoring, assignment to alternative classroom placements, and the provision of Title I reading programs.

Finally, *tertiary* prevention is appropriate for severely at-risk students who are already identified as having chronic problems and who have displayed a life-course-persistent pattern of antisocial and related forms of destructive behavior. This behavior pattern may involve severe mental health problems, delinquent activities, violence, and/or vandalism (Moffitt, 1994). Successful interventions for this student population must be comprehensive, initiated early in the trajectory of risk development, be in evidence over the long term, and involve parents, teachers, and peers. As a rule, wrap-around, interagency approaches to intervention that are collaborative in nature are required to impact students who fit this behavioral profile (Kukic, 1995).

School-site intervention approaches are needed that encompass *all three* of these prevention levels or types. Unfortunately, few schools implement these levels of prevention strategies within their buildings; and if they do, their efforts are rarely coordinated or interfaced with one another. To be maximally effective, prevention approaches, and the interventions comprising them, must be *directly linked* to and coordinated with each other within the context of a school site and its four systems of behavioral support (i.e., schoolwide, specific setting, classroom, and individual student). Thus, failure at one level of prevention provides an implicit assessment that the student requires a more powerful, intensive intervention at the next level of prevention. In other words, those students who do not respond to the primary-level intervention components are then referred to the more intensive one-to-one or small group strategies at the secondary prevention level. Similarly, those students who do not respond at a secondary prevention level would move to tertiary prevention, and, along with their families, teachers, and peers, receive a comprehensive, collaborative, and intensive intervention (see Walker et al., 1996). Resistance to a well-designed and implemented intervention provides a foundation for treatment-based identification of more severely involved students and allows for the most pragmatic, cost-efficient usage of intervention resources.

In a fully integrated approach of this type, it is expected that the adjustment problems of approximately 75% to 85% of a school's students can be prevented with primary prevention strategies of a universal nature. However, this figure will vary based on the overall risk status of the student population. A substantial portion of the remaining students (i.e., 10% to 15%) should respond to secondary prevention interventions of a more intensive nature. The very small number of remaining students (3% to 5%) who do not respond to secondary prevention efforts would be candidates for a complex and expensive tertiary prevention strategy.

A Sample Primary Prevention Application: Second Step

Among the most widely accepted curricular programs available for violence prevention in schools is the *Second Step* program (Committee for Children, 1992) devel-

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oped and published by the Committee for Children, a nonprofit agency based in Seattle, Washington. *Second Step* is a universal intervention for preschool through Grade 8, designed to achieve primary prevention goals and outcomes. It consists of a violence prevention curriculum that teaches four essential skills to all students: (a) empathy, (b) impulse control, (c) problem solving, and (d) anger management/conflict resolution. The *Second Step* curriculum is designed to be taught at each grade level and is sequenced to take into account the developing maturity and cognitive abilities of students in the preschool through eighth-grade range. This program contains both school and parent involvement components and is being widely adopted by school districts nationally; currently, approximately 15,000 U.S. schools are implementing it. *Second Step* requires staff training for effective implementation and contains curricular materials and parent handbooks for each developmental level. The curriculum is taught by classroom teachers using the same instructional procedures as for teaching academic content with 30 key skills taught for approximately 30 minutes daily over a period of 3 to 6 months. Teaching strategies include visually presented scenarios that use modeling, problem solving, role-plays, discussion, and question answering.

Evaluation studies reported by the Committee for Children of the *Second Step* curricular program (Committee for Children, 1988, 1989, 1990, 1992) indicate that (a) perspective-taking and social problem-solving skills improved significantly following participation in the program and (b) *Second Step* students showed superior skill levels over matched control students in their responses to hypothetical social conflict situations. A third-party, independent evaluation of *Second Step* was reported in the *Journal of the American Medical Association* with positive results (Grossman et al., 1997). In a randomized controlled trial using intervention and control groups, these authors found that *Second Step* decreased rates of aggressive behavior and increased prosocial behavior for intervention students compared to control students. In January 2001, the U.S. Department of Safe and Drug Free Schools announced that *Second Step* received the highest rating of 132 intervention programs reviewed that purport to make schools safer and drug free. Information about *Second Step* can be obtained by writing to the Committee for Children, 2203 Airport Way South, Suite 500, Seattle, WA 98134-2027.

A Sample Secondary Prevention Application: First Step to Success

The *First Step to Success* home and school early intervention program is designed to address the early signs of an emerging antisocial behavior pattern (Walker et al., 1997, 1998). It consists of three modules designed to be used in concert with each other: (a) a universal, schoolwide screening procedure to detect at-risk students; (b) a school intervention involving targeted at-risk students, peers, and teachers that teaches an adaptive, prosocial pattern of school behavior; and (c) a home-intervention component that provides parent training in skills to help the child succeed in school (i.e., cooperation, listening, accepting limits, communication about school, problem solving, making friends, and developing confidence and self-esteem).

First Step has been rigorously evaluated using adult ratings of student behavior and direct behavioral observations of target students in classroom and playground settings (see Walker et al., 1998). The application of *First Step* produces high-magnitude behavior change outcomes averaging an effect size of .86 across five dependent measures (i.e., four teacher rating measures and direct behavioral observations recorded in playground and classroom settings) (see Walker et al., 1998). Four- and five-year longitudinal follow-up evaluations indicate that behavioral gains produced by the *First Step* program in kindergarten persist well into the upper elementary grades (Epstein & Walker, in press). *First Step* has been included as an exemplary best practice in six national reviews of effective interventions for addressing school safety and violence prevention priorities. Information about the *First Step* program can be obtained by contacting the publisher, Sopris West, Inc., at 4093 Specialty Place, Longmont, CO 80504 (1-800-547-6747) or by writing to the Institute on Violence and Destructive Behavior, 1265 University of Oregon, Eugene, OR 97403-1265.

A Sample Tertiary Prevention Application: Multisystemic Therapy

Multisystemic Therapy (MST) is a highly effective and widely used tertiary-level intervention designed to prevent recidivism among delinquent youth (Schoenwald, Brown, & Henggeler, 2000). It is an ecologically based, wrap-around intervention developed by Henggeler and his associates at the University of South Carolina. MST is included in the Blueprint Series of scientifically validated, violence prevention programs established by the Center for the Study and Prevention of Violence and is a thoroughly researched intervention model that works effectively for the most severely involved, at-risk adolescents (see Schoenwald et al., 2000).

The core feature of the MST program is its emphasis on changing the social ecology of these adolescent offenders and their families so that positive adjustment and functioning are enhanced and emotional difficulties and antisocial forms of behavior are attenuated. The program operates within the natural environments in which youth are involved (i.e., home, school, community) and uses a home-based, family preservation model of service delivery. One of the major goals of MST is to provide intensive, family-based supports, services, and intervention to prevent out-of-home placements for youth. In addition, intensive supervision, interagency collaboration, and consultation are key components of the MST model.

Nine principles guide the MST assessment and intervention process:

1. The primary purpose of assessment is to understand the fit between the identified problems and their broader systemic context.
2. Therapeutic contacts emphasize the positive and use systemic strengths as levers for change.
3. Interventions are designed to promote responsible behavior and decrease irresponsible behavior among family members.

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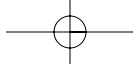
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4. Interventions are present focused and action oriented, targeting specified and well-defined problems.
5. Interventions target sequences of behavior within and among multiple systems that maintain the identified problems.
6. Interventions are developmentally appropriate and fit the developmental needs of the youth involved.
7. Interventions are designed to require daily or weekly effort by family members.
8. Intervention effectiveness is evaluated continuously from multiple perspectives with providers assuming accountability for overcoming barriers to successful outcomes.
9. Interventions are designed to promote treatment generalization and long-term maintenance of therapeutic change by empowering caregivers to address family members' needs across multiple systemic contexts.

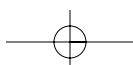
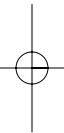
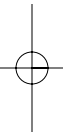
The MST model is highly recommended for addressing the problems of adolescent offenders who are at high risk for recidivism, which may ultimately lead to chronic offending. Aos (1999) indicated that for each subsequent arrest prevented or avoided for a juvenile offender, approximately \$30,000 is realized in long-term savings. MST is particularly appropriate for use with antisocial youth who are early starters and more likely to become recidivists (Moffitt, 1994). However, MST requires a substantial investment of personnel time and effort and those who implement it must complete an intensive course of training in the MST approach. As a result, implementation of the MST model generally achieves superior treatment integrity with correspondingly solid outcomes.

CONCLUSION

We now have available to us proven and promising prevention practices appropriate for use at primary, secondary, and tertiary levels which enable us to address the behavioral and academic needs of children and youth early on in their lives and school careers. These approaches also allow us to intervene comprehensively with them as well as with the key social agents in their lives (i.e., families, teachers, and peers). Evidence-based and highly effective intervention models, along with key support systems, are also available for use in the prenatal to age 5 developmental period that, if carefully applied, can reduce and eliminate many of the risks associated with poverty, dysfunctional families, and chaotic neighborhoods. Substantial progress has been made in synthesizing the literatures in which these innovative practices have been described and reported.

**CHAPTER 1***Structuring School-Based Interventions*

The prevention approach and supporting intervention practices described briefly in this chapter, and in the following book chapters, hold the potential to produce more positive outcomes and to redirect children and youth away from problematic lifestyles if they are implemented with integrity, scaled up, and adequately funded. We have developed this book with the idea that school psychologists working within school and community contexts are ideally positioned to take a lead role in the systematic implementation of a multitiered prevention model using evidence-based interventions. In our view, there is no higher priority than addressing the critical and growing set of needs of this country's at-risk children and youth. School psychologists are ideally positioned to assume a lead role in this effort.



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Structuring school-based interventions to achieve integrated primary, secondary, and tertiary prevention goals for safe and effective schools. H M Walker. M R Shinn. Schools were matched on school demographic characteristics and assigned randomly to intervention or waitlisted control conditions. Outcome measures were obtained from (a) all school staff; (b) a randomly selected subset of third-, fourth-, and fifth-grade teachers in each school; and (c) all students in classrooms of selected teachers. Multilevel analyses indicated significant ($p < .05$) positive effects of the program on a range of outcomes (e.g., improved student climate, lower levels of physical bullying perpetration, less school bullying-related problems). Determining if a source is primary, secondary or tertiary can be tricky. Below you will find a description of the three categories of information and examples to help you make a determination. Primary Sources. These sources are records of events or evidence as they are first described or actually happened without any interpretation or commentary. It is information that is shown for the first time or original materials on which other research is based. Examples of primary sources: Theses, dissertations, scholarly journal articles (research based), some government reports, symposia and conference proceedings, original artwork, poems, photographs, speeches, letters, memos, personal narratives, diaries, interviews, autobiographies, and correspondence.