

Overcoming Challenges to Using Evidence-Based Interventions in Schools

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The Center for School Mental Health Assistance at the University of Maryland recently completed a review of evidence-based prevention and treatment programs that can be used by school mental health clinicians. Based on the review, a school-based program operating in 22 Baltimore City schools has purchased and trained clinicians in a number of protocols for evidence-based interventions. We present findings from this review and make pragmatic recommendations for school mental health programs to overcome the challenges associated with the use of evidence-based interventions.

KEY WORDS: evidence-based prevention; treatment programs; school mental health.

In the past decade, there has been an increasing focus within the field of clinical psychology on the dissemination and real-world use of interventions that have empirical support for their efficacy. This movement formally began with the publication of the Division 12 (Clinical

Psychology) Task Force of the American Psychological Association (APA) report on the Promotion and Dissemination of Psychological Procedures (1995; see also Chambless *et al.*, 1996) and has expanded to include interventions for children with the efforts of other groups, including APA's Division of Clinical Child Psychology (Division 53; Lonigan *et al.*, 1998) and the Society of Pediatric Psychology (e.g., Jelalian and Saelens, 1999; Powers, 1999). Prevention scientists also have made efforts to promote the use of efficacious universal and selected interventions for youth (Greenberg *et al.*, 2001; Mrazek and Haggerty, 1994). The approach taken by these groups has been to review intervention outcome studies and to classify interventions on the basis of their demonstrated efficacy. The resulting lists are composed of standardized evidence-based interventions that range from "probably efficacious" to "empirically supported," based on the number, quality, and independence of outcome studies that test the approach (Chambless *et al.*, 1996).

The purpose of this paper is to examine issues involved in the use of evidence-based clinical interventions in one real-world treatment setting for youth, schools. There is a national movement toward providing more comprehensive mental health promotion and intervention in schools, which provides advantages to schools (e.g., increased supports to remove student barriers to learning)

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and to mental health systems (e.g., access to children in a natural setting; Weist, 1997). As school mental health programs continue to develop and expand, it is critical that the services provided in these programs achieve the highest quality possible; the use of evidence-based interventions has the potential to aid in this effort. In this paper, we first will provide an overview of evidence-based interventions for youth and general issues pertaining to their use, considering both treatments (i.e., “indicated” interventions) and more preventive universal and selected interventions. Next, we will discuss a review of efficacious youth interventions conducted by the Center for School Mental Health Assistance (CSMHA), the purpose of which was to identify which evidence-based intervention protocols are suitable for use by school mental health providers. Finally, we will examine the unique challenges of adapting and using evidence-based interventions in schools broadly and ESMH programs specifically, and offer suggestions for overcoming these challenges.

EVIDENCE-BASED INTERVENTIONS: AN OVERVIEW

When clinical trials are conducted to test the efficacy of a treatment or prevention approach, manuals that describe the elements of the intervention are used to ensure therapist adherence to the treatment protocol. It follows logically that manuals from these clinical trials could then be used in subsequent outcome studies or by practitioners in real-world settings. Thus, it would seem that efforts to disseminate efficacious interventions is simply a matter of ensuring that these manuals, along with other associated supports (e.g., training, technical assistance, and supervision), reach the hands of those practitioners who work with similar disorders or populations upon which the treatment protocols were validated.

In reality, however, the availability and usability of the manuals that describe evidence-based interventions vary tremendously, depending in part on the extent to which the intervention has been tested and refined (Carroll and Nuro, 2002). Interventions that have undergone extensive empirical testing tend to have manuals that are developed with great care and consideration of the practitioner, providing very clear instructions and user-friendly materials such as client workbooks and reproducible forms. Not surprisingly, such high-quality manuals tend to be copyrighted and mass-produced by professional publishers; consequently, they tend to be among the more expensive approaches available for purchase (average cost between \$40 and \$75 per manual). Other less well-established intervention protocols often are disseminated informally to

individuals who request copies directly from the developers themselves. A handful of evidence-based intervention protocols are available for free download on the Internet.

Understandably, many developers are reluctant to distribute intervention manuals to users without trying to ensure that the protocols are implemented faithfully and appropriately. Consequently, a number of evidence-based intervention protocols stipulate that potential users contact the developer directly for on-site training, ongoing technical assistance, and monitoring of the fidelity of the intervention. Not surprisingly, the evidence-based interventions that make these requirements are among the most expensive and complicated to implement in real-world settings.

Despite vast differences in the protocols themselves, there are a number of similarities in the treatment approaches for children and adolescents that have been identified as evidence-based. First, almost all approaches identified to date stem from a cognitive-behavioral theoretical orientation and involve cognitive-behavioral techniques (Kendall and Choudhury, 2003; Wilson, 1998). Second, most of the interventions are time-limited (on average, between 10 and 20 sessions total) and use a group modality (typically serving 5–8 children at once). Finally, evidence-based interventions tend to be highly focused and structured, requiring that skills be practiced both in and out of sessions (Wilson, 1998).

Evidence-based preventive interventions at both the universal (targeting whole populations who may or may not be at-risk for disorder) and selected (targeting youth who are at-risk for disorder but not yet impaired) levels also tend to have manuals that involve components based on behavioral or cognitive-behavioral principles. These interventions tend to focus on basic, broad interpersonal and coping skills that would be helpful for all children (in the case of universal interventions) or remedial skills that are lacking in students at-risk for disorders (in the case of selected interventions). For example, in an effort to prevent aggressive and disruptive behavior leading to conduct problems, a universal intervention may teach children to use relaxation techniques to calm down when upset. Because many preventive interventions teach core skills demonstrated to be deficient in youth with disorders, they often are referred to as social and emotional learning programs (Greenberg *et al.*, 2001).

In contrast to treatment approaches, evidence-based preventive interventions for youth tend to focus on broader skills rather than alleviating specific symptoms. Also different is the fact that in most cases, preventive interventions are administered in school classrooms by classroom teachers (with support from mental health professionals) rather than mental health providers. For example,

several universal classroom interventions attempt to reduce disruptive behavior among whole classrooms of students and require specific classroom rules and responses to misbehavior, thereby necessitating administration by teachers. Because teachers are so highly involved in these approaches, implementation of universal and selected interventions requires the support and “buy-in” from the school administration at both the school and district levels, a consideration not usually present in the treatment world, where providers tend to function relatively autonomously.

What does the use of evidence-based intervention protocols have to offer real-world mental health providers? Because these interventions have empirical support for their effectiveness, they have the potential to improve the quality of services provided and treatment outcomes for youth. In addition, because many evidence-based interventions are time-limited and have demonstrated efficacy using a group treatment modality, their use has the potential of serving more youth in less time. This possibility may be particularly advantageous in settings that have long waitlists of youth in need of services and/or limit the number of sessions that youth can receive (e.g., a managed-care insurance provider sets a cap of 10 sessions per year). Moreover, the use of manuals describing evidence-based interventions may provide helpful structure and support for new, less experienced, or non-professional clinicians (Connor-Smith and Weisz, 2003). Finally, by encouraging the use of manualized evidence-based interventions, supervisors and administrators may have an objective standard against which to measure clinician performance and client progress (Rounsaville *et al.*, 1988).

EVIDENCE-BASED INTERVENTIONS APPROPRIATE FOR USE BY SCHOOL MENTAL HEALTH PROVIDERS

There have been numerous federal initiatives to compile lists of interventions for specific client populations or treatment targets. For example, the Center for the Study and Prevention of Violence (CSPV) identified 10 “Blueprint” prevention and treatment programs that have demonstrated efficacy in preventing or ameliorating violent behavior among youth. Similarly, the Center for Substance Abuse Prevention (CSAP) has identified “model programs” to address youth substance problems. Other initiatives include summaries of universal prevention programs (e.g., Collaborative for Academic, Social, and Emotional Learning [CASEL]) and interventions to address minority mental health issues (U.S. Department of Health and Human Services [DHHS], 2001).

To date, there has been no comprehensive review of programs suitable for use by school mental health professionals. Such a review seems timely given the proliferation of school mental health programs across the country. These “expanded” school mental health (ESMH) programs augment limited services for youth in special education to move toward a full continuum of mental health promotion and intervention for youth in general and special education through school-community program partnerships (Weist, 1997). Since their early development in the 1980s, ESMH programs have grown progressively in the United States (U.S.; Weist *et al.*, 2003).

Early research provides support for the advantages of ESMH programs in reaching underserved youth (Weist *et al.*, 1999), and leading to outcomes important to youth, families, and schools, such as improved satisfaction (Nabors *et al.*, 2000), improved student functioning (Armbruster and Lichtman, 1999; Jennings *et al.*, 2000), and improved school climate and decreased inappropriate referrals into special education (Walrath *et al.*, 2004). However, each of these studies is best described as quasi-experimental. Experimental research of ESMH services has been hindered by the fact that services are highly variable (see Graczyk *et al.*, 2003; Weisz *et al.*, 1992). Fortunately, there is an increasing focus within ESMH on quality assessment and improvement (QAI; Weist *et al.*, 2002). The use of evidence-based manualized interventions is one strategy for ESMH programs both to promote quality by ensuring some level of standardization in practice and facilitating the measurement of outcomes.

The CSMHA is one of two national technical assistance centers funded by the Health Resources and Services Administration, with co-funding from the Substance Abuse and Mental Health Services Administration to provide leadership, training, resources, and technical assistance to advance school-based mental health in the United States. Reflecting one of its major goals to improve the quality of mental health promotion and intervention in schools, the CSMHA conducted a review of evidence-based interventions suitable for use by school mental health professionals. The goal of this review was to identify universal, selected, and indicated (treatment) interventions that could be implemented “as is” or with minimal adaptations for delivery within a typical ESMH program and to promote the use of these interventions by ESMH program professionals. Accordingly, the review excluded interventions that target youth outside of the K-12 grade age range and those interventions that require extensive involvement of other systems outside of the school environment (e.g., a universal substance use intervention in which a component is a public mass-media campaign).

Table I. Reviews of Evidence-based Interventions for Youth used in CSMHA Review

Review effort	Source
American Psychological Association, Division 12 (Clinical Psychology), Section 1, Clinical Child Psychology	Special issue <i>J. Clin. Child Psychol.</i> Volume 27 (1998)
American Psychological Association, Division 54—Society of Pediatric Psychology	Special issue, <i>J. Pediatric Psychol.</i> Volume 24 (1999)
Center for the Study and Prevention of Violence (CSPV)—Blueprints for Violence Prevention	http://www.colorado.edu/cspv/blueprints/
Center for Substance Abuse Prevention (CSAP)—Model Programs	http://www.samhsa.gov/centers/csap/csap.html
Collaborative for Academic, Social, and Emotional Learning (CASEL)	http://www.casel.org/projects_products/safeandsound2.php
Institute of Medicine, Reducing Risks for Mental Disorders	http://www.iom.edu/report.asp?id=15733
Surgeon General's Report on Mental Health (1999)	http://www.surgeongeneral.gov/library/reports.htm
Surgeon General's Report on Youth Violence (2001)	http://www.surgeongeneral.gov/library/reports.htm
Surgeon General's Report on Culture, Race, and Ethnicity: A Supplement to the Report on Mental Health (2001)	http://www.surgeongeneral.gov/library/reports.htm

Note. The CSMHA compendium of effective interventions for use within expanded school mental health programs is available at <http://csmha.umaryland.edu>.

Because there have been many efforts to inventory evidence-based interventions by national organizations (e.g., CSPV and CSAP) targeting populations similar to those of concern to the CSMHA, our review was conducted by perusing the lists of such organizations. A list of the national review efforts from which we extracted our ESMH list is provided in Table I. It should be noted that these reviews used different criteria to judge whether or not an intervention had sufficient empirical support to be included. From these reviews, we compiled a list of all cited interventions and eliminated interventions that were redundant across different lists. We then obtained information about each approach through writing the developers and perusing intervention websites (when available). Once a description of each approach was obtained, we coded each intervention as either universal, selected, or indicated, identified the target population or symptom addressed, and determined the process for implementing the intervention in real-world settings (e.g., costs, training needs, etc). We then used our experience working in schools to judge the appropriateness of each approach for ESMH programs and the feasibility of implementing each approach in schools. Because the goal of our review was primarily pragmatic, we did not judge directly the empirical evidence for the interventions.

The programs identified in the CSMHA review, along with a brief description of implementation issues and contact information, are available at <http://csmha.umaryland.edu>. The review of interventions is not meant to be used as a comprehensive list of all treatments available for a particular disorder, especially given that new interventions continue to emerge. Rather, it is meant as a stimulus for use of these and other evidence-based interventions within ESMH programs.

CHALLENGES TO IMPLEMENTING EVIDENCE-BASED INTERVENTIONS IN SCHOOLS

Although school mental health stakeholders at various levels (e.g., clinicians, local school systems, and state administrators) have shown interest in implementing evidence-based interventions, there are major barriers for implementation in the school setting. Many treatment manuals (e.g., Multisystemic Therapy; Henggeler *et al.*, 2002) discuss methods for ensuring “buy-in” from participating stakeholders. However, there have been few thorough explications of how to reduce barriers in a complex system such as schools, and even fewer research studies testing approaches to systematically ensure faithful replication (Hoagwood *et al.*, 2001). This knowledge gap is particularly problematic considering that the available data suggest that treatment fidelity is associated with improved outcomes in both the adult and child (e.g., Huey *et al.*, 2000) treatment literatures. Within school mental health, a recent meta-analysis of the effects of school-based programs on aggressive behavior found that poorly implemented programs produced smaller effects (Wilson *et al.*, 2003).

One domain of challenges involves logistical issues, most notably, expenses involved in using evidence-based interventions. As noted, protocols can be very expensive to purchase, especially those that require additional training or ongoing developer support. Most ESMH programs operate on a limited budget and are reliant upon third party reimbursement (see Evans *et al.*, 2003). These budgets often do not include funds for training, quality assurance, or ensuring evidence-based practice. Because the costs of manuals for evidence-based interventions are often

beyond what most individual clinicians can afford to purchase on their own (if the program does not purchase them for clinicians), such implementation likely will not occur, or occur haphazardly.

There are other logistical issues as well. For example, choosing an evidence-based intervention is made difficult by the lack of a central clearinghouse where all approaches can be examined at once and compared. Instead, mental health professionals must determine themselves how to obtain treatment protocols and often must contact developers directly through e-mail or phone calls. In most cases, it is difficult for a mental health professional to preview approaches before purchasing, since rarely are samples of manuals available. Once purchased, it is often difficult to share materials between clinicians at numerous school locations or to bring clinicians together across sites for training and support. Even something as seemingly simple as photocopying pages from a manual for client use, a right often included in the cost of the manual purchase price, can present a formidable challenge to a clinician who is denied photocopier access at his or her school.

Another domain of challenges involves clinician reluctance to use evidence-based interventions. In a recent national survey, the majority of practicing clinicians either had not heard of evidence-based interventions or had misconceptions about what they entail (Addis and Krasnow, 2000). As noted, decisions to use these approaches often are made by administrators who hold the purse strings, rather than by the clinicians themselves. Having such protocols imposed upon the work of clinicians who are already very busy can understandably create resistance, related to both the additional demands and to the loss (or the perception of loss) of clinical autonomy. Further, many clinicians are not trained in the cognitive-behavioral therapy orientation inherent in most evidence-based approaches and may either philosophically not agree with the orientation or lack confidence in their ability to learn the component skills involved (Connor-Smith and Weisz, 2003). Alternatively, some clinicians fear that using structured protocols will disrupt their relationships with clients and will reduce clinician creativity and autonomy (Addis and Krasnow, 2000).

Questions regarding the applicability of evidence-based intervention protocols to specific client populations have been levied (Norcross, 1999). Evidence-based protocols have not always been tested with youth of diverse racial and ethnic backgrounds, raising questions about their cultural appropriateness (DHHS, 2001). Similarly, those evidence-based treatments that were validated on pure diagnostic groups may not reflect the mixed-diagnosis world of real life service delivery. Gaps in interventions for various disorders at various ages also exist.

Fortunately, most intervention protocols do provide some guidelines for whether and how to adapt their approaches to address these concerns, and have shown generalizability to youth with mixed disturbances (Wilson, 1998).

An additional challenge in implementing evidence-based interventions in ESMH programs is overcoming resistance from students, parents, and teachers. Students themselves may feel that protocols are boring or irrelevant to them and may request less structured interactions with therapists. Most effective interventions for youth involve a significant parent component; sustaining parent involvement in ESMH program care is often challenging (Bickman *et al.*, 1998). Similarly, many protocols require teacher participation, which requires clinicians to obtain both individual teacher and school administrator buy-in.

OVERCOMING BARRIERS TO THE USE OF EVIDENCE-BASED INTERVENTIONS IN SCHOOLS

Clearly, a number of barriers to using evidence-based interventions by school mental health clinicians exist but can be overcome. The CSMHA has worked closely with its companion ESMH program, the University of Maryland's School Mental Health Program, to promote the use of evidence-based interventions in 22 schools in Baltimore City. This ongoing work has yielded a number of insights on the incorporation of evidence-based approaches into school mental health promotion and intervention.

Fostering Conditions Favorable to Adopting Evidence-based Interventions

In considering how a school system might undertake systems change to encourage proper implementation of evidence-based interventions, we can look to literature on organizational development and health care quality improvement (Brooks *et al.*, 2000; Shortell *et al.*, 1995). The National Institute of Mental Health (NIMH) consensus panel has suggested that adoption of new behaviors is dependent on a handful of fundamental conditions: (1) favorable attitudes or intention to change, (2) requisite skills, and (3) the absence of environmental constraint (Cabana *et al.*, 1999; Fishbein, 1995; Rosen *et al.*, 1995). In order to foster these three conditions, six empirically-derived factors have been identified (Torrey *et al.*, 2001). These potential "levers" include: (1) consumer demand for service; (2) education; (3) local peer influences; (4) financial incentives and penalties; (5) administrative rules and regulations; and (6) feedback on practice patterns (Drake

et al., 2001). Complex change efforts, such as facilitating faithful adoption of evidence-based intervention protocols in a public system, will require particularly intense efforts in as many of these realms as possible (Drake *et al.*, 2001; Torrey *et al.*, 2001).

Strategies for Encouraging Implementation of Evidence-based Interventions in Schools

As described by Torrey *et al.* (2001), three main principles that foster the adoption of evidence-based interventions in schools should be heeded. First, all stakeholders should be involved in the process. In schools, this ideally would require that ESMH program staff (clinicians and administrators), school staff (teachers and principals), parents, and youth all participate in the identification and implementation of evidence-based programs. Second, efforts involving these multiple stakeholders should be enacted at all stages of the change process. This includes identifying the problem areas to be addressed, selecting intervention approaches, motivating and educating for change, enacting the practice into routines, and participating in quality assurance activities. Third, intensity of effort must be maintained, under the assumption that successful implementation will be associated with the number of stakeholders and implementation components that are enlisted and continue to be involved in the program.

Strategies for Encouraging Implementation in Individual ESMH Programs

We have taken a “bottom up” approach to implementing evidence-based interventions in our ESMH program, starting with fostering conditions favorable to adopting interventions among our program staff while working to create opportunities to include the school system, parents, and other stakeholders in broader systemic change. Our approach to enlisting cooperation of ESMH program clinicians has involved several phases. In the first phase, we have made presentations to clinicians in training events regarding the national movement towards the use of evidence-based interventions in real-world settings (i.e., fostering favorable attitudes towards change and providing education; Drake *et al.*, 2001). In these trainings we have presented the use of standardized intervention protocols as one of many ways to use the evidence base to improve the services we provide to youth; other ways include training clinicians in component cognitive-behavioral interventions, such as behavioral modification and progressive muscle relaxation, which has been presented alongside the introduction to intervention manuals.

In the second phase, we purchased a number of standardized intervention protocols from the CSMHA review and made them available at one central location to all clinicians in our program (i.e., removing environmental constraints; Cabana *et al.*, 1999). Clinicians were encouraged, but not required, to peruse and copy manuals that they felt would be helpful in their work, and resources for copying necessary materials were provided. In the third phase, we asked our clinician subgroups (representing elementary, middle, and high schools) to set as a goal for the year to peruse the interventions available for their school level and collectively choose one intervention that will be implemented by all clinicians in the subsequent school year (i.e., administrative rules and regulations; Drake *et al.*, 2001). In the final phase, clinicians at each level implemented at least one evidence-based intervention protocol across all schools, using their subgroup meetings as a forum for ongoing training, troubleshooting, and support (i.e., local peer influence; Drake *et al.*, 2001).

We feel that this approach effectively addresses many of the barriers that impede front-line clinicians from using evidence-based intervention protocols. First, we have placed the burden of comparing the many available protocols on our research and administrative staff while at the same time allowing clinicians some choice in the interventions they use from a smaller, more manageable pool of approaches. Second, we made the use of evidence-based interventions voluntary initially and gradually moved toward requiring some limited use of standardized protocols, but doing so through a democratic process and in the context of ongoing peer support. Inherent in this approach is a nonthreatening message that evidence-based intervention protocols can supplement clinician’s work, not supplant their current practice (Connor-Smith and Weisz, 2003). Third, we have focused our training on the core cognitive-behavioral skills found in most intervention manuals, and have emphasized to clinicians that these skills can be adapted to fit their personal style.

Once convinced of the value of evidence-based interventions, clinicians are faced with the challenge of using these protocols with client populations (e.g., those of non-majority racial and ethnic groups) who may not fit protocol examples and guidelines. We have tried to empower clinicians to address this barrier by encouraging them to adapt the language and structure of evidence-based interventions to be more relevant for these groups while remaining faithful to the core components of the protocol. We feel that the belief that the ongoing peer support our clinicians receive is particularly helpful in making these adaptations.

Clinicians also must overcome any resistance they receive in the use of evidence-based protocols from their

clients and school personnel. In terms of resistance from the youth themselves, we emphasize the need for clinicians to “set the tone” for what the youth’s therapy experience will be early on in treatment, before potentially bad habits are established. For example, a child client who has grown accustomed to play therapy twice per week naturally will resist attempts by the clinician to make the sessions more structured. A better strategy is to use the less structured aspects of therapy, often viewed by child clients as more enjoyable, as rewards for active participation in the didactic and skill-building components required of evidence-based treatments.

To engage parents and teachers as intervention agents in evidence-based interventions, we encourage clinicians to explicitly educate them about effective treatments, while emphasizing the critical importance of their involvement. Parents and teachers often have valid concerns regarding whether they will have the time and skills necessary to participate in interventions. This reaction may be viewed wrongly by clinicians as resistance. In addition to dispelling misconceptions parents and teachers have about the time required or their ability to help, clinicians must be available to provide support and guidance. In many cases, it may be necessary for clinicians to create additional incentives for teachers and parents to become involved, going beyond their traditional roles as clinicians. For example, a clinician might offer to take on a few of a teacher’s responsibilities while she implements an approach in her classroom or to help a parent with a job search before launching into a parent training protocol. With patience and creative engagement strategies, clinicians can form effective partnerships with parents and teachers.

SUMMARY AND CONCLUSIONS

ESMH programs can improve the quality of mental health services that youth receive by drawing from the evidence base regarding effective treatments and preventive approaches for child disorders. One important way to make use of the evidence base is to incorporate standardized intervention protocols into clinical practice. Although numerous challenges in implementing evidence-based interventions exist, these can be overcome with the sustained involvement and support of key ESMH program stakeholders—school and program administrators, teachers, parents, and most importantly, clinicians themselves. It is our hope that this special issue, as well as the online CSMHA compendium of evidence-based manualized interventions, will facilitate this effort in real-world ESMH programs.

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