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.

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

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.

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.

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.

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.

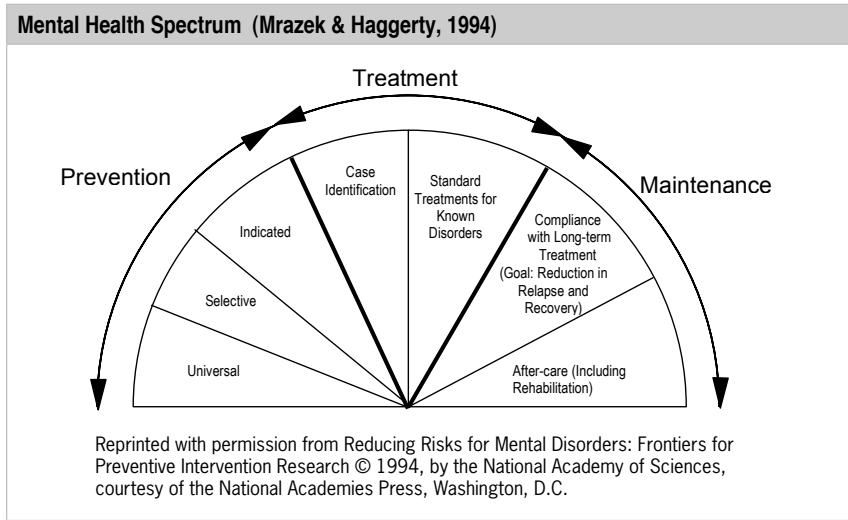## Heuristic Models of School Based Mental Health Programs

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).
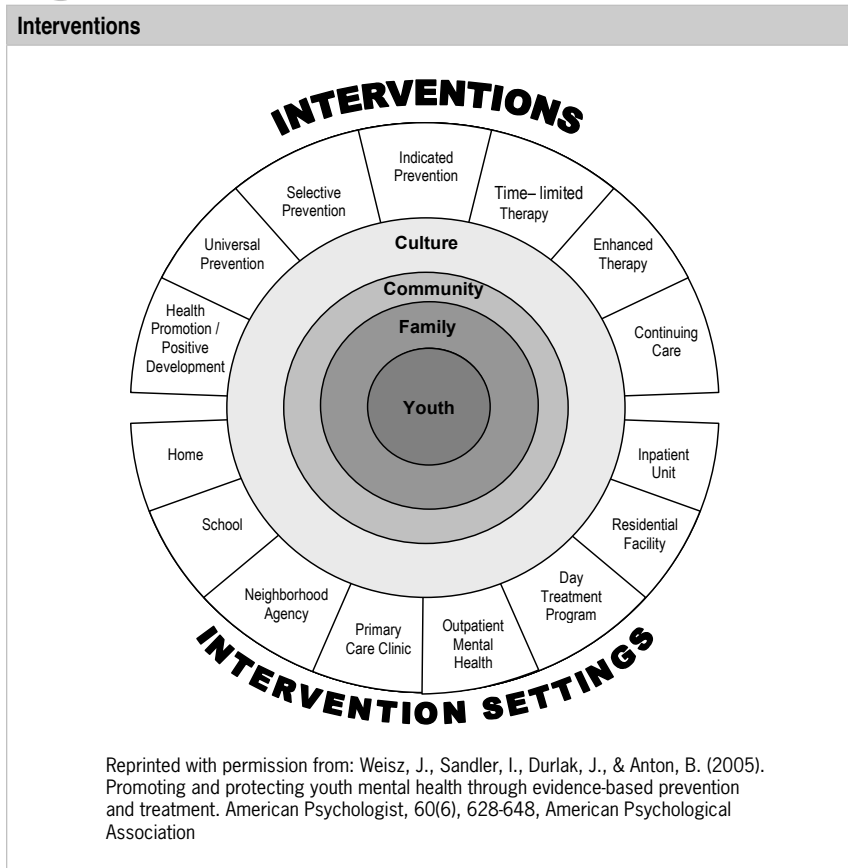
The Mental Health (MH) Spectrum

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.

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.

Figure 3.1

Mental Health Spectrum (Mrazek & Haggerty, 1994)

Reprinted with permission from Reducing Risks for Mental Disorders: Frontiers for Preventive Intervention Research © 1994, by the National Academy of Sciences, courtesy of the National Academies Press, Washington, D.C.

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).

> **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.

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

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.
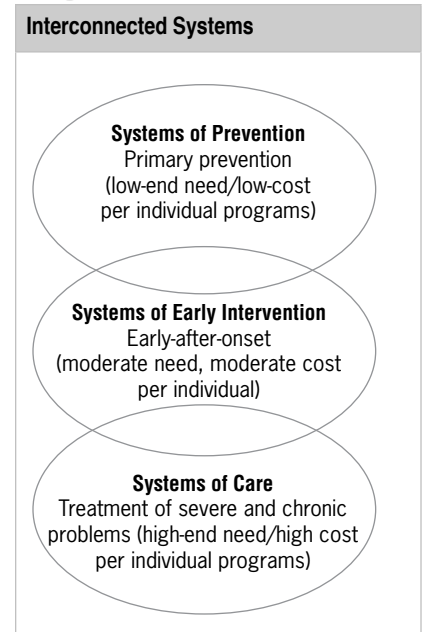
Systems of prevention. Services at this level are implemented through universal interventions. For example, schools conduct drug and alcohol education as part of the K-12 curriculum, they encourage parent involvement, and there are school-wide character education programs. The community promotes and 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

Systems of Prevention
Primary prevention
(low-end need/low-cost
per individual programs)

Systems of Early Intervention
Early-after-onset
(moderate need, moderate cost
per individual)

Systems of Care
Treatment of severe and chronic
problems (high-end need/high cost
per individual programs)

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.

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.

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.

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).
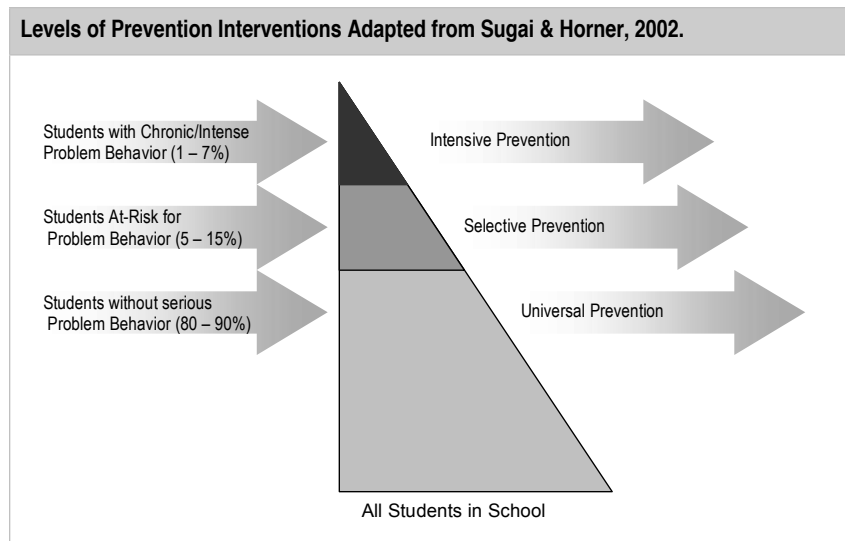
The increased attention to PBS as an effective tool in managing a variety of academic, social, and emotional/behavioral problems validates its potential as an important model of SBMH. It is also noteworthy that some of the leaders in the PBS field have expressed interest in integrating PBS with the children's 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

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.

Figure 3.4

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

Students with Chronic/Intense Problem Behavior (1 – 7%)

Intensive Prevention

Students At-Risk for Problem Behavior (5 – 15%)

Selective Prevention

Students without serious Problem Behavior (80 – 90%)

Universal Prevention

All Students in School

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.

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

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

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

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.).

"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. 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.

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