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School-Based Mental Health

An Empirical Guide for Decision-Makers

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Preface

School-Based Mental Health: An Empirical Guide for Decision-Makers

As we enter the new millennium, there is increasing concern about the growing number of children and adolescents who experience difficulties facing the challenges of development and who succumb to the adverse effects of emotional disturbance. This increase in the need to support America's youth occurs in a context of system transformation aimed at improving the effectiveness of services and increasing the capacity to serve all children who are in need.

An important strategy to help achieve this transformation is the proposed development of effective and integrated school-based mental health services. Recent federal initiatives and acts have promoted schools as an effective location to meet the social and emotional needs of all children while achieving the highest academic standards. The 1999 Report of the Surgeon General on the Mental Health of the Nation, the 2001 No Child Left Behind Act, and the 2003 report from the New Freedom Commission on Mental Health have all focused attention on the potential of increasing the effectiveness and capacity of school-based mental health services to improve the emotional well being of all children as well as their academic achievement.

While these federal initiatives have fulfilled important roles in increasing advocacy and interest in school-based mental health, they have not supplied recommendations at a level of specificity needed for effective implementation at a scale necessary for significant improvement in outcomes for children. For example, they have triggered an explosion of interest and activity in school-based mental health programming, yet outcomes for children who have emotional disturbances continue to be the poorest of all disability groups (Wager et al., in press). The field can be characterized as being fragmented and underdeveloped, and confused by conflicting terminology and professional perspectives.

The aim of this monograph is to contribute to the dialogue that addresses these barriers preventing school-based mental health services from meeting the hoped for potential to improve service effectiveness and capacity. We have briefly reviewed the history of mental health services supplied in schools, summarized the major conceptual models that currently influence the implementation of services, and provided an overview of the evidence-base for school-based interventions. The monograph also reviews federal policies and funding strategies that affect the implementation of services. We close with specific recommendations for increased accountability and the use of evidence-based practices in the field through the adoption of the pubic health model for implementing effective school-based mental health services.

1

What is School-Based Mental Health?

Why School-Based?

There is an abundance of evidence that most children in need of mental health services do not receive them, and those that do, receive them, for the most part, through the school system (Burns et al., 1995). Consequently, advocates for improved children's mental health service delivery are now attending to the need to channel additional mental health services into school settings. The reasons seem clear—schools have a long history of providing mental health and support services to children, and inherently provide convenient access for a majority of children.

How best to implement school-based mental health services, however, has been understudied; real-world practice is currently comprised of competing models and approaches. These models emerge from diverse theories and philosophical underpinnings that are characterized by different terminology as well as varied intervention strategies. Together, this collection of models provides a plethora of ideas on how to best provide mental health services in schools and by whom. Implementation, however, has generally been piecemeal with only parts of the models being actualized in any one community.

In short, the general condition of school-based mental health services in this country is such that communities seeking to increase utilization of these services in their schools will encounter a wealth of available information. However, they will find no comprehensive blueprint that integrates advocacy, empirical support, and the community capacity for implementation.

The purpose of this monograph is to sketch out such a blueprint, and to help forward the school-based mental health agenda by (1) describing the various models and approaches both in mental health and in the education literature, (2) reviewing and critiquing the empirical support for the approaches described, and (3) suggesting the next steps in terms of integrating science, policy, and practice to achieve effective school-based mental health service delivery systems.

It is hoped that policy- and decision-makers in both mental health and education will find the information presented helpful as they begin to build or refine their school-based mental health services.

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Definition of School-Based Mental Health

The term "school-based mental health" has become a commonly used phrase much like the phrase "community-based mental health services" or "less restrictive environment." These terms appear to have a common meaning among the professionals that use them without any further specification needed. However, as concepts evolve from rhetoric to actual implementation, definitions and clarity of the parameters of the concept become more important. This was the case with the term "community-based," as advocates pressed for mental health services for children to become less restrictive (e.g., non-hospital based) and move to community-based services. However, it was soon realized that some hospital-based services could also be community-based and the concept of "community-based" was refined to include any necessary resource that could involve the family and was the least restrictive environment available to address the needs of the child.

The term "school-based mental health services" now needs a clearer conceptual framework.

The term "school-based mental health services" now needs a clearer conceptual framework. The term has generally come to be understood as any mental health service delivered in a school setting. School settings, however, can range from neighborhood schools to academic public school-administered programs in hospitals and juvenile justice facilities. Schools also deliver mental health services and support through the special education program for students with emotional disturbance. In fact, efforts to deliver mental health services and manage challenging behaviors have been a mandate in special education for over 30 years. These diverse school environments challenge the clarity of the concept "school-based mental health," as does the history of uneven collaboration between mental health and education. Within this context, the diverse mental health needs of students contribute another dimension to the confusion surrounding school based mental health services.

History of School-Based Mental Health Services

The current movement toward channeling mental health resources into schools is reminiscent of the inception of child mental health services in the U.S. At the end of the 1800s, in response to increasing numbers of children being placed in adult jails, the first child mental health services began by providing counseling to children with school problems. These services, along with juvenile court clinics that incorporated the first multi-disciplinary teams to work with children, gave rise to advocacy for building child guidance clinics throughout the country in 1922. The initial clinics were primarily staffed by social workers and later evolved to include multi-disciplinary teams that encouraged community-based, and non-hospital based, care for children, with many created to work specifically with school districts. These early clinics provided the foundation for currently operating community mental health centers throughout the country (Pumariega & Vance, 1999).

However, in the 1970s and '80s there was a movement toward the medicalization of child mental health with child and adolescent psychiatric services directed toward a more hospital-based model of care, driven in part by financing policies. This led to a split between psychiatric hospital-based services and community-based mental health services. This split between the two treatment modalities allowed public mental health dollars to be absorbed by hospitals, leaving few resources for community-based care.

Concomitantly, the first public law was passed addressing the education of students with disabilities, P.L. 94-142, the Education of All Handicapped Children Act, later reauthorized as the Individuals with Disabilities Education Act (IDEA). P.L. 94-142 placed a larger responsibility on the education system to meet the mental health needs of students with emotional disturbances (Pumariega & Vance, 1999). This legislation required that all support services needed to help educate students with disabilities must ultimately be supplied by the education system.

Leaders in the mental health system viewed this new legislation as a mandate for schools to pay for mental health services—services that were under-funded within the community mental health centers. Leaders in the education system viewed this as an unfunded mandate and had to engineer ways to piece together meager resources across a multitude of students with physical and emotional disabilities with hopes that the mental health system would supply necessary resources for children with emotional disturbances.

IDEA legislation has played a key role in blurring the lines of who is responsible for providing mental health services to children and adolescents. This confusion in roles and responsibility between education and mental health persists to this day in many communities and the renewed interest in school-based mental health services has, for some, triggered renewed conflict between the two systems.

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It is clear that both the education and mental health systems have a long history of providing mental health services to students. Sometimes these services are delivered collaboratively between the two systems, but more often, the services work in parallel fashion with each other or do not operate effectively at all in either system. Efforts to conceptualize school-based mental health services will be advanced by including a clear delineation of the role of each system.

Current Status and Understanding of Children with Emotional Disturbances

Our knowledge base is slowly being updated regarding the number of children who have some type of emotional disturbance and the nature of those disturbances (Greenbaum et al., 1998; Wagner, Kutash, Duchnowski

For schools cause is not as relevant as are the characteristics of the behaviors that are currently being exhibited in the classroom.

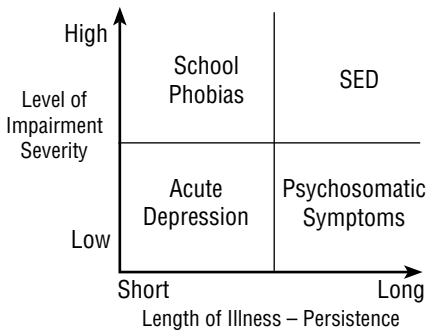
& Epstein, 2005a; Wagner, Kutash, Duchnowski, Epstein & Sumi, 2005b). Estimates of the number of children with emotional disturbances are always more than expected, and their conditions are more diverse and often more long-standing than previously estimated. A recent national study of adults with mental health disabilities documented that their problems reportedly started in early adolescence or around 14 years of age (Kessler, Berglund, Demler, Jin, & Walters, 2005).

The knowledge base on the *causes* of emotional disturbance in children is also growing. There is rarely a single cause of this condition, but rather it can be explained as a combination of biological factors, and environmental factors with the influence of each of these changing across the developmental spectrum. For a discussion of the causes associated with emotional disorders in children, see Chapter Three of the Surgeon General's report on Mental Health (U.S. Department of Health and Human Services [U.S. DHHS], 1999) and Eyberg, Schuhmann, and Rey (1998).

For schools, however, cause is not as relevant as are the characteristics of the behaviors that are currently being exhibited in the classroom—such as the intensity, duration, and level of impairment associated with the behaviors (Zionts, Zionts, & Simpson, 2002).

figure 1.1

Severity and Persistence in Children's Mental Health Disorders



One way of illustrating the range of emotional and behavioral problems in children and adolescents has been to classify the mental health need by severity of the impairment (i.e., how much does the problem interfere with daily functioning) as well as by the expected duration of the illness (Stroul & Friedman, 1994). As illustrated in Figure 1.1, a child experiencing fear of attending school or school phobia, for example, has a condition that can be severely disruptive to everyday functioning since attending school is a major activity of childhood. However, the length or duration of the problem is thought to be of a short-term nature. On the other hand, children with a severe emotional disorder (SED) are thought to have functional impairments in multiple life domains (in school, the community, and within the family), and the condition is projected to persist for a long period of time. The concepts of severity and persistence have played major roles in designing mental health delivery systems and treatment approaches.

The various mental health service strategies used by schools and the mental health system may be classified in terms of when the intervention is implemented in relation to the onset of a condition. That is, is the purpose of the program to *prevent* or to *treat* a mental health or behavioral challenge in children and adolescents? A majority of children are thought to never exhibit an emotional or behavioral problem that is of sufficient severity or persistence to impair their functioning or daily interactions. However, there are many programs and approaches that are aimed at all children in hopes of helping

to prevent the onset of various emotional or behavioral challenges. These *universal prevention programs,* as they are called, are provided to all children through school-wide implementation. Some children and adolescents, however, are at-risk for the development of emotional or behavioral disorders either due to familial or environmental conditions. There are many programs, called *selective or secondary prevention programs*, which in addition to focusing on individual students, can combine students with similar risk factors for group interventions aimed at helping to prevent the onset of behavior or emotional problems. Mental health treatments are usually employed once the disorder or condition has been established in a child or adolescent. These specialized individual interventions are grouped under the heading of *tertiary or indicated prevention*.

These three levels or types of programs have become a useful heuristic when discussing the array and range of mental health supports and treatments useful in preventing and treating mental health problems in children. However, the conceptualization and definitions of these three levels of intervention are not universally agreed upon within the school-based mental health services field and confusion has emerged. A review of these definitional issues is presented in Chapter 2 to promote the common language necessary to support collaboration, and better selection and implementation of programs and practices.

Universal prevention programs provided to all children through school-wide implementation to prevent onset of emotional or behavioral challenges.

Selective or Secondary prevention programs combine students with similar risk factors due to familial or environmental conditions for group interventions aimed at helping to prevent the onset of behavior or emotional problems.

Tertiary or indicated prevention mental health treatments usually employed once the disorder or condition has been established in a child or adolescent.

Our Approach to Organizing the Empirical Support

Our approach to harness, describe, and critique the empirical support for school-based mental health approaches has been influenced by three factors. The first factor that influenced our work is the array of quality websites describing and organizing the empirical literature on social, emotional, and learning enhancement programs that currently exist. There are presently several websites that identify an array of "best practices" and "empirically supported" programs, and these sites are usually organized around the three levels of prevention: universal, selective, and indicated approaches.

The next factor that influenced our work was a recent review of the extant literature by Rones and Hoagwood (2000) that examined the empirical literature published between 1985 and 1999 on school based mental health services. While their literature search uncovered over 5,128 entries containing the term school-based mental health services for children, only 47 entries described programs or treatment approaches that met the criteria of being rigorously evaluated or researched. Of this group, 36 articles described randomized controlled trials, nine described quasi-experimental designs, and two studies used a multiple baseline design.

The third factor that influenced our work was the realization that the empirical literature supporting special education and educational programs was often separate from the mental health literature, with neither citing each other's work. There are bridges to build here.

In this monograph, we synthesize our work to provide readers with a broader context in which to (a) understand the major models that guide the development of school-based mental health services (SBMH), (b) evaluate the empirical base supporting these approaches, and (c) interpret the key federal policies that promote SBMH services.

The following chapters build upon each other to frame a prerequisite context for decision makers. Following the current discussion of background, we explore the various definitions of prevention and intervention related to SBMH (Chapter 2), and review and summarize three current and influential models addressing issues in SBMH service delivery (Chapter 3). Chapter Four organizes the programs and approaches from both the websites and from the extant literature published on SBMH services along the prevention continuum (i.e., universal, selective, and indicated). Chapter Five contains a discussion of the major federal policies that have supported, and in some cases mandated, SBMH. A brief summary of the research on organizational structures and financing mechanisms found in SBMH programs is presented in Chapter Six. In the final chapter, we conclude with a reflection on the current status of SBMH, future research needs, and the potential for the extensive implementation of effective SBMH services to significantly improve the outcomes for children and youth across a broad array of life domains.

2
Prevention Definitions

Toward Common Definitions

As seen in the previous Chapter, current implementation of an effective blend of school-based mental health services is hampered by the fragmented history of prior service delivery, which contributes to the current lack of clarity in its models, concepts, definitions and priorities. Because an aim of this monograph is to bring a common language to discussion of SBMH programs, a position on the definition of prevention strategies and the distinction from treatment strategies is necessary.

Current implementation of a school-based mental health services is hampered by the fragmented history of prior service delivery, which contributes to the current lack of clarity in its models, concepts, definitions and priorities.

Prevention, in any terms, at all levels, will have a central role in the future of SBMH. During the past two decades, the broad children's mental health services community has come to agree that the field needs to look beyond initiatives to increase the number of practitioners who provide direct clinical service and shift the focus to implementation of models that emphasize prevention and service integration (e.g., Tolan & Dodge, 2005). To support this shift, an important first step is to adopt a commonly accepted definition of what constitutes prevention intervention, the various levels of prevention intensity, and the differentiation of prevention and treatment. The adoption of a consensus definition is still emerging, leading to confusion at both the practice and research levels in the mental health services field, including SBMH services (School Mental Health Alliance, 2005).

Definitions from Public Health

The public health field has produced an outstanding record of prevention intervention that has addressed infectious disease, implemented mass immunization, and introduced hygiene measures that have dramatically reduced the death rate due to these diseases. Based on this successful record, the public health prevention model has been extended to noninfectious diseases and chronic illnesses, including mental illness and emotional/behavioral disturbances in children (Mrazek & Haggerty, 1994). We contend that public health offers a valuable framework for understanding how preventive services can be assessed and described, and this discussion reviews the evolution of its definitions, and relates them to current prevention models in SBMH.

The Commission on Chronic Illness

The original classification system for prevention in the public health field was proposed by the Commission on Chronic Illness (1957). It contained three types of prevention interventions, stated in terms of primary goals related to disorder or illness (see Table 2.1).

table 2.1

Three Types of Prevention (Commission on Chronic Illness, 1957)
• **Primary Prevention**, which seeks to decrease the number of new cases of a disorder or illness;
• **Secondary Prevention**, which seeks to lower the rate of established cases of a disorder or illness in the population (prevalence);
• **Tertiary Prevention**, which seeks to decrease the amount of disability associated with an existing disorder.

Gordon's Revisions

The introduction of the Commission's definitions was not universally accepted in the field and much confusion and disagreement resulted. Gordon (1987) devised a new classification system using a "risk benefit" perspective. He proposed that the risk to an individual of getting a disease must be weighed against the cost, risk, and discomfort of the preventive intervention and his categories of preventive interventions are provided in Table 2.2.

table 2.2

Three Levels of Prevention Proposed by Gordon (1987)
• **Universal Measures** are desirable for everyone in the eligible population. The benefits outweigh the costs for everyone;
• **Selective Measures** are desirable only when the individual is a member of a subgroup whose risk of becoming ill is above average;
• **Indicated Measures** are desirable for an individual who, on examination, is found to manifest a risk factor or condition that identifies them as being at high risk for the future development of a disease.

A simplistic blending of the two systems has added to the confusion (see Mrazek & Haggerty, 1994). For example, Gordon (1987) holds that indicated interventions and treatment are different. That is, treatment quickly provides benefits including symptom reduction, while indicated prevention is probabilistic in nature. Indicated prevention measures are used for asymptomatic persons and there is no sure way of knowing if the disease will occur. The potential benefit may be delayed and the cost needs to be evaluated given such a situation.

The Institute of Medicine

In the early 1990s, the Committee on Prevention of Mental Disorders, a sub-committee of the Institute of Medicine (IOM), was charged with preparing a report on the current research and policy recommendations for a prevention research agenda for mental disorders (Mrazek & Haggerty, 1994). The resulting definitions of prevention are provided in Table 2.3. It should be noted that the definition of indicated prevention is different from Gordon's definition in which the term is only for asymptomatic individuals.

While these definitions have helped to guide the field, the conceptualization of prevention continues to evolve, with new features reflecting advances in the field.

table 2.3

Levels of prevention proposed by the Institute of Medicine (Mrazek & Haggerty, 1994)

- **Universal Preventive Interventions** are targeted to the general public or a whole population group that has not been identified on the basis of individual risk. The intervention is desirable for everyone;
- **Selective Preventive Interventions** are targeted to individuals or a subgroup of the population whose risk of developing mental disorders is significantly higher than average. The risk may be imminent or it may be a lifetime risk;
- **Indicated Preventive Interventions** are targeted to high risk individuals who are identified as having minimal but detectable signs or symptoms foreshadowing mental disorder but who do not meet DSM criteria levels at the current time.

Weisz, Sandler, Durlak & Anton

While these definitions have helped to guide the field, the conceptualization of prevention continues to evolve, with new features reflecting advances in the field. For example, Weisz, Sandler, Durlak, and Anton (2005) recently produced an important synthesis of prevention and treatment in the children's mental health field. While their conceptual model will be more fully discussed in the next chapter, their definitions of prevention strategies warrant mention in this section. For the most part, they use language similar to that in the IOM report in describing universal, selective, and indicated interventions. However, they have added a relatively new concept to the three levels of prevention strategies in the IOM report (i.e., "health promotion/positive development") and clearly separate prevention and treatment (see Table 2.4).

While it remains to be seen how universally these definitions will be adopted, Weisz and his colleagues (2005) have offered some clarity to the broad children's mental health services field with definitions that are more specific and more clearly delineated.

table 2.4

Definitions of prevention and treatment (Weisz et al., 2005, p. 632)

- **Heath Promotion/Positive Development Strategies** target an entire population with the goal of enhancing strengths so as to reduce the risk of later problem outcomes and/or to increase prospects for positive development;
- **Universal Prevention Strategies** are approaches designed to address risk factors in entire populations of youth – for example, all youngsters in a classroom, all in a school, or all in multiple schools – without attempting to discern which youths are at elevated risk;
- **Selective Prevention Strategies** target groups of youth identified because they share a significant risk factor and mount interventions designed to counter that risk;
- **Indicated Prevention Strategies** are aimed at youth who have significant symptoms of a disorder … but do not currently meet diagnostic criteria for the disorder;
- **Treatment Interventions** generally target those who have high symptom levels or diagnosable disorders at the current time.

PBS is gaining attention as an integrated approach to promoting social and emotional well-being for students.

Prevention as Implemented by Positive Behavior Support (PBS)

As previously noted, within the special education field, mental health service approaches have evolved in parallel, with a separate literature. While the special education community has a long history of research and interventions targeted at children who have emotional disturbances and who are served in special education programs, their efforts for the most part have been at the indicated and treatment levels. Most of their work has focused on behavior management with little emphasis on universal prevention strategies.

Presently, a growing number of researchers in special education have begun to pursue a more proactive approach, expanding the scope of intervention. PBS, also referred to as Positive Behavior Interventions and Supports is gaining attention as an integrated approach to promoting social and emotional well-being for students. It is therefore important to reflect on the definitions for prevention central to its application.

PBS is fairly new to school settings. However, the PBS approach has an established record aimed at reducing challenging behaviors and increasing positive social interaction at the individual level. The PBS literature is predominantly found in the education sector directed at mental retardation and developmental disabilities. Its impact on the mental health field is still emerging but it is considered by its advocates to have great potential for improving practice and outcomes. PBS is more fully described in the next chapter of this monograph, however its definitions of prevention are included here as part of a comprehensive overview of the major conceptualizations of prevention as they relate to school-based mental health services.

In terms of prevention, PBS has adopted the three-level conceptualization similar to the IOM report. However, differences in the focus of the strategies and the language used suggest that PBS could be considered a system of treatment interventions rather than strictly prevention. The PBS approach to prevention strategies focuses on reducing the need for more intensive interventions for children who are at-risk for accelerating their level of challenging behavior.

At this point we offer the definitions of the three levels of PBS that have been proposed by the Office of Special Education Programs' (OSEP) Technical Assistance Center on PBIS (n.d.). These definitions are presented in Table 2.5.

table 2.5

Definitions of Prevention within the PBS Framework (OESP Technical Assistance Center on PBIS, n.d.)

- **Universal or School-wide Interventions** create positive school environments. This is a proactive approach that replaces the need to develop individual interventions for multiple students who engage in similar inappropriate behaviors. For example, by teaching all children the correct and safe way to walk through the halls of the school, touching other children and the escalation into aggressive behavior and fighting can be greatly reduced. These strategies are considered to be "primary prevention" in that they build the capacity of the school to provide a safe environment for all children and to more effectively implement selective and indicated interventions;
- **Selective/Targeted Interventions** are used with students who require more than universal strategies but less than intensive individualized interventions. The purpose of selective or targeted interventions is to support students who are at-risk for or are beginning to exhibit signs of more serious problem behaviors. Such interventions can be offered in small group settings for students exhibiting similar behaviors or to individual students. These interventions are considered to be "secondary prevention;"
- **Intensive Individualized Interventions** are considered to be "tertiary prevention." They are implemented when problem behaviors are dangerous, highly disruptive, and may result in social or educational exclusion. In developing these interventions, it should be noted that although the aim is to individualize, the methods of PBS are standardized and follow a specific plan that includes a functional behavioral assessment of the situation and the development of a person-centered plan.

We suggest that the literature offers a clear direction for constructing the preliminary language useful for distinguishing prevention strategies from treatment strategies in the school settings.

Summary

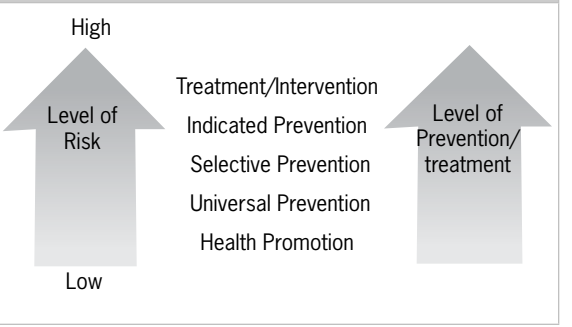
The adoption of the public health prevention model by the mental health and education systems is an emerging process. Consequently, attempts to define prevention in an analysis of SBMH programs will be subject to the existing confusion and competing definitions and conceptualizations that characterize the current status of the field. That said, we suggest that the literature offers a clear direction for constructing the preliminary language useful for distinguishing prevention strategies from treatment strategies in the school settings.

At this point in time, the IOM conceptualization of prevention strategies, as modified by John Weisz and his colleagues (2005), appears to be the most feasible approach. The majority of the prevention literature uses similar terminology, most of the websites describing effective practices also use this terminology, and the essence of the distinction between the three levels of prevention is compatible with various models of SBMH programs described in this monograph. That is, each level of prevention is aimed at avoiding deeper penetration into the intervention continuum.

While there are differences in the language describing the prevention continuum in the PBS model as well as issues related to the distinction between prevention and treatment, the essence of the continuum is similar to the modified IOM model. Weisz and his colleagues define treatment as interventions that "generally target those who have high symptom levels or diagnosable disorders" (2005, p. 632). In the PBS model, diagnostic labels are not used and the emphasis is on level of symptoms or challenging behavior. This position is not totally incompatible with that of Weisz and colleagues. Consequently, in this monograph we will use the definition of treatment proposed by Weisz and colleagues (see Figure 2.4), as it is more inclusive of the conceptualizations of various SBMH program models.

Figure 2.4

Levels of prevention and associated risk level for developing mental health problems (Weisz et al. 2005)



3

Description of Conceptual Models of School-Based Mental Health

Evolution of Conceptual Models for School-Based Mental Health

As a nation, we believe that societal outcomes are associated with educational achievement. In recent decades, this belief has been reflected in a robust level of federal and local funding for education, and public focus on accountability in the nation's schools, as evidenced by the emphasis on high-stakes testing. It is no surprise, then, that there is new attention to social and emotional development, due to its perceived relationship to achievement. Schools now find themselves in the role of preventing emotional and behavioral challenges and identifying risk factors considered potential barriers to academic success.

The explosion of interest in and implementation of a smorgasbord of school-based mental health programs (SBMH) emerges from this context, however decision makers have not, to date, had clear guidance from the field regarding selection criteria or effective application. Application of SBMH, as it exists today, is not guided by a single conceptual model. Currently, the school-based mental health field offers several different and sometimes conflicting perspectives that drive equally incongruent programs and policies. Examples of these diverse perspectives include broad-based school reform and restructuring (e.g., Adelman & Taylor, 2006), the implementation of clinical psychology/psychiatry interventions in the schools (e.g., Armbruster & Lichtman, 1999; Weist, Myers, Hastings, Ghuman, & Han, 1999), and the application of positive behavior supports to programs for students who have emotional disturbances (e.g., Horner, Albin, Sprague, & Todd, 1999).

These diverse perspectives have their roots, to some degree, in the observation that professionals who develop and implement SBMH represent multiple professional disciplines that include clinical psychology, special education, applied behavioral analysis, psychiatry, and developmental psychology. Furthermore, funding for research and demonstration projects in SBMH has been awarded by a range of federal government agencies that include the Office of Special Education Programs (OSEP), the National

Application of SBMH is not guided by a single conceptual model. Currently, the school-based mental health field offers several different and sometimes conflicting perspectives that drive equally incongruent programs and policies.

Institute for Disability and Rehabilitation Research (NIDRR), the National Institute of Mental Health (NIMH), the Substance Abuse and Mental Health Services Administration (SAMHSA), and the Maternal and Child Health Bureau of the Health Resources and Services Administration (HRSA). While each of these agencies shares, at least in part, in the broad mission of supporting research and/or program demonstrations that will improve outcomes for children who have emotional and behavioral disturbances, their program agendas and criteria for funding often are quite different. This introduces another source of diversity in conceptualization and content in the broad range of research and programs that fall under the rubric of SBMH.

Perhaps the most prevailing source of divergence in SBMH comes from the differences in approach that exist between the education and mental health systems.

In addition to influence exerted by this list of agencies and professional disciplines, perhaps the most prevailing source of divergence in SBMH comes from the differences in approach that exist between the education and mental health systems. The contrasting perspectives between these agencies coupled with the degree to which they are enmeshed in the implementation of SBMH programs require a more detailed analysis.

Education and Mental Health Perspectives on SBMH

Although the education and mental health systems play an important role in providing SBMH services, the two systems have not produced the record of effective collaboration necessary to create an extensive network of effective SBMH programs across the country. In order to more clearly identify the roles and influences of the mental health and education systems on SBMH, we have listed some factors in Table 3.1 described from the perspective of each system and how they may affect SBMH program implementation. As this table illustrates, there are more areas in which the differing perspective can impede collaboration compared to those that might facilitate implementation of effective SBMH programs.

For example, the systems differ in their primary goal or purpose. The education system aims to improve academic outcomes for children who are experiencing psychosocial barriers that impede their education. Under the regulations of IDEA, children who have emotional disturbances are placed in special education programs if their academic progress is affected by their disability. Related services (e.g., services purchased by education to meet individual needs), which may include mental health services, are only provided if the individualized education program (IEP) calls for them. If academic progress is not considered to be impeded, the school system is not obligated to address emotional problems in children—and rarely does—due to limited resources. In the mental health service system, the assessment of emotional impairment is the primary determinant of eligibility for service, although the actual receipt of service depends on many factors including the availability

Table 3.1

Contrasting Perspective in School Based Mental Health

	Education System	Mental Health System
Overarching Influence	Individuals with Disabilities Education Act (IDEA)	Diagnostic and Statistical Manual (DSM)
Conceptual Framework	Behavior Disorders, Challenging Behavior, Academic Deficits	Psychopathology, Abnormal Behavior, Impaired Functioning
Important Theoretical Influences	Behaviorism, Social Learning Theory	Psychoanalytic Approaches, Behavior Theory, Cognitive Psychology, Developmental Psychology, Biological/ Genetic Perspectives, Psychopharmacology
Focus of Intervention	Behavior Management, Skill Development, Academic Improvement	Insight, Awareness, Improved Functioning
Common Focus	Improving Social and Adaptive Functioning Importance of and Need to Increase Availability, Access, and Range of Services	

The emergence of distinct conceptual frameworks describing the target behavior for each system has resulted in different terminology that goes beyond simple semantic differences.

of private or public funding. Educational functioning is among life domains considered in treatment planning, but it is not the primary factor.

Different language. The emergence of distinct conceptual frameworks describing the target behavior for each system has resulted in different terminology that goes beyond simple semantic differences. SBMH from the perspective of the education system is likely to be described as meeting the needs of children who have "behavior disorders or challenging behaviors" or preventing such behaviors. The number of discipline referrals to the office is a major outcome measure along with improved academic achievement, especially in math and reading. Programs and interventions implemented by the mental health system target children who have a mental illness or emotional disturbance and who meet the criteria for a diagnosis in the current edition of the DSM, or those considered to be at-risk for mental illness. The emphasis is on diagnosing and treating in order to improve functioning and reduce relapse and reoccurrence. Functioning in school is but one domain of interest, along with home and community.

One consequence of the difference in vocabulary used in each system is that research reports generated by the different perspectives are frequently published in journals and texts read only by those that are schooled in that particular perspective. That is, the research does not cross-pollinate across all the disciplines concerned with SBMH. This results in a failure to understand the different approaches to intervention across disciplines and impedes the implementation of comprehensive, effective programs at a level of scale needed for significant improvement in outcomes for the millions of children affected by emotional disturbances.

The school-based mental health field will be well served by a convergence of the literature, and blending of terminology. Researchers are encouraged to attend to promoting this marriage, and to further conceptual clarity through how they frame their investigations and report their findings, acknowledging and integrating education and mental health perspectives. Decision makers should read critically, with attention to conceptual underpinnings of terminology.

Researchers and practitioners are shaped and guided by the theoretical context in which they have been trained or have developed after their formal training.

Different theoretical foundations. Researchers and practitioners are shaped and guided by the theoretical context in which they have been trained or have developed after their formal training. Clearly, these perspectives filter how they view the world, human behavior, and specific processes such as SBMH. For example, researchers and practitioners concerned with children who have emotional disturbances and trained in a College of Education are likely to be influenced by behavioral and social learning approaches. On the other hand, those trained in a psychology department in a College of Arts and Sciences are more likely to have been exposed to a broad array of theories that include psychodynamic, behavioral, cognitive-behavioral, and neurological and biochemical premises among others. These theoretical perspectives guide thinking about the nature and goals of interventions as well as indicators of success. As a result, SBMH programs can be found that range from schoolwide approaches to promote prosocial behavior as an alternative to aggression at recess (Todd, Haugen, Anderson, & Spriggs, 2002) to the Coping with Stress Course (Clarke et al., 1995), which uses cognitive-behavioral interventions to help students cope with irrational thoughts associated with depression.

Some common ground. Interestingly, both the education system and the mental health system have produced interventions aimed at skills training to promote the social and adaptive functioning of children (Rones & Hoagwood, 2000). These interventions continue to be promoted as part of SBMH programs even though the efficacy of social skills training is not known (Forness, Kavale, Blum, & Lloyd, 1997). This may be an example of an area in which cross-training and more sharing of information could lead to more effective interventions. In addition, there is a growing consensus about the importance of health, particularly mental health, as a means of ensuring that all youth have an opportunity to succeed in school (School Mental Health Alliance, 2005).

Emerging perspectives. In spite of the different conceptual points of view in the two systems, the desire to actually implement SBMH programs has resulted in a literature and practice base that lends itself to, at least the beginnings of, a systematic analysis and effort toward explicating the ingredients of effective SBMH programs. The rest of the chapter will describe three major perspectives or models of SBMH that incorporate the majority of perspectives in the literature that influence policy, research, and practice in the field. The three perspectives are

the *Mental Health Spectrum*, *Interconnected Systems*, and *Positive Behavior Support (PBS)*. Congruence among these models as well as areas in which there seem to be conflicting positions will be identified. These models or perspectives are defined in Table 3.2.

table 3.2

Three Major Models or Perspectives of SBMH

- The Spectrum of Mental Health Interventions and Treatments (Mrazek & Haggerty, 1994; Weisz et al., 2005). This approach includes what may be considered traditional mental health interventions applied to school settings. These include promotion and prevention strategies, psychotherapy and other standard treatments for known disorders, psychopharmacology, and maintenance and recovery strategies. This model will be referred to as "The MH Spectrum."
- Interconnected Systems for Meeting the Needs of All Children (Adelman & Taylor, 2006; National Institute for Health Care Management, 2005). This model is composed of three overarching systems: systems of prevention; systems of early intervention; and systems of care for children with the most serious impairments. These three systems collaborate to form an integrated continuum of services for children that include SBMH. This model will be referred to as "Interconnected Systems."
- The Application of Positive Behavior Supports to Reduce Challenging Behaviors in School (Horner et al., 1999). This model implements positive behavior supports (PBS) and functional behavioral assessment in school settings to both prevent and intervene with challenging behaviors at the school, classroom, and individual level. This model will be referred to as PBS.

In addition, it is important to note that SBMH programs and the three models described within this chapter can be implemented through several different processes. For example, a program can be the product of a mental health services provider collaborating with a school district to implement an integrated program of services. An alternative would be the school system's decision to use its own pupil services staff to provide a mental health component to a special education program or the general education curriculum. A third option might be an arrangement in which a school district contracts with a mental health services provider to supply a discrete service such as individual therapy to students, but there is no provision for collaboration or interaction with school staff.

An examination of the three models summarized in this chapter and the three implementation scenarios presented here illustrates the key roles of the education system and the mental health system in the implementation of SBMH. The effects of the traditions, policies, and theoretical foundations that influence these two systems need to be considered in terms of their influence on SBMH and the degree to which these influences may facilitate or impede the implementation of effective SBMH.

The effects of the traditions, policies, and theoretical foundations that influence the mental health and education systems need to be considered in terms of their influence on SBMH and the degree to which these influences may facilitate or impede the implementation of effective SBMH.

Heuristic Models of School Based Mental Health Programs

Three models of SBMH have been identified in this monograph to serve as heuristic aides in reviewing and describing the variety and number of demonstration programs and research studies that focus on SBMH. As noted above, these models are referred to as the *MH Spectrum*, *Interconnected System*s, and *PBS*. Although the terminology and theoretical foundations of these models differ, and in some aspects the difference is substantial, they can all be examined with respect to the manner in which they address universal, selective, and indicated interventions and treatments. However, as stated in Chapter 2, there is much semantic confusion over these terms and readers are reminded that for the sake of promoting clarity, we have chosen to use the IOM definitions as modified by John Weisz and his colleagues (2005).

Three models of SBMH—MH Spectrum, Interconnected Systems, and PBS—serve as heuristic aides in reviewing and describing demonstration programs and research studies. These models can be described by how they address universal, selective and indicated interventions and treatment.

The Mental Health (MH) Spectrum

The MH Spectrum (Mrazek & Haggerty, 1994; Weisz et al., 2005) refers to the continuum of services and interventions designed for children who are considered to have a mental illness or emotional disturbance, or to be at-risk. Mrazek and Haggerty (1994) originally developed the spectrum as a framework for prevention research in the broad mental health field. Its effectiveness as a guiding framework in the field is evidenced by the frequency of reference to it, especially in the emerging body of literature on prevention research in children's mental heath services. As illustrated in Figure 3.1, the mental health spectrum is a broad array of service components ranging from universal prevention strategies to in-patient care. Obviously, most SBMH interventions occur at the left side of the continuum. There will be some children who receive universal preventive interventions, but they may progress through several components of the spectrum because of the progression of their illness.

More recently, Weisz and colleagues (2005) have adapted the mental health spectrum proposed by Mrazek and Haggerty (1994; see Figure 3.2) into an even broader framework linking evidence-based prevention and treatment. As noted previously, Weisz and colleagues (2005) have added health promotion/positive development strategies to the spectrum as a component that precedes universal prevention strategies. They emphasize the "permeable" separation between indicated prevention strategies and treatment and promote a focus on evidence-based practice as a unifying construct throughout the entire spectrum. The framework proposes that strengths reside in youth, families, communities, and culture, and consequently places them in the center of the diagram. Interventions that offer support are arrayed in the upper semi-circle and setting locations in the lower semi-circle.

Figure 3.1

Mental Health Spectrum (Mrazek & Haggerty, 1994)

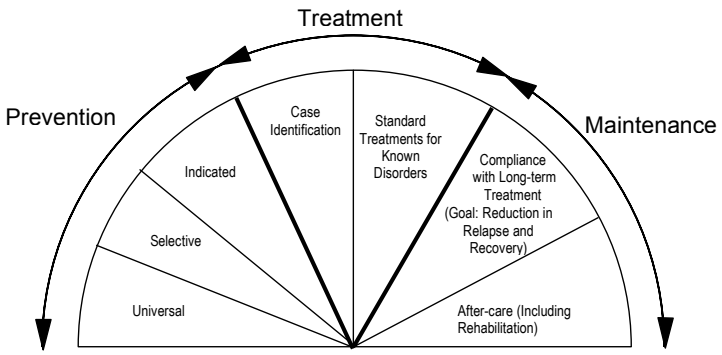


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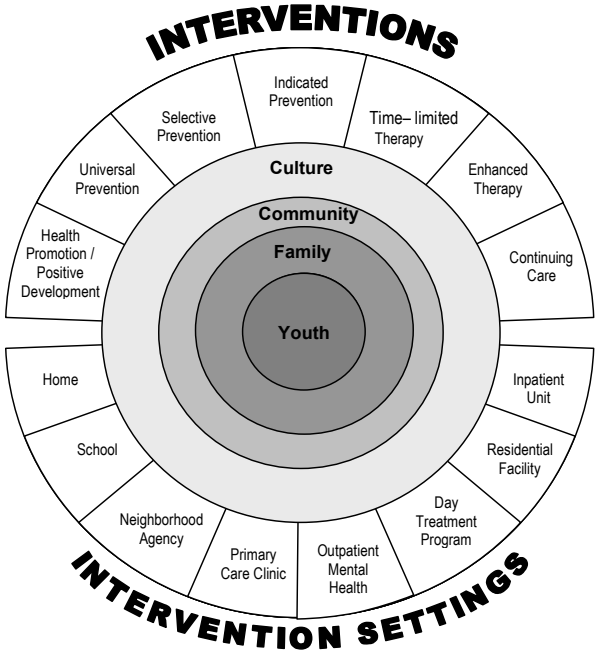
Figure 3.2

Interventions



Reprinted with permission from: Weisz, J., Sandler, I., Durlak, J., & Anton, B. (2005). Promoting and protecting youth mental health through evidence-based prevention and treatment. American Psychologist, 60(6), 628-648, American Psychological Association

Historically, when SBMH was implemented by the traditional mental health system, programs typically targeted diagnostic groups, or children at risk for specific mental health disorders.

While the role of the mental health system in the schools has not always been readily accepted or effectively implemented, Weisz and his colleagues (2005) have brought attention to the need for school-mental health collaboration by identifying "school" as a setting for many mental health interventions in the spectrum of services. This fits well with the growing movement to expand SBMH services that are provided by community mental health centers (Weist, Lowie, Flaherty, & Pruitt, 2001). This movement has been spurred on by several factors. For example, the gap between the number of children who have documented mental health needs and the number who actually receive service is becoming recognized nationally as critical in terms of its impact. It is well documented that less than one-third of children who need services are receiving treatment (e.g., Leaf et al., 1996). In addition, as achievement-focused school reform began to subject teachers and administrators to increasing accountability for student performance, the prominence of psychosocial barriers to learning, and the gap between need and service delivery gained increased attention from the education system (Adelman & Taylor, 1998).

Focus on diagnostic categories. Historically, when SBMH was implemented by the traditional mental health system, programs typically targeted diagnostic groups, or children at risk for specific mental health disorders, (e.g., depression or conduct disorder). This is the case with all three levels of prevention interventions as well as with treatment interventions. Consequently, the literature contains many examples of school-based programs designed to address children exhibiting a variety of specific diagnostic categories. Children with these diagnoses represent the large majority of the children who are candidates for selective and indicated mental health intervention, and SBMH programs that serve them typically use individual and group therapy; skills-based programs to promote social functioning, such as anger management; and psychopharmacology. Consultation services are sometimes provided, although there are fewer examples of such programs in the literature. It should be noted that presently there appears to be a movement away from the narrow focus on diagnostic categories toward more inclusion of universal interventions (Weisz et al., 2005).

While the types of SBMH programs that are part of the MH Spectrum will obviously focus on the school setting, there may be some interaction with the home as well as settings staffed by the specialty mental health community. This interplay between the home, school, and community-based treatment settings is a dimension to be noted when examining programs, and some examples of evidence-based practices presented in Chapter 4 have multiple components or settings in their program structure.

Examples from the MH Spectrum. Aggressive, oppositional behavior is one of the most frequent problems exhibited by school aged children. There are

several empirically validated programs that aim to prevent this type of behavior in schools, such as Promoting Alternative Thinking Strategies (PATHS), Second Step, Responding in Peaceful and Positive Ways (RIPP), and the Good Behavior Game (see Chapter 4 for descriptions). One example of how such programs operate is the Good Behavior Game (Kellum, Rebok, Ialongo, & Mayer, 1994). This universal prevention program was developed by mental health professionals in partnership with a large urban school district. The Good Behavior Game is an effective intervention to reduce high rates of aggressive behavior in first graders through a classroom-based behavior management strategy. Principles of positive reinforcement of appropriate group behavior were taught to classroom teachers. Not only did aggressive behavior decline during the intervention, but a six year follow-up revealed that boys who were very aggressive in first grade demonstrated significantly less aggressive behaviors than a comparable group of boys who did not receive the intervention. This same group of mental health researchers and professionals has worked with teachers to pair the Good Behavior Game with evidence-based instructional practices and have demonstrated improvement in behavior and academic achievement (Kellum et al., 1994).

Examples of mental health intervention at the selective and indicated levels of prevention include the Incredible Years, FAST Track, First Step to Success, and the Coping with Stress Course (see Chapter 4 for descriptions). Key features of such programs can be examined in the Coping with Stress Course (Clark et al., 1995). In this program, students reporting elevated levels of depression take part in a cognitive-behavioral group intervention led by trained psychologists and counselors. In the group sessions, students learned skills to identify and challenge negative or irrational thoughts and beliefs that may lead to depression. School personnel agree that next to oppositional and aggressive behavior, depression is a major concern in schools. The Coping with Stress Course has been rigorously tested and found to significantly reduce instances of major depression in participating students (treatment) as well as reducing the number of students who had elevated levels of depression who eventually needed more intensive treatment (indicated preventive intervention).

Summary of the MH Spectrum. When mental health providers enter schools to implement SBMH they bring the methods and techniques that have their roots in the psychological/behavioral health literature, traditions, and training. As the framework promoted by Weisz and colleagues (2005) indicates, mental health providers bring a comprehensive range of prevention and treatment services. They focus on identifying what diagnostic category of emotional disturbance is the target of the intended intervention and then a method of preventive intervention or treatment is chosen. While the range of settings for implementing the MH Spectrum is very broad, there

When mental health providers enter schools to implement SBMH they bring the methods and techniques that have their roots in the psychological/ behavioral health literature, traditions, and training.

is no doubt that locating mental health services in schools greatly increases accessibility and service utilization. For example, Catron and Weiss (1994) found that when mental health services were implemented in schools, 98% of referred students entered service, while only 17% of similar students who were referred to traditional clinic-based programs entered treatment. The question remains as to how many of the mental health services implemented in schools are evidence-based? In the next chapter, we summarize the results of several recent syntheses of evidence-based practices developed for implementation with children and adolescents.

It is important to note that in the examples described above, the Good Behavior Game and the Coping with Stress Course, the providers were highly skilled university-based practitioners and researchers. Over a decade ago, Weisz, Weiss, and Donenberg (1993) empirically demonstrated the differential effects of psychotherapy provided in a university-based clinic compared to a community-based clinic. While clients served in the university setting showed significant improvement in functioning, similar clients served in the community showed no change. The explanation offered by Weisz and his colleagues (1993) was that in the university setting, therapists (usually doctoral students) were highly supervised and used methods that were evidence-based (e.g., cognitive-behavior therapy), and there was strong adherence to the model. In the community there was very little supervision, therapists reported that they used many different types of therapy, including those for which there is little or no evidence of effectiveness (e.g., psychoanalytic approaches). The majority of these community-based therapists felt they were eclectic and had no adherence to a particular model of therapy.

Since the majority of mental health providers are community-based, the effectiveness of the SBMH services they provide will be tempered by the degree to which they implement evidence-based practices with fidelity.

Since the majority of mental health providers are community-based, the effectiveness of the SBMH services they provide will be tempered by the degree to which they implement evidence-based practices with fidelity (Fixsen, Naoom, Blase, Friedman, & Wallace, 2005). The good news is that there is, at present, considerable energy directed at the identification and implementation of evidence-based mental health interventions. The journals of virtually all disciplines as well as professional meetings highlight these practices. As will be described in Chapter 4, several organizations have provided the public with compendia of evidence-based programs, many of which can be easily accessed on the internet. While there is reason to be optimistic about increased effectiveness of SBMH programs that are implemented by community-based providers, the barriers to a significant reform and restructuring of the provider network are many. These include skepticism about research findings, potential costs associated with the implementation of evidence-based practices, the ability to meet local needs, adherence to ineffective approaches learned in training, lack of resources to conduct professional development, and a general lack of community-based

providers to staff SBMH programs. Effective implementation of school-based mental health services clearly rests on the field's success is addressing these barriers.

Interconnected Systems

Given the barriers facing the traditional mental health system in its attempts to implement SBMH, a model that is guided by a public health strategy and based on collaboration between systems has emerged as an alternative approach for implementing SBMH. This model, which we call *Interconnected Systems*, is comprised of a continuum of services that aims to balance efforts at mental health promotion, prevention programs, early detection and treatment, and intensive intervention, maintenance and recovery programs (National Institute for Health Care Management, 2005). Figure 3.3 illustrates the model as a series of three interconnected ovals representing systems of prevention, systems of early intervention, and systems of care. The model has been most clearly articulated and promoted by the Center for Mental Health in Schools at UCLA (Adelman & Taylor, 2006) and the Center for School Mental Health Assistance at the University of Maryland (Weist, Goldstein, Morris, & Bryant, 2003). In this model, resources from the school and the community are pooled to produce integrated programs at the three levels of service need.

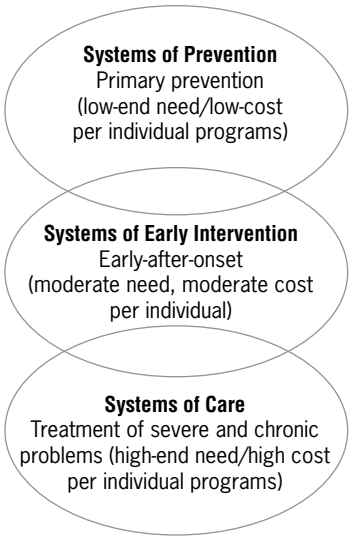
Systems of prevention. Services at this level are implemented through universal interventions. For example, schools conduct drug and alcohol education as part of the K-12 curriculum, they encourage parent involvement, and there are school-wide character education programs. The community promotes and supplies prenatal care, recreation activities and facilities, and opportunities for child abuse awareness and education. These services are coordinated between the school and the community and may be located in the school itself (to maximize access and utilization), but could also be conducted at recreation centers, faith-based centers, and social halls. In the ideal case, staff from schools as well as community agencies would be involved in implementation.

Systems of early intervention. At this level, individuals who are at-risk and who have moderate needs are targeted for service. This corresponds to the category of selective interventions in the Mental Health Spectrum Model. Schools may have a pregnancy prevention program for young women who have certain risk factors (e.g., a conduct disorder), there may be dropout prevention programs for high risk youths, and work-experience programs may be available for selected students. The community conducts Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) programs for eligible children and youth, and makes the results available to schools and Child Find programs (honoring the privacy rights of families but advocating for early intervention

Interconnected Systems is comprised of a continuum of services that aims to balance efforts at mental health promotion, prevention programs, early detection and treatment, and intensive intervention, maintenance and recovery programs.

Figure 3.3

Interconnected Systems



One of the most recognized strategies is the System of Care when problems are severe and long standing.

and acting as a facilitator for the dissemination of important information). A mental health center may provide short-term school-based counseling for at-risk students; for example, those whose parents are divorcing or students who are referred by assistant principals for anger management programs. In other cases, family support and the provision of emergency food and shelter will be important interventions that can prevent deeper penetration into the services system. Again, in ideal systems, there is a role for school staff and agency staff in the implementation of services.

Systems of Care. When problems are severe and long standing, that is, when multiple domains of functioning are impaired and problems have persisted for at least a year, intensive treatment is needed. At this level, one of the most recognized strategies is the System of Care (SOC) proposed by Stroul and Friedman (1994). The SOC is envisioned as an integrated and collaborative continuum of services provided by the various child-serving agencies aimed at children with the most intensive needs and their families. A set of fundamental values and principles are delineated to guide service provision with the family and coordination among service providers. Children who are served by the SOC will most likely (though not always) be in special education programs in school. Regardless of their identified category of special education, they will be exhibiting serious behavioral and emotional problems. An effective SOC would coordinate crisis intervention, long-term therapy, and hospitalization if necessary. Out-of-home placements such as foster care, detention, and residential treatment may be provided but intensive family preservation services are also available. At this intensive level of service, the "wraparound" approach may be used in a community. Essential to wraparound is the notion that the child and the family are central, services are individually tailored to the strengths and needs of the family, and are "wrapped around" them rather than placing a child into a particular program because of his/her diagnosis or pattern of behavior (Eber, Sugai, Smith, & Scott, 2002; Robbins & Armstrong, 2005; VanDenBerg & Grealish, 1996). Policy makers and administrators need to understand that the SOC and wraparound are more of a philosophy of support for children and families than a specific intervention. They are heavily value laden and promote strengths-based assessment, families being accepted as equal decision-making partners, culturally competent services, and a commitment to least restrictive, community-based treatment.

While the SOC and wraparound were designed to address the most severe level of impairment, they are feasible components of SBMH programs. In the ideal, there will be a community team of professionals joined by the family and their advocates, engaged in developing an individualized treatment or service plan that will, of course, be compatible with an existing Individualized Educational Plan (IEP) if the child is in a special education

program. Because of the complexity of the problems and the wide services array, a case manager is available to support the family and assist the agencies to better coordinate service delivery. While a community may designate a lead agency to implement the SOC, it must be recognized that all agency representatives and the family are equal decision-making partners.

The SOC is over 20 years old now, with wraparound being slightly more recent. Funded by the Substance Abuse and Mental Health Services Administration (SAMHSA), 121 communities and tribal nations have implemented SOCs affecting several thousands of children. In general, the engagement of schools in this initiative has been weak and the evidence for overall effectiveness of the SOC has been mixed but promising (Kutash, Duchnowski, & Friedman, 2005).

Because of the similar terms used to describe the SOC and wraparound, it is not surprising that the two approaches are sometimes considered to be equivalent and may even be used interchangeably to describe a local program. This is not correct, however, and is indicative of a failure to recognize the locus of operation for the two processes. Systems of care, as the name implies, operate at the systems level, not the client (child and family) level. The primary work in SOCs occurs with administrators, agency directors, commissioners, and similar decision-makers. Confusion may arise from the reality that families, advocates, and consumers often are, and should be "at the table" as equal decision-making partners with the agency representatives in developing valid SOCs. This is the essence of "family driven" SOCs. However, the work, at this level, centers on systems activities, for example, developing inter-agency agreements, methods to share information and protect confidentiality, cross training of staff from multiple agencies, increasing capacity of community-based services and decreasing out-of-home placements, pooled funding, and multi-agency over-site. A commitment to achieve family-centered services and cultural competency in all aspects of service delivery are values that the implementers of the SOC attempt to infuse into all the component parts of the SOC at the systems level.

Wraparound is a philosophy that guides the implementation of services at the individual level primarily through the development of an individual care plan. The plan is driven by values such as being family centered, child focused, culturally competent, and strengths-based. Practitioners of wraparound espouse the need for "flexible funds" to provide services that fit the needs of the family rather than fit the family into a service for which there is a funding stream. However, the production of a pool of flexible funds is not a task that a wraparound planning team will be able to accomplish in a treatment planning meeting. The availability of flexible funds is a systems issue and a different set of decision-makers typically have responsibility for such an issue.

Systems of care operate at the systems level, not the client (child and family) level.

Wraparound is a philosophy that guides the implementation of services at the individual level primarily through the development of an individual care plan.

The need for flexible funds is a good example of the potential need to integrate SOCs with wraparound. The advocates of these approaches have an opportunity to collaborate with researchers to explicate how this integration should work and the cost benefit its implementation. As yet, neither the literature nor the field has provided any systematic examples of such efforts.

Some advocates of interconnected systems contend that this may be the only way for communities to truly meet the mental health needs of their children and the work will be worth it.

Summary of interconnected systems. If a school system would like to implement a SBMH program that is composed of Interconnected Systems, there is much work to be done. However, some advocates of this approach contend that this may be the only way for communities to truly meet the mental health needs of their children and the work will be worth it (Tolan & Dodge, 2005). An important source of information describing Interconnected Systems in the context of a SBMH program model is the work of Adelman and Taylor at the UCLA Center for Mental Health in Schools. In a recently published text, Adelman and Taylor (2006) have summarized their extensive work addressing the removal of barriers to learning. They propose that schools, whether they accept it or not, are faced with the serious problem of almost a third of their students failing to learn because of psycho-social barriers to learning.

Adelman and Taylor's approach (2006) to SBMH is to completely restructure schools and the communities they serve into comprehensive, interconnected systems that together have the expertise and resources to effectively address the barriers to learning and produce students who are successful in the multiple domains of their lives. More specifically, in discussing whether the barriers to learning are caused by internal factors or the environment, they propose the use of a transactional view that "actually encompasses the other models and provides the kind of comprehensive perspective needed to differentiate among learning and behavior problems" (Adelman & Taylor, 2006, p. 24). Their conceptualization of a "transactional view" is consistent with their position that major restructuring needs to take place to bring about significant improvement in outcomes for children who experience emotional problems. That is, narrow, fragmented approaches that focus on single aspects of barriers to learning will not be sufficient to bring about desired outcomes. An approach that is comprehensive (composed of the interconnected systems) is necessary to address both the internal (child) causes and the external (environmental) causes of psychosocial barriers to learning.

Policy makers and administrators interested in the removing barriers to learning model of SBMH should know that a network of several hundred schools are involved in implementing the Adelman and Taylor approach, however documented outcomes are yet to be revealed. Like the SOC, this is a difficult model to rigorously evaluate. As Adelman and Taylor have pointed out, "The reality is that available direct evidence is sparse, and other relevant data must be appreciated in terms of addressing barriers that interfere with improving student achievement" (2006, p. 166).

Another important source of information on the Interconnected Systems model is the Center for School Mental Health Assistance (CSMHA) at the University of Maryland (Weist, 1997). The CSMHA has promoted the Interconnected Systems model through its expanded school mental health programs (ESMH) that aim to "move toward a full continuum of mental health promotion and intervention for youth in general and special education through school-community program partnerships" (Schaeffer et al., 2005, p.17). ESMH programs aim to reach under-served children and youth, and to improve a range of outcomes that are important to the children served, their families, and schools. Research on these outcomes includes studies on satisfaction with services (Nabors, Weist, & Reyolds, 2000), improved student functioning (Armbruster & Lichtman, 1999), and improved school climate (Walrath, Bruns, Anderson, Glass-Seigel, & Weist, 2004). While the results of these studies are encouraging, they have many limitations including small numbers of participants and lack of comparison groups. ESMH is a relatively new approach and continues to evolve into a model that can be empirically evaluated (Weist et al., 2002).

There are different amounts of support for the various components of the Interconnected Systems model and as yet there is no comprehensive evaluation of the model because it is not totally in place in any community.

Positive Behavior Support

During the last 20 years, positive behavior support (PBS) has emerged from applied behavior analysis (ABA) as "a newly fashioned approach to problems of behavior adaptation" (Dunlap, 2006, p. 58). ABA developed in the 1960s as a science in which instrumental learning principles such as positive reinforcement and stimulus control were used to bring about changes in behavior that were socially important.

In the 1980s and 1990s PBS advanced to offer a broad array of interventions that used the concepts and principles of ABA along with those of other disciplines. PBS originally developed as an alternative to aversive control of extremely serious and often dangerous behaviors of people who were developmentally disabled. In recent years, however, the application of PBS has expanded to include students with and without disabilities in a variety of settings such as school, home, and community. Today, PBS addresses a broad range of academic and social/behavioral challenges and has transformed from a singular focus on individual case planning to systems level implementation especially involving school-wide issues (Sugai & Horner, 2002).

Currently, PBS may be considered a developing applied science "that uses educational and systems change methods (environmental redesign) to enhance quality of life and minimize problem behavior" (Carr et al., 2002, p. 4). When PBS is used to develop an intervention for an individual it is

Today, PBS addresses a broad range of academic and social/behavioral challenges and has transformed from a singular focus on individual case planning to systems level implementation especially involving school-wide issues.

accompanied by a functional behavioral assessment (FBA) to develop an effective behavioral support plan. FBA is defined as "a systematic process of identifying problem behaviors and the events that (a) reliably predict occurrences and non-occurrences of those behaviors and (b) maintain the behaviors across time" (Sugai et al., 1999 p. 13).

The success of PBS with individual cases of problem behavior in children is supported by the requirements in the 1997 amendments to IDEA mandating PBS and FBA to be used to reduce challenging behaviors in students who have disabilities (Sugai & Horner, 2002). Research is beginning to emerge supporting the effectiveness of PBS at the systems level, particularly as a school-wide preventive intervention to reduce the incidence of problem behaviors and increase student learning (see, for example, Nelson, Martella, & Marchand-Martella, 2002). In addition, there is a growing body of literature describing the integration of PBS with systems of care principles and wraparound in school settings at the selective and indicated levels (Eber et al., 2002; Robbins & Armstrong, 2005).

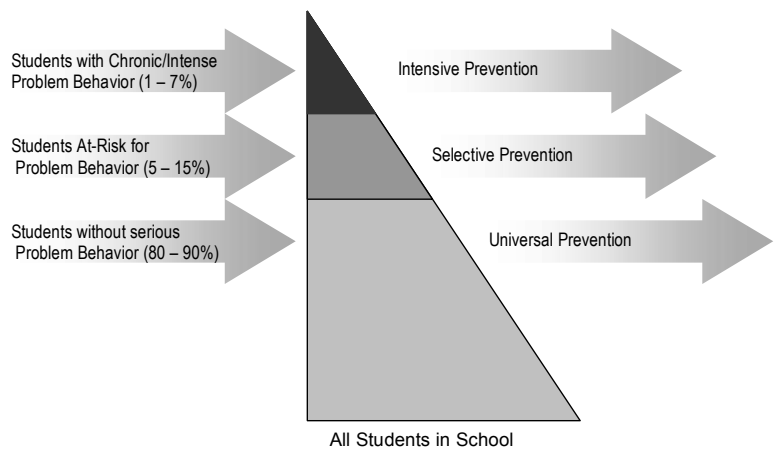
Descriptions of PBS are often accompanied by a triangle shaped graphic that illustrates its use in universal interventions, at-risk or selective interventions, and intensive individual interventions.

The increased attention to PBS as an effective tool in managing a variety of academic, social, and emotional/behavioral problems validates its potential as an important model of SBMH. It is also noteworthy that some of the leaders in the PBS field have expressed interest in integrating PBS with the children's mental health system, a further indication of the need for decision-makers to keep abreast of the developments in the PBS field (School Mental Health Alliance, 2005).

Descriptions of PBS are often accompanied by a triangle shaped graphic that illustrates its use in universal interventions, at-risk or selective interventions, and intensive individual interventions (see Figure 3.4). As this figure suggests, about 80% of all children do not have serious problems and universal interventions are sufficient for them. About 15% of children are at-risk and require targeted or selective interventions that often are group administered. This leaves about 5% of children who require intensive individualized interventions. Interestingly, these percents correspond to the children's mental health epidemiological findings that about 20% of children, at a point in time, have a diagnosable disorder

Figure 3.4

Levels of Prevention Interventions Adapted from Sugai & Horner, 2002.



that meets DSM criteria and about 5% of children have a serious and persistent disorder (Friedman, Kutash, & Duchnowski, 1996).

School-wide or universal interventions in PBS. The purpose of school-wide PBS is to create positive school environments for all students. It is a proactive approach that replaces the need to develop individual interventions for multiple students who engage in similar inappropriate behaviors. Before universal interventions are implemented in a school, several steps need to occur to ensure success. First, a large majority of the school staff, usually 80%, must agree to implement the intervention. A consensus needs to emerge concerning the target behavior(s) for the intervention, i.e., what behavioral needs in the school will be addressed. Then, training has to occur that includes information about the theoretical approach of PBS as well as the methods used in implementation. When a school agrees to implement a PBS universal intervention, the staff is committing to the use of a process, not an isolated intervention.

When a school agrees to implement a PBS universal intervention, the staff is committing to the use of a process, not an isolated intervention.

For example, "Teaching Recess" is a school-wide program implemented after a school committee determined that the majority of office referrals occurred on the playground of an elementary school during recess (Todd et al., 2002). These referrals typically were made because of fighting and other types of aggressive behavior. An instructional plan was developed, recess workshops were held for the entire school—both staff and students—for a total of only two hours and fifteen minutes, and the intervention was initiated. During the workshops students walked the boundaries of the playground, observed the self-manager rules and behavioral expectations in action, and had a short debriefing back in the classrooms. The number of recess-related office referrals was reduced by 80% in the first year of implementation.

Strategies such as "Teaching Recess" can be considered universal prevention and build the capacity of the school to have a safe environment for all children. In the PBS model, it is not assumed that all children have learned all of the appropriate social behaviors that will enable them to function successfully in school. Consequently, a school-wide program that teaches important interactive behaviors will bring all of the students up to a level at which they will be able to do well and avoid behavior that may result in a discipline referral. In addition, school-wide universal interventions establish a positive environment in the school that will facilitate the implementation of targeted/selective and intensive interventions for students who exhibit more serious challenging behaviors. This is accomplished through developing consistent behavioral expectations in the school staff.

Selective/targeted interventions in PBS. Simply stated, in the PBS model selective interventions are used with students who require more than universal strategies but less than intensive individualized interventions. The purpose of selective interventions is to support students who are at-risk for

more serious problem behaviors. Implementing a selective intervention begins with an assessment to identify the purpose of the problem behavior through a functional behavioral assessment (FBA). Next, a support plan is developed that may include such interventions as teaching the student a functionally equivalent replacement behavior for the problem behavior or rearranging the environment to reduce the probability of the problem behavior occurring. Monitoring and reassessing is a fundamental component of PBS (OSEP Technical Assistance Center for PBIS, n.d.).

It should be noted that "indicated interventions" are equivalent to intensive individualized interventions and tertiary prevention in PBS language.

"Improving Classroom Behavior by Modifying Task Difficulty" (Umbreit, Lane, & Dejud, 2004), is an example of a selective intervention. During time for independent work in reading and math, a ten-year old fourth grader often talked to other students, kicked the seat in front of him, and wandered around the classroom. His teacher considered the behavior to be very disruptive, reprimanded him several times and then sent him to the office when the behavior persisted. A functional behavioral assessment revealed that the behaviors occurred after he completed his assignments and that the disruptive behaviors were preferred to sitting at his desk and waiting for the rest of the class to finish. In the intervention, the difficulty of his assignments was assessed and more challenging academic assignments were provided. On-task behavior increased from approximately 50% on average to over 90%. Both the student and the teacher reported satisfaction with the intervention.

Specific selective interventions also can be offered in small group settings for students exhibiting similar behaviors. Examples include membership in a social skills club in which specific replacement behaviors are taught, modeled, and used by the students. A "check in/check out" intervention may be used with a student who has problems during transitions from class to class. Ideally, the decision to use a selective intervention is made by a school planning team after at least two discipline referrals have been made (Hawken & Horner, 2003).

Intensive individualized interventions in PBS. It should be noted that in the IOM-Weisz and colleagues (2005) terminology, "indicated interventions" are equivalent to intensive individualized interventions and tertiary prevention in PBS language. When problem behaviors are dangerous, highly disruptive, and may result in social or educational exclusion, more intensive interventions are needed. In developing these interventions it should be noted that although the aim is to individualize, the methods of PBS are standardized and follow a specific plan. The excerpt in Table 3.3 is taken from "Overview of Tertiary Prevention," available from the OSEP Technical Assistance Center for PBIS.

When done correctly, indicated interventions in the PBS model have many similarities with the wraparound approach (Eber et al., 2002). For example, in both a team of the most important stakeholders, including

table 3.3

Overview of Indicated Prevention in the PBS model (OSEP Technical Assistance Center for PBIS, n.d.)

Tertiary Prevention interventions are implemented through a flexible, but systematic, process of functional behavioral assessment and behavioral intervention planning. The following outline illustrates the general steps of the process.

I. Identify goals of intervention.

Based on the available information, the team identifies the specific concerns and goals:

a. what the student is doing that is problematic (observable behaviors).

b. to what extent (e.g., frequency) these behaviors are occurring.

c. what broad goals the team hopes to achieve through intervention.

II. Gather relevant information.

Members of the behavioral support team gather information through a variety of sources:

a. review of existing records.

b. interviews of support providers.

c. direct observation of patterns, antecedents, contexts, and consequences.

III. Develop summary statements.

The team uses the information to create statements that describe relationships between the student's behaviors of concern and aspects of the environments. These statements include:

a. when, where, and with whom the behavior is most/least likely to occur.

b. what happens following the behavior (what they get or avoid).

c. other variables that appear to be affecting the person's behavior.

IV. Generate behavioral support plan.

A plan is developed, based on the summary statements, to address the behavioral concerns and fit within the environments in which it will be used. The behavioral support plan (for students who have IEPs this may also serve as the Behavior Intervention Plan (BIP) includes:

a. adjustments to the environment that reduce the likelihood of problem.

b. teaching replacement skills and building general competencies.

c. consequences to promote positive behaviors and deter problems.

d. a crisis management plan (if needed).

V. Implement and monitor outcomes.

The team works together to ensure that the plan is implemented with consistency and is effective in achieving the identified goals. The team identifies the training and resources needed, determines who is responsible for monitoring implementation, evaluates outcomes (via continued data collection), and communicates periodically, making adjustments in the plan, as needed.

families, plans the intervention. Contributions from all members are valued and the team strives to be culturally competent. The team is oriented to developing the most feasible individualized plan possible based on an analysis of data rather than placing the child in an available program slot.

Summary of PBS. When schools decide to use PBS as a model for SBMH they are making a commitment to major change. Typically, PBS trainers suggest that there needs to be at least 80% agreement among the staff that they are willing to learn and implement the model. Without this commitment, PBS will not work. Even with this level of commitment, it will take time and effort. The majority of PBS trainers have an education or special education background and this helps them relate to the faculty. Earlier in this chapter, we pointed out the differences in language in SBMH that is driven by the education versus the mental health system. PBS is clearly in the education camp.

At present, many school districts and some entire states are turning to PBS to address the challenging behaviors and other psycho-social barriers to learning facing their students.

At present, many school districts and some entire states are turning to PBS to address the challenging behaviors and other psycho-social barriers to learning facing their students. There is a large body of research indicating positive changes in behavior resulting from PBS and FBA for persons who have developmental disabilities and autism spectrum disorder (Marquis et al., 2000). These interventions are at the individual, indicated level and they have been evaluated with single-subject design studies. As previously noted, there is an additional growing body of research examining PBS at the school-wide (preventive) and selective levels (e.g., Lewis & Sugai, 1999; Nelson et al., 2002; Robbins & Armstrong, 2005; and Sugai & Horner, 1999).

Recently, Forness (2005) has critiqued the status of behavioral interventions in the special education field, and found them lacking the empirical base to support designation as evidence-based practices—even though there have been frameworks offered that establish criteria to evaluate the quality of evidence for these interventions, including PBS. For example, Horner and his colleagues (Horner, et al., 2005) have developed an extensive method for identifying evidence-based practice in special education programs using single-subject designs. Forness argues that while single-subject and correlational designs are valid research methods, they do not meet commonly accepted criteria for establishing evidence. He urges the field to use experimental designs, especially random controlled trials, to demonstrate the effectiveness of behavioral interventions at the level of an "evidence-based practice" (Forness, 2005).

Most experts in the field agree that school-wide PBS is in its infancy (Dunlap, 2006). However, the early results of PBS interventions implemented at the indicated level, and the growing body of support for implementation at the universal and selective levels for children who have emotional/behavioral problems, is very promising.

Decision-makers are encouraged to make data-based decisions when designing SBMH programs. It is therefore important to recognize that the empirical support for PBS as a viable model for implementation in schools is unique. Because the roots of PBS are in applied experimental analysis of behavior, the evidence for PBS, at this time, is primarily derived from single-subject designs. This research, while not in the traditional empirical mode, is nevertheless rigorous, generalizable, and strong in social validity (Sugai & Horner, 2002). Therefore, administrators have a preponderance of evidence to support their exploration of PBS as a viable model for SBMH programs.

Use of Conceptual Models in Decision-Making

This chapter seeks to provide a foundation for evaluating approaches to the provision of school-based mental health services, and determining necessary processes and resources for effective implementation. We do not contend that this will be a quick or easy endeavor. The divergent language, conflicting conceptual underpinnings, and lack of a coherent body of evidence for comprehensive, community-wide initiatives are barriers recognized by the field. However, there are promising convergences in structural models emerging from public health, and best practices developing from pioneer efforts to integrate key features and strategies from the mental health spectrum, interconnected systems model, and PBS.

Regardless of the overall conceptual model embraced, decision-makers are faced with the selection of programs that best match their particular demographics, resources, and stage of development in delivery of SBMH services. Fortunately, there is a growing body of evidence that can suggest programs and practices that, when embedded in a SBMH system, have potential to result in a reasonable level of positive outcomes for students and their families. The next chapter presents an overview of those mental health services and programs that have been awarded the status of *evidence-based practice*, and explores the empirical support for the designation.

Regardless of the overall conceptual model embraced, decision-makers are faced with selection of programs that best match their particular demographics, resources, and stage of development in delivery of SBMH services.

4

The Empirical Base of School-Based Mental Health Services

The purpose of this chapter is to describe the evidence-base for mental health services that are appropriate for delivery in schools.

Examining the Evidence

It is clear that schools are now formally engaged in implementing a range of programs to meet the social and emotional needs of their students in order to facilitate learning. While these efforts range from support for students from school personnel such as school counselors to very specific packaged programs such as character education, most schools are engaged in these activities. Zins, Weissberg, Wang, and Walberg (2004) report that a typical school delivers, on average, 14 separate programs that broadly address social-emotional issues. Of these programs, however, most were not empirically-based. Also, there is no evidence of a systematic deployment of these programs, but rather, they seem to emerge in response to immediate pressures or trends.

The purpose of this chapter is to describe the evidence-base for mental health services that are appropriate for delivery in schools. Overall, mental health services in this review are defined as any strategies, programs, or interventions aimed at preventing and treating mental health problems in youth and can range from programs focused at the universal, selective, and indicated levels of prevention. Because there are a variety of sources describing the evidence-base on mental health services, it is hoped that this review will start to identify the breadth and depth of the knowledge base so that it can be both better implemented by practitioners and strengthened by future research efforts.

It should be noted that in this survey of evidence-based programs, the majority of these programs do operate in schools. Therefore, it is hoped that an integrated list of evidence-based programs will facilitate discussions between mental health and school decision-makers as they consider the role of evidence-based programs for provision of school-based mental health services in their communities. As recommended in the previous chapter, any selection of individual programs and practices will be strengthened when embedded in a system-wide model.

SAMHSA maintains a web-based National Registry of Evidence-based Programs and Practices. Programs listed in this registry are classified as either *model*, *effective*, or *promising*.

Method

The review consisted of an examination of

- existing compendia of empirically-supported programs ($N = 7$),
- a web-based resource describing established and probably efficacious approaches for four specific disorders,
- four articles summarizing empirically-based programs, and
- recently published articles identifying recent developments and resources in SBMH.

Compendia of Empirically-Supported Programs

Seven lists of empirically-supported mental health programs for children were selected for this review. The following comprise the best known, and most frequently referenced listings: (1) Substance Abuse and Mental Health Services Administration (SAMHSA), (2) Collaborative for Academic, Social, and Emotional Learning (CASEL), (3) U.S. Department of Education (USDOE), (4) Prevention Research Center for the Promotion of Human Development at Penn State, (5) Center for the Study and Prevention of Violence (CSPV), (6) Center for School Mental Health Assistance (CSMHA), and (7) Washington State Institute for Public Policy.

1. Substance Abuse and Mental Health Services Administration (SAMHSA)

Over the past several years, the Substance Abuse and Mental Health Services Administration (SAMHSA) has maintained a web-based National Registry of Evidence-based Programs and Practices (NREPP). To be listed on this registry, program candidates submit published and unpublished program materials to NREPP for review by teams of scientists who rate each program according to 15 criteria of scientific soundness (see Table 4.1 for a description of these criteria). Though all programs are scored on each of the 15 rating parameters, scores that determine program classification as either *model*, *effective*, or *promising* are based on ratings of integrity and utility, which serve as summaries for the other 13 criteria.

To be designated a *Model Program* by SAMHSA, a program must be rated as effective (based on the criteria of scientific soundness) and developers must have the capacity and have coordinated and agreed with SAMHSA to provide quality materials, training, and technical assistance to practitioners who wish to adopt their programs. *Effective Programs* have met all the criteria of a model program except developers have yet to agree to work with SAMHSA to support broad-based dissemination of their programs but may disseminate their programs themselves. *Promising Programs* have been evaluated and are scientifically defensible but do not yet have sufficient scientific support to meet standards set by SAMHSA for designation as an effective or model program

Table 4.1

Rating criteria for programs submitted for review to SAMHSA's National Registry of Evidence-Based Programs and Practices (Schinke, Brounstein, & Gardner, 2002, p. 15)	
Theory	The degree to which programs reflect clear, well-articulated principles about behavior and how it can be changed.
Intervention fidelity	How the program ensures consistent delivery.
Process evaluation	Whether program implementation was measured.
Sampling strategy and implementation	How well the program selected its participants and how well they received it.
Attrition	Whether the program retained participants during its evaluation.
Outcome measures	The relevance and quality of evaluation measures.
Missing data	How the developers addressed incomplete measurements.
Data collection	The manner in which data were gathered.
Analysis	The appropriateness and technical adequacy of data analyses.
Other plausible threats to validity	The degree to which the evaluation considers other explanations for program effects.
Replications	Number of times the program has been used in the field.
Dissemination capability	Whether program materials are ready for implementation by others in the field.
Cultural- and age-appropriateness	The degree to which the program addresses different ethnic-racial and age groups.
Integrity	Overall level of confidence of the scientific rigor of the evaluation.
Utility	Overall pattern of program findings to inform theory and practice

(Schinke, Brounstein, & Gardner, 2002). In early 2006, the website listed 66 model, 37 effective, and 55 promising programs. Of the 66 model programs listed, 56 (85%) focus on children and/or their parents, and these programs are discussed in the results section of this chaper.

In 2006, SAMHSA will be revising its review criteria for programs eligible for the National Registry of Evidence-Based Programs and Practices (NREPP) and expanding the registry to include population-, policy- and system-level outcome ratings for interventions (Request for Comments; NREPP, 2005). All programs currently listed within the registry will be re-reviewed under the new criteria. The 16 new review criteria for programs aimed at individual-level outcomes are provided in Appendix E. The definitions of the expanded areas of population-, policy-, and systems-level outcomes and the 12 review criteria for these outcomes are provided in Appendix F.

2. Collaborative for Academic, Social, and Emotional Learning (CASEL)

In March 2003, the Collaborative for Academic, Social, and Emotional Learning (CASEL) issued a report on evidence-based social and emotional learning programs.

Founded in 1994, CASEL's mission is to enhance children's success in school and life by promoting coordinated, evidence-based social, emotional, and academic learning as an essential part of education from preschool though high school. To help achieve this mission, CASEL collaborates with an international network of researchers and practitioners in the fields of social and emotional learning, prevention, positive youth development, and education reform to promote social and emotional learning efforts in schools.

The common core of the 80 programs selected by CASEL is that they all increased children's sense of connectedness or attachment to school and increased skills for setting goals, solving problems, achieving self discipline, or character development or responsibility.

CASEL searched the extant literature and asked for nominations of evidence-based programs that provide curriculum for schools to use to increase the social and emotional competency of the general student population. They identified 242 programs for review, and selected only those programs (a) that are school-based and provide curriculum (of at least eight lessons) for teachers to deliver to the general student population; (b) whose curriculum covers two consecutive grades or provides a structure that promotes lesson reinforcement beyond the first year; and (c) are available nationally.

Of the 242 programs reviewed, 80 met the specified criteria. Of the 80 programs, only 11 or 14% of the programs met the highest level of scientific rigor set by CASEL: multiple studies (using different samples) that document positive behavioral outcomes at post-testing, with at least one study indicating positive behavioral impact at least one year after the intervention ended.

The common core of the 80 programs selected by CASEL is that they all increased children's sense of connectedness or attachment to school and increased skills for setting goals, solving problems, achieving self discipline, character development, or responsibility. The 11 programs meeting the highest level of rigor are described in the results section of this chapter.

3. U. S. Department of Education (USDOE)

In 1998, a panel comprised of 15 experts in safe, disciplined, and drug free schools acting on behalf of the Department of Education's Office of Educational Research and Improvement (OERI) began to document educational programs effective in combating both substance abuse and violence among youth. Applications were solicited from any program sponsor who believed his or her program might meet the review criteria. Of the 124 programs reviewed, 33 programs were designated as "promising" and nine programs were designated as exemplary. There were seven criteria that had to be met in order for a program to be considered exemplary: (a) evidence of

efficacy, (b) quality of the program goals, (c) a sound rationale, (d) program content is appropriate for intended population, (e) program implementation is sound, (f) program integrates into the educational mission of schools, and (g) the program can be replicated. The monograph describing these programs was published in 2001, and the nine programs classified as exemplary are described in the results section of this chapter.

Written in 2000 by Greenberg, Domitrovich, and Bumbarger, this review included effective universal, selective, and indicated prevention programs that were found to produce improvements in specific psychological symptomatology or in factors generally considered to be directly associated with increased risk for child mental disorders.

4. Prevention Research Center for the Promotion of Human Development at Penn State

Written in 2000 by Greenberg, Domitrovich, and Bumbarger, this review included effective universal, selective, and indicated prevention programs that were found to produce improvements in specific psychological symptomatology or in factors generally considered to be directly associated with increased risk for child mental disorders. Because of this, studies were included if the child showed early problems or was identified as being high-risk for developing a later disorder; studies were excluded if the children were formally identified as having a DSM diagnosis. Programs were included if they had been evaluated using either a randomized-trial design or a quasi-experimental design that used an adequate comparison group. Studies were required to have both pre- and post-findings, and preferably follow-up data to examine the duration and stability of program effects. In addition, it was required that the programs have a written manual that specifies the model and procedures to be used in the intervention. Finally, it was necessary to clearly specify the sample and their behavioral and social characteristics.

Programs were identified through an extensive review of the literature and reputable internet sources (i.e., Centers for Disease Control and Prevention, NIMH Prevention Research Center). Over 130 programs were identified, 34 of which met criteria for inclusion in the review. Those 34 programs are described in the results section of this chapter.

The project, called Blueprints for Violence Prevention, has identified 11 prevention and intervention programs that meet criteria for effectiveness.

5. Center for the Study and Prevention of Violence (CSPV)

In 1996, the Center for the Study and Prevention of Violence (CSPV), at the University of Colorado at Boulder, began an initiative to identify violence prevention programs that are effective. The project, called Blueprints for Violence Prevention, has identified 11 prevention and intervention programs that meet criteria for effectiveness. To be classified as a *model* program or a *Blueprint* program, the program must have met three criteria: (a) empirical evidence of prevention effect using a strong research design, (b) a documented sustained effect overtime, and (c) multiple site replications. While model programs must meet all three criteria (n = 11), programs classified as *promising* must meet only the first criterion (n = 16). The 11 model programs selected by CSPV are described in the results section of this chapter.

6. Center for School Mental Health Assistance (CSMHA)

The Center for School Mental Health Assistance (2002) reviewed several sources of empirically-supported interventions to produce their own overview of interventions believed suitable for adaptation and implementation in schools.

The Center for School Mental Health Assistance (2002) reviewed several sources of empirically-supported interventions to produce their own overview of interventions believed suitable for adaptation and implementation in schools. However the criteria for making this determination were not explicit. Their list of programs, therefore, included mostly behavioral or cognitive-behavioral interventions that were most likely covered by other organizations distilling empirically-based interventions.

CSMHA's sixteen-page document presents a description of 40 programs divided by diagnostic condition (i.e., anxiety, depression, and conduct problems) and by prevention level; indicated (n = 12), selective (n = 12), and universal (n = 16), and may be a useful resource for practitioners. Overall, approximately 8% of the indicated programs, 42% of the selective programs, and 69% of the universal programs or updated versions of these programs are contained in the description of programs in the results section of this chapter.

The titles of the programs contained within the CSMHA document are listed in Appendix A. The lack of concordance between the CSMHA list and the list of programs created by other sources reflects not only the rapid evolution of new approaches and packaged programs, but also the increases in the empirical rigor required by more recent reviews.

7. Washington State Institute for Public Policy (WSIPP)

The Washington State Institute for Public Policy issued a report on the benefits and cost of evidence-based programs that focused on reducing negative social outcomes.

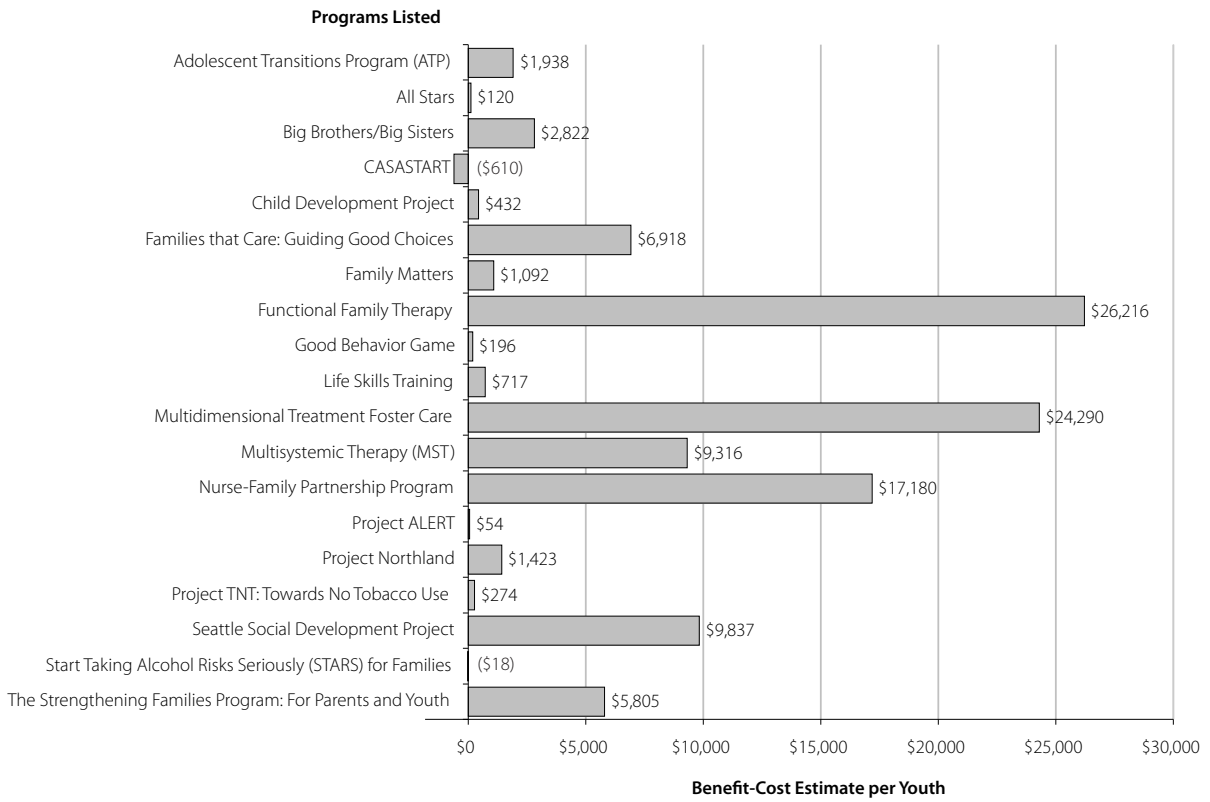
The Washington State Institute for Public Policy issued a report on the benefits and cost of evidence-based programs (Aos, Lieb, Mayfield, Miller, & Pennucci, 2004). As mandated by the Washington State Legislature, this report focused on a limited number of programs and only those approaches that focused on reducing the following negative social outcomes for youth: (a) crime, (b) substance abuse, (c) teen pregnancy, (d) suicide, (e) child abuse and neglect, and (f) increasing the positive social outcome of educational attainment.

To be included in this analysis, a program or approach had to have one rigorous evaluation that targeted one of the six outcomes listed above and be applicable to real world settings. Additionally, some programs and approaches were excluded because the measured outcomes could not be monetized. For example, although one program documented symptom reduction on a scale that measured psychopathology (e.g., changes on the Child Behavior Checklist), the change in score could not be associated with a monetary amount and therefore the program could not be part of the WSIPP analysis. Changes in standardized scale scores (i.e., symptom reduction) is a common outcome tool for mental health researchers, suggesting that many mental health programs may have been excluded from the WSIPP analysis due to the monetary measurement requirement.

The analysis yielded benefit minus cost information for 61 evidence-based programs and approaches. The 61 programs are listed in Appendix B, along with the benefit minus cost estimate per youth, the number of studies or trials used to calculate the cost-benefit analysis, and the social outcomes influenced by each program. Nineteen (31%) of the program/approaches described by WSIPP also appear in one of the other compendia of programs (see figure 4.1).

figure 4.1

Programs Described by WSIPP Listed in Compendia



What is especially interesting about this compendium is the unique approach taken to include programs. WSIPP clearly states that they wanted programs targeted at specific outcomes rather than programs that may fit into a school or be classified as a mental health program. For example, they targeted empirically-supported programs that reduce crimes committed by adolescents. While committing a crime would certainly be considered a negative outcome and is often considered poor functioning for a teen attending a mental health program, is a program targeting crime reduction

a mental health program? Is a program that targets the prevention of teen pregnancy a "mental health program?" The approach adopted by WSIPP points to the broad array of outcomes and functioning typically subsumed under the topic of mental health interventions.

Web-Based Services Guide for Consumers and Practitioners

www.effectivechildtherapy.com defines and summarizes the established and "probably efficacious" treatments for the following categories of disorders: Anxiety, Depression, Attention Deficit Hyperactivity Disorder, and Conduct/Oppositional Problems.

A website to inform the general public as well as practitioners regarding the most up to date information about mental health practice for children and adolescents has been created through a partnership between the Society of Clinical Child and Adolescent Psychology (Division 53 of the American Psychological Association) and the Network on Youth Mental Health funded by the MacArthur Foundation. This web site (www.effectivechildtherapy.com) defines and summarizes the established and "probably efficacious" treatments for the following categories of disorders: Anxiety, Depression, Attention Deficit Hyperactivity Disorder, and Conduct/Oppositional Problems. Under the heading of Anxiety for example, eight associated disorders are listed including Generalized Anxiety. While there are no well-established treatments described for this disorder, cognitive behavioral therapy, family anxiety management, modeling, and relaxation training are described under the "probably efficacious" treatment heading.

This is a beneficial resource for the public and practitioners wanting a quick summary of effective treatment options for a variety of diagnostic conditions. The number of disorders covered by this site may be expanded in the near future (Weisz et al., 2005). Because this site only provides overarching summaries and does not describe the research or list specific programs, the descriptions from this site could not be integrated into the results section of this chapter.

Articles that Discuss and Summarize Empirically-Supported School-Based Mental Health Approaches

The articles selected go beyond identifying individual programs, but rather seek to glean evidence-based strategies that cut across programs.

Our review searched out critiques of evidence-based literature that identified common or core features of evidence-based practice. The articles selected—and described below—go beyond identifying individual programs, but rather seek to glean evidence-based strategies that cut across programs.

1. Rones and Hoagwood (2000) and Hoagwood (2006)

In order to assess the empirical support for school-based mental health programs, Rones and Hoagwood (2000) conducted a review of the literature published between 1985 and 1999. To be included as an empirically-supported school-based mental health program, the study must have utilized a rigorous design and included a control group or multiple baseline approach. The study also had to include a school-based service, defined as "any program, intervention, or strategy applied in a school setting that was

specifically designed to influence students' emotional, behavioral, or social functioning" (p. 224). Of the 5,128 entries retrieved, less than 1% (n = 47) of the studies met the requirement of having a rigorous research design. The remaining empirical studies were categorized as describing 37 strategies focusing on either emotional or behavior problems (n = 4), depression (n = 5), conduct problems (n = 22), stress (n = 2), or substance abuse problems (n = 12). The outcome domains of each study were categorized as focusing on (a) reducing symptoms, (b) increasing functioning, (c) describing services/systems, or (d) a combination of these.

Of the 37 strategies and interventions described by the 47 studies, 20% (n = 7) were found to be ineffective at treating the targeted problem. The remaining strategies were found to be either effective (35%, n = 13), mixed in their effectiveness (32%, n = 12), or a combination of effective on some outcomes and not on others (13%, n = 5; see Appendix C for a list of the strategies described in this review).

The authors summarized factors associated with the effectiveness of the empirically-supported strategies (see in Table 4.2). The first factor was an association between program effectiveness and consistent program implementation; the second factor was the use of multi-component programs that targeted the ecology of the whole child. Three effective prevention interventions, for example, targeted parents, teachers, and peers in the intervention. Program effectiveness was also associated with multiple approaches to changing behavior, such as informational presentations combined with skill training. It appears that these multiple formats were successful because they focused on the change agents that were theoretically linked to the target behaviors. A related factor was that programs with the strongest evidence of an impact were those directed toward changing specific behaviors and skills associated with the targeted problem (e.g., depression, conduct problems), while more general activities such as field trips did not seem to enhance the intervention.

The final factor associated with the effectiveness of a strategy was the integration of the program into the general classroom curriculum. That is, mental health programs delivered as an integral part of the classroom rather than as a separate and specialized session were associated with more positive outcomes. This suggests the importance of the integration of services within the normal routine of the school in order for the programs not only to be effective but sustained.

In a more recent review of the empirical literature, Hoagwood (2006) examined over 2,000 articles produced between 1990 and 2004. Her examination revealed that 63 articles (< 3%) met her criteria of being a rigorously tested intervention dealing with mental health problems in

table 4.2

Factors Associated with Program Effectiveness (Rones & Hoagwood, 2000)

1. Consistent implementation
2. Multi-component programs (child, teacher, and parent components)
3. Multiple approaches (informational sessions combined with skill training)
4. Targeting specific behaviors and skills
5. Developmentally-appropriate strategies
6. Strategies integrated into the classroom curriculum

children. Twenty-three of these studies (37%) tested the effects of a program on both academic and mental health outcomes and 14 of these studies found an impact on both types of outcomes. The remaining 40 studies (63%) examined only mental health outcomes with only 38 demonstrating effectiveness in this area. Additionally, the majority of studies (74%) were conducted with young children while only six studies focused on middle or high school populations.

2. Browne, Gafni, Roberts, Byrne, and Majumdar (2004)

To determine common elements of mental health programs aimed at providing preventive or early intervention services to at-risk children, Browne, Gafni, Roberts, Byrne, and Majumdar (2004) synthesized 23 reviews describing the empirical literature on prevention strategies implemented in or involving schools. These reviews were published between 1984 and 2000 and represent hundreds of studies. The common elements of effective prevention and early intervention programs described in this analysis are presented in Table 4.3.

table 4.3

Common Elements of Prevention and Early Intervention Programs (Browne et al., 2004)

1. Programs aimed at developing protective factors have shown greater positive results than programs aimed at reducing pre-existing negative behaviors, but vary by age, gender, and ethnicity of children
2. Younger children show greater positive results than older children, but some programs are effective for older children
3. Programs directed to address a specific problem have greater effect than broad, unfocused interventions
4. Programming that has multiple elements involving family, school, and community are more likely to be successful than efforts aimed at a single domain
5. Strategies were enhanced when based on and informed by sound theoretical foundations
6. Fear-inducing tactics and delivering information in only a didactic format were generally less effective
7. Long-term strategies are more effective than short-term strategies when they have the continued presence of appropriate adult staff or mentors

3. Greenberg, Weissberg, O'Brien, Zins, Fredricks, Resnik, et al. (2003)

Greenberg and colleagues (2003) conducted a synthesis of the empirical literature on strategies aimed at increasing positive youth development and mental health; decreasing substance use; antisocial behavior, school nonattendance, and drug use; and the influences on learning and academic performance. They concluded that there is a solid research base indicating that well-designed, well-implemented, school-based prevention and youth

development programming can positively influence a diverse array of social, health, and academic outcomes. This synthesis found that key strategies for effective school-based prevention programming involve student-focused, relationship-oriented, and classroom and school-level organizational changes (see Table 4.4).

4. Weisz, Sandler, Durlak, and Anton (2005)

In this recent article, Weisz and colleagues (2005) propose linking mental health prevention and treatment within an integrated model. Part of the research agenda to achieve this model calls for the continued development and wider implementation of evidence-based prevention and treatment interventions. They conclude that more than 500 discrete, named psychotherapies are now practiced with children and more than 1,500 outcome studies have been conducted. The authors summarize the results of numerous meta analyses on mental health treatments (primarily psychotherapy studies) and these results are presented in Table 4.5.

table 4.4

Key strategies for effective school-based prevention programming involve the following student-focused, relationship-oriented, and classroom- and school-level organizational changes (Greenberg et al., 2003, p. 470)

1. Teach children to apply social and emotional learning (SEL) skills with ethical values in daily life through interactive classroom instruction and provide frequent opportunities for student self-direction, participation, and school and community service
2. Foster respectful supportive relationships among students, school staff, and parents
3. Support and reward positive social, health, and academic behavior through systematic school-family-community approaches
4. Multi-year, multi-component interventions are more effective than single component short-term programs
5. Competence and health promotion efforts are best begun before signs of risky behaviors emerge and should continue through adolescence

table 4.5

Summary of the effectiveness of youth psychotherapy (Weisz et al., 2005, pp. 630-631)

1. The average treated child was functioning better after receiving psychotherapy than 75% of the children in the control group
2. Beneficial treatment effects were still evident six months after treatment concluded
3. Treatment effects are larger for the particular problem addressed in treatment than for global problems not specifically addressed in treatment
4. Meta analyses of cognitive behavior therapy (CBT) show substantial effects while family therapy show respectable effects
5. Studies of treatment "as usual" in settings in which therapists were able to use their clinical judgment to deliver treatment as they saw fit, not constrained by evidence-based interventions or manuals, and in which there was a comparison of their treatment to a "control group" were found to have no treatment benefit
6. Linking multiple treatments together such as those promoted under systems of care have yet to demonstrate positive effects at the clinical level

Review of Recent Literature and Other Resources

In an attempt to capture efforts that had emerged in the recent literature, we conducted a review of the literature from 1999 to 2005. Three data bases (e.g., Ovid Medline, Ovid PsycInfo, and ERIC) were searched using the following combination of key words: "School," "Mental Health," and "Children." This search resulted in an identification of 1,182 citations. Each citation was reviewed to determine if it described a quantitative analysis of a school-based program, used standardized measures, employed a comparison group, was published in a peer-reviewed journal, and was written in English. While only a few studies of school-based programs were identified as having rigorous empirical designs, this process uncovered many resources on the topic that may be of help to the field. The studies unearthed in this review are listed in Table 4.6, and the resources are presented in Tables 4.7 and 4.8.

Several of the studies reviewed point to recent developments and trends in developing school-based mental health services. Weiss and his colleagues, after documenting the lack of efficacy of school-based individual counseling, have begun to augment their school-based program by integrating teachers. The results of a controlled study (Weiss, Harris, Catron & Han, 2003) indicated the RECAP program (Reaching Educators, Children, and Parents), a cognitive-behavioral and social skills training program for elementary school children with internalizing and externalizing problems, is effective for both types of problem behaviors. Another recent study (Mufson et al., 2004) of a randomized clinical trial of interpersonal therapy implemented in five school-based clinics in New York City revealed that a sample of Hispanic adolescent females with depression demonstrated significantly better outcomes than youth in the treatment as usual condition. An article by Armbruster and Lichtman (1999) examined changes over time for students served in a school-based mental health clinic versus those students served in a community-based clinic. Results indicate small but statistically significant improvement in both groups of students.

The remaining studies revealed the wide range of mental health problems and populations addressed by school-based services. Included in these articles were studies of youth exposed to violence, traumatized Latino immigrant children, and children experiencing homelessness or post disaster trauma. Other articles studied the effectiveness of prevention programs and the long-term outcomes of children who participated in early intervention programs.

table 4.6

Literature Review Results – Articles describing a quantitative analysis of a school-based programs, using standardized measures, including a comparison group, and published in a peer-reviewed journal between 1999 and 2005.

1. Armbruster, P., & Lichtman, J. (1999). Are school-based mental health services effective? Evidence from 36 inner city schools. *Community Mental Health Journal, 35*(6), 493-504.
2. Chemtob, C. M., Nakashima, J. P., & Hamada, R. S. (2002). Psychosocial intervention for postdisaster trauma symptoms in elementary school children: A controlled community field study. *Archives of Pediatrics & Adolescent Medicine, 156*, 211-216.
3. Forness, S. R., Serna, L. A., Nielsen, E., Lambros, K., Hale, M. J., & Kavale, K. A. (2000). A model for early detection and primary prevention of emotional or behavioral disorders. *Education and Treatment of Children, 23*(3), 325-345.
4. Han, S., & Weiss, B. (2005). Sustainability of teacher implementation of school-based mental health programs. *Journal of Abnormal Child Psychology, 33*(6), 665-679.
5. Ialongo, N., Poduska, J., Werthamer, L., & Kellam, S. (2001). The distal impact of two first-grade preventive interventions on conduct problems and disorder in early adolescence. *Journal of Emotional and Behavioral Disorders, 9*(3), 146-160.
6. Kataoka, S. H., Stein, B. D., Jaycox, L. J., Wong, M., Escudero, P., Tu, W., et al. (2003). A school-based mental health program for traumatized Latino immigrant children. *Journal of the American Academy of Child and Adolescent Psychiatry, 42*(3), 311-318.
7. Mufson, L., Dorta, K. P., Wickramaratne, P., Nomura, Y., Olfson, M., & Weissman, M. M. (2004). A randomized effectiveness trial of interpersonal psychotherapy for depressed adolescents. *Archives of General Psychiatry, 61*(6), 577-584.
8. Nabors, L., Sumajin, I., Zins, J., Rofey, D., Berberich, D., Brown, S., et al. (2003). Evaluation of an intervention for children experiencing homelessness. *Child & Youth Care Forum, 32*(4), 211-227.
9. Reynolds, M., Brewin, C. R., & Saxton, M. (2000). Emotional disclosure in school children. *Journal of the American Academy of Child and Adolescent Psychiatry, 41*(2), 151-159.
10. Stein, B. D., Jaycox, L. H., Kataoka, S. H., Wong, M., Tu, W., Elliot, M. N., et al. (2003). A mental health intervention for school children exposed to violence: A randomized controlled trial. *Journal of the American Medical Association, 290*(5), 603-611.
11. Weiss, B., Harris, V., Catron, T., & Han, S. S. (2003). Efficacy of the RECAP intervention program for children with concurrent internalizing and externalizing problems. *Journal of Consulting and Clinical Psychology, 71*(2), 364-374.

table 4.7

Additional resources on evidence-based mental health programs	
Web sites describing programs that are evidence-based	
• American Youth Policy Forum	http://www.aypf.org/
• Child Welfare League of America, Research to Practice Initiative:	http://www.cwla.org/programs/r2p/default.htm
• CSAP's Prevention Portal: Model Programs	http://permanent.access.gpo.gov/lps9890/lps9890/www.samhsa.gov/centers/csap/modelprograms/default.htm
• National Center for Injury Prevention and Control, Centers for Disease Control and Prevention Using Evidence-Based Parenting Programs to Advance CDC Efforts in Child Maltreatment Prevention:	http://www.cdc.gov/ncipc/pub-res/parenting/ChildMalT-Briefing.pdf
• National Child Traumatic Stress Network Empirically Supported Treatments and Promising Practices:	http://www.nctsn.org/nccts/nav.do?pid=ctr_top_trmnt_prom
• NASP (National Association of School Psychologists) Center: Exemplary Mental Health Programs Online Edition	http://naspcenter.org/exemplary.html
Office of Juvenile Justice and Delinquency Prevention's Model Programs Guide (MPG):	http://www.dsgonline.com/mpg2.5/mpg_index.htm
• Preventing Drug Use Among Children and Adolescents: A Research Based Guide for Parents, Educators, and Community Leaders:	http://www.drugabuse.gov/pdf/prevention/RedBook.pdf
• Promising Practices Network (RAND)	http://www.promisingpractices.net/
• School Mental Health Alliance:	http://www.kidsmentalhealth.org/SchoolMentalHealthAlliance.html
• Strengthening America's Families	http://www.strengtheningfamilies.org/
• Task Force on Evidence Based Interventions in School Psychology	http://www.sp-ebi.org/
• UCLA Center for Mental Health in Schools Clearinghouse:	http://smhp.psych.ucla.edu/clearing.htm
• University of Maryland Center for School Mental Health Analysis and Action:	http://csmha.umaryland.edu/
• What Works Clearinghouse:	http://whatworkshelpdesk.ed.gov

table 4.8

Additional resources on evidence-based mental health programs

Articles and Books

Special Section of the *Journal of Clinical and Adolescent Psychology* (Sept 2005, vol. 34, No.3) provides 7 articles discussing the evidence base for assessment of various disorders.

Burns, B. J., Hoagwood, K. E., & Lewis, M. (Eds.). (2004). Evidence-based practice, part I: Research update. *Child and Adolescent Psychiatric Clinics of North America, 13*(4).

Burns, B. J., Hoagwood, K. E., & Lewis, M. (Eds.). (2005). Evidence-based practice, part II: Effecting change. *Child and Adolescent Psychiatric Clinics of North America, 43*(2).

Fixsen, D. L., Naoom, S. F., Blase, K. A., Friedman, R. M. & Wallace, F. (2005). *Implementation Research: A Synthesis of the Literature.* Tampa, FL: University of South Florida, Louis de la Parte Florida Mental Health Institute, The National Implementation Research Network (FMHI Publication #231). http://nirn.fmhi.usf.edu/resources/publications/Monograph/index.cfm

Greenberg, M. T., Domitrovich, C. E., Graczyk, P. A., & Zins, J. E. (2004). *The study of implementation in school-based preventive interventions: Theory, research, and practice.* Washington, DC: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services. http://www.prevention.psu.edu/pubs/documents/CMHS_Implementation_report.pdf

Hoagwood, K. E. (2005). Family-based services in children's mental health: A research review and synthesis. *Journal of Child Psychology and Psychiatry, 46*(7), 690-713.

Hunter, L. (2002). *School-Based Interventions for Attention Deficit and Disruptive Behavior Disorders: A Critical Review.* Report prepared for the Klingenstein Third Generation Foundation, New York, NY.

Karoly, L. A., Kilburn, M. R., & Cannon, J. S. (2005). *Early childhood interventions: Proven results, future promise.* Santa Monica, CA: RAND Labor & Health. http://www.rand.org/pubs/monographs/2005/RAND_MG341.pdf

Kazdin, A. E., & Weisz, J. R. (1998). Identifying and developing empirically supported child and adolescent treatment. *Journal of Consulting and Clinical Psychology, 66*(1), 19-36.

Mihalic, S., & Aultman-Bettridge, T. (2002). *A Guide to Effective School-Based Prevention Programs*. In W.L. Tulk (Ed.), Policing and School Crime. Englewood Cliffs, NJ: Prentice Hall Publishers.

U.S. Department of Health and Human Services (2001). *Youth Violence*. A Report of the Surgeon General. Rockville, MD: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Injury Prevention and Control; Substance Abuse and Mental Health Services Administration, Center for Mental Health Services; and National Institutes of Health, National Institute of Mental Health.

Wilson, S. J., & Lipsey, M. W. (2005). *The effectiveness of school-based violence prevention programs for reducing disruptive and aggressive behavior.* Revised report for the National Institute of Justice, retrieved from http://www.ncjrs.gov/pdffiles1/nij/grants/211376.pdf

With the current keen interest in evidence-based practices in SBMH, a spirited discussion has developed, and continues, concerning the nature, amount, and quality of evidence that designates an intervention as being empirically or evidenced-based.

Results

These results will be organized around two key issues. First, we critique the various requirements used to designate a program as *empirically-based*. Second, an integrated view of the programs designated as empirically-based is presented. Programs that are described by any of the five sources included in the method section are described below.

Level of Evidence Required for a Program to be Designated as "Empirically-Based"

What constitutes "evidence?" With the current keen interest in evidence-based practices in SBMH, a spirited discussion has developed, and continues, concerning the nature, amount, and quality of evidence that designates an intervention as being empirically or evidenced-based (e.g., Jensen, Weersing, Hoagwood, & Goldman, 2005). This discussion is more than an academic debate because it is becoming clear that evidence-based interventions are becoming the "coin of the realm" for the various service providing agencies. There already are examples of state level initiatives (e.g., Michigan, Oregon, and Texas) and third party payers that require a percentage of contracted services to be rigorously, empirically-supported interventions for reimbursement.

It is also clear from our review of the compendia of evidence-based practices that there is a range of criteria used to designate an "evidence-based" practice. For example, SAMHSA has 15 criteria used to designate a program as being a model program, an effective program, or a promising program. The USDOE has seven criteria that are applied by a 15 member expert panel to determine if a program is exemplary or promising. Fortunately, our review of the criteria used by various panels reveals that while there is no universally accepted definition of an evidence-based program at this time, there is some consistency in terms of core criteria. For example, a randomized controlled trial or very rigorous quasi-experimental design is required across all of the sources. They may differ in the number of studies and requirements for multiple, independent researchers that are necessary to meet criteria, but there is an emphasis on an empirical demonstration of effectiveness.

While the variability in criteria for designating an intervention as evidence-based is somewhat frustrating, it should not lead administrators, policy-makers, or practitioners to conclude that the data base is flawed. On the contrary, we present, in this chapter, a preponderance of evidence that supports the effectiveness of many SBMH interventions that are designed to either prevent the development of emotional problems in children or to effectively improve functioning across multiple domains for children who exhibit emotional disturbance. Decision makers, in both the education and mental health systems, have many options from which to choose in implementing SBMH services. The task becomes to match your population and systems model with the programs available.

As the research base grows, it can be expected that methods and designs will become even more sophisticated in evaluating evidence-based practice and some of the ambiguity may be resolved. For example, Jensen and colleagues (2005) have suggested a future research agenda that is not limited to the implementation of a randomized controlled trial but would compare treatment interventions, identify the active ingredient of what is considered to be an evidence-based practice, and identify mediating variables that may affect effectiveness. Their methodology aims to uncover the "cause" of the positive effect in unequivocal terms so as to facilitate dissemination and implementation that can go to scale. In addition, it is important to evaluate the effects of evidence-based practices from a longitudinal perspective, examining both the short term and long term outcomes for possible iatrogenic effects of interventions (Dishion, McCord, & Poulin, 1999).

As the research base grows, it can be expected that methods and designs will become even more sophisticated in evaluating evidence-based practice and some of the ambiguity may be resolved.

An Overview of Programs Designated as Empirically-Based

Description of empirically-based programs. A primary purpose of our review was to discover what the current evidence base looks like; that is, was there a concordance of programs across listings? The answer is "yes" and "no." Of the 92 programs listed in Table 4.9, the majority are from SAMHSA (*n* = 56, 61%), and 21 programs (23%) appear in more than one of the five sources. It is important to note that should some programs be listed by fewer sources than others, this is often a reflection of the different requirements each source has for being "empirically-based" versus a real difference in the programs. An examination of the programs listed in Table 4.9 reveals that approximately one-third of the programs listed are designated as targeting substance abuse, trauma, or health problems, while the remaining two-thirds address the regulation of emotions or social functioning, see Table 4.10. Overall, program approaches focus equally on universal levels of prevention (53% or 48 of 90 programs) and selective/indicated levels of prevention (47% or 42 of 90 programs). Two programs were categorized as focusing on all three levels of prevention.

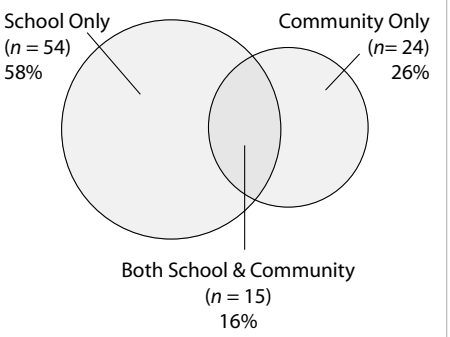
The majority of the programs (58%) listed in Table 4.9 take place in schools, while 26% take place solely in the community, and 16% take place in both the community and schools. It is clear that any discussion of school-based mental health services must include the role of evidence-based programs.

Thirty-five percent of the programs target children 12 years of age or younger, while 24% target children 12 years of age or over. The remaining programs target children covering a wide range of ages including 20% that serve youth 5 to 18 years of age and an additional 16% that serve youth 10 to 18 years of age.

A majority of evidence-based mental health programs (61%) have a family component as part of the program, while a little less than half

figure 4.2

Settings for Evidence-based Programs and Practices (*N* = 92)



(47%) have a teacher component. The duration of programs listed in Table 4.9 is equally divided with a third of the programs taking less than three months to implement, a third taking between three and nine months to be implemented, while the remaining third require more than nine months for full implementation.

The results found in this investigation are similar to a parallel endeavor to isolate evidence-based practices in schools by the School Psychology Task Force of the American Psychological Association (Kratochwill & Stoiber, 2002). In their analysis of evidence-based practices promoted across various organizations, they identified a total of 29 programs that were school-based and showed clear evidence of effectiveness through rigorous testing. Eleven of these programs focused on comprehensive prevention, nine focused on violence (prevention and intervention), eight focused on substance abuse, five focused on social skills and emotional adjustment, two focused on academics, and one program focused on trauma (Hoagwood, 2006).

table 4.9

Compendium of Evidence-Based Behavioral Health Programs Listed on any of Five Sources by Prevention Level (Indicated, Selective, and Universal).

	Prevention Level / Focus	List Cited	School, Community, or Both	Age Range*	Length of Program+	Family Component (Y/N)	Teacher Component (Y/N)
Indicated (17 programs)							
	Social / Emotional						
1	Brief Strategic Family Therapy	A	C	6 – 17 yrs	8 – 12 weeks	Y	N
2	Counselors Care (C-CARE) and Coping and Support Training (CAST)	B	S	14 -18 yrs	2 hours (C-CARE) 6 weeks (CAST)	N	N
3	Early Risers: Skills for Success	A	B	6 – 10 yrs	3 years	Y	N
4	Family Effectiveness Training	A	C	6 – 12 yrs	13 weeks	Y	N
5	Multidimensional Treatment Foster Care	C, D	B	12 -18 yrs	Avg. stay 7 months	Y	N
6	Queensland Early Intervention and Prevention of Anxiety Project	B	S	7-14 yrs	10 weeks	Y	N
	Substance Abuse						
7	Multidimensional Family Therapy	A	C	11 – 18 yrs	Avg. of 4 months	Y	N
8	Not on Tobacco	A	B	12 – 24 yrs	10 weeks	N	N
9	Project EX	A	S	14 – 19 yrs	6 weeks	N	N
10	Reconnecting Youth	A	S	14 – 18 yrs	One semester	Y	Y
	Violence / Aggression						
11	Adolescent Transitions Program (ATP)	B	C	10 – 14 yrs	12 weeks	Y	N
12	Anger Coping Program	B	S	9 – 12 yrs	12 – 18 weeks	N	N
13	Attributional Intervention (Brainpower Program)	B	S	10 – 12 yrs	6 weeks	N	N

	Prevention Level / Focus	List Cited	School, Community, or Both	Age Range*	Length of Program+	Family Component (Y/N)	Teacher Component (Y/N)
14	Earlscourt Social Skills Group Program	B	S	6 – 12 yrs	12 – 15 weeks	Y	Y
15	Montreal Longitudinal Experimental Study	B	B	7 – 9 yrs	Two years	Y	N
16	Multisystemic Therapy (MST)	A, C	C	12 – 17 yrs	Avg. of 4 months	Y	N
17	Peer Coping Skills Training	B	S	6 – 12 yrs	Approx. 22 weeks	N	Y
Indicated / Selective (11 programs)							
	Social / Emotional						
18	Incredible Years	A, C	S	2 – 8 yrs	Up to 22 weeks	Y	Y
19	Families and Schools Together (FAST)	A	C	4 – 12 yrs	8 – 12 weeks	Y	N
	Substance Abuse						
20	CASASTART (Striving Together to Achieve Rewarding Tomorrows)	A, D	C	8 – 13 yrs	Up to 2 years	Y	N
21	Leadership and Resiliency Program (LRP)	A	B	14 – 17 yrs	Up to 4 years	N	N
22	Parenting Wisely	A	C	9 – 18 yrs	Self-administered	Y	N
23	Project Success	A	C	14 – 18 yrs	8 – 12 sessions	Y	N
24	Residential Student Assistance Program	A	C	14 – 17 yrs	5 – 24 weeks	N	N
	Violence / Aggression						
25	FAST Track	B	S	6 – 12 yrs	School Year	Y	N
	Trauma						
26	Cognitive Behavioral Therapy for Child Sexual Abuse	A	C	3 – 18 yrs	12 sessions	Y	N
27	Trauma Focused Cognitive Behavior Therapy	A	C	3 – 18 yrs	12 - 16 weeks	Y	N
	Healthy Babies						
28	Nurse-Family Partnership Program	A, C	C	0 – 3 yrs	Up to 2 years	Y	N
Selective (14 programs)							
	Social / Emotional						
29	Across Ages	A	B	9 – 13 yrs	Continuous	Y	N
30	PENN Prevention Program	B	C	10 – 13 yrs	12 weeks	N	N
31	Primary Mental Health Project	B	S	4 – 10 yrs	School Year	N	N
32	Stress Inoculation Training I	B	S	16 – 18 yrs	13 sessions	N	N
33	Stress Inoculation Training II	B	S	13 – 18 yrs	8 sessions	N	N
	Aggression / Depression						
34	Coping with Stress Course	B	S	13 – 18 yrs	15 sessions	N	N
35	First Step to Success	B	B	4 – 5 yrs	Approx. 3 months	Y	Y
36	Functional Family Therapy	C	C	11 – 18 yrs	8 – 26 hours	Y	N
37	Social Relations Program	B	S	10 – 11 yrs	School Year	N	N
	Trauma						
38	Children in the Middle	A	C	3 – 12 yrs	2 – 4 months	Y	N
39	Children of Divorce Intervention Program (CODIP)	B	S	8 – 15 yrs	9 – 16 sessions	N	N
40	Children of Divorce Parenting Program	B	C	8 – 15 yrs	12 sessions	Y	N
41	Family Bereavement Program	B	C	7 – 17 yrs	15 sessions	Y	N

	Prevention Level / Focus	List Cited	School, Community, or Both	Age Range*	Length of Program+	Family Component (Y/N)	Teacher Component (Y/N)
	Mentoring						
42	Big Brothers/Big Sisters	B, C	C	5 – 18 yrs	One year or longer	N	N
Selective /Universal (9 programs)							
	Social / Emotional						
43	Dare to be You1	A	B	2 – 5 yrs	12 weeks and boosters	Y	Y
44	Project Achieve	A	S	4 – 14 yrs	3 years	Y	Y
45	SAFE Children: Schools and Families Educating Children	A	B	4 – 6 yrs	20 weeks	Y	N
46	Strengthening Families Program	A	C	6 – 12 yrs	7-14 weeks and boosters	Y	N
	Substance Abuse						
47	All Stars	A	B	11 – 14 yrs	9 – 13 weeks	Y	Y
48	Keepin' It REAL	A	S	10 – 17 yrs	10 lessons and booster	N	Y
49	Project ALERT	A, D	S	11 – 14 yrs	11 weeks and boosters	N	Y
50	Project Toward No Drug Abuse	A, C	S	14 – 19 yrs	4 – 6 weeks	N	Y
	Aggression						
51	Olweus Bullying Prevention Program	A, C	S	6 – 18 yrs	School Year	N	Y
Universal (39 programs)							
	Social / Emotional						
52	Al's Pals: Kids Making Healthy Choices	A	B	3 – 8 yrs	23 weeks	Y	Y
53	Caring School Community	E	S	5 – 12 yrs	School Year	Y	Y
54	Child Development Project	A, B	S	5 – 12 yrs	Up to 3 years	Y	Y
55	Families that Care: Guiding Good Choices	A	C	8 – 13 yrs	5 – 10 weeks	Y	N
56	Good Behavior Game	B	S	5 - 7 yrs	2 years	N	Y
57	High/Scope Educational Approach for Pre-School & Primary Grades	A, E	S	3 – 5 yrs	School Year	Y	Y
58	Improving Social Awareness – Social Problem Solving	B	S	8 – 14 yrs	School Year	N	Y
59	Life Skills Training	A, C, D, E	S	11 – 16 yrs	3 years	N	Y
60	Linking the Interests of Families and Teachers (LIFT)	B	S	6 – 11 yrs	10 weeks	Y	Y
61	Lions Quest Skills Series	A, E	S	6 - 18 yrs	Multiyear	Y	N
62	PATHS: Promoting Alternative Thinking Strategies	A, B, C, E	S	5 – 12 yrs	5 years	Y	Y
63	Positive Youth Development Program	B	S	11 – 14 yrs	15 weeks	N	N
64	School Transitional Environment Project (STEP)	B	S	Transitioning students	School Year	N	Y
65	Seattle Social Development Project	B	S	6 - 12 yrs	School Year	Y	Y
66	Skills, Opportunities, And Recognition (SOAR)	E	S	6 – 12 yrs	Multiyear	Y	Y
67	Social Decision Making and Problem Solving Program	E	S	6 – 12 yrs	25-40 lessons per year	N	Y
68	Suicide Prevention Program I	B	S	12 - 14 yrs	12 weeks	N	N
69	Suicide Prevention Program II	B	S	16 – 17 yrs	7 weeks	N	N

	Prevention Level / Focus	List Cited	School, Community, or Both	Age Range*	Length of Program+	Family Component (Y/N)	Teacher Component (Y/N)
	Substance Abuse						
70	Athletes Training and Learning to Avoid Steroids (ATLAS)	A, D	S	13 - 19 yrs	10 sessions	Y	Y
71	Class Action	A	S	14 – 18 yrs	8-10 weeks	Y	Y
72	Communities Mobilizing for Change on Alcohol	A	B	13 -20 yrs	Continuous	N	N
73	Family Matters	A	C	12 – 14 yrs	3 months	Y	N
74	Keep a Clear Mind	A	S	8 – 12 yrs	4 weeks	Y	Y
75	Midwestern Prevention Project	C	B	12 – 18 yrs	5 years	Y	Y
76	Project Northland	A, D	S	10 – 14 yrs	3 years	Y	Y
77	Project TNT: Towards No Tobacco Use	A, D	S	11 - 14 yrs	10 days and boosters	N	Y
78	Project Venture	A	B	11 - 15 yrs	Continuous	N	Y
79	Protecting You/Protecting Me	A	S	6 – 11 yrs	5 years	N	Y
80	Start Taking Alcohol Risks Seriously (STARS) for Families	A	B	11 – 14 yrs	5 – 10 weeks	Y	N
81	The Strengthening Families Program: For Parents and Youth	A, D	C	10 – 14 yrs	7 weeks and booster	Y	N
82	Too Good For Drugs	A	S	5 – 18 yrs	School year	Y	Y
	Aggression / Violence						
83	I Can Problem Solve (ICPS)	B, E	S	4 – 12 yrs	School Year	Y	Y
84	Responding in Peaceful and Positive Ways (RIPP)	A, B, E	S	12 – 14 yrs	3 years	N	Y
85	Safe Dates	A	S	12 – 18 yrs	9 sessions	Y	Y
86	Second Step: A Violence Prevention Program	A, B, E	S	4 – 14 yrs	15 to 30 weeks	Y	Y
87	SMART Team: Students Managing Anger and Resolution Together	A	S	11 – 15 yrs	8 computer modules	N	Y
88	Teaching Students to be Peacemakers	A	S	5 – 14 yrs	School Year	N	Y
89	Too Good for Violence	A	S	5 – 18 yrs	School Year	N	Y
	Health Promotion						
90	Know Your Body	E	S	6 – 12 yrs	School year	Y	Y
Universal/ Selective/Indicated (2 programs)							
91	Creating Lasting Family Connections (CLFC)	A	C	11 – 15 yrs	20 weeks	Y	N
92	Positive Action	A	S	5 – 18 yrs	School Year	Y	Y

1 This is a different program than D.A.R.E. (Drug Abuse Resistance Education)

* Programs reporting grades were converted to the approximate age of student in each grade level

+ Sessions generally last 40 minutes to 1 hour

Codes for which lists cited the program:

A = SAMHSA: http://www.modelprograms.samhsa.gov

B = Penn State: http://www.prevention.psu.edu/pubs/docs/CMHS.pdf

C = CSVP: http://www.colorado.edu/cspv/blueprints/

D = USDOE: http://www.ed.gov/admins/lead/safety/exemplary01/exemplary01.pdf

E = CASEL: http://www.casel.org/projects_products/safeandsound.php

Overall, the empirically-based programs contain a limited number of overall strategies and include either skill development curricula or therapeutic approaches of either behavior management or cognitive-behavioral therapy.

What does differ between programs is the amount of time, type of involvement, and role of teachers and parents in the program.

table 4.10

Target of problem behavior and level of prevention for the 92 programs that appear on one of the five lists of evidence-based programs.

Level of Prevention	All programs	Programs directed at substance abuse, trauma, or health problems	Programs directed at social functioning, emotional regulation, or reducing aggression
Indicated	17	4	13
Indicated/Selective	11	7	4
Selective	14	4	10
Selective/Universal	9 } 48	4	5
Universal	39 }	13 (37%)	26 (43%)
Indicated/Selective/ Universal	2	0	2
Total	92	32 (35%)	60(65%)

Content/focus of the programs listed as empirically-based. An examination of indicated prevention programs reveals that the majority address aggression and violence by promoting skill-building curricula for students, their parents, or both. On the other hand, those indicated programs that are targeted toward the regulation of social and emotional functioning contain skill-building curriculum and therapeutic approaches (either cognitive-behavioral or behavior management strategies) or a combination of both. As expected, as programs move toward more universal approaches to prevention, the use of skill-building curricula increases and the use of therapeutic approaches diminishes.

Overall, the empirically-based programs contain a limited number of overall strategies and include either skill development curricula or therapeutic approaches of either behavior management or cognitive-behavioral therapy. What does differ between programs, however, is the amount of time, type of involvement, and role of teachers and parents in the program. Universal prevention programs are more likely to involve parents and teachers in delivering and reinforcing the skills curriculum, and parents may also be recipients of skill-building curricula, such as parenting skills. As programs move to the selective and indicated levels of prevention, skill-building curricula are likely be delivered to a selected group of students, and involve parents in the therapeutic process or as providers of the skill-building curricula, or both. Another trend is that skill-building curricula are more likely to be delivered to children with externalizing problems (e.g., aggression or violence), while children with internalizing problems are more likely to receive cognitive-behavioral therapeutic strategies.

Limitations

The current analysis included only those programs ranked by each of five sources as either the most effective or most ready for dissemination. Most sources had several tiers of programs, and a more complete analysis would include all the programs listed by all sources. Additionally, the only program materials reviewed were those supplied by each of the five sources. A more complete analysis would include an inspection of the materials supplied by each individual program including an examination of original research articles describing the empirical support. Even with these limitations, however, the purpose of combining the diverse sources of information and summarizing the current evidence-base in school mental health services has been achieved.

Summary/ Discussion

It is evident that considerable efforts have been made by multiple organizations to make information about evidence-based programs available to practitioners and other consumers. We focused on seven organizations that have provided some type of information on evidence-based practices, representing approximately 100 programs aimed at preventing and treating substance abuse and emotional and social regulation problems.

The requirements used by each organization to determine the level of scientific rigor differed, ranging from requirement for multiple controlled trials to a consensus reached by an expert panel. Also, the organizational perspectives differed, affecting how programs were deemed eligible for inclusion on their lists. The CSPV focused on violence prevention, CASEL focused on programs that increase social and emotional competency, and WSIPP focused on outcomes (crime prevention, for example). These varied perspectives reveal the range of functioning expected to be influenced by our mental health programs. Some evidence-based programs can reduce symptomology associated with depression, for example, while others focus on functional outcomes, such as reducing arrest rates. It is likely that this diversity of goals—both in organizations that identify evidence-based programs, and in the programs they list—confuses the issue for many decision makers, and may impede adoption.

However, there appear to be trends in these mental health programs themselves that are considered evidence-based. School-based delivery is such a trend, as the majority of programs are designed to be operated by, or in conjunction with, schools and parents. This finding indicates that planning for school-based mental health services in the future will include determining the role of evidence-based programs, with members of local communities assessing whether a particular evidence-based program or strategy addresses the needs of the local population. The list of evidence-based programs

There appear to be trends in these mental health programs themselves that are considered evidence-based. School-based delivery is such a trend, as the majority of programs are designed to be operated by, or in conjunction with, schools and parents.

provided in Table 4.9 can serve as a planning tool for joint discussions between decision-makers in mental health and schools. The trend of school involvement in the delivery of empirically-supported programs appears to cut across the universal and selective/indicated levels of prevention with the role of parents and teachers changing as you move from universal to indicated programs. As schools and mental health organizations move to evidence-based programs, they should be prepared for new roles for teachers, parents, and mental health providers—new roles that are not always universally embraced or valued.

Two common active features within the pool of evidence-based treatments are (a) skills-training using multiple modes of delivery and (b) therapy, including some form of cognitive-behavioral therapy or behavior management strategies, with many programs using both.

All the programs listed as evidence-based can be considered packages that contain the information regarding the resources and training necessary to implement the program. While compendia of programs may be useful because they list a variety of programs in one place, each program should be reviewed to ensure that the problems and populations addressed match the needs of the local population where implementation is planned. Chorpita and his colleagues (Chorpita, Daleiden, & Weisz, 2005; Chorpita & Taylor, 2001; Chorpita et al., 2002; Daleiden & Chorpita 2005) described how members of a local community reviewed the evidence-base of various mental health interventions in order to make recommendations to support clinical decisions. Through the work of a task force of key stakeholders including administrators, academics, parents of children with emotional disturbances, and clinical service providers, the evidence-base was condensed to one-page summaries for each commonly encountered mental health problem in children. These summaries provided a roadmap to the efficacy level of various services. In addition to these summaries, the service research information was incorporated into interagency performance standards and practice guidelines.

Two common active features within the pool of evidence-based treatments are (a) skills-training using multiple modes of delivery and (b) therapy, including some form of cognitive-behavioral therapy or behavior management strategies, with many programs using both. It is also important to note what is not listed as being evidence-based at this time. Social skills curriculums, a popular adjunct intervention delivered in schools to youth with emotional and behavioral disorders, has not been found to be effective in influencing social functioning in this population. The evidence on social skills training is still being developed, and it should be considered an experimental intervention that requires further investigation and specification (Kavale, Mathur, & Mostert, 2004).

Neither Systems of Care (Stroul & Friedman, 1994) nor Positive Behavior Support (Horner et al., 1999)—two initiatives extensively supported by federal funding—were listed on any of the sources as being evidence-based. Both approaches target outcomes for systems, rather than individuals, per se, and suggest frameworks, principles, or strategies for

schools or communities to implement in accordance with their unique needs. Consequently, neither of these initiatives has resulted in packages that communities or schools can readily implement. As lists of evidence-based programs evolve from programs focused solely on the individual to programs that focus on outcomes at the population, policy, and system levels (as SAMHSA is currently promoting), we expect that these types of strategies will begin to appear.

Because most evidence-based programs call for new roles for mental health providers, parents, and teachers, it has become clear that parents and teachers may be the primary gate keepers to implementation of evidence-based programs (Han & Weiss, 2005). In light of these new roles, there appears to be the need for an integrative framework to help communities and schools work together to successfully implement universal, selective, and indicated prevention and treatment strategies. The models discussed in the previous chapter offer a conceptual model for how integrated systems of services and supports should work; it may be that Systems of Care and Positive Behavior Support may serve as the beginning of such frameworks.

There appears to be the need for an integrative framework to help communities and schools work together to successfully implement universal, selective, and indicated prevention and treatment strategies.

5 The Role of Federal Policy and Initiatives on School-Based Mental Health

Federal Focus on SBMH

There are approximately 100,000 schools in the U.S. with about 53 million students and 6 million adults working in these schools. This is about one-fifth of the population of the country and as a "target population" it has tremendous potential to realize the promise of federal policies at a scale that will be clearly noticeable.

While there is sparse evidence of wide-spread implementation of effective SBMH services, there is no lack of federal policies, regulations, and initiatives promoting the implementation of evidence-based SBMH services.

While there is sparse evidence of wide-spread implementation of effective SBMH services, there is no lack of federal policies, regulations, and initiatives promoting the implementation of evidence-based SBMH services. Such initiatives extoll the potential of these services to significantly increase access to mental health services for children, increase the number of children in need who actually receive services, and subsequently improve a range of outcomes including social and emotional functioning, and academic progress. It is no exaggeration that all federal agencies that have responsibility for some aspect of the well-being of children and youth have some reference to at least collaborate with schools to better achieve their own particular mission as it relates to the welfare of the children they serve. The lion's share of these policies and initiatives emanates from the various branches of the U.S. Department of Education (USDOE) and the Department of Health and Human Services (DHHS). Consequently, the role of these two federal agencies is the focus of this chapter. It is our hope that this profile of current federal policy will serve decision-makers as they strive to design SBMH service systems that meet the needs of local communities in a manner compatible with the requirements, mandates, and intent of federal programs and legislation.

USDOE

Arguably, the Individuals with Disabilities Education Act (IDEA), originally passed in 1976 as the Education of all Handicapped Children's Act, is the most comprehensive piece of federal legislation to affect children who have disabilities and their families, including children who have emotional disturbances. In the case of children who have emotional

disabilities, however, IDEA is narrowly focused on students who have an identifiable disability that may affect various life domains but must also interfere with the student's educational achievement. The interpretation of eligibility criteria at the local level has resulted in the continuous under-identification of this disability group. There has never been more than 1% of the school age population identified and served in special education programs, despite prevalence estimates closer to 5% (Kutash et al., 2005). Based on a population of approximately 53 million children in school, the number who have significant emotional disturbance is about 3 million, while only about a half million are served in special education programs. In addition, children who have emotional disturbances have the poorest outcomes compared to all other disability groups (Wagner, 1995).

The attention to the provision of mental health services to children in schools by the USDOE is most appropriate as the school system can be considered the de facto mental health system for children in this country.

A more recent piece of legislation aimed at all children and youth is the No Child Left Behind Act (NCLB) signed into law in 2002 by President Bush. In NCLB, the emotional well-being of all children is addressed and a specific section of the Act (Title V) outlines initiatives aimed at assuring the emotional well-being of America's youth. With 53 million children in school and an estimated 20% of all children meeting criteria, at a point in time, for a diagnosable mental illness at a level of impairment that requires some type of intervention (Kutash et al., 2005), there is the potential that over 10 million children will need some type of help to meet the goals relating to emotional well-being in NCLB. These numbers reveal the scope of the challenge for the nation to meet the mental health needs of America's school age children and youth.

Both IDEA and NCLB contain language, guidelines, and regulations aimed at meeting this challenge. For example, in the case of children covered under IDEA, related services needed to ensure an appropriate education are prescribed as an entitlement of the Act. Related services may include psychological counseling, the implementation of behavioral plans based on functional behavioral assessments, and the inclusion of positive behavioral interventions and supports. Some examples of strategies offered under NCLB include character education, safe and drug free school initiatives, violence prevention programs, and specific programs for children who are neglected, exposed to violence, or at-risk for failure due to low income. In both Acts, interagency collaboration is encouraged to enhance service capacity. Because approximately three-fourths of children who receive any mental health service at all receive it through the school system (Burns et al., 1995), the attention to the provision of mental health services to children in schools by the USDOE is most appropriate as the school system can be considered the de facto mental health system for children in this country.

DHHS and School-Based Mental Health

For the Department of Education, enhancing academic achievement is the primary goal, the mental health of children is a mediating variable that may affect academic achievement and therefore it is a variable of interest. In the Department of Health and Human Services (DHHS), there are divisions, such as SAMHSA, for which positive mental health of children and adults is the primary focus. The policies and initiatives of DHHS relating to children's mental health were significantly energized in the early 1980s, to some degree as a response to Jane Knitzer's critical examination of the field. In the report of her landmark study *Unclaimed Children: The Failure of Public Responsibility to Children and Adolescents in Need of Mental Health Services* (1982), Knitzer described the "dismal" situation that existed. She found that the agencies responsible for providing children's mental health services shuttled children and families through a revolving door from office to office and agency to agency in a frustrating search to find help. This prompted the development of a series of federal initiatives aimed at promoting a seamless, community-based system of care that would provide the range of services needed by these children and their families. (For an extensive review of the history of these initiatives and the current status of the system of care, see Kutash et al., 2005, and Lourie, Stroul, & Friedman, 1998.)

For the DOE, enhancing academic achievement is the primary goal, the mental health of children is a mediating variable that may affect academic achievement and therefore it is a variable of interest. In the DHHS, there are divisions, such as SAMHSA, for which positive mental health of children and adults is the primary focus.

From the early 1980s to the present, the system of care model developed by Stroul and Friedman (1994) has continued to serve as a blueprint for SAMHSA's children's mental health initiatives. Its potential value has been reinforced by the Surgeon General's report on the nation's mental health (U.S. DHHS, 1999), and most recently by the report of the President's New Freedom Commission on Mental Health (2003). The policies and emphasis on systems of care have implications and relevance for SBMH. As noted in Chapter 3, the system of care proposes that the child-serving agencies that have responsibility for some aspect of children's mental health service provision be united in an integrated, collaborative system of equal partnership. Schools are identified as critical in this partnership because the location of services in schools can significantly increase access to service, schools can foster the implementation of universal prevention programs and early identification programs, and interventions in schools may have reduced stigma associated with mental health problems.

The implementation of SBMH services in the context of a system of care involves procedures such as formal interagency agreements, blended funding mechanisms, shared personnel, and a leveraging of resources to maximize the impact of services on children and their families. The policies of DHHS and SAMHSA have also promoted the concepts of the

involvement of families as equal decision making partners in all aspects of the treatment of their children and provision of services that are culturally competent—a vision that has not yet been fully implemented.

The Maternal and Child Health Bureau

In 1995 the Maternal and Child Health Bureau reported increasing awareness of the need to make mental health services more accessible for the school-age population. Similar to other branches of DHHS, the Maternal and Child Health Bureau viewed schools as an important component of newly directed policies and initiatives the Bureau was developing to promote mental health services to children in need. The first major step was to fund two Centers for SBMH and several state-level initiatives to foster mental health in schools. The two Centers, at UCLA and the University of Maryland, were referred to earlier in Chapter 3. The core of these initiatives was to pursue a wide range of activities to improve how schools address barriers to learning and enhance healthy development, especially mental health. These initiatives are not overly prescriptive and the Centers and state grantees have produced a wide range of programs aimed at achieving their goals (Adelman & Taylor, 2006).

A major problem facing current policies is their lack of specificity in both concepts and structures for implementation.

The policies and directions espoused by the Maternal and Child Health Bureau can best be summarized as promoting the Interconnected Systems model described in Chapter 3. Schools are considered to be ideal locations and key partners in implementing a comprehensive system of prevention and intensive intervention aimed at improving the overall mental health of children. Along with community-based partners, schools are encouraged to develop innovations to implement the model.

The Challenges of Implementation

Clearly, there is no dearth of federal policies and initiatives aimed at enhancing SBMH services. The effectiveness of these policies in improving service accessibility and mental health outcomes remains to be demonstrated. The recent findings from the Special Education Elementary Longitudinal Study (SEELS) and the National Longitudinal and Transition Study 2 (NLTS2) describing the service history and outcomes of children who have emotional disturbances and who are served in special education programs are not encouraging (Wagner et al., in press). Less than half of these children receive mental health services in schools, and even fewer are clients of community mental health agencies. This is especially troubling in that school outcomes for children with emotional disturbances—such as academic achievement, behavior referrals, and engagement in the school culture—are the poorest of all disability groups, and dismal when compared to outcomes for peers who are not disabled.

A major problem facing current policies is their lack of specificity in both concepts and structures for implementation. While federal administrations walk the tight-rope of the new federalism on one hand, with the desire to hold states to a higher degree of accountability for child and family well-being, the policies that are promoted lack the focus necessary to achieve outcomes in a manner that affords evaluation of effective implementation and outcome.

For example, throughout IDEA, NCLB, and the New Freedom Commission on Mental Health there are references to schools and community mental health agencies collaborating to develop effective SBMH services, but little direction is offered on what this should look like, and how it is to be accomplished. In practice, this turns out to be a close to impossible task for the average community. The task is complex and each agency has many competing demands. School personnel are not uniformly convinced of the value of SBMH in their pursuit of improved academic outcomes (Adelman & Taylor, 2006). The advocates of PBS have demonstrated that without 80% buy in from faculty and staff, the probability of achieving an effective level of program implementation is very slim. Likewise, without the commitment of school administrators, confidence that sufficient resources exist, and a sensitive cadre of mental health professionals as partners, the probability of implementing an effective school-wide prevention and intervention program to meet the mental health needs of students is also very slim. Consequently, the situation today is a network of grant supported demonstration programs that typically cannot be sustained after the grant terminates.

The branches of federal agencies need to re-evaluate policies aimed at enhancing SBMH and become more pro-active in providing leadership to achieve integrated, collaborative, and effective programs aimed at improving the mental health of America's children. There are some definite signs that this is beginning to happen. For example, a frequently mentioned barrier to collaboration is the difference in language and terminology used across agencies. It is encouraging that we now can find phrases such as *family-driven* and *culturally competent* in initiatives promoted by most federal agencies. While SAMHSA can take much credit for requiring potential grantees in their demonstration programs to clearly specify family partnerships and cultural competency, they can do the same thing with school-mental health collaboration. Currently, the requirements for such partnerships are general and lack the detailed documentation of an infrastructure that can support SBMH. By becoming more direct in this requirement, SAMHSA may be able to bring about significant improvement in the implementation of SBMH services in their community-based demonstration programs.

Throughout IDEA, NCLB, and the New Freedom Commission on Mental Health there are references to schools and community mental health agencies collaborating to develop effective SBMH services, but little direction is offered on what this should look like, and how it is to be accomplished.

The successful implementation of policy is clearly a multi-level process. However, in the case of SBMH, federal and state agencies can address the issue of low levels of implementation by providing leadership for local communities. Good policies require a threshold level of specificity that is not always present. Policy implementation requires technical assistance and support to the intended implementers with sufficient vigor to ensure sustainability. As communities overcome barriers to accomplishing the goals mandated by policy, we must document how they used knowledge of their community context to implement effective programs, and resources must be invested to capture such best practices and transmit them to the field. Without these components, grants to fund policy implementation demonstration projects will continue to fall short of the intention to show change at a scale that is more national than local.

6

The Organization and Financing of School-Based Mental Health Services

The purpose of this chapter is to acquaint decision makers with the research that has been conducted on the organization and financing of school-based mental health services, what findings suggest, and where future research is necessary to promote SBMH service systems.

Research on Organization and Financing for SBMH

Little empirical knowledge exists about the organization and cost of providing mental health services in schools. It is estimated that the yearly cost of mental health services delivered in all settings to children and adolescents exceeds $11.68 billion or $172 per child (Ringel & Sturm, 2001). However, this estimate is based on an analysis of claims and survey data on mental health use for one year (1998) and generally excludes any costs from mental health support services delivered by school personnel. The purpose of this chapter is to acquaint decision-makers with the research that has been conducted on the organization and financing of school-based mental health services, what findings suggest, and where future research is necessary to promote SBMH service systems.

Organization of Mental Health Services in Schools

There have been two recent surveys reporting on the organization of school-based mental health services using a nationally representative sample of schools and districts or states. These two surveys include: The School Health Policies and Programs Study (SHPPS) 2000 (Brener, Martindale & Weist, 2001) and School Mental Health Services in the United States, 2002–2003 (Foster et al., 2005). Both of these surveys yield similar results and begin to document the immense efforts made by schools to supply mental health services to their students by using both school resources and contracting with community organizations such as mental health agencies. These efforts, however, differ by region of the country (Slade, 2003).

Both surveys document that the majority of schools offer some type of mental health or social service support to students, with 20% of all students receiving some type of school-supported mental health service. The most recent survey found that most schools provide individual counseling (76%), case management (71%), or group counseling (68%) to their students. The service most frequently reported as difficult to provide was family support,

and this has been documented in other studies as well (see Wagner et al., in press). For those schools delivering mental health services, most (96%) report that at least one school staff member is responsible for providing mental health services to students, while most schools have between two and five staff members delivering these services (Foster et al., 2005).

The most common administrative arrangement for the delivery of school mental health services is for schools to hire their own staff to provide mental health services and to augment these services through contracts with local community mental health providers. About half of all schools have a contract with a local provider to supply mental health services in the school (see Tables 6.1 and 6.2).

table 6.1

Results from the School Health Policies and Programs Study (SHPPS) 2000 Survey (Brener et al., 2001)

- 52% of states have a person who oversees or coordinates school mental health and social services while 63% of districts have a person who serves this role. More than three-fourths of schools (79%) have a person who oversees or coordinates mental health and social services at the school.
- 77% of schools have a part-time or full-time guidance counselor who provides mental health or social services to students at the school. In 66% of schools, a part-time or full-time school psychologist provides services to students.
- About one in ten schools (10.4%) and 25% of districts have a school-based health center (SBHC) that offers mental health and social services to students. Among the states (80%) with at least one SBHC, 87% have at least one that serves as a Medicaid Provider.
- 52% of schools (and 59% of districts) report having an arrangement with agencies or professionals independent of the school to supply mental health and social services to their students with most of these agencies (86%) being local mental health or social services agencies. Of the 59% of districts, 79% report these agencies provide identification or counseling services for mental or emotional disorders. Additionally, most districts offer case management (75%) for students with behavioral or social problems, family counseling (71%), and individual counseling (84%) under this arrangement.

table 6.2

How often various administrative arrangements for the delivery of mental health services are used in schools [a, b]

- School-financed student support services, in which school districts hire professional staff to provide traditional mental health services
  - 1/3 of school districts report that they exclusively use school- or district-based staff to provide mental health services
- Formal connections with community mental health services, in which formal agreements are made between schools and school districts and one or more community agency to provide mental health services and to enhance service coordination; the service can be co-located within the school or provided at the community agency
  - 1/4 of school districts only use outside agencies for the provision of mental health services
  - 49% of districts (55% of schools) have a contract with an outside agency to provide mental health services
- School-district mental health units or clinics, in which districts operate and finance their own mental health units or clinic that provides services, training, and/or consultation to schools, or districts organize multidisciplinary teams to provide a range of psychosocial and mental health services
  - 2% of school districts reported they operated their own mental health unit or clinic
  - 17% of schools reported having an agreement with a school-based center operated by a community-based organization to provide mental health services to their students
- Classroom-based curricula, which are activity-driven approaches aimed at optimizing learning by enhancing social and emotional growth. Interventions tend to be teacher-led and prevention-oriented
  - 59% of schools report using curriculum-based programs to enhance social and emotional functioning and reduce barriers to learning
  - 78% provide school-wide strategies to promote safe, drug free schools
- Comprehensive, multifaceted, and integrated approaches, in which districts bring multiple partners (e.g. community-based organizations) together to provide a full spectrum of services for children and youth with mental health needs. This approach would include such models as Systems of Care, in which an array of mental health and wraparound services are provided to children with mental health problems and their families via partnerships among various child-serving systems
  - 1/3 of schools rarely or never held interdisciplinary meetings among mental health staff or conducted joint planning sessions between mental health and other staff
  - 40% of schools held monthly or weekly interdisciplinary meetings and planning sessions

[a] The overarching categories and definitions for the administrative arrangement are from the Policy Leadership Cadre for Mental Health in Schools, 2001; and Weist, 1997;

[b] The data on the use of each administrative arrangement is supplied from Foster et al., 2005.

Districts, rather than individual schools, have the authority and autonomy to determine the types of mental health services available for both general education and special education students.

Slade (2002) conducted an analysis of the effect on the use of community-based mental health services when mental health services are offered in the school. He concludes that "because few adolescents receive counseling in both school and non-school sectors in a given year, the data suggest that the school-based and community-based service sectors operate essentially as two parallel systems" (p. 163). This analysis provides evidence that the two systems do not compete with each other for clients or provide duplicate services for students.

Districts, rather than individual schools, have the authority to determine the types of mental health staff hired and the overall allocation of mental health resources in schools. Further, districts, rather than individual schools, have the authority and autonomy to determine the types of mental health services available for both general education and special education students. It is estimated that there are 358,000 staff at individual schools providing some type mental health service. The most common professional is a school counselor, where 52% of his or her time is spent in providing mental health services (Foster et al., 2005).

Funding of School-Based Mental Health Services

Little research has been produced on the financing of school-based mental health services. In their survey of districts and schools, Foster and her colleagues (2005) report that 58% of school district mental health budgets are designated for paying the salaries of mental health staff, while 26% are allocated to pay community-based organizations for the services they provide in schools. The remaining budget goes to providing technical assistance, professional development and training (8%), and various administrative expenses (8%).

Additionally, respondents to this survey reported that funding from the Individuals with Disabilities Education Act (IDEA) is the most frequently used federal source to finance mental health services (63%). Over half (55%) of respondents reported using state special education funds to pay for mental health services, 49% use local funds, 41% use State general funds, and 38% reported Medicaid reimbursement as a funding source.

Medicaid

It is estimated that Medicaid currently funds more than half of public mental health services administered by states. This increased use of Medicaid funding represents a major shift in the predominate model by which public mental health services are funded and delivered. In the past, the use of the mental health block grant and categorical grants such as the system of care grants were the dominate methods to pay for services (Buck, 2003; Mark et al., 2005).

Medicaid is based on the "3-E" principle of "Eligible Services for Eligible Clients by Eligible Providers" (Bundy & Wegener, 2000). To meet the requirements of Medicaid, all criteria must be met resulting in three areas that must be monitored in order to be in compliance with the mental health plans administered by each state's Medicaid office. In a project to document states' use of Medicaid and State Mental Health Authority funding to provide mental health services to children, researchers have documented extreme variations among states in both the number of children served and the funding of mental health services. Among states, there is a 14- to 17-fold difference between the lowest and highest measures of children served per thousand and an approximately 20-fold difference in average expenditure per child served (Dougherty Management Associates, 2005). These differences in number served and money spent demonstrate the impact of local policy on reaching the target population.

Three financing strategies have been used to maximize Medicaid to support health and mental health services for school-age children and youth (Bundy & Wegener, 2000). Under the "Fee for Service Claiming," Medicaid eligible services are reimbursed by the state Medicaid agency. Eligible services provided by school-based health clinics may be reimbursed by Medicaid using this mechanism. The second strategy is "Administrative Claiming" and many school staff activities that are related to student health and mental health are reimbursable through this mechanism. Activities can include Medicaid outreach, facilitating Medicaid enrollment, transportation and translation services, special education services and program planning, interagency collaboration, and administrative case management. The third strategy is for two or more agencies to create a partnership to "leverage" new and additional funding through Medicaid. An example of this strategy would be a partnership between a public school district and a mental health agency. Another leveraging strategy suggested by advocates is the greater integration of Medicaid and IDEA for youth who qualify for both (Bazelon Center for Mental Health Law, 2003). While it is generally believed that all of these strategies are being used to finance school-based mental health services, little national information on actual use is currently available.

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Summary

While there is only limited information on the financing and organization of school-based mental health services, the information that is available comes from surveys conducted with nationally representative samples of schools and therefore can be thought of as a valid description of the broad landscape. The results from these surveys support the notion that schools are a major provider of mental health services to children

and adolescents with most schools providing some type of mental health service. Staff supervised by the school system provide these mental health services most often. A significant number of schools, almost half, contract with local mental health providers to augment the mental health services provided by school staff.

Currently, schools are blending an array of federal, state, and local funds to support the delivery of mental health services in schools. The decision-making processes and magnitude to which each of these sources is used to fund different types of mental health services are currently unknown. There are, however, numerous descriptive examples of communities that have braided various funding streams to support school–based mental health (see Evans et al., 2003 and Robinson, Barrett, Tunkelrott, & Kim, 2000, for examples of descriptive case studies), and these descriptions of innovative financing mechanisms provide a foundation upon which to build future research.

7

School-Based Mental Health Services: Meeting the Challenge, Realizing the Potential

Current Status of School-Based Mental Health

There is a long history in this country, going back to the end of the 19th century, of providing mental health services to children in their schools. Now, as we enter the 21st century, there is an increased interest in and hope that SBMH services may play a larger role in better meeting the needs of the literally millions of children who have emotional disturbances and need mental health intervention. Through more effective implementation of these services, the academic and social/emotional outcomes for these children are expected to improve, leading to an adulthood that is healthier and marked by a better quality of life.

Through more effective implementation of these services, the academic and social/emotional outcomes for these children are expected to improve, leading to an adulthood that is healthier and marked by a better quality of life.

The literature reviewed and the program models described in this monograph reveal that the field of SBMH services can be characterized as fragmented, under-developed, and emerging. It suffers from confusion that comes from the different languages and terminologies used by the various agencies that provide SBMH, especially the education and mental health systems. On the other hand, there is a strong multi-disciplinary and multi-agency presence in the field, there is a growing evidence base for specific programs, and a growing recognition of the need for a comprehensive, integrated approach in order to "scale up" the localized successes that emerge to a level that will have significant national impact. In this chapter we will recommend that a public health model approach be adopted to meet this need.

Among the many barriers that impede the fruition of SBMH's promise, financing issues play a major role. It may be surprising to many that over $12 billion is spent annually on children's mental health services in this country. Unfortunately, there is a paucity of research on financing children's mental health services in general, and even less for SBMH services. This leaves many important questions unanswered concerning how these billions are spent. We know that the majority of children who receive any mental health service at all, receive it in their school. We also know that two-thirds of all schools use some IDEA funds to pay for SBMH services and Medicaid funds support

over half of all mental health services received by children. Finally, the few studies that have been conducted reveal great disparity between states in terms of the numbers of children who receive services that are funded by Medicaid as well as in the amount of money spent on them. Many schools have developed home-grown strategies with collaborating community agencies to blend the available pool of federal, state, and local funds in order to achieve maximum support for SBMH programs.

An analysis of federal policies reveals a common thread, the need to implement the "public health model" more fully.

While the knowledge base describing the funding of SBMH may be sparse, we found no lack of policies bearing on SBMH. Most federal agencies that have some responsibility for the welfare of children have policy initiatives related to capitalizing on the potential advantages afforded by locating services in the schools. These federal policies are passed down to the states and ultimately local level bureaucracies.

Interestingly, an analysis of federal policies reveals a common thread: the need to implement the "public health model" more fully. This view is a central characteristic in policy reports ranging from special education (see the President's Commission on Excellence in Special Education, U.S. Department of Education-Office of Special Education and Rehabilitative Services, 2002) to mental health (the report of the President's New Freedom Commission on Mental Health, 2003). We view this as an encouraging prospect and support the use of the public health model as a framework for the implementation of effective SBMH services.

In spite of the wide-spread reference to the public health model, there are very few citations in which this model is fully elaborated. Consequently, before applying the model to SBMH, we present a brief overview.

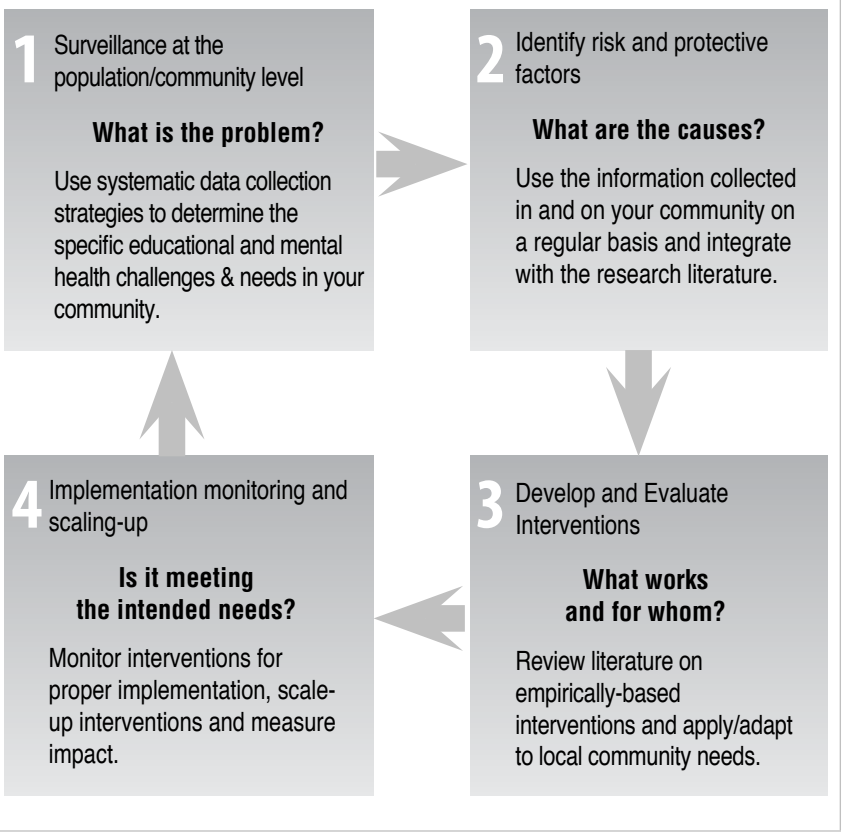
The Public Health Approach

In many reports in the literature, the discussion of the public health model does not go beyond the emphasis on the development of strategies for prevention through the implementation of universal, selective, and indicated interventions. While prevention certainly is a fundamental principle, the model is richer and more encompassing. The public health model has its focus on populations rather than individuals, that is, society is the client (Strein, Hoagwood, & Cohn, 2003). The interaction of risk and protective factors in individuals are examined at the community level. Decisions are data-based and the goal of public health research is to develop specific interventions that are targeted toward enhancing protective factors and reducing the risk factors that lead to undesirable outcomes.

The public health model may be conceived of as having four components or steps (see Figure 7.1). The first component is a focus on the population as opposed to individuals. Surveillance, which entails defining

Figure 7.1

Implementing school-based mental health systems using a public health approach



a specific problem through systematic information collection at the population level, is the major mechanism used in this component. The goal is to be able to describe the scope, characteristics, and the consequences of a problem facing the community. In the second step, the causes are identified through an analysis of the risk and protective factors, their correlates, and how these factors could be modified to decrease the risk. In the third step interventions are developed and evaluated. The interventions are on a continuum that includes health promotion/positive individual development, universal prevention interventions, selective interventions, and indicated interventions. The fourth step consists of activities to scale up implementation at a level that will have significant positive impact on the population. In this step effective practices are implemented and monitored and their cost effectiveness is evaluated.

This is a comprehensive approach aimed at reducing the negative consequences of a condition or behavior. However, it is also practical, makes

use of multi-disciplinary involvement, and monitors costs and benefit. In the following sections each of the four components of the public health model will be described in terms of how a community may use this model to develop and implement a comprehensive system of school-based mental health services.

Surveillance entails systematic data collection to produce information for action.

Focus on the Population

When a community decides to use a public health model to guide the implementation of school-based mental health services for its school age children and youth, the first step involves surveillance. That is, the community will seek answers to the question, "What is the problem in our community?" Surveillance entails systematic data collection to produce information for action. The community would want to know the degree to which the mental health needs of its children are being met, the gaps in service delivery, and the potential for effective SBMH services to contribute to meeting the needs. In a public health approach, the focus is on all the school-aged children, not just those with the most severe emotional disturbances or those who may be at-risk for suicide, for example. Consequently, the school district is a major player in the surveillance process as opposed to individual schools or classrooms.

Surveillance information can be derived from district-wide data, census information, county health department data, and other similar databases. This information will help produce estimates of the magnitude of the problem, possible geographic and demographic relationships, and lead to the development of strategies for improved outcomes. High quality surveillance in a community will facilitate progress to the next step that attempts to identify the risk and protective factors that contribute to the manifestation of undesirable conditions.

Risk/Protective Factors

In the public health model potential causes of problems are identified through analysis of risk and protective factors. It should be noted that risk and protective factors are not causes or cures themselves but rather are statistical predictors that have a theoretical and empirical base. Risk factors are personal characteristics or environmental conditions that have been empirically demonstrated to increase the likelihood of problem behavior. Some examples of risk factors are gender, family history, lack of social support, reading disabilities, and exposure to bullying. These factors vary in terms of their malleability to change. Protective factors are personal characteristics or environmental conditions that have been empirically established to interact with risk factors to reduce the likelihood of the occurrence of problem behavior. Examples of protective factors include caring parents and teachers, social competence and problem solving skills,

schools that establish high expectations for all students and supply the supports necessary for all students to achieve these expectations, and the opportunity to participate in positive activities in school and the community. As in the case of risk factors, these protective factors vary in the degree to which schools and child-serving agencies can promote them, but they all have been empirically demonstrated to reduce the effects of risk factors.

As the research base on risk and protective factors expands, it is becoming clear that there needs to be a balance in addressing the reduction of risk factors, a deficit approach, and promoting protective factors, a strengths-based approach. Schools and community partners need to keep in mind that the hallmark of the public health model is data-based decision making and a commitment to using the best available interventions, the next component of the model. Effective surveillance and information on the population will lead to the identification of local risk and protective factors. This will enable the community to apply and adapt the most relevant evidence-based innovations in the next step of implementing the model.

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Develop and Evaluate Interventions

The past several decades have seen a plethora of innovative and empirically-based interventions developed and aimed at meeting the emotional and behavioral needs of youth. Most of these interventions and strategies are dependent upon schools for implementation. Efforts also have been made to distill these interventions into the level of prevention they address (i.e., universal, selective, indicated/treatment) and an assessment of the empirical strength of each. While we seem to have many options, we probably do not have a perfect match between the array of problems presented by youth covering the entire developmental continuum and empirically-supported approaches. Plus, it is widely recognized that many youth have multiple or co-occurring problems that are not adequately addressed by the current selection of interventions.

On the other hand, many of the effective strategies available are not being implemented. This is especially true in the area of universal prevention. Prevention is an area in which we have a long history of empirical support, see for example, Neurons to Neighborhoods (National Research Council and Institute of Medicine, 2000), and Greenberg et al. (2003). There are two school-based universal programs, PATHS and school-wide use of positive behavior support (PBS), that are beginning to be implemented in schools nationwide. We need to document the use of these strategies and their effectiveness in various types of communities.

Another challenge is to get empirically-supported selective and indicated programs integrated into schools. Communities are creating interesting strategies to increase the awareness of the various empirically-supported

programs. The state of Hawaii formed work groups to study empirically-based programs and determine which programs would be most applicable to their populations (Chorpita & Taylor, 2001; Chorpita et al., 2002). Ohio has a state-wide initiative to increase awareness of evidence-based practices (Ohio Department of Mental Health, 2001), as well as an initiative to increase the empowerment of teachers in delivering school-based mental health services (Paternite, 2003). A growing literature shows that many communities nationwide are active in building school-based mental health services (Vernberg, Jacobs, Nyre, Puddy, & Roberts, 2004). As reported in Chapter 6, close to half of all schools have multidisciplinary teams of various compositions that meet at least on a monthly basis and approximately 55% of schools report having a contract with an outside agency to provide mental health services.

What is missing in the communities actively building school-based mental health services is the evaluation of these services and documentation of the student outcomes resulting from these services.

What is missing from the communities actively building school-based mental health services is the evaluation of these services and documentation of the student outcomes resulting from these services. This type of information is critical to informing policy and practice. This is especially needed in the area of students with emotional disturbances (ED) who are served in special education settings. This population of students continues to experience low levels of academic achievement, high drop out rates, and few support services (Wagner & Sumi, 2006; Wagner et al., in press).

In our discussion of the development and evaluation of SBMH practices in this monograph, we have given space to a discussion of the system of care model (SOC) and PBS while pointing out that neither yet appears on any listing of evidence-based practice. As noted in Chapter 3, PBS is in its infancy as a systems strategy. Building the research base is not static, it evolves and we hope the field heeds the recommendations of Forness and colleagues (2005) to conduct tests of PBS that use empirical designs that meet criteria for establishing designation as an evidence-based program. In the case of the system of care, much of the evaluation and research has focused on systems level outcomes such as reduction in rates of residential placements and increased interagency agreements to pool funding of mental health services. In addition, there continues to be wide-spread support for SOCs at the practice level. SAMHSA continues to invest tens of millions of dollars to establish community-based SOCs. It may be that the ultimate contribution of SOC will be at the systems, rather than the client level. The SOC may provide the kind of "host environment" proposed by Zins and Ponti (1990), that is necessary to facilitate the implementation of evidence-based practices at a sustainable and scaled-up level. Communities that desire to implement a data-driven public health model of SBMH may find that the existence of a system of care in the community provides a level of interagency collaboration, and shared values and vision that are necessary to implement state-of-the-art evidence-based interventions for their children and youth.

Focus on Educational Outcomes. An additional challenge inherent in the delivery of school-based mental health services is the need to direct our attention to improving academic outcomes for students with ED. Until recently, little attention has been directed to the academic issues for students with emotional and behavioral disorders. This may be partly due to teacher preparation programs focusing predominantly on the social and behavioral characteristics and needs of this population and the misconception held by many educators that students must behave properly before academic learning is possible (Lane, 2004). Recent research suggests that, in some instances, students may act out to avoid aversive academic tasks—tasks that do not match the students' level, either being too easy or too difficult (Lane, 2004).

Other research is beginning to explore the therapeutic relationship of academic interventions and the reciprocal relationship between academic success and decreases in negative behavior. In a study of the efficacy of psychotherapy, Catron, Harris and Weiss (1998) revealed that students with behavior disorders who received academic tutoring improved their behaviors as much as the students who received individual counseling. In addition, there is a growing body of research that academic success is associated with a decrease in problem behavior (Gottfredson, Gottfredson, & Skroban, 1996; Lane, O'Shaughnessy, Lambros, Graham, & Beebe-Frankenberger, 2001; Lane et al., 2002). This research suggests that mental health professionals may need to come to the classroom to support teachers in instructional activities and classroom management to a greater degree than previously recognized.

Implementation Monitoring and Scaling up

The final step in the public health model addresses the issue of implementation. Recently, numerous efforts have been initiated to better understand the factors associated with the successful implementation of evidence-based practices in community-based settings. We are currently just beginning to understand the complexity of scaling-up innovative interventions for wide-scale community adoption. Both the National Implementation Research Network (Fixsen et al., 2005) and the Prevention Research Center for the Promotion of Human Development at Penn State (Greenberg, Domitrovich, Graczyk, & Zins, 2004) have conducted extensive reviews of the literature in this area and their conclusions are summarized below.

The research results are clear: providing training on innovative techniques to staff without adequate follow-up (e.g. coaching and supervision) is not effective and will result in flawed implementation and outcomes that do not match those achieved by program developers. While most program developers provide manuals and initial training sessions for their programs, very few offer mechanisms for the ongoing monitoring of implementation quality.

The research results are clear: providing training on innovative techniques to staff without adequate follow-up is not effective and will result in flawed implementation and outcomes that do not match those achieved by program developers.

Without continued support of staff as they implement these new approaches and without the ongoing monitoring of implementation, most programs will not be implemented as planned and the promised outcomes will not materialize. Fixsen et al., (2005) suggest the key to successful implementation is a combination of supportive policies, community involvement, and an organizational infrastructure able to supply post-training support and conduct process and outcome evaluations (see Table 7.1).

table 7.1

Four factors to successful implementation (Fixsen et al., 2005)

Implementation is most successful when:

- Carefully selected practitioners receive coordinated training, coaching, and frequent performance assessments;
- Organizations provide the infrastructure necessary for timely training, skillful supervision and coaching, and regular process and outcome evaluations;
- Communities and consumers are fully involved in the selection and evaluation of programs and practices; and
- State and federal funding avenues, policies, and regulations create hospitable environment for implementation and program operations.

Greenberg and colleagues (2004) remind us in their review that for innovations implemented in schools, factors at the school-, district-, and community-level influence the quality of program delivery. Without support and active involvement of the community and district, most innovations adopted at the school level will not succeed. Additionally, along with collecting information on the level of implementation of an innovation, school personnel and practitioners should examine and record factors that substantially affect the quality of implementation in their setting and share this information with the developers of the program and the field. It is through the collection and dissemination of information on implementation in a variety of schools that the field will move forward. Daleiden and Chorpita (2005) present an extended discussion of how evidence-based services have been integrated into information system, performance measurement, and feedback tools. They offer an excellent framework for schools and communities to use as they start this important process.

The various factors associated with the proper implementation of innovative interventions will call for new roles for school staff and community workers, new partnership with parents and family members, and new activities for the various stakeholders involved in implementing SBMH programs. While the tasks may be formidable, it is achievable with good planning and attention to outcomes, and the results will be most rewarding.

8 Summary

Next Steps

This monograph has provided the reader with a wealth of information on an array of topics influencing the effective delivery of school-based mental health services. The topics in this monograph include models of SBMH services, definitions of prevention, policies affecting school based mental health delivery, lists of evidence-based practices, and an overview of the research on the financing of mental health services. It is hoped that these materials will confirm some long held beliefs and practices as well as provide the impetus to develop and implement new strategies to help meet the needs of children. Within the current climate of transformation and reform it may be an opportune time to implement school-based mental health services with new tools and perspectives. The public health model provides a framework for school-based mental health services that can span the vast age groups and problems encountered in public schools today. Using this framework as a guide, the following considerations are provided as you build or re-build your school-based mental health service model:

- Develop and instill a clear vision based on sound values and principles about the importance of meeting the social and emotional needs of children and youth because social and emotional learning is an essential part of education across all ages;
- Implement school-wide prevention programs and acknowledge this will require new roles for community workers and school staff;
- Improve the educational outcomes of students by using evidence-based and empirically-supported selective and indicated prevention programs with particular attention to the academic needs of students with ED served in special education; and
- Take a systematic approach that goes beyond the individual school and uses district-wide and community-wide data on programs to inform decision-making.

The convergence of these two perspectives is the hallmark of "school-based mental health."

In this era of accountability and school reform, the mental health community should be aware that their interventions must align with the major concern of the schools—academic achievement. Likewise, the education community must be aware that mental health professionals do have strategies to improve instruction and achievement as well as improving social and emotional functioning in children. The convergence of these two perspectives is the hallmark of "school-based mental health."

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A
Appendices

Appendix A
Programs described by CSMHA (2002)

The symbol * indicates the program is also listed in Table 4.9.

Indicated

Anxiety / Depression

1. Coping Cat (by Phillip Kendall, 1996)
2. FRIENDS (by Paula Bartlett, 1999)
3. Stark School-Based Intervention for Depression (by Kevin Stark)
4. Adolescent Coping with Depression Course (by Peter Lewinsohn)
5. Taking Action Program for Depressed Youth (by Phillip Kendall)

Externalizing Disorders

6. Cognitive-behavioral therapy for impulsive children (by Phillip Kendall & Lauren Braswell, 1993)
7. Teaching Problem Solving to Students with Learning and Behavior Problems (by Phillip Kendall & Nettie Bartel, 1990)
8. Defiant Children (by Russell Barkley, 1998)
9.* Functional Family Therapy (FFT; by James Alexander)
10. Helping the Noncompliant Child (by Rex Forehand & Robert McMahon, 2001)
11. Keeping Your Cool (by Phillip Kendall)
12. Videotape Parent Training (by Carolyn Webster-Stratton)

Selective

Anxiety / Depression

1.* Adolescent Coping with Stress Course (by Peter Lewinsohn)
2.* Family Bereavement Program (by Irwin Sandler)
3. Penn Optimism Program (by Karen Reivich)
4. FRIENDS (by Paula Bartlett, 1999)

Externalizing / Disruptive problems

5. Achieving, Behaving, Caring (ABC; by Pam Kay)
6.* Across Ages (by Andrea Taylor)
7. Behaviorally-Based Preventive Intervention (by Brenna Bry)
8. Coping Power (by John Lochman)
9. Creating Lasting Connections (CLC; by Ted Strader, 1995)
10. FAN Club (by Tena St. Pierre)
11.* Project Towards No Drug Abuse (Project TND; by Steven Sussman)
12.* Reconnecting Youth (by Jerald Herting and Leona Eggert)

Universal

1.* I Can Problem Solve (ICPS; by Roger Spivak and Myrna Shure)
2.* Promoting Alternative Thinking Strategies (PATHS; by Mark Greenberg, 1994)
3. Skillstreaming (by Arnold Goldstein)
4.* Adolescent Transitions Project (by Thomas Dishion)
5.* Project ALERT (by Phyllis Ellickson)
6. Be Proud, Be Responsible (by Loretta & John Jemmott)
7. Behavioral Prevention Project (by Debra Kamps)
8.* Bullying Prevention Program (by Dan Olweus)
9.* Child Development Project (CDP; by Eric Schaps)
10.* Life Skills Training (by Gilbert Botvin)
11.* Linking the Interests of Families and Teachers (LIFT; by John Reid, 2000)
12. Preparing for the Drug-Free Years (PDFY; by J. David Hawkins)
13.* Project Northland (by Cheryl Perry)
14. Project STARR (by Mary Ann Pentz)
15.* Skills, Opportunities, And Recognition (SOAR; by Richard Catalano)
16.* Strengthening Families Program (by Richard Spoth)

Appendix B
WSIPP results of benefit – cost analysis of 61 programs and approaches

	Programs	Benefit – cost estimate per youth	Number of studies	Prevention of				Improved
				Prevention of Crime	Substance Abuse	Teen Pregnancy	Child Abuse & Neglect	Educational Outcomes
Pre-K Education Programs								
1	Early Childhood Education for Low Income 3- and 4-Year-Olds 1	$9,901	106	✔		✔	✔	✔
2	HIPPY (Home Instruction Program for Preschool Youngsters)	$1,476	6					✔
3	Parents as Teachers	$800	8			✔	✔	✔
4	Parent-Child Home Program	($3,890)	6					✔
5	Even Start	($4,863)	2					✔
6	Early Head Start	($16,203)	3					✔
Child Welfare /Home Visitation Programs								
1*	Nurse Family Partnership for Low Income Women	$17,180	15	✔	✔		✔	✔
2	Home Visiting Programs for At-risk Mothers and Children 1	$6,077	25		✔	✔	✔	✔
3	Parent-Child Interaction Therapy	$3,427	1				✔	
4	Healthy Families America	($1,263)	12		✔		✔	✔
5	Systems of Care/Wraparound Programs 1, 2	($1,914)	3					
6	Family Preservation Services (excluding Washington) 1, 2	($2,531)	15					
7	Comprehensive Child Development Program	($37,397)	2					✔
8	The Infant Health and Development Program	($49,021)	1					✔
Youth Development Programs								
1*	Seattle Social Development Project	$9,837	7	✔	✔	✔		✔
2	Guiding Good Choices (formerly PDFY)	$6,918	6	✔	✔			
3*	Strengthening Families Program for Parents and Youth 10-14	$5,805	5		✔			
4*	Child Development Project	$432	4	✔	✔			
5*	Good Behavior Game	$196	1		✔			
6 *	CASASTART (Striving Together to Achieve Rewarding Tomorrows)	($610)	4	✔	✔			
Mentoring Programs								
1 *	Big Brothers/Big Sisters	$48	4	✔	✔			✔
2 *	Big Brothers/Big Sisters (taxpayer cost only)	$2,822	4	✔	✔			✔
3	Quantum Opportunities Program	($15,022)	8	✔		✔		✔
Youth Substance Abuse Prevention Programs								
1*	Adolescent Transitions Program	$1,938	3		✔			
2 *	Project Northland	$1,423	3		✔			
3*	Family Matters	$1,092	2		✔			

WSIPP results of benefit – cost analysis of 61 programs and approaches – continued

	Programs	Benefit – cost estimate per youth	Number of studies	Prevention of				Improved
				Prevention of Crime	Substance Abuse	Teen Pregnancy	Child Abuse & Neglect	Educational Outcomes
4 *	Life Skills Training (LST)	$717	33		✔			
Youth Substance Abuse Prevention Programs (continued)								
5	Project STAR (Students Taught Awareness and Resistance)	$694	6		✔			
6	Minnesota Smoking Prevention Program	$506	2		✔			
7	Other Social Influence/Skill Building Substance Prevention Programs	$485	130		✔			
8 *	Project Towards No Tobacco Use (TNT)	$274	10		✔			
9*	All Stars	$120	13		✔			
10*	Project ALERT (Adolescent Learning Exp. in Resistance Training)	$54	6		✔			
11*	STARS for Families (Start Taking Alcohol Risks Seriously)	($18)	10		✔			
12	D.A.R.E. (Drug Abuse Resistance Education)	($99)	38		✔			
Teen Pregnancy Prevention Programs								
1	Teen Outreach Program	$181	5			✔		✔
2	Reducing the Risk Program	($13)	4			✔		
3	Postponing Sexual Involvement Program	($54)	7			✔		
4	Teen Talk	($81)	3			✔		
5	School-Based Clinics for Pregnancy Prevention 1	($805)	8			✔		
6	Adolescent Sibling Pregnancy Prevention Project	($2,641)	3			✔		
7	Children's Aid Society-Carrera Project	($9,093)	3			✔		
Juvenile Offender Programs								
1	Dialectical Behavior Therapy (in Washington)	$31,243	1	✔				
2*	Multidimensional Treatment Foster Care (v. regular group care)	$24,290	2	✔				
3	Washington Basic Training Camp	$22,364	Not listed					
4	Adolescent Diversion Project	$22,290	4	✔				
5	Functional Family Therapy (in Washington)	$14,315	1	✔				
6	Other Family-Based Therapy Programs for Juvenile Offenders 1	$12,441	6	✔				
7*	Multi-Systemic Therapy (MST)	$9,316	6	✔				
8	Aggression Replacement Training (in Washington)	$8,805	1	✔				
9	Juvenile Offender Interagency Coordination Programs 1	$8,100	4	✔				
10	Mentoring in the Juvenile Justice System (in Washington)	$5,073	1	✔				
11	Diversion Programs with Services (v. regular juvenile court process) 1	$1,865	6	✔				
12	Juvenile Intensive Probation Supervision Programs 1	($1,482)	6	✔				
13	Juvenile Intensive Parole (in Washington)	($5,992)	Not listed					

WSIPP results of benefit – cost analysis of 61 programs and approaches – continued

	Programs	Benefit – cost estimate per youth	Number of studies	Prevention of				Improved
				Prevention of Crime	Substance Abuse	Teen Pregnancy	Child Abuse & Neglect	Educational Outcomes
14	Scared Straight	($11,056)	8	✔				
15	Regular Parole (v. not having parole)	($12,478)	Not listed					
Other National Programs (excluding Washington)								
1*	Functional Family Therapy	$26,216	6	✔				
2	Aggression Replacement Training	$14,846	4	✔				
3	Juvenile Boot Camps	$8,474	10	✔				
4	Juvenile Intensive Parole Supervision	($5,992)	7	✔				

[1] Indicates an approach, not a packaged program
[2] Indicates examined "out-of-home placements"
* Indicates program also listed on 4.9.

Appendix C
Overview of programs (*n*=38) and studies (*n* = 47) by type of problem discovered in the review of literature from 1985 to 1999 conducted by Rones and Hoagwood (2000)

Target	Universal or Indicated	First Author	Name of Program	# of Studies	Results
Emotional and Behavioral Problems (4 citations)					
1*	Universal	Greenberg	PATHS	1	Mixed
2*	Universal	Knoff	Project Achieve	1	Effective
3	Indicated	Catron	Vanderbilt School-Based Counseling Program	2	Mixed/Effective
4	Not specified	Hawkins		1	Effective
Depression (6 citations)					
5	Universal	Klingman	Coping with Distress and Self-Harm	1	Mixed
6	Universal	Clarke	Educational intervention	1	Not Effective
7	Universal	Clarke	Behavioral-skill training	1	Not Effective
8*	Indicated	Clarke	The Coping with Stress Course	1	Effective
9	Indicated	Gillham		1	Effective
10	Not specified	Reynolds		1	Effective
Conduct Problems (22 citations)					
11	Universal	Gottfredson		1	Mixed
12*	Universal	Reid	LIFT	1	Effective
13	Universal	Aber	Resolving Conflicts Creatively Program	1	Mixed
14	Universal	Cunningham	Student Mediated Conflict Resolution	1	Effective
15*	Universal	Dolan./ Kellam	Good Behavior Game	2	Mixed/Effective
16	Universal	Grossman		1	Mixed
17*	Indicated	CPRPG/King	FAST Track	2	Mixed/Effective
18	Indicated	Pepler		1	Mixed
19	Indicated	Tremblay		1	Mixed
20	Indicated	Vitaro		1	Mixed
21	Indicated	Fuchs	Mainstream Assistance Teams	1	Effective
22	Indicated	Bierman		1	Mixed
23	Indicated	Dupper	School Survival Program	1	Not Effective
24	Indicated	Hudley	Attributional retraining	1	Effective
25	Indicated	Lochman	Anger Coping	2	Mixed/Effective
26	Indicated	Rosal	CBT Art Therapy	1	Not Effective
27	Indicated	Suter	Social Activities	1	Not Effective
28	Not specified	Battistich		1	Effective
29	Not specified	Braswell		1	Not Effective

Overview of programs (Rones & Hoagwood) – continued

Target	Universal or Indicated	First Author	Name of Program	# of Studies	Results
Stress (2 citations)					
30	Universal	Henderson	Coping with Kids	1	Effective
31*	Universal	Cecil	Stress Inoculation	1	Effective
Substance Abuse (12 citations)					
32*	Univ/Indic	Botvin	Life Skills Training	4	Mixed/Effective
33	Universal	Dielman	Alcohol Misuse Prev.	1	Mixed
34*	Universal	Ellickson	Project Alert	1	Mixed
35*	Universal	Perry	Project Northland	1	Mixed
36	Universal	Rosenbaum	DARE	2	Not Effective
37*	Universal	Sussman/ Dent	Toward No Tobacco Use	2	Effective
38	Indicated	Hostetler	Project CARE	1	Not Effective

* Program also listed in Table 4.9.

Appendix D
Brief Description of programs listed in Table 4.9

1. **Brief Strategic Family Therapy**
   The program is delivered in sixty to ninety minute sessions over the course of eight to twelve weeks. A counselor meets with the family and develops a therapeutic alliance, diagnoses family strengths and problem relations, develops a change strategy and helps implement those strategies.

2. **Counselors Care (C-Care) and Coping and Support Training (CAST)**
   C-Care is a 2-hour computer-assisted assessment of risk and protective factors and also includes a brief intervention to provide empathy and support and to build networks and resources. CAST includes 12 small-group sessions held twice weekly for 6 weeks. CAST includes building group support, problem solving, anger management, and building self esteem.

3. **Early Risers: Skills for Success**
   A family advocate visits and consults with the child's teachers, instructs and mentors the child in social skills, and facilitates communication between home and school. The family advocate also makes regular home visits, supports the family in setting goals and planning, and brokers community services.

4. **Family Effectiveness Training**
   This program consists of thirteen weekly family sessions educating and promoting effective parenting skills, communication, conflict resolution, problem solving skills, and substance abuse prevention. Brief strategic family therapy is also employed. This program was developed for use with Hispanic populations.

5. **Multidimensional Treatment Foster Care (MTFC)**
   MTFC is a home-based foster care program which emphasizes behavior management methods to provide adolescents with a structured and therapeutic living environment. Average length of stay is seven months. Services are also offered to biological parents with the ultimate goal of returning the youth back home.

6. **Queensland Early Intervention and Prevention of Anxiety Project (QEIPAP)**
   This cognitive-behavioral school based program consists of weekly group sessions, one to two hours long, over ten weeks. It develops a plan of graduated exposure to fearful stimuli using psychological, cognitive, and behavioral coping strategies. This is a modified form of Coping Cat (Kendall). Parents participate in three sessions teaching child management strategies and exposure techniques.

7. **Multidimensional Family Therapy**
   Multicomponent and multilevel intervention that assesses and intervenes with the adolescent and parent(s) individually, the family as a system, individuals in the family, relative to their interactions with influential social systems that impact youth's development.

8. **Not on Tobacco**
   Ten, fifty-minute weekly sessions using curriculum based on social cognitive theory delivered at school or in the community. Trains youth in self-management, stimulus control, social skills, social influence, stress management, relapse prevention, nicotine withdrawal techniques, weight management, and peer evaluation.

9. **Project EX**
   Eight sessions delivered over six weeks emphasizing coping with stress, nicotine withdrawal, relaxation, avoiding relapse. The program uses motivating activities including games, talk shows, and alternative exercises (yoga).

10. **Reconnecting Youth**
    A semester-long high school class involving skills training in the context of a positive peer culture. Parental involvement is required. School personnel are given guidelines regarding suicidal behavior.

11. **Adolescent Transitions Program (ATP)**
    This program strives to reduce antisocial behavior through 12 weekly, 90-minute group sessions using presentations, videotapes, and tokens. Parents also attend 12 weekly 90-minute group sessions on parent skill building. Additionally, families participate in three individual consultations.

12. **Anger Coping Program**
    An anger management program including weekly 45 to 60 minute groups over 12 to 18 weeks. Lessons focus on improving student perspective-taking skills, affect regulation, self-control, social problem solving, and social skills. Sessions include role play and other activities.

Brief Description of programs listed in Table 4.9 – continued

13. Attributional Intervention (Brainpower Program)
This program aims to reduce aggression by conducting twice-weekly 40-60 minute group sessions over 6 weeks. Groups focus on teaching students about social interactions and correct interpretation of interactions. The program includes role play, story reading, and discussion. Also includes a twelve sessions on attention training.

14. Earlscourt Social Skills Group Program
Program aims to reduce aggression in elementary school students through twice weekly, 75-minute group sessions for 12 to 15 weeks. Sessions teach eight basic skills in program modules, classroom activities, and homework. Training sessions are also offered to parents.

15. Montreal Longitudinal Experimental Study
This program is an effort to reduce aggressive behavior in 7 to 9 year olds. It consists of parent training where each family attends multidisciplinary sessions every two to three weeks on average over two years. Parents receive twenty sessions about ways to improve parenting skills. During social skills training, student groups were involved in several activities: coaching, peer modeling, and role play techniques and met for nine sessions the first year and ten sessions during the second year.

16. Multisystemic Therapy (MST)
This program has a usual duration of 60 contact hours over 4 months. Intervention strategies are integrated into social ecological context and include strategic family therapy, structural family therapy, behavioral parent training, and cognitive behavior therapy.

17. Peer Coping – Skills Training
The program consists of fifty-minute weekly sessions that include discussion, role playing, group activity, and group reward. Each child must master a specific set of performance goals, but the group does not move on until each member masters the goal. Teachers provide positive reinforcement for on-task behavior.

18. Incredible Years
This program uses four formats: eighteen to twenty-two two-hour weekly Dina Dinosaur group therapy for children; sixty Dina Dinosaur lesson plans for the classroom; twelve to fourteen two-hour weekly parenting groups; and fourteen two-hour teacher classroom management sessions.

19. Families and Schools Together (FAST)
Offers multifamily group intervention including support groups (eight to twelve weeks) and meetings with families after they "graduate" from the program.

20. CASASTART (Striving Together to Achieve Rewarding Tomorrows)
Brings together police, school, and community organizations to redirect lives of youth likely to end up in trouble and to reduce illegal drug use and crime in community. Case managers serve as counselor, mentor, advocate, broker, and role model.

21. Leadership and Resiliency Program (LRP)
Requires partnership between high school and a substance abuse/health service agency. Youth attend weekly in-school resiliency groups, participate in weekly community service activities after school and on weekends (including animal rehabilitation), and outdoor activities.

22. Parenting Wisely
This interactive computer-based program teaches parents and their children skills for combating risk factors for substance use and abuse. The highly interactive and nonjudgmental CD-ROM format accelerates learning, and parents use new skills immediately.

23. Project Success
Project success consists of an eight-session substance prevention education program, individual assessment, and eight to twelve individual or group counseling sessions (which vary by topic). Parents attend a workshop on substance abuse prevention/reduction, and students are referred to treatment or other services as needed.

24. Residential Student Assistance Program
A student assistance counselor is placed in an RTC and provides an eight-session substance abuse prevention education program, individual assessments, eight to twelve group counseling sessions, and referral and consultation.

25. Fast Track
The Universal Fast Track program uses the PATHS school-based curriculum for grades 1-5. The Selective/Indicated Fast Track program includes 5 additional components in grade 1, such as parent training, home visits, child social skills training groups, child tutoring in reading, and peer-pairing.

Brief Description of programs listed in Table 4.9 – continued

26. Cognitive Behavioral Therapy for Child Sexual Abuse (CBT-CSA)

The program consists of parallel sessions with the child and non-offending parent and joint parent-child sessions (in later stages of therapy). There are twelve sessions of both individual and group therapy. Parents are also provided with behavioral management training.

27. Trauma Focused Cognitive Behavior Therapy (TF-CBT)

TF-CBT is a treatment intervention designed to help children, youth, and their parents overcome the negative effects of traumatic life events such as child sexual or physical abuse; traumatic loss of a loved one; domestic, school, or community violence; or exposure to disasters, terrorist attacks, or war trauma. The program can be administered in an individual or group format, involving the child only, parent only, or combined treatment.

28. Nurse-Family Partnership Program

Nurse-Family Partnership (NFP) provides first-time, low-income mothers of any age with home visitation services from public health nurses. The visiting nurse develops a therapeutic relationship with the family around areas of health, environment, support, parental roles, and major life events.

29. Across Ages

This program is a community-based prevention program that pairs older adult mentors with adolescents. The program employs mentoring, community service, social competence training, and family activities.

30. PENN Prevention Program

This program is a cognitive behavioral intervention delivered in group settings that meet after school for one and a half hour sessions over a twelve week period. Groups consist of in-session instruction and weekly homework assignments. Topics include a cognitive component and a problem solving/coping component.

31. Primary Mental Health Project

This is an early intervention project where the identified child meets with a trained child associate alone or in small groups once a week for 20-25 sessions. Each session lasts from 25-45 minutes throughout the school year. These meetings encourage expressive play with limits placed on inappropriate behavior.

32. Stress Inoculation Training I

The thirteen sessions include group and individual formats and cover cognitive restructuring, problem solving, and anxiety management. This program also includes teaching cognitive coping skills and relaxation training.

33. Stress Inoculation Training II

In eight sessions, students learn about the process of anxiety arousal and instrumental and cognitive-palliative coping skills such as progressive relaxation, cue-controlled relaxation, and cognitive restructuring.

34. Coping with Stress Course

This program promotes adaptive coping for adolescents with depressive symptomatology through 15 group sessions, each 45 minutes long, which take place after school. Groups employ cognitive interventions through the use of cartoons, role play, and group discussions.

35. First Step to Success

This program uses a modified CLASS program (Hops & Walker) which works in conjunction with the existing academic program. Behavioral criterions for the students are set daily. The program usually lasts approximately two months. The home intervention portion of the program, "HomeBase", is a six-week program involving a home visit and assessment. Parents are taught to reward appropriate behaviors.

36. Functional Family Therapy (FFT)

FFT is a prevention/intervention program for youth who have demonstrated the maladaptive, acting out behaviors and related syndromes. Intervention consists of 8-26 hours of direct service time with youth and family, depending on the severity of disruptive behaviors. FFT consists of five phases: engagement, motivation, assessment, behavior change, and generalization.

37. Social Relations Program

This program includes twenty six, 30-minute individual sessions and eight small group sessions covering four areas: social problem solving, positive play training, group-entry skills training, and anger control.

Brief Description of programs listed in Table 4.9 – continued

38. Children in the Middle

This program was designed for use with court-mandated/recommended training. Parents attend one or two sessions for two to three hours per session, where they view videotapes and participate in discussions. Children attend six to ten sessions for thirty to forty-five minutes per session, where they view child-centered videos. Both parents and children complete workbooks.

39. Children of Divorce Coping Program (CODIP)

This program strives to ease impact of parental separation or divorce on elementary school children through 10 to 16 sessions emphasizing support and skill building through group support, discussion, building problem solving skills, and enhancing positive self and family perceptions.

40. Children of Divorce Parenting Program

Parents divorced within two years attend 10 group and 2 individual sessions to learn about spending quality tie with their children, listening to their children, and using anger management skills to reduce interpersonal conflict.

41. Family Bereavement Program

The Family Bereavement Program consists of two parts. The Family Grief Workshops include 3 sessions connecting bereaved families and educating them on the grief process. The Family Advisor Program includes 12 sessions focused on changing parental demoralization, parental warmth, stable positive events, and negative stress events.

42. Big Brothers/Big Sisters

Big Brothers/Big Sisters screen and match adult mentors with youth from low-income, single-parent families for the purposes of developing and maintaining supportive relationships. Mentors meet with the assigned child several times a month over the course of at least one year.

43. Dare to be You

Families attend a twelve-week workshop series and semi annual twelve-hour boosters. The curriculum teaches self-responsibility, personal and parenting efficacy, communication/social skills, and problem solving and decision making skills. Teachers and childcare providers are also trained, as well as community staff involved with the family.

44. Project Achieve

This program involves strategic planning and organizational development to influence school reform. Teachers take part in training programs, parents participate in a home-school collaboration effort, and students receive "stop and think" curriculum.

45. SAFE Children: Schools and Families Educating Children

SAFE Children consists of a twenty-week family group curriculum including information dissemination, group discussion, family activities, and assignment of between-session activities. Also includes twice-weekly individual tutoring (heavily phonics based).

46. Strengthening Families Program (SFP)

SFP consists of fourteen two-hour sessions and behavioral skills training program. Parents meet separately with two group leaders during the first hour while children meet with two children's trainers. For the second hour families engage in structured family activities, practice therapeutic play, and reinforce positive behaviors.

47. All Stars

This is a school or community-based program designed to delay the onset of drug use, violence, and premature sexual activity. A highly interactive program, All Stars involves 9 to 13 lessons during its first year, and 7 to 8 booster lessons in its second year. This program uses small group activities, group discussions, games, and art activities.

48. Keepin' it REAL (Refuse, Explain, Avoid, Leave)

This program is a ten-lesson classroom curriculum accompanied by five videos demonstrating resistance strategies and illustrates skills taught in the lessons. Worksheets, role-play, games, and discussion are also used. One monthly booster session during the eight months after the program was completed is recommended.

49. Project ALERT

Project ALERT consists of eleven weekly lessons that motivate students against drug use, teaches skills and strategies to resist pro-drug pressures, and establishes non-drug using norms using guided classroom discussions and small group activities. Homework assignments work to involve the parents.

Brief Description of programs listed in Table 4.9 – continued

50. Project Toward No Drug Abuse (TND)

This program is a drug abuse prevention program for high school students that includes 12 in-class 40-minute interactive sessions that provide motivation, skills, and decision making targeting drug use.

51. Olweus Bullying Prevention

This is a bullying prevention program which works at three levels: school-wide, classroom level, and individual student. The program consists of weekly twenty to forty-minute classroom meetings. Teachers participate in regular teacher discussion groups. A coordinating committee consists of administrators, teachers, students, parents, and onsite coordinator.

52. Al's Pals: Kids Making Health Choices

This program consists of 46 lessons delivered by a classroom teacher for 10 – 15 minutes, twice a week. Al's Pals provides opportunities for children to acquire and practice social and emotional skills.

53. Caring School Community

This program focuses on building a school community based on caring relationships. It stresses good citizenship and provides broad multi-year coverage. Students learn competencies (social awareness, self management, self awareness, and communication skills) through teacher modeling, rehearsal, and independent application.

54. Child Development Project (CDP)

The CDP includes a reading-decoding program, reading comprehension program, and a four-part community-building program (school-wide activities, cross-grade buddies, class meetings, and family involvement). The program can take up to three years to complete.

55. Families that Care: Guiding Good Choices

This program consists of five, two-hour sessions that are interactive and skill based, and includes the use of videos and workbooks. Parents have the opportunity to practice new skills and receive feedback.

56. Good Behavior Game

Children in first grade are assigned to one of three classroom groups or teams. Teams are penalized for disruptive or noncompliant behavior and rewarded for not exceeding maladaptive behavior standards. This program also includes a group-based reading mastery component. The program continues into the second grade.

57. High/Scope Educational Approach for Pre-school and Primary Grades

This program develops learning environments where young children naturally engage in fifty-eight activities that foster development of important skills and abilities. The program incorporates active learning, adult-child interaction, maintaining daily routine, and assessment into the classroom.

58. Improving Social Awareness – Social Problem Solving (ISA-SPS)

The ISA-SPS program's three phases focus on reducing stressors associated with the transition from elementary to middle school. The Readiness Phase includes 20, 40-minute lessons which promote self-control, group participation, and social awareness. The Instructional Phase includes 20, 40-minute sessions teaching students eight steps for social decision making and problem solving. The Application Phase trains teachers to promote reinforcement of appropriate behavior.

59. Life Skills Training

This project includes fifteen forty-five-minute sessions for middle/junior high students and twenty-four thirty to forty-five-minute sessions for elementary students. Focuses on drug resistance skills, personal self-management skills, and general social skills.

60. Linking the Interests of Families and Teachers (LIFT)

The program is made up of twenty, one-hour sessions over a ten week intervention consisting of parent training; a classroom based social skills program;, a playground behavioral program; and systematic communication between teachers and parents. Parents meet once per week over six weeks for parent training.

61. Lions Quest Skills Series

This program focuses on character education, service learning, and violence and substance abuse prevention. The series provides 103 lessons across grades from K-12 and provides broad coverage of substance abuse prevention, violence prevention and good citizenship.

62. PATHS: Promoting Alternative Thinking Strategies

The PATHS curriculum has six volumes teaching emotional literacy, self-control, social competence, positive peer relations, and interpersonal problem-solving skills. This program continues over five years.

Brief Description of programs listed in Table 4.9 – continued

63. Positive Youth Development Program

This program uses a highly structured school-based curriculum program of twenty sessions during over fifteen weeks. Curriculum covers topics such as stress management, self esteem, problem solving, by using techniques such as didactic instruction, discussion, videos, diaries, and role play.

64. School Transitional Environment Project (STEP)

STEP creates cohorts of students who remain in homeroom together to develop learning communities. Homeroom teachers are trained to become an advisor for these students and act a liaison between students, families, other teachers, and the rest of the school.

65. Seattle Social Development Project

Teachers are trained in proactive classroom management, interactive teaching, and cooperative learning. Parent training is offered and topics vary according to grade of child.

66. Skills, Opportunities, and Recognition (SOAR)

This program is based on an eight-step model for teaching social and emotional skills. All components of this program emphasize teaching students how to conduct themselves responsibly in school and home settings.

67. Social Decision Making and Problem Solving Programs

This program provides twenty-five to forty lessons per year that are designed to help children recognize and use their emotions effectively in solving problems.

68. Suicide Prevention Program I

Twelve weekly, fifty-minute group sessions which follow a three-phase intervention model: educational-conceptual, exercise-training, and implementation-application.

69. Suicide Prevention Program II

This program is a gradual, controlled confrontation program of seven weekly two-hour workshops, aimed at eliciting introspective discussion. Workshops are semi-structured and centered on description of students' actual experiences, working through those experiences, and coping with the external problems or inner emotions.

70. Athletes Training and Learning to Avoid Steroids (ATLAS)

A drug prevention program delivered to older males within a sports context. The curriculum includes nine classroom hours to deliver ten session/lectures of about forty five minutes each. Each student is required to have 100 hours of team contact during sport season.

71. Class Action

This program consists of eight to ten sessions. The curriculum looks at real-world social and legal consequences of under-age drinking. Students participate in mock legal cases. Class Action also includes community speakers and parent involvement in the form of postcards mailed home. This program can be used as a part of Project Northland (#75) or as a stand-alone program.

72. Communities Mobilizing for Change on Alcohol

The community organizer works with civic groups, faith organizations, school, community groups, law enforcement, liquor licensing agencies, and advertising to influence local public policies and practice to limit youth access to alcohol. The program contains no curriculum.

73. Family Matters

Four booklets containing readings and activities regarding tobacco and alcohol use and are mailed home to parents. Follow-up phone calls to parents by a health educator provides additional support.

74. Keep a Clear Mind

In this project, the teacher (or other school staff) sends home four weekly lessons on tobacco, alcohol, marijuana, and saying "no" to drugs. Students who return completed lessons earn rewards. Five parent newsletters are also included.

75. Midwestern Prevention Project (MPP)

MPP is a skills program of 10-13 classroom sessions focused on drug abuse prevention that starts in school and is then reinforced through parents, the media, and community organization components.

76. Project Northland

Project Northland consists of eight, forty-five-minute sessions of teacher and peer-led classroom sessions. The take home part of the program involves providing a forum for students and families to discuss alcohol-related topics.

Brief Description of programs listed in Table 4.9 – continued

77. Project TNT: Towards No Tobacco Use
This tobacco-use prevention program targets middle school students and includes 10 school-based lessons to be presented over a two-week period. Each lesson lasts 50 minutes.

78. Project Venture
Students participate in classroom-based problem solving activities, outdoor experiential activities, adventure camps, treks, and community-oriented service learning.

79. Protecting You / Protecting Me (PYPM)
Developed by Mothers Against Drunk Driving (MADD), PYPM is a five-year alcohol prevention consisting of interactive classroom modules providing forty-two lessons and forty reinforcement activities including role-play, small group and classroom discussion, reading, writing, story telling, surveys, art, and music.

80. Start Taking Alcohol Risks Seriously (STARS) for Families
STARS is a health promotion program aimed at preventing alcohol use. Families receive an annual health consultation (twenty-minutes) with a nurse/other health care professional about alcohol use. Ten key facts about alcohol use postcards are mailed to parents for five to ten weeks. Parents can return the postcard for more information on a particular topic. Four weekly take-home prevention activities for parents and children to complete together are provided.

81. Strengthening Families Program – Parents & Youth (SFP)
SFP uses family systems and cognitive-behavioral approaches to increase resilience and reduce risk factors for behavioral, emotional, academic, and social problems. The program lasts for seven weeks and is delivered in group settings. Parents and youth meet in separate groups during first hour, and together for second hour. Videotapes are used. Booster sessions are offered.

82. Too Good for Drugs
Too Good for Drugs includes ten lessons per grade for K–8th grades and twenty-six lessons for high school grades. This program should be implemented each school year. It provides normative education, information on harmful effects of drug use, pro-social skill development, diverse role-play, cooperative learning, and parental involvement.

83. I Can Problem Solve (ICPS): An Interpersonal Cognitive Problems Solving Program for Children
Designed for students in the four to five year age range, this program consists of a twelve-week interpersonal cognitive problem solving program. This program uses games, discussion, and group interaction techniques to teach communication and problem solving. Also includes teacher (or parent) training in 'problem solving dialoging'.

84. Responding in Peaceful and Positive Ways (RIPP)
This curriculum consists of twenty-five sessions taught during a 45-minute class period once a week. Adult role models are used to teach knowledge, attitudes, and skills that emphasize nonviolence and positive communication. It uses small group work, role play, relaxation techniques, repetition and rehearsal, and peer mediation.

85. Safe Dates
This program consists of nine, fifty-minute sessions about relationships, a school play about dating abuse and violence, a poster contest, and parent letters and brochures. The school can also host family education programs.

86. Second Step: A Violence Prevention Program
Thirty, 35-minute lessons are taught once or twice a week and covers anger management, empathy, and impulse control. A video-based parent guide encourages the reinforcement of skills at home.

87. SMART Team: Students Managing Anger and Resolution Together
This program uses an eight-module process including a multi-media program that focuses on anger management, dispute resolution, and perspective taking.

88. Teaching Students to be Peacemakers
Teaching Students to Be Peacemakers consists of twenty, thirty-minute lessons including case studies, role-playing activities, and simulations. After the twenty lessons, peer medication procedures are implemented in the class and school. The program is re-taught each year as students' progress to more complex levels.

89. Too Good for Violence
This curriculum builds sequentially by grade and focuses on conflict resolution, anger management, respect, and communication skills, through role-play, cooperative learning, games, small group activities, and class discussion.

Brief Description of programs listed in Table 4.9 – continued

90. Know Your Body

This program includes a health education curriculum with forty-nine lessons per year covering topics such as exercise, safety, and disease prevention. Know Your Body develops critical thinking skills about health decisions.

91. Creating Lasting Family Connections (CLFC)

Comprehensive family strengthening, substance abuse, and violence prevention make up the CLFC curriculum. There are six modules, three for parents and three for youth. Follow-up case management is provided in this twenty-week program.

92. Positive Action

The Positive Action curriculum is grade-based and focuses on multiple domains related to improving academic achievement and behaviors. The program also works to impact school climate and classroom management skills of educators. Parents receive a related family kit containing lessons and materials.

Appendix E
Sixteen Individual-Level Outcome Evidence Rating Criteria–NREPP (Request for Comments; NREPP, 2005, pp. 50384-50386; Federal Register, 8/26/05)

Individual-Level Outcome Evidence Rating Criteria

1. Theory-Driven Measure Selection

Outcome measures for a study should be selected before data are collected and should be based on a priori theories of hypotheses.

0 = The applicant selected the measure after data collection for the apparent purpose of obtaining more favorable results than would be expected from using the measures originally planned, OR there is no documentation of selection prior to data analysis.

4 = Documentation shows that the applicant selected the measure prior to study implementation, OR the measure was selected after study inception, but before data analysis, and is supported by a peer review panel or literature related to study theories or hypotheses.

2. Reliability

Outcome measures should have acceptable reliability to be interpretable. "Acceptable" here means reliability at a level that is conventionally accepted by experts in the field.

0 = No evidence of measure reliability.

1 = Reliability coefficients indicate that some but not all relevant types of reliability (e.g., test-retest, inter-rater, inter-item) are acceptable.

3 = All relevant types of reliability have been documented to be at acceptable levels in studies by the applicant.

4 = All relevant types of reliability have been documented to be acceptable levels in studies by independent investigators.

3. Validity

Outcome measures should have acceptable validity to be interpretable. "Acceptable" here means validity at a level that is conventionally accepted by experts in the field.

0 = No evidence of measure validity, or some evidence that the measure is not valid.

1 = Measure has face validity.

3 = Studies by applicant show that measure has one or more acceptable forms of criterion-related validity that are correlated with appropriate, validated measures or objective criteria; OR, as an objective measure of response, there are procedural checks to confirm data validity, but they have not been adequately documented.

4 = Studies by independent investigators show that measure has one or more acceptable forms of criterion-related validity that are correlated with appropriate, validated measures or objective criteria; OR, as an objective measure of response, there are adequately documented procedural checks that confirm data validity.

4. Intervention Fidelity

The "experimental" intervention implemented in a study should have fidelity to the intervention proposed by the applicant. Instruments that have tested acceptable psychometric properties (e.g., inter-rater reliability, validity as shown by positive association with outcomes) provides the highest level of evidence.

0 = There is evidence the intervention implemented was substantially different from the one proposed.

1 = There is only narrative evidence that the applicant or provider believes the intervention was implemented with acceptable fidelity.

2 = There is evidence of acceptable fidelity in the form of judgment(s) by experts, based on limited on-site evaluation and data collection.

3 = There is evidence of acceptable fidelity, based on the systematic collection of data on factors such as dosage, time spent in training, adherence to guidelines or a manual, or a fidelity measure with unspecified or unknown psychometric properties.

4 = There is evidence of acceptable fidelity from a tested fidelity instrument shown to have reliability and validity.

5. Comparison Fidelity

A study's comparison condition should be implemented with fidelity to the comparison condition proposed by the applicant. Instruments for measuring fidelity that have tested acceptable psychometric properties (e.g., inter-rater reliability, validity as shown by predicted association with outcomes) provide the highest level of evidence.

0 = There is evidence that the comparison condition implemented was substantially different from one proposed.

Sixteen Individual-Level Outcome Evidence Rating Criteria–NREPP – continued

1 = There is only narrative evidence that the applicant or provider believes the comparison condition was implemented with fidelity.

2 = Researchers report observational or administrative data that the comparison condition was implemented with fidelity.

3 = Documentation confirms that comparison group participants did not receive interventions that were very similar or identical to intervention participants, AND there is documentation of degree of participation in any comparison conditions such as lectures or treatment.

4 = There is evidence from a tested instrument suggesting that the comparison condition was implemented with fidelity.

6. Nature of Comparison Condition

The quality of evidence for an intervention depends in part on the nature of the comparison condition(s), including assessments of their active components and overall effectiveness. Interventions have the potential to cause more harm than good; therefore, an active comparison intervention should be shown to be better than no treatment.

0 = There was no comparison condition.

1 = The comparison condition is an active intervention that has not been proven to better than no treatment.

2 = The comparison condition is no service or wait-list, or an active intervention shown to be as effective as or better than no treatment.

3 = The comparison condition is an attention control.

4 = The comparison condition was shown to be as safe or safer and more effective than an attention control.

7. Assurances to Participants

Study participants should always be assured that their responses will be kept confidential and not affect their care or services. When these procedures are in place, participants are more likely to disclose valid data.

0 = There was no effort to encourage and reassure subjects about privacy and that consent or participation would have no effect on services.

1 = Data collector was the service provider, AND there were documented assurances to participants about privacy and that consent or participation would have no effect on care or services.

2 = Data collector was not the service provider. There were indications, but no documentation, that participants were assured about their privacy and that consent or participation would have no effect on care or services.

4 = Data collector was not the service provider, AND there were documented assurances to participants about privacy and that consent or participation would have no effect on care or services; OR, data were not collected directly from participants.

8. Participant Expectations

Participants can be biased by how an intervention is introduced to them and by an awareness of their study condition. Information used to recruit and inform study participants should be carefully crafted to equalize expectations. Masking treatment conditions during implementation of the study provides the strongest control for participant expectancies.

0 = Investigators did not make adequate attempts to mask study conditions or equalize expectations among participants in the experimental and comparison conditions, or differential participant expectations were measured and found to be too great to control for statistically.

2 = Investigators attempted to mask study conditions or equalize expectations among participants in the experimental and comparison conditions. Some participants appeared likely to have known their study condition assignment (experimental or comparison).

3 = Investigators attempted to mask study conditions or equalize expectations among participants in the experimental and comparison conditions. Some participants appeared likely to have known their study condition assignment (experimental or comparison), but these differential participant expectations were measured and appropriately controlled for statistically.

4 = Investigators adequately masked study conditions. Participants did not appear likely to have known their study condition assignment.

Sixteen Individual-Level Outcome Evidence Rating Criteria—NREPP – continued

9. Standardized Data Collection

All outcome data should be collected in a standardized manner. Data collectors trained and monitored for adherence to standardized protocols provide the highest quality evidence of standardized data collection.

0 = Applicant did not use standardized data collection protocols.

2 = Data was collected using standardized protocol and trained data collectors.

3 = Data was collected using standardized protocol and trained data collectors, with evidence of good initial adherence by data collectors to the standardized protocol.

4 = Data was collected using standardized protocol and trained data collectors, with evidence of good initial adherence to data collectors to the standardized protocol and evidence of data collector retraining when necessary to control for rater "drift."

10. Data Collector Bias

Data collector bias is most strongly controlled when data collectors are not aware of the conditions to which study participants have been assigned. When data collectors are aware of specific study conditions, their expectations should be controlled for through training and/or statistical methods.

0 = Data collectors were not masked to participants' conditions, and nothing was done to control for possible bias, OR collector bias was measured and found to be too great to control for statistically.

2 = Data collectors were not masked to participants' conditions, but data collectors received training to reduce possible bias.

3 = Data collectors were not masked to participants' conditions; possible bias was appropriately controlled for statistically.

4 = Data collectors were masked to participants' conditions.

11. Selection Bias

Concealed random assignment of participants provides the strongest evidence of control for selection bias. When participants are not randomly assigned, covariates and confounding variables should be controlled as indicated by theory and research.

0 = There was no comparison condition, OR participants or providers selected conditions.

3 = Participants were not assigned randomly, but researchers controlled for theoretically relevant confounding variables, OR participants were assigned with non-concealed randomization.

4 = Selection bias was controlled with concealed random assignment.

12. Attrition

Study results can be biased by participant attrition. Statistical methods as supported by theory and research can be employed to control for attrition that would bias results, but studies with no attrition needing adjustment provide the strongest evidence that results are not biased.

0 = Attrition was taken into account inadequately, OR there was too much attrition to control for bias.

1 = No significant differences were found between participants lost to attrition and remaining participants.

2 = Attrition was taken into account by simpler methods that crudely estimate data for missing observations.

3 = Attrition was taken into account by more sophisticated methods that model missing data, observations, or participants.

4 = There was no attrition, OR there was no attrition needing adjustment.

13. Missing Data

Study results can be biased by missing data. Statistical methods as supported by theory and research can be employed to control for missing data that would bias results, but studies with no missing data needing adjustment provide the strongest evidence.

0 = Missing data were an issue and were taken into account inadequately, OR levels of missing data were too high to control for bias.

1= Missing data were an issue and were taken into account, but high quantity makes the control for bias suspect.

NREPP; Sixteen Individual-Level Outcome Evidence Rating Criteria – continued

2= Missing data were an issue and were taken into account by simpler methods (mean replacement, last point carried forward) that simplistically estimate missing data; control for missing data is plausible.

3= Missing data were an issue and were taken into account by more sophisticated methods that model missing data; control for missing data very plausible.

4= Missing data were not an issue.

14. Analysis Meets Data Assumptions

The appropriateness of statistical analyses is a function of the properties of the data being analyzed and the degree to which meet statistical assumptions.

0= Analyses were clearly inappropriate to the data collected; severe violation(s) of assumptions make analysis uninterpretable.

1= Some data were analyzed appropriately, but for other analyses important violation(s) of assumptions cast doubt on interpretation.

2= There were minor violations of assumptions for most or all analyses, making interpretation of results arguable.

3= There were minor violations of assumptions for only a few analyses; results were generally interpretable.

4= There were no violations of assumptions for any analysis.

15. Theory-Driven Selection of Analytic Methods

Analytic methods should be selected for a study based on a priori theories or hypotheses underlying the intervention. Changes to analytic methods after initial data analysis (e.g., to "dredge" for significant results) decrease the confidence that can be placed in the findings.

0= Analysis selected appears inconsistent with the intervention theory or hypotheses; insufficient rational provided by investigator.

1= Analysis selected appears inconsistent with the intervention theory or hypotheses, but applicant provides a potentially viable rationale.

3= Analysis is widely accepted by the field as the most consistent with study theory or hypotheses; no documentation showing methods were selected prior to data analysis.

4= Analysis is widely accepted by the field as the most consistent with study theory or hypotheses; documentation shows that methods were selected prior to data analysis.

16. Anomalous Findings

Findings that contradict the theories and hypotheses underlying an intervention suggest the possibility of confounding causal variables and limit the validity of study findings.

0 = There were anomalous findings suggesting alternate explanations for outcomes reported.

4 = There were no anomalous findings, OR researchers explained anomalous findings in a way that preserves the validity of results reported.

Based upon the independent reviewer assessments, review coordinators will compute average evidence quality ratings for specific outcome measures (based on the 16 evidence quality criteria), and then ask reviewers to determine the overall intervention outcome evidence ratings according to two components: quality of evidence and intervention replications. Average evidence quality ratings scores below 2.0 will be considered "insufficient current evidence" for the effectiveness of a given outcome, and will not be included in the Registry. Evidence quality rating scores of 2.0 to 2.5 will be considered "emerging evidence" for effectiveness, and scores of 2.5 and higher (4.0 is the maximum) will be considered "strong evidence."

Specific rating category labels for effective outcomes remain to be finalized, but might include categories such as: (1) Strong evidence with independent replication(s); (2) Strong evidence with developer replication(s); (3) Strong evidence without replication; (4) Emerging evidence with independent replication(s); (5) Emerging evidence with developer replication(s); and (6) Emerging evidence without replication.

Appendix F
Definitions and Review Criteria for Population-, Policy-, and System-, Level Outcome Ratings for Interventions. (Request for Comments; NREPP, 2005, p. 50387; Federal Register, 8/26/05)

Review Process for Determining Population-, Policy-, and System-Level Outcome Ratings for Interventions

The NREPP Evidence Rating Criteria for Population-, Policy-, and System- Level Outcomes are proposed as the basis for reviewer ratings of outcomes generated by community prevention coalitions and other environmental interventions to promote resiliency and recovery at the community level. SAMHSA's rationale for use of these separate criteria comes through a recognition that some interventions may be designed to affect a community over time, and that the prevailing scientific standards for assessing the effectiveness of these interventions may indeed be different than those for interventions seeking to change individual-level outcomes.

1. **Population-Level Outcomes**—measures the effect of an intervention of an existing, predefined population. Examples of such existing, predefined populations include "all youth residing in a neighborhood," "all female employees of a manufacturing plant," or "all Native Americans receiving social services from a tribal government." "All patients receiving a specific treatment," in contrast, cannot be defined as an existing, predefined population because that population would have come into existence as a direct response to the intervention.
2. **Policy-Level Outcome**—measures the effect of an intervention on enactment, maintenance, or enforcement of policies that are assumed to have a positive aggregate impact on resiliency or recovery. Examples of such outcomes include "the rate of passage of legislation restricting access to alcoholic beverages" or "the percentage of arrests for illicit drug manufacturing that result in convictions."
3. **System-Level Outcome**—measures the effect of an intervention on prevention and treatment capacity, efficiency, or effectiveness in an existing system or community. Examples of such outcomes include "increased capacity of a State government to quantify alcohol or drug-related problems" or "increased effectiveness of a community treatment system to respond to the comprehensive needs of individuals with Axis I mental health diagnoses."

Twelve Review Criteria

To support the transparency of the review process, SAMHSA wants stakeholders to understand clearly the NREPP procedures and decision-making processes. All community coalition interventions included in NREPP will have demonstrated evidence of effectiveness at the population, policy, or system level. The ratings will indicate the strength of the supporting evidence, and may be as follows:

(1) Strong evidence with replication;

(2) Strong evidence without replication;

(3) Emerging evidence with replication; and

(4) Emerging evidence without replication.

All NREPP evidence ratings are defined at the level of specific outcomes. The 12 evidence rating criteria used for population-, policy and system-level outcomes, summarized as an average Evidence Quality Score (EQS) for each outcome, allow independent expert reviewers to score along dimensions of outcome measurement, intervention fidelity, comparison conditions, participant and data collector biases, design and analysis, and anomalous findings. Each of the 12 criteria is assessed by independent reviewers on a 0 to 2 scale, in which a "1" indicates that methodological rigor may have been acceptable and a "2" indicates that adequate methodological rigor was achieved for this type of outcome.

Preliminary discussions of classifications have suggested that "Strong evidence" be defined as an average EQS of 1.75 or above (out of a possible 2.0), and that "Emerging evidence" be defined as an average EQS between 1.50 and 1.74 (out of a possible 2.0).

Outcome Measurement Criteria

1. Logic-Driven Selection of Measures

Outcome measures should be based on a theory or logic model that associates them with the intervention.

0 = The applicant appears to have selected outcome measures for the purpose of identifying favorable results rather than from a logic-based rationale.

1 = There is no explicit description of a guiding logic model or theory for measures, although a rationale for the inclusion of most measures can be inferred.

2 = Measures are supported by a theory or logic model that associates the intervention with the outcome.

Definitions and Review Criteria for Population – continued

2. Reliability

Outcome measures should have acceptable reliability to be interpretable. "Acceptable" here means reliability at a level that is conventionally accepted by experts in the field.

0 = No evidence of reliability of measures is presented.

1 = Relevant reliability measures are in the marginal range.

2 = Relevant reliability measures are in clearly acceptable ranges.

3. Validity

Outcome measures should have acceptable validity to be interpretable.

0 = No evidence of validity of measures is presented or evidence that is presented suggests measures are not valid.

1 = Measures has face validity.

2 = Relevant validity has been documented to be at acceptable levels in independent studies.

4. Intervention Fidelity

The intervention should be well defined and its implementation should be described in sufficient detail to assess whether implementation affected outcomes.

0 = The intervention and/or its implementation are not described in sufficient detail to verify that the intervention was implemented as intended.

1 = The intervention and its implementation are described in adequate detail, including justification for significant variation during implementation.

2 = The intervention and its implementation are described in adequate detail, reflecting variation during implementation with little or no plausible impact on outcomes.

5. Nature of Comparison Condition

The quality of evidence for an intervention depends in part on the nature of the comparison condition(s).

0 = Research design either lacks a comparison condition, or employs a before/after comparison.

1 = Comparison condition was no service or wait-list (including baseline comparison for a multipoint time series), or an active intervention that has not been shown to be safer or more effective than no service.

2 = Comparison condition was an active intervention shown to be as safe as, or safer and more effective than, no service.

6. Standardized Data Collection

All outcome data should be collected in a standardized manner. Data collectors trained and monitored for adherence to standardized protocols provide the highest quality evidence of standardized data collection.

0 = Data collection or archival sources used by the evaluation to assess outcome did not use standardized data collection protocol(s).

1 = All outcome data were collected using standardized protocol(s).

2 = All outcome data were collected using standardized protocol(s) and trained data collectors.

7. Data Collector Bias

Data collector bias is most strongly controlled when data collectors are not aware of the interventions to which populations have been exposed. When data collectors are aware of specific interventions, their expectations should be controlled for through training and/ or statistical analysis methods on resultant data.

0 = Data collectors were not masked to the population's condition, and nothing was done to control for possible bias, OR collector bias was identified and not controlled for statistically.

1 = Data collectors were not masked to the population's condition; possible bias was appropriately controlled for statistically or through training.

2 = Data collectors were masked to the population's condition, or only archival data was employed.

8. Population Studied

0 = A single group pre/posttest design was applied without a comparison group, OR the alleged comparison group is significantly different from the population receiving the intervention.

1 = Population(s) were studied using time trend analysis, multiple baseline design, or a regression-discontinuity design that uses within-group differences as a substitute for comparison groups.

2 = Population matching or similar techniques were used to compare outcomes of population that received the intervention with the outcomes of a valid comparison group.

Definitions and Review Criteria for Population – continued

9. Missing Data

Study results can be biased by missing data. Statistical methods as supported by theory and research can be employed to control for missing data that would bias results, but studies with no missing data needing adjustment provide the strongest evidence.

0 = Missing data were an issue and were taken into account inadequately, OR levels of missing data were too high to control for bias.

1 = Missing data were an issue and were taken into account, but high quality makes the control for bias suspect.

2 = Missing data were not an issue or were taken into account by methods that estimate missing data.

10. Analysis Meets Data Assumptions

The appropriateness of statistical analysis is a function of the properties of the data being analyzed and the degree to which data meet statistical assumptions.

0 = Analyses were clearly inappropriate to the data collected; severe violation(s) of assumptions make analysis uninterpretable.

1 = There were minor violations of assumptions, making interpretation of results arguable.

2 = There were no or only very minor violations of assumptions; result were generally interpretable.

11. Theory-Driven Selection of Analytic Methods

In addition to the properties of the data, analytic methods should be based on a logic model or theory underlying the intervention. Changes to analytic methods after initial data analysis (e.g., to dredge for significant results) decrease the confidence that can be placed in the findings.

0 = Analysis selected appears inconsistent with the intervention theory or hypotheses; insufficient rationale was provided by the investigator.

1 = Analysis selected appears inconsistent with the intervention logic model or hypotheses, but the investigator provides a potentially viable rationale.

2 = Analysis is widely accepted by the field as consistent with the intervention logic model or hypotheses.

12. Anomalous Findings

Findings that contradict the theories and hypotheses underlying an intervention suggest the possibility of confounding causal variables and limit the validity of study findings.

0 = There were anomalous findings suggesting alternate explanations for outcomes reported that were not acknowledged by the applicant.

1 = There were a few anomalous findings, but additional analysis or previous literature cited by the applicant provide a reasonable explanation.

2 = There were no anomalous findings, OR researchers explained anomalous findings in a way that preserves the validity of results reported.

Appendix G
Possible steps in implementing a public health model for school-based mental health services

1 Surveillance at the population/community level

What is the problem?

Use systematic data collection strategies to determine the specific educational and mental health challenges & needs in your community.

Steps to Identify Priority Problems through Surveillance

- Establish a task force that has resources and authority for engaging in decision-making for service planning.
- Use existing data to create a composite picture of the mental health challenges in the community.
- Existing data should be examined for indicators of mental health functioning in youth in your community and will help direct action.
- Examples:

  What is the youth suicide rate in your community?

  What is the rate of involuntary psychiatric hospitalizations in your community?

  What are some indicators of substance abuse problems among the youth in your community?

  Do existing data point to mental health problems of youth in the juvenile justice system?

  What are the rates of suspensions and dropping out of school in your community?

  What are the rates of young children entering school who are not ready to learn?

- Prioritize the problems to be addressed.

2 Identify risk and protective factors

What are the causes?

Use the information collected in and on your community on a regular basis and integrate with the research literature.

Steps to Identify Risk and Protective Factors

- Identify risk and protective factors for each prioritized problem. Risk factors are those conditions that increase the likelihood of a negative outcome for children. Protective factors are conditions that reduce the probability of the negative outcome.
- Examine the empirical literature and condense the information to identify the risk and protective factors associated with the priority problem.
- Examples:

  Depression is a well-documented risk factor for suicide. Possessing adequate coping skills to deal with stress is an effective protective factor against depression and, subsequently, suicide.

  A common risk factor associated with the problems of aggression and substance use is negative peer influence. For both, protective factors are increased social competence and communication skills.

  A common risk factor for early school failure is a lack of pre-school academic skill development. The protective factors include an academic environment that engages in screening and early intervention for students with academic deficits.

- Integrate the community data with the research literature to identify and prioritize risk and protective factors needing to be addressed in your community.

3 Develop and evaluate interventions

What works and for whom?

Review literature on empirically based interventions and apply/adapt to local community needs.

Steps to Implement Evidence-Based Programs and Practices

- Use the research literature to identify evidence-based programs and practices that are appropriate for addressing the prioritized risk and protective factors in your community.
- Communities need to be aware of the need to integrate and balance the implementation of universal, selective, and indicated interventions. After universal interventions have been established, the effectiveness of implementing selective and indicated interventions will be facilitated.
- The Task Force must also investigate the feasibility of implementing the selected evidence-based program for issues such as cost of the program, staff training necessary for implementation, and cultural relevance. Additionally, Task Force members should outline the resources needed to support the implementation of the selected intervention over the life of the program.
- A Task Force that prioritizes depression, aggression and substance abuse for possible action, for example, could examine the feasibility of implementing the following programs:

  For depression - the *Coping with Stress Course* is a selective intervention that involves cognitive behavioral therapy in a group setting.

  For aggression – the PATHS Program (*Promoting Alternative Thinking Strategies*) is a universal prevention program that teaches skills such as self-control, social competence, and interpersonal problem-solving skills. An example of an indicated intervention is the *Anger Coping Program*, which group settings to reduce antisocial behavior.

  For substance use – *the Midwestern Prevention Project* focuses on drug abuse prevention with classroom-based sessions and parent involvement.

4 Implementation monitoring and scaling-up

Is it meeting the intended needs?

Monitor interventions for proper implementation, scale-up interventions and measure impact.

Steps for Implementation, Monitoring, and Scaling-Up

- Create infrastructure to examine and monitor youth and community outcomes to determine the effectiveness of efforts.
- Create quality assurance standards and training opportunities to support the dissemination and wide spread adoption of successful efforts.

> ***"No mass disorder afflicting humankind has been eliminated or brought under control by attempts at treating the affected individual, nor by training large number of individual practitioners."***

George Albee
Past President
American Psychological Association