11 Best Practices in Population-Based School Mental Health Services

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OVERVIEW

School shootings, suicides, and school dropout rates, along with the desire for higher academic test scores, have awakened policy makers, school administrators, teachers, and parents to the importance of attending to students' mental health needs. These needs are substantial. Epidemiological research has shown that 20% of school-age youth have a diagnosable psychiatric disorder (Centers for Disease Control and Prevention, 2013), and only a fourth of these students are receiving therapeutic services outside of the school (Hoagwood & Johnson, 2003). Given this significant gap between the need for and availability of mental health services, schools are the de facto mental health provider for most school-age children and adolescents. Concurrently, developmental research since the 1970s has demonstrated that mental health and psychological wellness are not ancillary to school success but are integral to it (Masten et al., 2005). In fact, schools cannot be successful unless their students are also developmentally, socially, and emotionally competent.

School psychologists must recognize their tacit responsibility for the mental health of their students. Adelman and Taylor (2010) argue strongly that school improvement efforts will not succeed until the reforms incorporate the efforts of school psychologists and other school mental health providers. This chapter will describe how population-based models can be used to align school psychological services with the mental health needs of children (Hoagwood & Johnson, 2003) and how doing so can strengthen students' school success. Emphasis will be placed on showing how population-based services are similar to and different from traditional school psychological services that focused on referred students. Emphasis will also be placed on what needs to happen to transition from traditional to comprehensive population-based school psychological services.

Population-based mental health services are those that have been carefully planned to meet the collective mental health needs of all students enrolled in a school. The services begin with monitoring students' mental health and then using the data from the monitoring to plan an array of services and interventions that promote psychological wellness. Students' wellness, in turn, is essential for optimal academic achievement. The array of population-based services represents a multitiered continuum of care. Universal screening and evidence-based interventions for all students serve as the foundation for all other mental health services in the school. Services promoting environments that nurture students at high risk correspond to the selected or targeted level of intervention. Finally, the intensive or indicated level of intervention is represented by remedial services that help students develop social, emotional, and behavioral competencies.

Traditional school psychological services had a clear goal: remediating social, emotional, or behavioral disturbances of referred students. With a population-based infrastructure, three additional goals are addressed: promoting the psychological well-being of all students, providing protective support to students at high risk for developmental failures, and promoting caretaking environments that allow students to overcome developmental risks and challenges (Doll & Cummings, 2008). Together, these four goals subsume both direct and indirect services described in the National Association of School Psychologists (NASP) *Model for Comprehensive and Integrated School Psychological Services* (NASP, 2010). Population-based services designed to promote mental health are at the central core of the NASP Practice Model. At the systems level, the domain of Preventive and Responsive Services requires that school psychologists work with others to enhance students' "learning, mental health, safety, and physical well-being" (NASP, 2010, p. 6). Likewise, at the student services level, the domain of Interventions and Mental Health Services to Develop Social and Life Skills requires that school psychologists work with others "to implement and evaluate services that support socialization, learning, and mental health" (NASP, 2010, p. 5). Additional references to mental health promotion are integral to the NASP Practice Model's domains of Data-Based Decision Making and Accountability and Consultation and Collaboration. These domains are also essential to the successful implementation of population-based mental health services.

BASIC CONSIDERATIONS

Within a population-based service model, systematic and objective needs assessments are conducted to create a portrait of the collective mental health of all students enrolled in a school or district (Doll & Cummings, 2008). The identified mental health needs are compared against a similarly comprehensive assessment of the mental health resources available in the school and community. Schools' mental health resources include the many social supports that are available through the teachers, administrators, and other school staff who interact with students in addition to the school mental health professionals. Next, a plan is constructed that prioritizes the needs of the school's students and allocates mental health resources to services that are frequently needed and those that will have high impact on the students' psychological wellness. Options for services may be expanded through collaborative partnerships that integrate diverse mental health services into comprehensive systems of care and dismantle programmatic silos, which are narrowly construed programs that address a single risk factor or disturbance without regard for students' other risks or needs. Ongoing and rigorous evaluation of the impact of mental health services documents the plan's effectiveness and informs decisions about plan refinements. At the core of this cycle of assessment, planning, intervention, and evaluation are the principles that (a) students' mental health services must be intentional and empirically rigorous; (b) data should document the collective mental health needs of students in the district; (c) research should guide the match between interventions and those needs; (d) and evaluation should document the impact of the program's mental health services on students' psychological wellness and success.

Ultimately, all goals of population-based mental health services converge toward a single purpose: to foster the social, emotional, behavioral, and academic competence that students need to be successful in school and in life. The population-wide perspective allows school psychologists to exploit current and emerging research describing community-wide supports that strengthen students' developmental competence and psychological well-being. Schools are uniquely suited to implement population-based mental health services because their universal access to all children allows schools to detect students' early signs of social and emotional distress more readily than other mental health providers, and schools can incorporate appropriate mental health interventions into students' everyday routines.

BEST PRACTICES IN POPULATION-BASED SCHOOL MENTAL HEALTH SERVICES

This section will summarize the best practices available to school psychologists in population-based assessment, resource identification, planning, intervention, and evaluation. Figure 11.1 shows how these phases are revisited in an ongoing cycle of program renewal and refinement.

Population-Based Needs Assessment

A best practice is that school psychologists gather comprehensive, accurate data to describe the collective mental health of all students enrolled in their school or district. These population-based assessments address three questions: (a) What is known about the mental

Figure 11.1. Example of a School's Matrix Diagraming the Scope of Population-Based Mental Health Services and the Personnel Available to Support the Services

MAJOR AREAS OF FUNCTION	GENERIC COMPETENCIES	SPECIALIZED COMPETENCIES
DIRECT INTERVENTIONS	• Consulting with teachers regarding behavioral adjustment • Providing an evidence-based drug-prevention program within classrooms • Screening all students for suicide risk	• Developing and delivering a bereavement group for a student whose parent has died • Implementing a parenting intervention with parents of students with ADHD • Implementing a suicide prevention program for students at high risk
INTERVENTIONS TO ENHANCE SYSTEMS WITHIN SCHOOLS	• Consulting with building leadership and paraprofessionals to refine playground/recess practices • Consulting with building leadership to refine school policies for behavioral discipline	• Implementing a school-wide bullying prevention program • Establishing a crisis intervention team to respond to acts of violence or disturbing events
INTERVENTIONS TO ENHANCE SCHOOL–COMMUNITY LINKAGES AND PARTNERSHIPS	• Developing and staffing a parent resource center in the school	• Implementing a community–school service coordination team • Establishing a families and schools together intervention in the building
SUPERVISION/ADMINISTRATION	• Fostering a peer supervision network for school mental health professionals • Serving on the building mental health planning team	• Managing a supervision network for professionals • Conducting a systematic program evaluation of school mental health services

health of students who attend this school or schools in this district? (b) What are the needs of the population as a whole? (c) What are the needs of students identified as being at risk or in the early stage of developing problems? These may be unfamiliar questions for school psychologists who are accustomed to traditional one-child-at-a-time assessment procedures. Traditional child studies fully describe each student's academic, social, and emotional strengths and needs, and they point to the interventions that are needed for that student to be successful. Prior to 1980, school psychologists trusted that teachers and parents were referring the neediest students for assessment and that, collectively, the comprehensive child studies provided a complete and

accurate assessment of schools' mental health needs. This confidence was shattered when subsequent epidemiological studies identified large numbers of unidentified children with significant mental health needs (Hoagwood & Johnson, 2003).

Population-based assessments identify students who would have slipped through the cracks in traditional referral-based services by proactively screening the full student population of a school with objective, empirically defensible measures of psychological wellness or disturbance (Doll, Haack, & Bieber, 2013). They identify students earlier than would otherwise be the case, and guide the planned development of school mental health services to match the collective students' needs.

Population-based assessments should only occur within an integrated student support plan (Dowdy, Furlong, Eklund, Saeki, & Richey, 2010). Even a highly sophisticated and well-implemented screening procedure has limited value without a follow-up plan to deliver services to students who demonstrate needs. Moreover, well-designed population-based screening requires concerted effort by a team and cannot be undertaken by a single individual. Thus, teachers, administrators, and noncertified staff in a school play essential roles in any population-based student support plan.

Population-based screening assessments should be selected with special attention to identification of the mental health needs that are not readily recognized within schools. Boys and some girls with externalizing symptoms are often identified by teachers in the traditional referral systems, while students of both genders who have internalizing symptoms are more often overlooked (Hoagwood & Johnson, 2003).

Population-based assessments must be highly accurate in describing the mental health of a school's students (Levitt, Saka, Romanelli, & Hoagwood, 2007). Accuracy is composed of the assessment's sensitivity and its specificity. Sensitivity refers to the percentage of students who are correctly identified as having a significant mental health need. In contrast, specificity describes the percentage of students correctly identified as not having a mental health need. A measure with high sensitivity (minimizing the number of false-negative identifications) will not overlook students with legitimate needs for school psychological services. Two other terms that school psychologists should be familiar with are *positive predictive value* (the proportion of true positives over the total of true positives added to the false negatives) and *negative predictive value* (the number of true negatives over the total of true negatives and false positives).

Finally, population-based assessments must be practical for use by teams of educators screening the full enrollment of a school or district (Doll et al., 2013). These assessments must be brief to administer so that the assessment of large numbers of students is neither time intensive nor prohibitively expensive. For example, it would be unreasonable to ask teachers to complete a 100-item symptoms checklist for every student in a class. The assessments must also be efficient to code and analyze. Hand scoring a brief, 20-item checklist from every child in a 500-student elementary school would be an onerous task. Many population-based assessments use multistage procedures in which the entire child population of a community is first screened to identify any evidence of a disorder. More time-intensive measures are then administered to students selected in the first stage and yield more comprehensive descriptions of their needs and strengths. At a minimum, the assessment results in a list of students with a demonstrated need for services and descriptive information about the identified group. The best assessments can be administered repeatedly without practice effects and are sensitive to intervention effects, so that the assessment results can verify reductions in the prevalence or severity of disturbances or increases in the prevalence or degree of psychological wellness once an intervention has been provided.

Four assessment strategies are used in population-based services to screen the full enrollment of a school or district. Measures may (a) identify students at high risk for disturbances based on their demographic or social risk, (b) describe students' access to very strong protective factors, (c) identify students with prominent symptoms of a disorder even though not all diagnostic criteria are met, or (d) identify students having a mental disorder or qualifying for special educational services for behavior disorders. Each of these strategies is described below, together with an example of a population-based measure that uses that strategy. Additional discussion of alternative population-based measures can be found in Doll et al. (2013).

Identifying Students With Chronic Life Stressors

Population-based assessment can be predicated on the developmental risk research, which has identified chronic stressors that place students at risk for limited academic and social success (Werner, 2013). Identification of children living with multiple stressors can aid in constructing effective prevention and intervention systems that target the specific needs of a school's enrollment. The most prominent of these stressors include poverty, low parent education, family conflict, ineffective parenting, child maltreatment, poor physical health of the child or parents, and parental mental illness or incapacity. Prevalence rates for some of these stressors can be identified through a systematic analysis of the cumulative file data available in school files (e.g., students' eligibility for free and reduced lunch or for Title I programs). Descriptions of other factors exist within other agencies in the community. For example, the police department can typically describe the incidence of violent and nonviolent crimes within the school's catchment area. A city planning department can describe the average home value in the community and the rate of rental versus owner-occupied properties.

The local employment office can describe the unemployment rate. Developmental risk research convincingly establishes that these community and family characteristics are primary determinants of developmental success or failure and that they are important indexes of the social need that exists within the community.

A very practical example of screening for chronic stressors can be found in Fairfax County, Virginia, where school psychologists, school social workers, and school counselors collaborated with community agencies and county government to gather information about the school enrollment's mental health needs (King & Jun, 2012). They distributed two surveys: Risk and Protective Factors (selected items from the Youth Risk Behavior Survey available from the Centers for Disease Control and Prevention, http://www.cdc.gov/healthyyouth/yrbs/index.htm) and Healthy Behaviors (selected items from the Communities That Care Survey available at the Substance Abuse and Mental Health Services Administration website [SAMHSA], http://store.samhsa.gov/product/Communities-That-Care-Youth-Survey/CTC020). Together, the surveys ask questions about students' mental health issues such as depression; suicide; body image; use of alcohol, tobacco, and other drugs; delinquent behaviors; bullying; sexual health; nutrition; and physical activity. The surveys were administered annually to 8th-, 10th-, and 12th-grade students, and staff members were then able to assess the impact of interventions. Then if a risky behavior was shown to be elevated in a specific high school, the school mental health team tailored interventions and prevention efforts for that school. More information about the program and a toolkit can be found on the Fairfax County School Psychology Services' website (http://www.fairfaxcounty.gov/ncs/prevention/toolkit.htm). The toolkit provides links to obtain support, a step-by-step guide for implementation, and contact information for the prevention staff. Also available on the site are prevention handouts and resources on substance abuse, bullying/cyberbullying, depression, suicide, and teen dating abuse.

Another risk survey report that represents a collaboration of the community and school resources is the Dane County (Wisconsin) Youth Assessment Overview Report (Dane County Youth Commission, 2012; reports are available at http://www.danecountyhumanservices.org/family/youth/dane_county_youth_commission.aspx). In the most recent report, 19.4% of Dane County middle and high school youth (7th to 12th grade) indicated *yes* when they were asked, "During the past 12 months, did you ever feel so sad or hopeless almost every day for at least 2 weeks in a row that you stopped doing some usual activities?" Girls reported depressive symptoms at a higher rate than boys, with a total of 25.6% of the girls reporting symptoms of depression. Of the high school students, anxiety symptoms were reported by 10.5% of the high school girls and 5.4% of the high school boys. Symptoms of an eating disorder were reported by 2.0% of the high school girls and 1.3% of the boys.

Whereas the Fairfax and Dane County surveys were anonymous, Eklund (2013) describes a screening procedure that was not. In an elementary school in the Fort Carson (Colorado) School District, specific students were identified as at risk using universal screening; and then school-wide social–emotional curricula were implemented. A large percentage of the district's students were dependents of active military parents, and, since students' parents were in various stages of deployment, this created significant stressors on the families. For example, when one parent was deployed to an active conflict, the other parent became a single parent, and there was also a shared fear that the deployed parent might not return or could be seriously wounded. Even when the deployed parents returned home, they were not the same as when they left. Working with teachers to identify and select social–emotional curricula, the program team decided that K–2 teachers would implement Second Step (Frey, Hirschstein, & Guzzo, 2000), while third- and fourth-grade teachers implemented Promoting Alternative Thinking Strategies (Greenberg, Kusche, & Mihalic, 1998), with the fifth-grade teachers opting for Stories of Us. Eklund used the Student Risk Screening Scale (Drummond, 1994) as well as the ClassMaps Survey (Doll et al., 2013). A total of 62 students were identified by the screening as having significant mental health needs. Thirty-nine of the students had been previously identified, while 23 students not currently identified were connected with services.

Describing Students' Protective Factors

Many of the same developmental studies that described demographic risk factors also identified protective factors that predict future life success in vulnerable students and could become the mechanisms underlying preventive interventions. Examples of such protective factors include close peer friendships, high self-efficacy, high level of engagement in productive activities, access to warm relationships and guidance from adults, or access to responsive schools. Consequently, a

second form of population-based assessment identifies assets available to a school's students.

A promising example of asset assessment is the Resiliency Scales for Children and Adolescents (Prince-Embury, 2007). This is a 64-item self-report survey that describes the personal resources of students, including their senses of mastery and interpersonal relatedness, and also describes their emotional reactivity. The survey is based on very strong theoretical conceptualization and is nicely grounded in developmental research on adolescent resilience. Validity studies described in the Resiliency Scales for Children and Adolescents manual show that it discriminates well between students with and without a variety of psychiatric disorders. Moreover, comparison of the two strengths scales (sense of mastery and sense of relatedness) and the one liability scale (emotional reactivity) can yield a vulnerability index that represents students' personal capacity for coping with adversity.

By administering the Resiliency Scales for Children and Adolescents across enrolled students, schools could assess the collective personal resources of students. Prince-Embury (2010) explains how these results could guide interventions to strengthen students' resilience. Some students' ratings could trigger referral to cognitive–behavioral groups designed to strengthen their sense of mastery. Other interventions might help certain students identify their personal strengths. Still other students might be systematically directed toward activities and groups that could provide them with a social network of support. Reassessment with the Resiliency Scales for Children and Adolescents could establish the degree to which the school's services were contributing to gains in student resilience.

Identifying Early Symptoms of Later Disorders

Population-based assessments may also be based on evidence of early symptoms of dysfunction that do not satisfy the diagnostic criteria for mental disorders but nevertheless represent developmental problems that could impair students' life success (Albers, Glover, & Kratochwill, 2007). Early identification and intervention make it possible for schools to address adjustment problems when they are first evidenced and, in some cases, to mitigate long-term negative outcomes. While many risk-based assessments use surveys or rating scales to identify emerging symptoms, it is also possible to use existing school data as measures of functional risk. For example, information about office discipline referrals can be used to assess a school's safety and behavioral climate (Irvin et al., 2006).

As one example of an early identification assessment, the Check & Connect program compiles attendance and discipline data to identify middle school students who are in danger of disengaging from school (Christenson & Reschly, 2010). Disengaged students are paired with a mentor who then monitors the student's active participation in school, intervenes at critical points to keep the connection to school alive, and builds a meaningful partnership between home and school. The Check & Connect manual (Christenson, Stout, & Pohl, 2012) further explains the identification of students at risk for leaving school, indicators of student disengagement, desirable selection criteria for mentors, the role of the mentor, and detailed steps for implementing the program with fidelity. An innovative feature of the website (http://checkandconnect.umn.edu) is the availability of assistance to individuals writing funding proposals for a Check & Connect program within their school district.

Identifying Diagnosable Disorders

Results of epidemiological prevalence studies can be used to predict the most likely disorders that school psychologists will identify through population-based screening (Doll et al., 2013). The most prevalent psychosocial disorders in elementary-age students are anxiety disorders, attention deficit disorders, and, to a lesser extent, conduct and oppositional defiant disorders. By the secondary grades, the incidence of attention deficit hyperactivity disorder (ADHD) is somewhat lower, but the incidence of conduct disorders is at least twice that of elementary students, and mood disorders are three to four times as prevalent.

One prominent example of an assessment that identifies students with diagnosable disorders is the Systematic Screening for Behavior Disorders (Walker & Severson, 1992). This was used to screen the entire enrollment of a New Orleans school to identify students with behavior disorders who qualified for special educational services (Walker et al., 2010). Originally designed for use with elementary populations, recent research indicates the Systematic Screening for Behavior Disorders is also a promising tool for middle and high school populations (Lane, Kalberg, Parks, & Carter, 2008; Richardson, Caldarella, Young, Young, & Young, 2009). First, teachers attend a brief presentation alerting them to the distinctive internalizing and externalizing behaviors of students. Then each teacher identifies three students from his or her class who demonstrate externalizing behaviors and three who demonstrate internalizing behaviors. The teacher completes brief

checklists to describe the nature and frequency of critical behaviors that characterize each of the six students. Those students with elevated ratings are systematically observed in both the classroom and the playground and are referred to the school's child study team for behavior planning if the students engage in excessive amounts of negative behavior, are unusually isolated, or are disengaged from classroom learning activities. Research conducted by the authors (Walker & Severson, 1992; Walker et al., 2010) shows that between 85% and 90% of a school's students can be correctly identified as having or not having internalizing or externalizing problems using the Systematic Screening for Behavior Disorders.

In prior decades, the administration, analysis, and interpretation of population-based measures such as those described above would be a prohibitively time consuming task. However, technology can substantially reduce the time and cost required for school staff to collect, organize, and analyze population-based data (Burns, 2013). Future advances in technology will only make population-based assessments even simpler. Measures administered using tablets or smartphones could save data directly to secure electronic spreadsheets and provide assistive technology for students with disabilities. As examples, the Dane County survey mentioned earlier was administered electronically, and the online ClassMaps survey reads questions aloud to students. Using current technology and cloud-based software, it can be a simple task to synchronize electronic data even when it is culled from multiple informants or uses different platforms. Integrated ratings across teachers, peers, and students can become powerful predictors of student mental health needs and school success. Population-based assessment is now a practical option of schools because of the potential of technologically enhanced assessment when collecting and examining large sets of data.

Even with technological enhancements, and regardless of the measures that are used, it is clear that a shift to population-based assessments cannot be made around the edges of traditional assessment. The strategies require considerable staff time up front in order to plan, collect, and analyze the school-wide data. At a minimum, this will require that schools redirect some of the resources currently allocated to referral-based service delivery. Moreover, population-based assessments do not replace traditional problem-based assessments of individual students; that is, population-based assessments rarely provide sufficient definitive information for a full behavior plan for any single student. Instead, population-based assessments provide different and important information about the overall mental health status of a school.

Identification of Mental Health Resources

A best practice is that school psychologists make effective use of existing resources of a school or district when describing services available to meet students' mental health needs. Questions about the school's mental health resources that parallel questions about students' needs. These are (a) What is being done already to support students' psychosocial development? (b) Who does it? (c) What else needs to be done? Underlying these questions is the very practical insight that, in most schools, transitions to population-based services will not be predicated on a substantial increase in the availability of mental health resources. Instead, most public schools face the prospect of continued tight budgets and unwavering pressure to cut expenses, particularly when these expenses are noninstructional. Community mental health centers face similar pressures, and private insurance carriers are inconsistent in their reimbursements for students' mental health services. Consequently, the shift from a traditional model to population-based school psychological services will often be made in the face of flat or even diminishing pediatric mental health resources.

Still, careful and deliberate planning might make it possible to use existing resources more efficiently and effectively (Adelman & Taylor, 2010). National policy makers have suggested that scarce resources could be leveraged if school psychologists, school counselors, school social workers, and community mental health professionals could coordinate their efforts rather than working independently to solve some of the same problems with the same subpopulations of students. Others point out that this coordination is sorely lacking between current school and community practice. Many note that teachers and other educators play a crucial role in fostering students' social growth and well-being, and so schools can draw upon many adults (not just school mental health professionals) when offering social–emotional learning programs for students. Schools are the sites for diverse social and mental health programs, including programs to prevent substance abuse and other risky youth behaviors, to promote school completion, to strengthen youth resilience, and to enhance parenting (Osher, Dwyer, & Jackson, 2004). Still, these programs have typically developed within programmatic silos, meaning that each works in isolation of the others

(Adelman & Taylor, 2010). They fail to take advantage of collaborative and coordinated ways of using each program to meet other programs' respective objectives. This is not to suggest that each program has an unimportant mandate or focus. However, a connection to other programs is too frequently missing from the mission of each program. At times, school and community programs partition services and compete for turf. Reshaping these programmatic silos into coordinated systems of care will require heretofore unknown flexibility and dedicated focus.

Resource mapping is a strategy for marshaling resources to address the needs of students who emerge from the assessment phase (Adelman & Taylor, 2010; Center for Mental Health in Schools at UCLA, 2008). Its purpose is to carefully analyze and plan the roles and functions of school counselors, psychologists, social workers, and other educators as a part of promoting collaboration and reducing fragmentation of services. As a systematic assessment of resources, resource mapping is, in itself, a major intervention and critical first step toward improving the effectiveness of the system's ability to anticipate and respond to students' psychological needs. The desired outcome is to free resources from their respective silos and leverage their impact.

The first step of resource mapping is describing the school's support staff: how staff members spend their time and when and where they provide services. In a typical school district, the staff could include school psychologists, counselors, attendance officers, social workers, dropout coordinators, school safety and violence prevention staff, resource teachers, crisis team members, school improvement team members, and staff from outside agencies that have programs that are school-linked or use school facilities. A map of services can be created by recording the nature of services provided by each individual or professional group, populations of students served, and when the staff is present in the school. Then, this description should be extended to include other educators and school staff who contribute in important ways to students' psychological wellness.

Once the map of school-based support staff resources is completed, the next critical step involves reframing roles to respond to the various needs identified during the initial assessment phase. For example, if four different mental health professionals are providing behavioral consultation in a school, and multiple professionals are often providing this service for the same students, realigning these services could free up resources for other needs. If, in this same school, a large

number of students were engaged in presuicidal behaviors, some of the freed-up professional time might be allocated to suicide prevention services. Adelman and Taylor (2010) describe this as weaving together the staff. An important component of this reframing process may be modifying existing policies to allow services to be combined in new ways and to allow professionals to interact in new ways.

The capacity of the school-based support staff can also be expanded by tapping community-based resources, including public and private agencies, personnel, and programs, for inclusion in the map. Community mental health professionals and school-based support staff are not the only resources for promoting students' healthy development. Teachers, parents, and mentors also provide critical support through their daily interactions with students. In some districts, the business community has shown much interest in promoting high-quality schools and may be a potential resource. In other districts, a local university represents yet another rich source of resources. Philanthropic groups may also be considered. As was the case for school-employed resources, the resource map should include the name of the program or professional, the nature of the service, and when the service is delivered.

Population-Based Planning

A best practice is that school psychologists' plan for population-based services is intentional, matching services and interventions to the highest priority mental health needs of the school's students. Reconciling students' needs with the available resources leads inevitably to a third set of questions: Which services should be provided to which students? When? By whom? For how long? With what result? By juxtaposing existing mental health resources with the needs of students in the school, it is possible to create a mental health service plan for the school. Mental health needs that are demonstrated by large numbers of enrolled students (e.g., anxiety symptoms) may indicate that school-wide services would be appropriate. Alternatively, very significant needs may justify the provision of high-intensity mental health services, even if these would be needed only by very few students. Matching resources against needs is a critical phase of population-based services.

The Center for Mental Health in Schools at UCLA (2001) provides a resource mapping matrix to conceptualize the match between students' needs and staff

competencies and to describe the various facets of personnel preparation that will be necessary to implement the desired program. Their matrix has three dimensions: types of interventions, specificity of competencies, and levels of professional development.

Figure 11.1 is an example of one school's resource map using the first two dimensions. Interventions are classified as direct, including interventions that are individual, group, or classroom focused; those enhancing systems within school; those building or strengthening community–school partnerships; or interventions that are supervisory or administrative. Competencies are categorized as generic (held by many school staff or most school mental health professionals) or specialized (held by some or a few school mental health professionals).

Subsequent to a comprehensive mental health needs assessment in the school, the mental health team determined that there was a striking need to address the students' behavioral discipline, with a special emphasis on classroom behaviors of students with ADHD and on peer conflict occurring both within the classroom and on the playground. In addition, the team identified a high prevalence of presuicidal behaviors and frequent experimentation with substance use. The team decided that mental health services would be most appropriate if provided in partnership with the school's parents and with community mental health providers who were already engaged in family services. An array of interventions was identified by the team as important to provide in this school and community. At this point, the Center for Mental Health in Schools suggests that the team carefully consider the interventions relative to the professional development of the available personnel. For example, if the resource map described staff with mastery-level skill in the generic and specific competencies associated with suicide prevention, the team could move forward with a plan to target these services to the appropriate students. However, if available staff only had skills at the induction or preservice level, it would be necessary to locate other staff with more advanced skills. In the best of all possible worlds, there would be a one-to-one match between students' needs and staff skills. However, it is more likely that gaps in competence will be found. Although resource identification and professional development are represented as a second phase of the population-based service model, both must be continuous efforts that take place throughout the implementation of any program of mental health services.

In some cases, mental health service planning will document the need for new kinds of services that have the potential to support multiple students simultaneously rather than one student at a time. One such program is Crone, Horner, and Hawken's (2010) school-wide behavioral support system that could be used with students whose behavioral compliance is a continuing problem. In other cases, school staff may decide that there are ecological factors that facilitate problems of a particular sort in a building. For example, a middle school used data to determine that large numbers of students were being expelled for behavioral conflicts that occurred at recess and that the playground's barren emptiness contributed to the disruptions. The school reduced expulsions significantly by adding more games to the noontime recess. In still other instances, mental health service planning will incorporate services that have not traditionally been thought of as mental health services. In particular, the emphasis on family and community factors as causal agents for students' mental disorders raise important questions about who is responsible for students' mental health and how healthy socioemotional development is promoted. Causal factors such as poverty, parental health, or community violence lay outside the traditional mental health and school authority in most communities, but their powerful links to psychological wellness suggest that services of police departments, social welfare agencies, community health departments, families, religious groups, schools, and neighborhoods are as essential to child mental health as the services of the school mental health professionals. Thus, a comprehensive plan for school mental health services will incorporate scores of adult caretakers who were not traditionally considered to be mental health providers.

Population-Based Intervention

A best practice is that school psychologists use population-based interventions that are evidence based and strategically selected to address the students' needs as identified in the plan. Selecting actual interventions for schools to implement raises another critical question: Which interventions are most likely to foster the changes the school psychologist is seeking in the students? Within the population-based model of school psychology, decisions about which interventions to provide and which students receive services are intentional decisions that are based upon the school-wide plan for services. Some, but not all, interventions will be delivered school-wide depending upon the needs of the school's students. The screening data can be especially helpful in making these decisions. Many, but not all, interventions will be

preventive, because early intervention has the potential for greater impact at less cost. Some interventions will be therapeutic treatments for specific students with social or emotional disturbances that disrupt their learning or development. The NASP Practice Model (NASP, 2010) advocates for a continuum of school mental health services, arguing that school psychologists' focus should not remain at the individual level despite their history of collecting individual assessments of student learning.

The continuum of school mental health services needed for population-based services is likely to look very much like the three-tiered model of service described by Osher et al. (2004). The continuum must address the universal mental health needs of students with system-wide or building-wide services to promote psychological wellness and to prevent disturbance. For example, all students could benefit from instruction in social problem-solving strategies or from a school-wide bullying prevention plan. Planning for universal services can draw upon the very rich research in developmental competence that has begun to define factors that predict school learners' social, academic, and behavioral success (Masten et al., 2005). Notably, not all of these factors are services provided by mental health professionals. Instead, all of a school's teachers, administrators, or other staff members are potential sources of mental health support for students.

The second-tier services are targeted mental health services that are provided to identified students who are at high functional risk (i.e., early evidence of adjustment disturbances) or demographic risk (i.e., evidence of poverty, family violence, or other characteristics that predict poor outcomes). These services are more concentrated and more intense than universal services, address needs that are not broadly held by all students in a school, and have the purpose of strengthening competence as well as ameliorating risk. Examples of targeted services include programs to involve parents more fully in their students' schooling (e.g., Check & Connect; Christenson et al., 2012) or services to teach coping skills to highly aggressive students (e.g., Coping Power Program; Lochman, Wells, & Lenhart, 2008). In the typical school, 15–20% of the school enrollment will benefit from targeted mental health services. However, particular schools may have striking differences in the prevalence as well as the nature of targeted services that are needed. Both demographic and functional risk are not evenly distributed across all school communities but instead tend to concentrate into niches of very high risk, particularly in distressed urban schools or very isolated

rural communities (Hoagwood & Johnson, 2003). One function of population-based mental health service planning is to identify the nature and extent of a school's need for targeted services.

In every school, a few students will require more intensive services. This third tier of services is necessary for students whose dysfunction is pronounced and who are not able to benefit from schooling without substantial accommodations. In typical schools, these students represent between 1% and 5% of the enrollment. However, once again, the nature and extent of need can differ markedly from one school to the next. Adelman and Taylor (2010) argue for a fourth tier in the intervention continuum, that of infrastructure development and planning. Their point is well taken. Important systemic changes need to occur before students and adolescents will have access to mental health interventions in proportion to their demonstrated mental health needs. Practices that build the infrastructures to provide students with mental health services (including practices that promote population-based services in schools) are critically important mental health interventions.

The three-tiered model described by Osher et al. (2004) is distinctive in that it describes an array of services, whereas that described by Walker et al. (2010) describes groups of students. This difference is important. A three-tiered *service* model is useful for ensuring that a comprehensive program of mental health services is available for students enrolled in the school. It is simultaneously flexible, in that once services are available, the mental health team could allocate these services (or not allocate services) to individual students based on each student's need. Service allocation decisions can be made based on functional criteria (e.g., the frequency with which a child is sent to the office for disciplinary reasons) instead of diagnostic criteria (whether or not a child meets the diagnostic criteria for conduct disorder or the special education criteria for behavior disorders). Moreover, the same child might receive services at either or both Tiers 2 and 3, in addition to the universal services that are delivered to all students in a school.

Valuable resources are already available that describe the array of mental health services that might be implemented across the three tiers. Osher et al. (2004) provide a catalog of effective interventions, together with a program matrix that describes the nature of each intervention, its purpose and developmental level, and whether it is implemented within classrooms, schools, families, or communities. An accompanying CD

provides additional references for the programs in an accessible PDF format.

Because population-based services incorporate universal services and interventions that interrupt developmental risk trajectories, these services have necessarily been interwoven with prevention services. Moreover, some of the strongest conceptual frameworks for population-wide interventions are included within the prevention literature. In particular, Nation et al. (2003) conducted a systematic analysis of the most effective prevention programs and, from this analysis, distilled a cogent description of key program characteristics. First, effective programs are comprehensive in that they incorporate multiple interventions and are implemented across school, home, community, and peer settings. Second, the most effective programs used varied and interactive teaching methods that actively engage participants in developing specific skills. Third, dosage of the best programs was matched to the severity of the problem. More severe problems require interventions that are more intense and of longer duration. Too often interventions are based on experience and what appears logical. However, Nation et al.'s (2003) fourth characteristic is that programs are most effective when the programs are theory driven, taking into account the etiology of the problem and drawing from an empirical evidence base. "Intervention theories focus on the best methods for changing the etiological risks" (Nation et al., 2003, p. 453). Finally, all effective programs promote strong, positive relationships between parents and students, teachers and students, and students and peers.

Skilled selection and implementation of preventive interventions are critical to the effectiveness of the intervention (Nation et al., 2003). Interventions may miss the mark if the interventions are delivered too early or too late. Traditional special education referral is a good example of waiting to intervene until failure is evident, when earlier and systematic steps might have avoided the failure altogether. Alternatively, an early elementary school curriculum on dating or substance use might be developmentally inappropriate for most students, and the effects might have washed out by the time students encounter those dilemmas. As a third example of the power of timing, HIV/AIDS programs have been shown to be effective prior to adolescents becoming sexually active but ineffective for those who are already sexually active. Skilled intervention planning will also select interventions that are consistent with local sociocultural norms as well as cultural beliefs and attitudes, and will embed evaluation into the interven-

tion planning from the start. Finally, a well-trained staff is essential to effective interventions. Skilled interventionists will deliver a program with greater fidelity.

The emphasis on evidence-based interventions (Kratochwill & Stoiber, 2002) has drawn needed attention to the critical role that research plays in identifying the most powerful interventions to use with population-based services. Several very effective websites list interventions that meet rigorous standards for empirical evidence of effectiveness:

- SAMHSA's National Registry of Evidence-Based Programs and Practices: http://www.nrepp.samhsa.gov/
- What Works Clearinghouse of the Institute for Education Sciences: http://ies.ed.gov/ncee/wwc/
- Promising Practices Network: http://www.promisingpractices.net
- U.S. Department of Education's Office of Safe and Healthy Schools: http://www2.ed.gov/about/offices/list/oese/oshs/index.html
- Collaborative for Academic, Social, and Emotional Learning: http://casel.org
- Center for the Study and Prevention of Violence: http://www.colorado.edu/cspv (the site lists model or blueprint programs selected from more than 600 violence prevention programs at http://www.blueprintsprograms.com/)

Practitioners can easily consult these sites to identify promising intervention programs that match the mental health needs identified in a school.

Still, the criteria for methodological rigor differ substantially from one website to the next, and professional debates still rage over (a) whether or not cumulative small-n research can be adequate evidence of an intervention's effectiveness, (b) how critical it is that evidence of effectiveness be collected for populations in the United States, (c) whether promising interventions have been adequately evaluated for non-White populations, (d) whether interventions that proved promising in laboratory research settings will be equally effective in actual settings, and (e) whether results emerging from any single study have been sufficiently replicated in additional, independent studies. Ultimately, decisions about whether an intervention is sufficiently evidence based for use will rest with a school's mental health planning team. Although teams can evaluate the published evidence of an intervention, the definitive answer is really determined by the evidence and outcome data generated at that particular school.

Population-Based Evaluation

A best practice is that school psychologists conduct ongoing, data-based evaluations to demonstrate the impact that population-based services are having for students' psychological wellness. It is critically important that the school step back at regular intervals and examine the ultimate question: Have the services been effective in strengthening the social, emotional, behavioral, and academic competence of our students? Evaluation of a school's mental health service program is a complex undertaking and requires that team members clearly specify, in advance, the indicators of program success and how the program will be monitored over time. Within a population-based model, the essential evaluation question is whether students in the district are more successful, are less successful, or demonstrate no change in success once the school's comprehensive program of school mental health services is implemented. This question parallels questions asked about improvements or declines in individual students but places emphasis, once again, on the collective wellness of all students enrolled in the school.

This goal represents a special challenge: Even though it is possible to aggregate individual evaluation information across multiple students, time constraints make it impossible to conduct comprehensive individual evaluations of the full enrollment of a school. Consequently, school psychologists must identify and target key indicators of student wellness from the beginning, weaving evaluation into the implementation of the program of services. The most useful evaluation will be formative or ongoing and will inform continuous improvement in the mental health services program even while it is being implemented. The most effective evaluation is systematic, with methodologically rigorous designs and not antidotal or limited to a single case study.

Key considerations for evaluating population-based school mental health services can be adapted from Nastasi's and Hitchcock's (2008) recommendations for evaluating comprehensive and culturally specific programs. In many cases, data collection procedures will mimic those used in the original school mental health needs assessment, since these procedures lend themselves to broad assessment of the collective mental health of a school enrollment. Within the Nastasi and Hitchcock (2008) framework, a well-designed evaluation will describe the key features and impacts of all facets of the program, from the perspectives of multiple participants (providers, recipients, and other cultural brokers). Decisions will be made, in advance, about the kinds of data that should be collected, how it should be managed, and steps that should be taken to ensure the validity and reliability of the data. In particular, data should be collected that describe the fidelity with which the intervention was conducted and the outcomes. The mental health team members should work to anticipate, in advance, unique challenges posed by evaluation and data collection in their particular school and community and the special opportunities for evaluation that might be present given other activities of the school and community. Key considerations for evaluating population-based school mental health services are included in Table 11.1.

Additional resources to support the evaluation of a population-based program of mental health services can be drawn from two approaches that illustrate the complex nature of program evaluation: Context, Input, Process, and Product (Stufflebeam & Shinkfield, 2007) and Comprehensive Mixed-Methods Participatory Evaluation (Nastasi & Hitchcock, 2008).

The Context, Input, Process, and Product model provides a useful framework to conceptualize evaluation. Within the model, context evaluations refer to the needs, assets, and opportunities that set the stage for a school's mental health goals and priorities. Input evaluations are assessments of alternative approaches or competing action plans along with their corresponding staffing plans and budgets. Process evaluations target how the program of services was implemented. Finally, product evaluations examine the intended and unintended consequences of the comprehensive services.

The Comprehensive Mixed-Methods Participatory Evaluation model is a mixed model approach. It takes advantage of the strengths of quantitative and qualitative. Nastasi and Hitchcock (2008) also characterize the approach as multisource, meaning that multiple stakeholders contribute to the evaluation. A strength of the Comprehensive Mixed-Methods Participatory Evaluation model is the importance that is placed on the cultural context of program implementation. Nastasi and Hitchcock (2008) note that successful program implementation requires an understanding of the shared beliefs, values, nuances of language, and behavioral norms. They define program success to include stakeholders' acceptance of the program, intervention integrity, outcomes, the degree to which the program is sustainable, and whether the program becomes part of the fabric of the institution.

SUMMARY

A population-based perspective on school mental health services provides alternative insights into how school

Table 11.1. Key Considerations for Evaluating Population-Based School Mental Health Services

Focus (key questions): Why?
- Was the program successful or effective?
- What is the impact of the program?
- Were program goals met?
- What were unintended positive and negative (iatrogenic) consequences (for individuals, groups, organizations)?
- Were there any unintended negative (iatrogenic) effects?
- What factors influenced program effectiveness?
- Was the program acceptable?
- Was the program implemented with integrity?
- Does the program have ecological–social validity? Was culture specificity achieved?
- To what extent did program acceptability, integrity, and ecological–social validity (culture specificity) influence program effectiveness or success?
- How do the multiple and potentially diverse perspectives of partners (planners, interventionists, and researchers; administrative, implementation, and evaluation staff; recipients, their caregivers, and community members) influence program success?
- How are evaluation data best used for data-based decision making and monitoring to ensure program success?

Participants: Who?
- Program planner or planners (researcher, interventionist, consultant)
- Professionals with expertise in mixed-method program evaluation
- Program implementation staff
- Cultural brokers (who can facilitate access and interpret culture)
- Representatives of stakeholder groups

Tasks or activities: What?
- Select or develop evaluation instruments or strategies
- Identify and secure existing data
- Data collection
- Data management
- Data analysis
- Data interpretation
- Data dissemination
- Participatory data-based decision making
- Staff development in evaluation methods, including accountability and monitoring

Strategies or methods: How?
- Data collection methods appropriate to specific program, using multimethod (combination of qualitative and quantitative methods), multisource (from various stakeholders) approach
- Recursive data collection, analysis, interpretation, and dissemination
- Systematic feedback process to facilitate program adaptation and staff development
- Participatory data-based decision making
- Facilitation of participatory process

Requisite skills (potential focus for recruitment and training)
- Program evaluation skills relevant to engaging in a participatory process, examination process and outcome variables, use of mixed methods (qualitative and quantitative), and seamless intervention–evaluation process
- Instrument development
- Data collection, management, and analysis
- Data interpretation and dissemination to varied stakeholder groups
- Participatory data-based decision-making skills
- Participatory problem-solving skills (communication, negotiation, consensus building)
- Group facilitation skills (e.g., engaging participants in idea generation, ensuring equitable participation, guiding group toward consensus)
- Professional and paraprofessional staff development and consultation skills

Challenges
- Identify or develop culture-specific instruments tied to program goals
- Ensure acceptability of evaluation by stakeholders
- Secure professional staff with expertise in evaluation
- Create seamless assessment–intervention process
- Access existing data within the system or organization
- Address ethical and legal issues related to data collection activities

Continued

Table 11.1. Continued

- Secure commitment to ongoing evaluation process
- Secure necessary resources
- Create a sustainable process and structure; build capacity within the system for sustainable program evaluation

Opportunities

- Ensure ecological validity and cultural specificity of mental health programs
- Develop sustainable and institutionalized evaluation systems
- Educate stakeholders about value of evaluation
- Build organizational–community capacity for program evaluation
- Engage in systematic evaluation of program acceptability, social validity, integrity, effectiveness, sustainability, and institutionalization
- Contribute to the understanding of how to implement successful programs (how it works; what contributes to its success) for the participating system and larger professional community
- Contribute to the knowledge base about intervention effectiveness and deployment of evidence-based programs in real-life settings
- Foster appreciation for the value and necessity of research, evaluation, and data-based decision making

Note. From *School-Based Mental Health Services: Creating Comprehensive and Culturally Specific Programs*, by B. K. Nastasi, R. B. Moore, & K. M. Varjas, 2004, Washington, DC: American Psychological Association. Copyright 2004 by the American Psychological Association. Reprinted with permission.

psychologists can best spend their time in schools, the purposes of their work, and the resources that are available to promote students' mental health. The shift in perspective can be dizzying at first and may cause school psychologists to lose sight of an important fact: School psychologists are already well prepared to function within population-based models. The responsibilities and skills are familiar, and the model's focus on data-based decision making takes good advantage of school psychologists' strong preparation in measurement, applied research, intervention, and evaluation. Indeed, population-based approaches to school psychological services weave together assessment and intervention procedures that are already available in the professional research literature. A principal value of the population-based perspective is in the very intentional and systematic planning that carefully matches services to student needs and in the careful attention that is paid to the mental health needs of all students enrolled in a school or community. Ultimately, the shift in perspective can maximize the impact of scarce school psychological resources.

AUTHOR NOTE

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REFERENCES

Adelman, H., & Taylor, L. (2010, February). *Moving prevention from the fringes into the fabric of school improvement* Paper presented at the annual meeting of the National Association of School Psychologists, Anaheim, CA.

Albers, C. A., Glover, T. A., & Kratochwill, T. R. (2007). Where are we and where do we go now? Universal screening for enhanced educational and mental health outcomes. *Journal of School Psychology*, *45*, 257–263.

Burns, M. K. (2013). *Using technology to enhance RTI implementation*. Washington, DC: National Center for Learning Disabilities. Retrieved from http://www.rtinetwork.org/getstarted/implement/using-technology-to-enhance-rti-implementation

Center for Mental Health in Schools at UCLA. (2001). *Framing new directions for school counselors, psychologists and social workers*. Los Angeles, CA: Author. Retrieved from http://smhp.psych.ucla.edu/pdfdocs/Report/framingnewdir.pdf

Centers for Disease Control and Prevention. (2013). *Mental health surveillance among children: United States, 2005–2011*. Washington, DC: Author.

Christenson, S. L., & Reschly, A. L. (2010). Check & Connect: Enhancing school completion through student engagement. In B. Doll, W. Pfohl, & J. Yoon (Eds.), *Handbook of youth prevention science* (pp. 327–348). New York, NY: Routledge.

Christenson, S. L., Stout, K. E., & Pohl, A. J. (2012). *Implementing Check & Connect with fidelity: What is Check & Connect? How is Check & Connect implemented?*. Minneapolis, MN: University of Minnesota, Institute on Community Integration.

Crone, D. A., Horner, R. H., & Hawken, L. S. (2010). *Responding to problem behavior in schools: The behavior education program* (2nd ed.). New York, NY: Guilford Press.

Dane County Youth Commission. (2012). *Dane County youth assessment overview report*. Madison, WI: Author. Retrieved from http://pdf.countyofdane.com/humanservices/youth/assessment_surveys/2012/youth_2012_overview.pdf

Doll, B., & Cummings, J. A. (2008). Why population-based services are essential for school mental health, and how to make them happen in your school. In B. Doll & J. A. Cummings (Eds.), *Transforming school mental health services: Population-based approaches to promoting the competency and wellness of children* (pp. 1–22; A joint

publication with the National Association of School Psychologists). Thousand Oaks, CA: Corwin Press.

Doll, B., Haack, M. K., & Bieber, K. (2013). Population-based strategies for identifying school-wide problems. In R. Brown-Chidsey & K. Andren (Eds.), *Problem-based assessment for educational intervention* (pp. 77–100). New York, NY: Guilford Press.

Dowdy, E., Furlong, M., Eklund, K., Saeki, E., & Richey, K. (2010). Screening for mental health and wellness: Current school-based practices and emerging possibilities. In B. Doll, W. Pfohl, & J. Yoon (Eds.), *Handbook of youth prevention science* (pp. 70–95). New York, NY: Routledge.

Drummond, T. (1994). *The Student Risk Screening Scale (SRSS)*. Grants Pass, OR: Josephine County Mental Health Program.

Eklund, K. (2013, February). *Social emotional supports for military children and families* Paper presented at the annual meeting of the National Association of School Psychologists, Seattle, WA.

Frey, K. S., Hirschstein, M. K., & Guzzo, B. A. (2000). Second Step: Preventing aggression by promoting social competence. *Journal of Emotional and Behavioral Disorders*, *8*, 102–112.

Greenberg, M. T., Kusche, C., & Mihalic, S. F. (1998). *Blueprints for violence prevention: Promoting alternative thinking strategies*. Boulder, CO: University of Colorado, Institute of Behavioral Science, Center for the Study and Prevention of Violence.

Hoagwood, K., & Johnson, J. (2003). School psychology: A public health framework: I. From evidence-based practices to evidence-based policies. *Journal of School Psychology*, *41*, 3–21. doi:10.1016/S0022-4405(02)00141-3

Irvin, L. K., Horner, R. H., Ingram, K., Todd, A. W., Sugai, G., Sampson, N. K., & Boland, J. B. (2006). Using office discipline referral data for decision making about student behavior in elementary and middle schools. *Journal of Positive Behavior Interventions*, *8*, 10–23. doi:10.1177/10983007060080010301

King, R., & Jun, M. K. (2012). *2011 Fairfax County youth survey risk and protective factors of 8th, 10th, and 12th grade students*. Fairfax, VA: Fairfax County and Fairfax County Schools. Retrieved from http://www.fairfaxcounty.gov/demogrph/pdf/2011_youth_survey_report.pdf

Kratochwill, T. R., & Stoiber, K. C. (2002). Evidence-based interventions in school psychology: The state of the art and future directions [Special issue]. *School Psychology Quarterly*, *17*, 341–389.

Lane, K. L., Kalberg, J. R., Parks, R. J., & Carter, E. W. (2008). Student Risk Screening Scale: Initial evidence for score reliability and validity at the high school level. *Journal of Emotional and Behavioral Disorders*, *16*, 178–190. doi:10.1177/1063426608314218

Levitt, J. M., Saka, N., Romanelli, L. H., & Hoagwood, K. (2007). Early identification of mental health problems in schools: The status of instrumentation. *Journal of School Psychology*, *45*, 163–191. doi:10.1016/j.jsp.2006.11.005

Lochman, J. E., Wells, K. C., & Lenhart, L. A. (2008). *Coping power*. New York, NY: Oxford University Press.

Masten, A. S., Roisman, G. I., Long, J. D., Burt, K. B., Obradovic, J., Riley, J. R., … Tellegen, A. (2005). Developmental cascades: Linking academic achievement and externalizing and internalizing symptoms over 20 years. *Developmental Psychology*, *41*, 733–746. doi:10.1037/0012-1649.41.5.733

Nastasi, B. K., & Hitchcock, J. (2008). Evaluating quality and effectiveness of population-based services. In B. Doll & J. A. Cummings (Eds.), *Transforming school mental health services: Population-based approaches to promoting the competency and wellness of children* (pp. 245–276; A joint publication with the National Association of School Psychologists). Thousand Oaks, CA: Corwin Press.

Nastasi, B. K., Moore, R. B., & Varjas, K. M. (2004). *School-based mental health services: Creating comprehensive and culturally specific programs*. Washington, DC: American Psychological Association.

Nation, M., Crusto, C., Wandersman, A., Kumpfer, K. L., Seybolt, D., Morrissey-Kane, E., & Davino, K. (2003). What works in prevention: Principles of effective prevention programs. *American Psychologist*, *58*, 449–456. doi:10.1037/0003-066X.58.6-7.449

National Association of School Psychologists. (2010). *Model for comprehensive and integrated school psychological services*. Bethesda, MD: Author. Retrieved from http://www.nasponline.org/standards/2010standards/2_PracticeModel.pdf

Osher, D., Dwyer, K., & Jackson, S. (2004). *Safe, supportive, and successful schools: Step by step*. Longmont, CO: Sopris West.

Prince-Embury, S. (2007). *Resiliency Scales for Children and Adolescents*. San Antonio, TX: Harcourt Assessments. doi:10.1177/0829573507305520

Prince-Embury, S. (2010). Assessment for integrated screening and prevention using the Resiliency Scales for Children and Adolescents. In B. Doll, W. Pfohl, & J. Yoon (Eds.), *Handbook of youth prevention science*. New York, NY: Routledge.

Richardson, M. J., Caldarella, P., Young, B. J., Young, E. L., & Young, K. R. (2009). Further validation of the Systematic Screening for Behavior Disorders in middle and junior high school. *Psychology in the Schools*, *46*, 605–615. doi:10.1002/pits.20401

Stufflebeam, D. L., & Shinkfield, A. J. (2007). *Evaluation theory, models, and applications*. San Francisco, CA: Jossey-Bass.

Walker, H. M., & Severson, H. H. (1992). *Systematic Screening for Behavior Disorders (SSBD): User's guide and administration manual*. Longmont, CO: Sopris West.

Walker, H. M., Severson, H. H., Naquin, F., D'Atrio, C., Feil, E. G., Hawken, L., & Sabey, C. (2010). Implementing universal screening systems within an RTI-PBS context. In B. Doll, W. Pfohl, & J. Yoon (Eds.), *Handbook of youth prevention science* (pp. 96–120). New York, NY: Routledge.

Werner, E. E. (2013). What can we learn about resilience from large-scale longitudinal studies? In S. Goldstein & R. B. Brooks (Eds.), *Handbook of resilience in children* (pp. 87–103). New York, NY: Springer.