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Advances in School Mental Health PROMOTION

Training and practice
Research and policy

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THE EDITORS

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EDITORIAL STATEMENT

The aim of the Journal is to promote global dialogue, collaboration and action toward the advancement of training, practice, research and policy in school mental health promotion.

Articles of applied significance to the advancement of progress in each of these realms and interconnections between them are given priority, as are articles that reflect a shared agenda, with schools, youth and families, mental health and other child serving systems collaborating toward the improvement and expansion of school mental health promotion initiatives.

Articles aim to reflect the full continuum of school mental health promotion, including efforts to assess and improve school environments; school-wide social and emotional learning, mental health promotion, and youth development; prevention; early identification and intervention; and intervention for youth in general and special education. Empirical articles, theoretical and conceptual papers, comprehensive reviews, evaluative studies of comprehensive programs, brief reports and commentaries are all considered for publication.

The Journal emphasises the connections between high quality and empirically supported school mental health promotion efforts; outcomes valued by families, schools and community members; and policy development and advocacy; all working together and gaining strength to enable growing numbers of schools and community initiatives to remove barriers to student learning and promote their school and life success.

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Advancing School Mental Health Promotion Globally

Key words: children; young people; schools; global; school mental health promotion

Introduction

With enthusiasm, we (M Murray and M Weist) bring you this new journal, *Advances in School Mental Health Promotion*. The journal is a product of our collaboration over the past eight years as part of broader efforts to build a global mental health promotion agenda. Within this larger agenda, promoting the mental health and school success of children and adolescents, from pre-school through secondary education and transition to adulthood, is an area of critical emphasis. In this introductory article, we define school mental health promotion, discuss its key themes, review reasons for its growth, discuss challenges being encountered, present strategies and ideas for the growth of the field, and discuss the role of this new journal in moving forward training, practice, research and policy.

School mental health promotion defined

We build our definition of school mental health promotion

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A B S T R A C T

This article introduces the new journal Advances in School Mental Health Promotion. *Following definitions of key concepts, critical themes associated with high-quality school mental health promotion are reviewed. Reasons for the growth of the field, along with evidence of progress in a number of developed nations, are presented. We then discuss challenges being encountered, including those related to high variability in experience across communities, states and nations, stigma and marginalization, funding and resource limitations, language barriers, the limited focus on school-wide promotion, universal prevention, social and emotional learning and climate, a significant research to practice gap, training and workforce concerns, and issues around youth, family and other stakeholder involvement. Each of these areas includes critical opportunities for the advancement of training, practice, research and policy, building interconnections between these realms, and development of collaborative research agendas within and across countries. We conclude with a review of global initiatives and opportunities related to school mental health promotion and briefly describe the articles in this inaugural issue.*

from a definition of mental health by the World Health Organization (WHO, 2001) that emphasizes it as a positive attribute:

> *a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community* (p1).

People have problems with their physical health, and problems with their mental health. These problems do not make either of them a negative concept.

Our definition of school mental health promotion also builds on a definition of mental health promotion by Hosman and Jané-Llopis (1999).

> *Mental health promotion activities imply the creation of individual, social and environmental conditions that enable optimal psychological and psychophysiological development. Such initiatives involve individuals in the process of achieving positive mental health, enhancing quality of life and narrowing the gap in health expectancy between countries and groups. It is an enabling process, done by, with and for the people. Prevention of mental disorders can be considered one of the aims and outcomes of a broader mental health promotion strategy.* (p.31)

Building on these concepts, we define school mental health promotion as:

> *Providing a full continuum of mental health promotion programs and services in schools, including enhancing environments, broadly training and promoting social and emotional learning and life skills, preventing emotional and behavioral problems, identifying and intervening in these problems early on, and providing intervention for established problems. School mental health promotion programs should be available to all students, including those in general and special education, in diverse educational settings, and should reflect a shared agenda – with families and young people, school and community partners actively involved in building, continuously improving, and expanding them.*

Please note that in this definition school mental health promotion is the overarching concept, with all efforts – from environmental enhancement to intervention for serious problems – subsumed under it.

Key themes

Quality is a central construct in school mental health (SMH) promotion, with many facets, including:

- an inclusive approach reaching out to and assisting all interested young people and families, and purposefully overcoming barriers to promotion and intervention
- building programs in ways that are responsive to student, school and community needs, while building on strengths
- focusing on reducing barriers to student learning through programs that are student- and family-friendly and are based on evidence of what works
- proactively involving all interested stakeholders in all aspects of program development, improvement and growth
- emphasizing and providing support for systematic quality assessment and improvement and continuous student- and program-level evaluation
- ensuring the full promotion to intervention continuum
- hiring the right staff, who receive the right training and ongoing coaching and support for high-quality promotion and intervention
- ensuring that all efforts are sensitive to the full range of developmental, cultural/ethnic, and personal differences in students
- building interdisciplinary relationships in schools, and strong teams and coordinating mechanisms
- building strong connections between programs and resources within the school with programs and resources in other community settings (Weist *et al*, 2005a; see Jané-Llopis & Barry, 2005 for a discussion of high-quality SMH promotion).

In addition to this strong emphasis on quality, school mental health promotion should reflect a purposeful attempt to build a new paradigm in the way mental health is promoted in children and adolescents. The priorities should be environmental improvement and

the health of populations of children and adolescents, not solely limited efforts to treat 'psychopathology' (a pejorative term) in select individuals (Rowling & Weist, 2004). Purposeful and strong efforts are needed to break down disciplinary silos (such as psychology vs. education vs. social work vs. nursing), as the work in schools is inherently interdisciplinary (Flaherty *et al*, 1998; Rappaport *et al*, 2003; Waxman *et al*, 1999). Similar system silos (for example mental health vs. education vs. health vs. juvenile services vs. child welfare) need to be broken down, as all of these systems serve young people in the schools. The many barriers associated with passive bureaucracies that wait for children and families to come should be dismantled, toward proactive, flexible, and minimally bureaucratic approaches to putting helpful and science-based programs and people in front of children and adolescents – those in need, those at risk, and those doing well (Association for Supervision and Curriculum Development, 2007; Weist, 1997).

There should be a move away from expert models that rely exclusively on people with advanced degrees who convey expertise in limited consultation and then move on, toward collaborative, non-hierarchical approaches that empower all who work in schools to be promoters of mental health for students, families, and staff (Power *et al*, 2003; Waxman *et al*, 1999; Weare, 2000). Young people, families, teachers, school and community leaders, policy makers, business leaders, and faith leaders should be genuinely involved in all aspects of program development, continuous enhancement and growth (Andis *et al*, 2002; Lever *et al*, 2003).

As high-quality programs and services, adhering to these principles, begin to achieve outcomes, findings and experiences – quantitative and qualitative – should be purposefully connected to systematic efforts to build advocacy, improve policy, and extend resources to enable the spread of SMH promotion to more schools (Weist *et al*, 2005b). Strategies to promote public involvement in the school mental health promotion agenda are critical, helping this agenda rise to significant policy actions in communities, since it is about young people, helping them to do well in school, and helping them to go on to become productive citizens (Andis *et al*, 2002).

All of this work involves recruiting, training, and empowering those who will promote mental health in schools, improving the quality of promotion and intervention, further building a systematic research agenda, and promoting policy improvement and resource enhancement, with specific linkage between each of these realms. Articles in this journal will reflect these themes.

Reasons for growth

There are many reasons for the growth of the school mental health promotion field. First, there is increasing recognition that children and adolescents with mental health needs generally do not receive services to address these needs in traditional outpatient or private settings, and that in most countries, the mental health system is essentially a non-system (U.S. Department of Health and Human Services [DHHS], 1999; U.S. Public Health Service, 2000; President's New Freedom Commission [PNFC], 2003; World Health Organization, 2004). This recognition is combined with recognition that schools are already the *de facto* deliverers of mental health services for children (Rones & Hoagwood, 2000), yet are often poorly equipped and supported to handle this responsibility (Adelman & Taylor, 2000).

As mental health promotion and intervention efforts build in schools, the most universal natural setting for children, many of the barriers that constrain the delivery of services to them in other settings are removed. When these services are done well, as presented in the above, there is an emerging literature showing that outcomes valued by families, schools and communities can be achieved. For example, empirically supported mental health promotion in schools has been associated with improved emotional and behavioral functioning (Botvin, 2000; Greenberg *et al*, 1999; Horner & Sugai, 2000), academic achievement (Knoff & Batsche, 1995), and cost savings, for example through reduced referrals to special education (Bruns *et al*, 2004).

In reporting on the evidence for mental health promotion efforts in schools, Stewart-Brown of the World Health Organization, Europe (2006) stated:

> *… school-based programmes that promote mental health are effective, particularly if developed and implemented using approaches common to the health promoting schools approach: involvement of the whole school, changes to the school psychosocial environment, personal skill development, involvement of parents and the wider community, and implementation over a long period of time* (p16).

Related to these recognitions, a number of developed nations are prioritizing the SMH promotion agenda through reports and funded initiatives. In the U.S., there is a clear federal commitment to school mental health, as found in the President's New Freedom Commission report (2003), which includes as one of 19 recommendations 'to expand and improve school mental health programs' (Recommendation 4.2, also see www.mentalhealthcommission.gov). Since 1995, the Health Resources and Services Administration, with co-funding from the Substance Abuse and Mental Health Services Administration (SAMHSA) through 2001 has funded two national centers to support the advancement of school mental at the University of Maryland (http://csmh.umaryland.edu) and the University of California, Los Angeles (http://smhp.psych.ucla.edu). Since 1999, a group of federal agencies led by SAMHSA has funded the *Safe Schools Healthy Students* initiative, which has supported the delivery of SMH services in over 240 U.S. communities (Furlong *et al*, 2003; U.S. Department of Education, U.S. Department of Health and Human Services, & U.S. Department of Justice, 2006). The Centers for Disease Control and Prevention's (CDC) Division of Adolescent and School Health (DASH) is currently supporting 23 state agencies in implementing coordinated school health programs, which in recent years have placed additional emphasis on SMH promotion (National Center for Chronic Disease Prevention and Health Promotion, 2007).

More recently, the U.S. Department of Education has been funding states and localities to build infrastructure for the 'integration of mental health in schools', and DASH is also funding state and local education agencies to build capacity for effective SMH. Further, 12 states have made an explicit commitment to build the SMH agenda (www.sharedwork.org), and movements related to school-wide positive behavior support (www.pbis.org) and social and emotional learning in children in schools are growing rapidly (www.casel.org), with support from the federal government (see Anglin, 2003 for a review of U.S. support of SMH, and Robinson, 2004 and Weist *et al*, 2003 for books on SMH based largely on the U.S. experience).

There are a number of initiatives in Australia receiving governmental support. For example, *beyondblue* is a national initiative of the state and territorial governments that works in partnership with schools, health services, workplaces, universities, media and community organizations to raise awareness and reduce stigma related to depression. The initiative also supports people with depression by providing them with resources and treatment options, and by encouraging relevant research (www.beyondblue.org.au/index.aspx?link_id). *MindMatters* is a national resource and professional development program funded by the Commonwealth Department of Health and Aging to support Australia secondary schools. The program takes a whole-school approach in promoting the emotional and social well-being of all members of the school community. *MindMatters* is being implemented broadly throughout Australia, 71% of all secondary schools reporting use of the program. *MindMatters* is being adopted in other countries, over 80,000 people receiving professional development training on the program (http://cms.curriculum.edu.au/mindmatters/about/about.htm; Hazell, 2006; Mason, 2007).

In Canada, *Take Action* is a school-based initiative of Ontario's Ministry of Children and Youth Services which supports school communities in providing information and building awareness about tobacco, alcohol and substance use, risk reduction and health/mental health promotion. The program provides students with grade-appropriate lessons which provide a foundation for students to learn decision-making and problem-solving skills and to make healthy choices in life. A new component, *Take Action in Secondary Schools*, has been added, providing educators with a reference guide to address and prevent substance use (www.ophea.net/takeactionoverview.cfm).

In England, *Social and Emotional Aspects of Learning for Secondary Schools (Secondary SEAL)* takes a whole-school approach to promoting social and emotional learning that aims, when fully implemented, to involve all members of the school and focus on all aspects of school life, including school plans, strategies, policies, teaching and learning, behavior support and staff development to support social and emotional learning. The program uses a broad five-fold categorization of social and emotional aspects of learning: self-awareness, managing feelings, motivation, empathy and social skills. These skills also contribute to a more positive school climate and promote staff effectiveness and well-being. *Secondary SEAL* effectively links with other national school-based initiatives. The program was devised by the Department for Children, Schools and Families (www.dcsf.gov.uk/), was successfully piloted in 60 schools in 2006, and will be offered to all schools by 2011 (http://bandapilot.org.uk/secondary/resources/

welcome_page/sns_ssealguidance0004307.pdf).

In Ireland, *Social Personal and Health Education* is an approved part of the school curriculum which supports the personal development, health and well-being of young people and helps them create and maintain supportive relationships. It was originally introduced in junior cycle and post-primary schools, and in 2000 the process began of expanding it to all schools. The program aims to promote self-esteem and self-confidence in students. Students are given strategies to make healthy, responsible decisions and are given the opportunity for discussion and reflection (www.sphe.ie/info.htm).

In New Zealand, the *Mentally Healthy Schools* initiative takes a whole-school approach to addressing the mental health concerns of school communities. It obtains curriculum support from the *Mental Health Matters* program (a health education curriculum). The initiative has three main domains: the health curriculum, school climate and the relationship between school and home. The initiative acknowledges that schools must address both individual learning through the health curriculum and the broader environment in which students learn (www.mentalhealth.org.nz/page.php?123)

The above are a sample of increasing activities in developed nations to promote student health and mental health in schools, not an exhaustive review of all that is going on. In addition to these efforts within countries, there are a number of networks of countries that are pursuing the promotion of mental health in schools. For example, the European Network of Health Promoting Schools includes more than 40 member nations. It was formed as a partnership between the Council of Europe, the European Commission and the World Health Organization (WHO) Regional Office for Europe to promote health in schools. The network connects the policy and practice of the health-promoting school to the health and education sectors. Though the main focus of the program is the student, it also aims to work at school, national and international levels. A settings approach to health serves as the basis for the health-promoting school. The approach maintains that creating a positive school environment will enable students to make healthy choices in all areas of life and improve their ability to learn. This will in turn reap benefits for the entire population with regard to health and prosperity, by reducing societal inequalities (www. euro.who.int/ENHPS; Gray *et al*, 2006).

Challenges

In spite of the support and progress described for the above nations, the work is at a very early stage and many challenges are being confronted. In the U.S., where there is clear and growing support for SMH, progress is very patchy; some communities embrace this agenda and others maintain the *status quo* of limited school mental health programs and services (PNFC, 2003; Teich *et al*, this issue). Even in communities showing some commitment to SMH, intervention services are generally limited, evidence-based practices are too rarely implemented, and school-wide mental health promotion, climate enhancement, and prevention remain relatively rare (Evans & Weist, 2004; Kutash *et al*, 2006; Foster *et al*, 2005; Weist *et al*, 2005; Teich *et al*, this issue).

Federalism in the United States (U.S. General Accounting Office, 2001) creates a strong emphasis on local control of schools, with site-based management. This means that even in one small community the picture of school mental health promotion could look very different from one school to the next, depending on school leadership and other factors, such as the student body. Some school principals will embrace the SMH agenda, while many others will not, believing, for example, that schools are for learning and not seeing the connection between school mental health promotion and learning (Paternite, 2004). A prevailing problem is stigma, often about all things related to mental health, which may result in avoidance or minimization of student mental health issues (WHO, 2001, 2004). Thus a considerable challenge in many schools is to convince school leadership that the SMH agenda is worthy of strong support. And, given the fluidity of school environments, with frequent changes in leadership, how can this commitment be sustained?

Language is very important, and language differences are significant in this emerging field. There is a lack of agreement on terms; 'school mental health',[1] 'school-based mental health', 'school behavioral health', and 'social and emotional learning' are all in active use in the U.S. Similarly, terms used by some to describe SMH services, such as 'clinic-based', 'pull-out' intervention, and 'co-located' services clearly have negative connotations. There are related concerns about labeling students with terms like 'emotional

[1] For a number of reasons, including the earlier review of definitions and concepts, we believe that 'school mental health promotion' is the most appropriate term for the work involved; hence the name of this journal.

disturbance' and 'psychiatric diagnosis', and many have argued for strong caution in using these terms and 'medicalizing' the field (Paternite, 2004; Rowling & Weist, 2004). However, these labels are often necessary for students to receive services, a clear tension.

Consistent with the factors outlined above, literature focusing on U.S. school mental health programs suggests that they are often marginalized and struggle for funding (Evans *et al*, 2003; Teich *et al*, this issue). Many SMH initiatives are reliant on fee-for-service funding mechanisms, which are highly bureaucratic and often burdensome to clinicians who operate with limited administrative support. Over-reliance on these mechanisms may directly militate against evidence-based practices (Evans *et al*, 2003; Evans & Weist, 2004). As SMH initiatives bring accessible mental health services to young people in schools, it is a real challenge to attempt to meet the unaddressed mental health needs of young people with insufficient staff and resources. Scattered, unsupported services usually do not achieve outcomes (Weisz, 2004), and so advocacy will stall. This creates a 'Catch 22' in communities that are committed to this agenda; they desire to expand services but are unable to do so without proof that they actually achieve desired outcomes (Wandersman, 2003).

A related set of challenges is associated with the bias in health and mental health systems to 'treat' people with disorders, and the general failure to prioritize and fund universal prevention, social and emotional learning programs and school climate enhancement,[2] in spite of a growing knowledge base on their importance for a range of positive student and school outcomes (Collaborative for Academic, Social and Emotional Learning, 2003; Durlak & Wells, 1997, 1998; Elias *et al*, 1997; Wingspread Declaration on School Connections, 2004).

A significant challenge is a large research to practice gap. While there are at least 40 evidence-based interventions that could be implemented in schools (Center for School Mental Health Assistance, 2002), these interventions may be somewhat cumbersome to implement, require significant infrastructure support that usually does not exist, may engender clinician resistance, and are often in need of some degree of modification for application in a particular school site (Grasczyk *et al*, 2003; Kutash *et al*, 2006; Evans & Weist, 2004; Flaspohler *et al*, 2006; Ringeisen *et al*, 2003). This realization is leading to an important line of research which is seeking to build implementation support for effective SMH practices (Fixsen *et al*, 2005), including supported use of manualized approaches and of more flexible modular strategies (Chorpita *et al*, 2004; Chorpita, 2006), and emphasizing positive relationships with students, protective factor enhancement and risk and stress factor reduction (Weist *et al*, 1999).

A daunting issue encountered in the U.S. and other nations pertains to the SMH workforce. Many communities lack enough mental health professionals, and the ratio of school-employed mental health professionals to students is commonly significantly below recommended levels (Paternite *et al*, 2006). Mental health professionals may receive little training in evidence-based practices, and in child and adolescent mental health unproven approaches continue to be commonly used (Evans & Weist, 2004; Hoagwood *et al*, 2007; Institute of Medicine, 2001; Kutash *et al*, 2006; Schaeffer *et al*, 2005). Discipline-related turf and tension remain common, fueled partly by professional organizations which promote **their discipline** and hold conferences for **their members** (Flaherty *et al*, 1998; Rappoport *et al*, 2003). There are relatively few interdisciplinary training events, and interdisciplinary training at the pre-service level is extremely rare (Paternite *et al*, 2006). These realities are inconsistent with the work in schools, where the work is inherently interdisciplinary and where, in reality, the boundaries are blurring as social workers, counselors, psychologists, and nurses (and in some cases teachers) may be doing very similar work.

Similarly, significant involvement of young people and families and other school and community stakeholders in planning, implementing, and continuously improving SMH services is an important aspiration for the field, consistent with the movement toward true systems of care (Stroul & Friedman, 1996; Leaf *et al*, 2003). Yet tokenism (marginally involving stakeholders, for example to achieve a grant requirement) continues to prevail (Bickham *et al*, 1998; Lowie *et al*, 2003). An important agenda for research and policy is on how to best engage young people and families and other invested people meaningfully in this work, and to gauge the incremental benefit of such stakeholder involvement.

All of these challenges point to many areas in need of research and knowledge development in this emerging field, and we hope this journal can be a resource for the same. We acknowledge that much of

[2] On a positive note, this trend is beginning to change, some U.S. states (such as Illinois, Ohio) enhancing funding for these programs and making them legislative priorities.

the above refers to the U.S. experience. There appears to be no literature comparing SMH experiences in the U.S. with those of other developed nations. And, importantly, there is very little information on school mental health in less developed nations. Articles comparing SMH themes across nations and focusing on under-developed nations will receive special priority.

Moving forward

The above emphasizes that school mental health promotion is an emerging field, gathering significant momentum in some countries, but with considerable variability in these countries, and probably with limited or non-existent status in the rest, especially in under-developed nations. There is a clear need for a global assessment of the status of these efforts, along with documentation of lessons learnt and effective practices in advancing training, practice, research and policy agendas, and in connecting these agendas together. The International Alliance for Child and Adolescent Mental Health and Schools (Intercamhs) emerged in the early 2000s as a small consortium of people from around 10 countries with a strong interest in school mental health promotion, and has since grown to over 300 people from 30 countries. Intercamhs has engaged in a number of actions to advance a global school mental health agenda, including presenting on this theme at a number of international meetings, assisting under-developed nations in building a focus on schools, and promoting networking and collaboration by interested people within and across countries (www.intercamhs.org).

In addition, along with other international organizations, Intercamhs is participating in the Global Consortium to Advance Promotion and Prevention in Mental Health (GCAPP). GCAPP is an international network of organizations that serves as a global forum for information exchange, discussion and mutual support in planning and implementing shared actions to promote mental health through partnership/collaborative working. It does this by building capacity for information exchange and by providing other assistance services for researchers, policy makers, advocates, practitioners and consumers across the globe. GCAPP is a catalyst, creating synergy across international organizations and borders to expand the capacity for developing, disseminating and implementing culturally tailored, effective interventions.

This journal is an example of the catalytic role of international networks such as Intercamhs and GCAPP.

Together, Intercamhs and GCAPP have participated in international and world conferences related to SMH promotion, including meetings in Auckland, Dublin, London, Perth, Oslo and Vancouver. Upcoming meetings of importance, in 2008, include The Fifth World Conference on the Promotion of Mental Health and Prevention of Mental and Behavioral Disorders, Melbourne, and Towards the Future: New Frontiers for Health Promotion, Turin.

In addition to this work, the Center for School Mental Health (CSMH) at the University of Maryland, a co-sponsor of this journal with the Clifford Beers Foundation, is working with the IDEA Partnership (funded by the U.S. Office of Special Education Programs) to build a Community of Practice on School Mental Health (Wenger *et al*, 2002). The community includes 12 states which have committed to advancing the SMH agenda, and 10 practice groups that are pursuing deeper dialogue and collaboration in areas of priority for the field, for example youth involvement, family partnerships, language issues, quality and evidence-based practice, and interdisciplinary training. The community interacts through a web-site, www.sharedwork.org, phone conferences and meetings of state initiatives and practice groups, and in an annual conference on Advancing School Mental Health sponsored by the CSMH (http://csmh.umaryland.edu). People from other countries are beginning to join and interact with the community, and international involvement in the community is now a priority. Highly user-friendly websites such as The School Mental Health Connection (www.schoolmentalhealth.org) are also emerging, with helpful information on the range of SMH topics for teachers, students, family members, and health and mental health staff.

All of the above are promoting multi-scale learning, where connections are being made at every level – community to community, state to state, national to state, federal to state, federal to national, nation to nation, state to international, and so on, promoting active dialogue and collaboration, mutual support and sharing of ideas, lessons learnt, and the growth of evidence-based and promising practices. A recent example occurred when the Ohio Department of Mental Health contacted the CSMH for assistance in developing school plans to help students with the mental health impacts of the pandemic flu. CSMH staff recognized that the Maryland Department of Education had recently convened a task force and

developed a report on this exact topic. Leaders from Maryland who developed the report were connected to leaders in Ohio preparing to work on a report, and essentially the Maryland report was adopted by Ohio, saving much effort and enhancing a state-to-state collaboration. It is our hope that this journal will facilitate this multi-scale learning in advancing the school mental health promotion agenda globally.

This journal and articles in this inaugural issue

As presented on the website for this journal (www.schoolmentalhealth.co.uk), this journal **emphasizes high-quality and empirically supported school mental health promotion efforts, outcomes valued by families, schools and community members, and policy development and advocacy, all working together and gaining strength to enable growing numbers of schools and community initiatives to remove barriers to student learning and promote their school and life success**.

This inaugural issue includes articles reflecting these themes. First, Judy Teich of the Substance Abuse and Mental Health Services Administration and colleagues present on the first-ever comprehensive survey of school mental health in the U.S. Findings highlight the growth of the field and the many areas in need of further development. Louise Rowling, of the University of Sydney and President of Intercamhs, then reviews critical dimensions to gaining political support for school mental health promotion. Alexandra Hilt-Panahon and colleagues from Lehigh and Louisiana State Universities present a critical review of school-based efforts to treat depression in children and adolescents. This first issue closes with an article by Heather Alvarez of Ohio University on teachers' stress and their psychosocial adjustment and functioning in the classroom. We are pleased to be able to include these articles on important topics for the advancement of school mental health promotion by recognized leaders in the field.

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What Kinds of Mental Health Services do Public Schools in the United States Provide?

Key words: data; statistics; survey; national; mental health treatment; public schools

Introduction

Schools are increasingly seen as a natural entry point for addressing children's mental health needs, and recognition of the importance of sound mental health as an essential support for academic success (Adelman & Taylor, 2000; Bruns *et al*, 2004; Sugai *et al*, 2000; Zins *et al*, 2004) has led to growth in school mental health programs as part of broader school reform efforts. Studies conducted in the 1990s (Weist, 1997) found movement across the United States (U.S.) in support of enhancing and improving school mental health services. Advocates for a system of care for children's mental health (Stroul & Friedman, 1996) and for school-based health centers (Advocates for Youth, 1998) have further underscored the critical role that integration of mental health services into the school setting can play in recognizing, assessing, and treating children's mental health problems.

However, while the increasing role of schools as providers of mental health care is recognized, few national studies have addressed how these services are organized, staffed, funded, and coordinated with community-based services. The 2000 School Health Policies and Programs Study (SHPPS), which included mental health as one of its seven modules, found that school counselors, psychologists, and social workers typically provide school mental health services (Centers for Disease Control and Prevention (CDC),

A B S T R A C T

This article describes the first national survey of mental health services in a representative sample of the 83,000 United States (U.S.) public elementary, middle, and high schools and their associated school districts. The survey identified types of mental health problem encountered, types of service delivered, administrative arrangements for delivering/coordinating services, and the disciplines/qualifications of providers. Issues of funding, budgeting and resource allocation, and data use were also explored. Major findings indicated that mental health services are widely available in schools, and schools are attempting to respond to the mental health needs of students. However, schools report that the frequency and severity of mental health problems are increasing, while resource levels are static or decreasing. Further research is needed to explore issues such as the intensity and duration of school mental health services, adequacy of specialty training for school mental health providers, and effectiveness of combinations of preventive mental health and treatment services.

2000). Analysis of findings from the 1994–1995 National Longitudinal Study of Adolescent Health (Slade, 2003) found that roughly half of middle and high schools nationally offered some level of mental health counseling, but found disparities in availability of such services by region, locale, and school size.

To address the need for more current and comprehensive information, the Center for Mental Health Services (CMHS) of the Substance Abuse and Mental Health Services Administration (SAMHSA) contracted with Abt Associates to conduct the first-ever national survey of mental health services provided in schools. The survey provides a description of the prevalence and distribution of mental health services in a nationally representative sample of the approximately 83,000 public elementary, middle, and high schools in the United States. The final report of the study, *School Mental Health Services in the United States, 2002–2003* (Foster *et al*, 2005), is available on request from SAMHSA's National Mental Health Information Center (NMHIC) at tel. 1-800-789-2647, and may also be accessed online at www.samhsa.gov. This article provides a synopsis of the study report, with the intention of making information from the study more widely available.

Method

The study began with a comprehensive review of the research literature. An expert panel of school officials, mental health researchers, policy makers, and representatives of professional organizations were asked to ensure that this review reflected the most up-to-date thinking and terminology regarding school mental health services. With the realization that information about funding and administrative arrangements for school mental health services is generally available only through district offices, the decision was made to develop two questionnaires, one for schools and one for districts. These questionnaires were modified and endorsed by representatives of several professional mental health and educational associations, pilot-tested on a small number of school and district staff representing the relevant respondent types, and revised according to their feedback. Since the survey did not collect client-level data, approval by an IRB was not required. The study methodology and survey instruments were reviewed and approved by the U.S. Office of Management and Budget (OMB) in September 2002.

To address information gaps identified by the literature review, survey questionnaires focused on:

- types of mental health problem encountered in the school setting, and mental health services available in schools to address those problems
- administrative arrangements for delivery and coordination of mental health services in schools
- types and characteristics of providers of mental health services in schools
- mechanisms for funding school mental health services, and ways in which funding mechanisms may affect delivery of services.

Mental health services were defined for purposes of this study as:

> *'those services and supports delivered to individual students who have been referred and identified as having psychosocial or mental health problems'.*

A random sample of 2,125 schools, and the 1,595 districts associated with these schools, was drawn from the U.S. Department of Education's public school data file, the Common Core of Data for 2000–2001 (U.S. Department of Education, National Center for Education Statistics, 2000–2001). The size of the sample was designed to provide reliable estimates of the universe of regular public schools, and their associated districts, by level and by size. The sampling strategy was also designed to yield estimates by each geographic region (Northeast, Midwest, South, West) and locale or setting (urban/central city, suburban/large town, small town/rural). These groupings for schools and school districts are the standard variables generally used for comparisons in education research, such as the School Health Policies and Programs Study (SHPPS), conducted by the Centers for Disease Control and Prevention (CDC) (CDC, 2000).

Data collection began in November 2002, when advance letters were sent to district superintendents in the sample, notifying them of the survey and requesting contact information for the respondent designated by the superintendent as the 'most knowledgeable about mental health services'. Fifty-eight districts (3.5% of sampled districts) required that a research application be submitted and approved before the survey could be conducted in their district office or schools. The process ranged from a simple form submitted to a district committee, to a lengthy application process requiring a teleconference presentation of the project.

In several districts, it was necessary to obtain consent from each sampled school and to submit signed consent forms to the district office before approval was granted. Of the 58 research applications submitted, 46 were ultimately approved. Two hundred and fifteen schools (ten percent of the original school sample) were located in these forty-six districts.

Questionnaires were mailed in January 2003, and data collection – including telephone follow-up to non-responding schools and districts – continued into the early summer. More than 30% of districts and 39% of schools requested re-mailings. Analysis of response rates for each type of school revealed that large, urban schools were less likely to complete a questionnaire. To estimate possible bias and increase the response rates, a targeted 'critical items' survey protocol, containing a subset of items from the questionnaire that were deemed critical to the survey's purpose, was administered to a random sample of non-responding schools. Ultimately, 1,147 schools in 1,064 districts across the country responded to the survey, and 'critical items' information was collected from an additional 150 schools. There was no evidence of bias after comparing the responses of early versus late respondents and responders to the 'critical items' survey. The final weighted response rates were 60.5% for schools and 59.85% for school districts. (A comprehensive description of the survey methodology can be found in Appendix D of the final report, available at: http://mentalhealth.samhsa.gov/publications/allpubs/sma05-4068/apnx3.asp.)

The data were weighted to create national estimates for number of schools and districts by region and by size, so that the total number and the distributions would match those of all schools and districts in the nation in the 2002–2003 school year. In addition to the quantifiable data, an open-ended question asked schools about their most successful strategies for providing mental health services to students, and districts were asked to comment on the survey itself or the funding of mental health services. Approximately 800 school respondents (70%) and 330 district respondents (28%) provided written comments; a synthesis of these responses was included as an appendix in the final survey report.

Limitations

This intent of this study was to describe 'traditional' mental health treatment services related to an identified individual student, not school-wide or classroom-wide prevention activities. The study described services currently being delivered, and was not designed to assess unmet need for services, nor was it intended to address the quality, adequacy, or appropriateness of services, or to capture the number or intensity of services delivered.

Survey respondents, and thus the unit of analysis, represented schools rather than staff. It was not possible to estimate the number of full-time equivalents (FTEs), because some mental health providers serve more than one school in a district, and the number of staff may be double-counted by schools in the same school district. Although the questionnaire asked schools to estimate the number of full-time and part-time mental health providers, most respondents were not able to provide this information.

More detail on the study findings can be found in two sets of analytic tables, which are included in the report as Appendix C of the larger report (Foster *et al*, 2005; www.samhsa.gov). The school tables display results by percentage of schools, with cross-tabulations by key school characteristics where it is possible to make comparisons. The district tables are similarly organized, and comparisons are made by district characteristics. The text of the larger study report highlights differences by school characteristics that were statistically significant at the $p<.05$ level.

The estimates presented in this article do not indicate to what extent services were provided by trained specialty mental health professionals, or by other school personnel without specialty training. Differences in estimates of the availability of mental health services in public schools relative to other such studies may be due to differences in sample design, definitions of mental health services, location of services, and year of data collection.

Results

Eligibility for mental health services

In the vast majority of schools (87%), all students were eligible to receive mental health services; 10% of schools required students to have an Individualized Education Plan (IEP), indicating special education status, to qualify for services. The proportion of schools in which all students were eligible was higher in the Northeast (96%) than in other regions. While the overall percentage of schools with eligibility for all students

was high, it was somewhat lower in schools with high enrollment of minority students; 83% of schools with high enrollment of minority students reported that all students were eligible for services, compared with 91% of schools with low minority enrollments (data not shown).

Mental health problems and services

The school questionnaire included a list of 14 psychosocial or mental health problems (***Box 1***, below) that were identified in consultation with the study advisory panel. Respondents were asked to rank the three problems most frequently identified for male and for female students. The list covered a broad spectrum of concerns, from relatively mild problems such as difficulty in adjusting to a new school, to more significant behavior problems such as bullying, to serious psychiatric and developmental disorders (although the list does not specify which disorders or diagnoses are included in this category). As seen in ***Table 1***, below, the problem category most frequently cited by schools, for both males and females across all school levels, was social, interpersonal, or family problems. The second and third most frequent problems for males were aggression or disruptive behavior and behavior problems associated with neurological disorders (such as attention-deficit/hyperactivity disorder); for females, anxiety and adjustment issues were cited as the second and third most frequent problems.

For both boys and girls, depression and substance use/abuse were reported more frequently as school level increased. Although depression was less frequently cited as a top mental health problem for boys, the proportion of schools reporting it as a major problem varied from eight percent in elementary school to twenty-three percent in high school. The frequency of substance abuse as a major problem also jumped sharply from middle school to high school, from four percent to thirty-four percent. Very few (six percent) of schools named major psychiatric or developmental disorders as one of their top three mental health concerns (data not shown). However, some districts observed in their open-ended comments that mental health problems were being identified earlier and were of a more serious nature than those seen in previous years. Comments also noted a lack of adequate treatment options in the community, particularly residential and inpatient beds.

BOX 1 ***Psychosocial or Mental Health Problem of Students***

- Adjustment Issues
- Social, Interpersonal, or Family Problems
- Anxiety, Stress, or School Phobia
- Depression, Grief Reactions
- Aggression or Disruptive Behavior
- Behavior Problems Associated with Neurological Disorders
- Delinquency or Gang-Related Behavior
- Suicidal or Homicidal Thoughts or Behavior
- Substance Use/Abuse
- Eating Disorders
- Concerns about Gender or Sexuality
- Physical or Sexual Abuse
- Sexual Aggression
- Major Psychiatric or Developmental Disorders

Source: *School Questionnaire, School Mental Health Services in the United States, 2002-2003.*

TABLE 1 ***Percentage of Schools That Cited the Following Mental Health Problems as Among Their Top Three Problems, by School Level, 2002 - 2003***

	Elementary % (N=579)		Middle % (N=220)		High % (N=295)	
Mental Health Problem	Males	Females	Males	Females	Males	Females
Social, interpersonal, or family	72	80	77	83	66	74
Aggression or disruptive behavior	64	30	69	30	54	18
Behavioral problems assoc/w neurological disorders	51	26	35	15	20	6
Adjustment issues	24	37	27	37	23	27
Depression, grief reaction	8	21	12	31	23	47
Anxiety	17	42	22	12	17	36
Substance use or abuse	**	**	4	3	34	19
Delinquency and gang-related problems	2	**	11	4	10	5

Source: *School Mental Health Services in the United States, 2002-2003.* Substance Abuse and Mental Health Services Administration, U.S. Department of Health and Human Services. School Questionnaire, Item 27, Appendix C, School Tables 15, 15A.

** *Value <1%*

Note: *Does not include schools that responded to "critical items" only. Does not include 34 "combination" schools.*

Overall, schools reported that 19.7% of students had received some type of school-supported mental health service in the school year prior to the study (data not shown). Respondents were asked to chose from a list of 11 services (***Box 2***, below) provided either directly by the school or district, or through community-based organizations with which the school or district had a formal arrangement, such as a contract or memorandum of agreement. As seen in ***Table 2***, below, more than 80% of schools provided assessment for mental health problems, behavioral management consultation, crisis intervention, and referrals to specialized programs. Two-thirds or more of schools provided individual counseling, case management, and group counseling. Short-term interventions (such as behavioral management consultation, crisis intervention) were more commonly provided than longer-term services (such as counseling, case management, family support services).

The service most frequently ranked as 'difficult' or 'very difficult' to deliver was family support services, followed by medication/medication management, substance abuse counseling, and referral to specialized programs or services (data not shown). Seventy-one percent of schools provided referrals to community providers; however, thirty-seven percent of those schools described such referrals as 'difficult' or 'very difficult' to accomplish.

Schools were asked to rank the extent to which various factors were barriers to the delivery of mental health services, using a scale of 1 to 4, where 1 was 'not a barrier' and 4 was 'a serious barrier'. Financial constraints on families (defined in the survey instrument as 'can't afford services or lack of insurance') and inadequate internal and community mental health resources were the factors most frequently reported as barriers or serious barriers. Language and cultural barriers, and protection of student confidentiality, were least frequently cited as barriers or serious barriers (data not shown).

Although the survey focused on mental health treatment, one question on prevention/early intervention programs was included in the questionnaire. More than three-quarters (78%) of schools reported providing school-wide strategies to promote safe and drug-free schools and prevent alcohol, tobacco, or drug use; 63% of schools reported using prevention and pre-referral interventions (for example team and family meetings for students with behavioral problems) and curriculum-based programs. Less-frequently reported approaches to prevention and early intervention were peer counseling/mediation and support groups (47% of schools), and outreach to parents regarding mental health issues (34%).

In an open-ended question, schools were asked to describe approaches or strategies they found most successful in improving student mental health. Responses cited curriculum-based programs and classroom guidance to enhance social and emotional functioning. Topics for such programs included anger management, prevention of violence and bullying, conflict resolution, and character education.

BOX 2 ***Mental Health Service Categories***

- Assessment for emotional or behavioral problems or disorders (including behavioral observation, psychosocial assessment, and psychological testing)
- Behavior management consultation (with teachers, students, family)
- Case management (monitoring and coordination of services)
- Referral to specialized programs or services for emotional or behavioral problems or disorders
- Crisis intervention
- Individual counseling/therapy
- Group counseling/therapy
- Substance abuse counseling
- Medication for emotional or behavioral problems
- Referral for medication management
- Family support services (e.g., child/family advocacy, counseling)

Source: *School Questionnaire, School Mental Health Services in the United States, 2002-2003.*

TABLE 2 ***Percentage of Schools Providing Various Mental Health Services by School Level, 2002 - 2003***

Mental Health Service	Elementary N=579 %	Middle N=220 %	High N=295 %
Assessment	90	87	86
Behavior Management Consultation	89	86	82
Crisis Intervention	87	86	82
Referral to Special Programs	85	83	81
Individual Counseling/Therapy	75	79	72
Case Management	74	70	68
Group Counseling/Therapy	70	67	61
Family Support Services	59	56	58
Substance Abuse Counseling	34	53	56
Medication/Medication Management	33	35	33

Source: *School Mental Health Services in the United States, 2002-2003,* Substance Abuse and Mental Health Services Administration, U.S. Department of Health and Human Services. School Questionnaire, Item 29, Appendix C, School Table 17A

Note: *Does not include schools that responded to "critical items" only. Does not include 34 "combination" schools.*

Comments also described interdisciplinary 'student assistance' or 'student service' teams comprising mental health professionals, educators, and nurses; teams sometimes included representatives from juvenile justice, community mental health, and child welfare.

Administrative arrangements for mental health service delivery and coordination

Almost one-third of school districts (32%) reported that they used only school or district-based staff to provide mental health services, while 28% of districts reported that they contracted only with outside providers for mental health services. Overall, almost half of school districts (49%) used some contracts or other formal agreements with community-based organizations and/or individuals to provide mental health services to their students. These arrangements were most frequently made with county mental health agencies (29%), community health centers (19%), individual providers (18%), and juvenile justice systems (17%). Arrangements with local hospitals and faith-based organizations were least common (six percent and four percent respectively) (data not shown).

Only two percent of school districts reported that they operated a mental health unit or clinic serving multiple schools; however, seventeen percent of schools reported having an arrangement with a 'school-based health center operated by a community-based organization' to provide mental health services to their students. These arrangements were more frequent in middle schools (23%) than in elementary schools (16%) or high schools (14%), and were more prevalent in urban schools (22%) than in suburban (15%) or rural schools (15%) (data not shown).

Approximately one-third of schools reported that they 'rarely or never' held interdisciplinary meetings among mental health staff, or shared mental health resources and conducted joint planning sessions between mental health and other staff. However, 40% of schools did report holding such meetings, and one third of schools held weekly or monthly joint planning sessions between mental health and other school staff, as well as weekly informal communication (data not shown).

Staff providing mental health services in schools

Almost all schools (96%) reported having at least one staff member whose responsibilities included providing mental health services to students. The most common types of staff were school counselors, nurses, school psychologists, and social workers (***Figure 1***, opposite). Three-quarters of schools had at least one school counselor on staff, more than two-thirds had a school psychologist and/or a school nurse, and 44% had a school social worker. Sixty-nine percent of schools reported having a school nurse who provided mental health services; school nurses spent approximately one-third of their time providing such services (data not shown).

Most schools reported having between two and five staff responsible for providing mental health services, but the distribution was very broad, from no staff (three percent of schools) to ten or more staff (six percent of schools). The most commonly reported number of staff providing mental health services was three (twenty percent of schools). Eight percent of schools reported that only one person in their school provided mental health services; this was most likely to be a school counselor, a school psychologist, or a school social worker (data not shown).

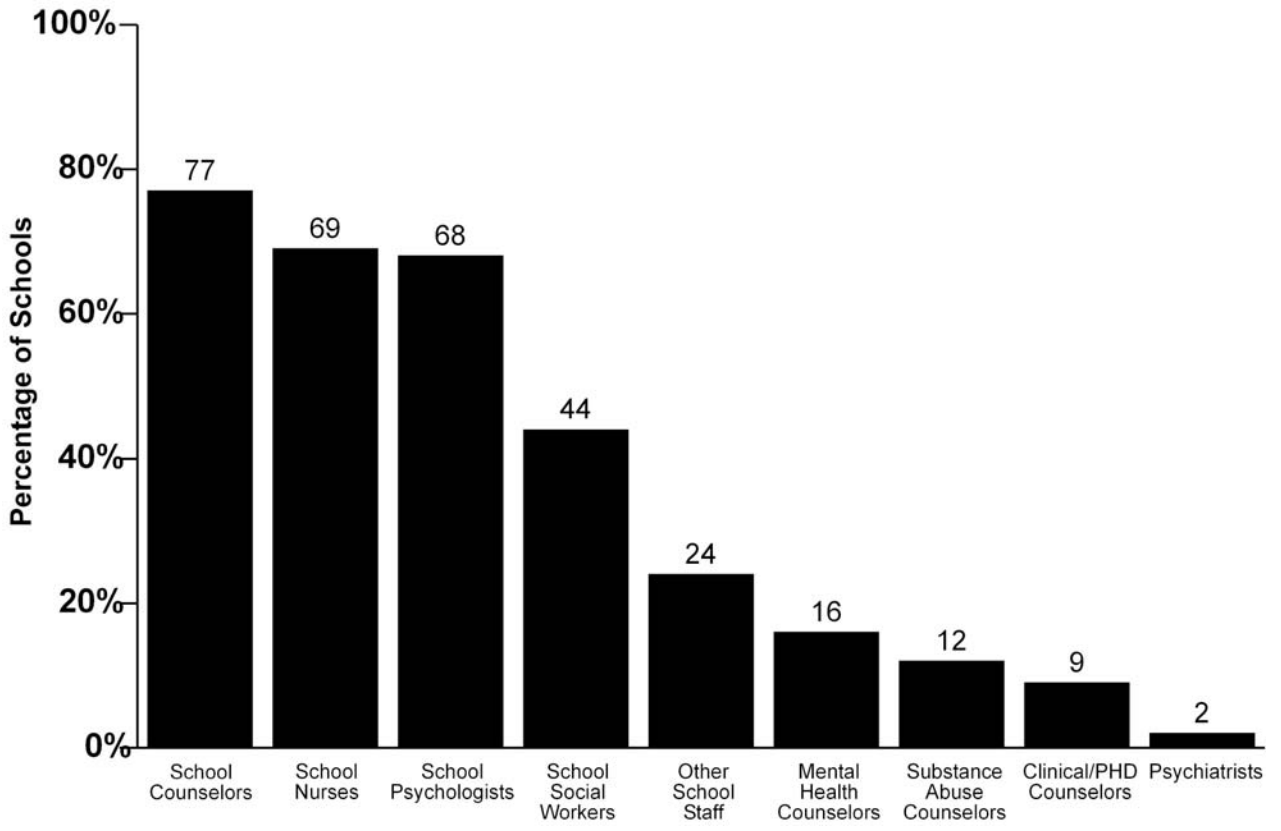
The average overall ratio of mental health staff to students was 1.0 per 500 students; it was highest in the Northeast (1.2 per 500 students) and lowest in the West (0.7 per 500 students). While the ratio varied relatively little across school levels, there was more variation by urbanicity; urban schools averaged 0.8 mental health staff per 500 students, while schools in rural locations had an average of 1.3 mental health staff per 500 students (data not shown).

More than 87% of school psychologists, school counselors, social workers, and mental health counselors held master's degrees or higher, and were licensed or certified in their fields. Substance abuse counselors and nurses were more likely to be licensed (80% and 88%, respectively) than to hold a master's degree (69% and 54%, respectively) (data not shown). The data do not indicate, however, whether qualifications such as master's degrees or licenses in some fields (for example nurses, school counselors) involve specialty training for the provision of mental health services.

Funding for mental health services

Nationally, the top Federal sources of funding for school mental health intervention services were the *Individuals with Disabilities Education Act* (IDEA, which funds special education), reported by 63% of districts, State special education funds (55% of districts), local funds (49% of districts), and State general funds (41%

FIGURE 1 ***Percentage of Schools with Various Types of Staff who Provide Mental Health Services, 2002-2003***



Source: *School Mental Health Services in the United States, 2002-2003,* Substance Abuse and Mental Health Services Administration, U.S. Department of Health and Human Services. School Questionnaire, Item 13, Appendix C, School Table 9.

of districts) (data not shown). Thirty-eight percent of districts reported Medicaid reimbursement (health insurance for families below income cut-offs) as a funding source for mental health services; twenty-eight percent of districts indicated that Medicaid was one of their top five sources of funding. Title IV (the Safe and Drug-Free Schools and Communities program) was most frequently reported by districts as a prevention resource (57% of districts), followed by local funds (43%) and State general funds (39%).

Sixty-nine percent of districts reported that the level of need for mental health services had increased since the previous year. Fifty-six percent of districts reported an increase in the number of general education students served, and sixty percent of districts reported an increase in referrals to outside providers. However, only 21% of districts reported that the number of mental health staff had increased since the previous school year, and 33% of districts reported that their funding for mental health services had decreased from the previous year (data not shown).

Respondents indicated that there were few Federal, State, or local funding sources earmarked for mental health services to students, other than for students in special education (data not shown). In open-ended comments, many districts cited competing priorities for the use of funds, such as the need to document increases in academic achievement, as a major impediment to providing mental health services in schools.

Discussion

These study findings indicate that in 2002–2003, public schools were making considerable attempts to be responsive to the mental health needs of their students. One-fifth of students received some type of school-

supported mental health service in the school year prior to the survey, almost half of schools had formal arrangements with community-based providers, and one-fifth of districts reported that the number of mental health providers on their staff had increased since the year prior to the survey. At the same time, findings also indicated an ongoing or increasing need for mental health services, and suggested multiple challenges faced by schools in addressing those needs, serious funding pressures, and inadequate community-based resources.

As might be expected, the most common mental health problems among students were found to be social, interpersonal, and familial in nature. Aggressive and disruptive behavior, and behavior problems associated with neurological disorders (such as attention deficit-hyperactivity disorder), were the most frequent problem for boys, while girls were perceived as facing more anxiety and adjustment concerns. More than half of all schools offered services commonly used to treat such problems, although family support services and group counseling were less available than individual interventions. Since ADHD and anxiety disorders are often treated with medication, it is worth noting that schools reported having difficulty both in providing medication management and in making referrals for medication evaluation.

Elementary, middle, and high schools faced different challenges in responding to the mental health needs of their students, which may have implications for teacher training and professional development, parent education, and prevention and intervention strategies. Elementary schools were more likely to be dealing with aggressive and disruptive behavior, which can have a negative affect on the learning environment for all children in a classroom. Almost two-thirds of elementary schools used curriculum-based programs to enhance social and emotional functioning and reduce barriers to learning; programs focusing on building skills such as anger management and conflict resolution were reported to be particularly helpful. At the middle school level, depression, alcohol/drug problems, and delinquency emerged as major concerns. Approximately three-quarters of all schools used school-wide strategies directed at promoting drug-free environments, but schools also reported that substance abuse counseling was less readily available than certain other services. In high schools, alcohol/drug problems and depression were more often reported as top mental health problems, and reportedly made more demands on mental health resources. However, substance abuse counselors accounted for only a small proportion of all mental health staff on-site in schools.

Even those schools without formal arrangements with community providers reported making active referrals, and 40% of schools reported that they participated in team meetings with community providers. These findings support recent research (Brener *et al*, 2001; Weist *et al*, 2001) indicating that some districts are moving toward provision of a full continuum of mental health care by partnering with community agencies and individual providers. Open-ended responses point to the importance of strong collaborations and connections between schools and community providers in order to optimize the intensity and scope of available services.

The most frequently reported barrier to receiving services was financial constraints on families, and almost half of schools cited inadequate internal and community mental health resources as 'barriers' or 'serious barriers'. This suggests that, while schools and their community partners were attempting to meet students' mental health needs, accessing services under the current system was often dependent on the financial resources of the family rather than the school system. Lack of (or inadequate) insurance and insufficient mental health resources in the community reportedly impeded access to mental health services for students, while increasing the pressure on schools to assume responsibility for addressing students' mental health needs.

Conclusions

The study found that several basic mental health services – assessment, behavior management, crisis intervention, and counseling – were widely available in schools. While the extent of this service array might suggest that schools were providing the full continuum of services required by students with mental health needs, this finding must be interpreted cautiously. The survey did not ask about the quantity of services, specialty qualifications of staff providing services, or the extent of unmet need for services. Responses to open-ended questions suggested that existing mental health resources may not be sufficient to support the services necessary to address fully the needs of students. School staff providing mental health services described many competing demands and significant role constraints.

Some schools commented that mental health problems encountered were more serious, and appeared at an earlier age, than those seen in previous years. Many districts voiced concern about the lack of treatment options in the community, particularly for 'deep-end' services such as residential or crisis facilities for students in need of placement outside their home environments. These responses point to the need for a shared agenda, in which schools, families, and mental health systems in the community work together toward the development and availability of a full continuum of mental health promotion, prevention, early intervention, and treatment services for students in general education as well as special education (see lead article, this issue). Further research should also address ways in which prevention programs can combine with treatment services and service providers to promote a continuum of care in the school setting.

While the study found widespread eligibility for mental health services and a relatively wide array of services provided, it should be noted that the definition of mental health services used was quite broad and inclusive. Individuals providing mental health services in schools include staff with graduate degrees and licensure in their fields, but the survey did not address the extent to which staff possess specific mental health qualifications for treating the major presenting problems at each school level. Future research is needed to examine the specialty qualifications and professional development needs of staff providing mental health services in schools. Similarly, the survey indicated the proportion of schools offering various types of service, but did not examine the intensity or duration of those services, or their adequacy, appropriateness, or quality. These are important questions that should be addressed in future research efforts.

It is also important to learn more about the amount of funding allocated to different types of prevention, assessment, and treatment services in relation to the number of children served and their presenting problems. Such analysis would shed light on equity of funding, and would help to guide decision making. Further examination of differences in levels of mental health funding and resources by region, urbanicity, minority enrollment, and other school characteristics is also important, and the issue of disparities in access to mental health services in schools merits further study. For example, while in the majority of schools all students were eligible to receive mental health services, schools with high minority enrollment were somewhat more likely to restrict mental health services to students in special education.

This study offers a baseline regarding mental health services provided in public elementary, middle, and high schools and their associated school districts in the United States. The study's findings confirm that mental health services currently play an integral role in the school setting. However, the findings also suggest that needs for mental health services are increasing, and that adequate funding and availability of community resources are essential if schools are to meet the challenge of addressing these needs.

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School Mental Health: Politics, Power and Practice

Key words: school mental health; politics; youth participation; implementation evaluation

A B S T R A C T

Progress has been made in the implementation of school mental health promotion, but there are some underlying issues that need to be recognised and addressed to ensure that the outcomes of current endeavours are maximised. These issues are politics, power and practice, and they reflect the different concerns and perspectives of some of the stakeholders, politicians, the media, mental health professionals, school personnel, parents and students. Using a mix of research and practice examples, this article demonstrates how politics and power shape practice. The issues are exemplified in discussion of collaboration, youth participation, professional positioning and quality mental health promotion implementation.

Introduction

School mental health promotion can be seen as the latest in a wave of health and social issues that schools have increasingly been called upon to include in curriculum and policies. These issues, identified in the past and many of them still present, range from drug use and abuse in the 1980s to HIV/AIDs and safe sex campaigns in the 1990s and, in the new century, mental health and mental illness. There have been many, often more localised or less intensive, 'epidemics' in between – drink driving, solvent abuse, teenage pregnancy, anti LSD, heroin and ecstasy strategies, youth suicide prevention, self-harm and, more recently, fears about the impact of new technology and cyber-bullying. There has also been growing awareness that these are not all distinct phenomena and that many of them have a common etiological base (Resnick *et al*, 1997; Zubrick *et al*, 1995; National Crime Prevention, 1999), and some generic implementation principles have emerged for quality comprehensive whole-school approaches. These have been used to address various health issues.

Additionally, attention to many of these issues has increasingly been fuelled by interest groups, media publicity and politicians, epidemiological data and other research-based findings shaping policy and priorities. School health issues are firmly on the media's agenda. Often the coverage consists of finding fault with what schools are doing. School health is also on the agenda of politicians, who in response to a parent/media furore offer 'quick fix' solutions that are usually not grounded in existing practice. In all this, schools are called upon to 'solve the problem'. Education personnel are concerned that each of these 'new' issues diverts attention from the core business of schools: learning and academic achievement.

Alarm is also sounded by some health sector personnel. They claim that action on a single health issue (for example violence prevention) and resultant focused funding create competing initiatives within school health that hinder progress. Too many splinter groups are vying for attention, undermining and diverting action away from the building of comprehensive school health approaches. School health is now, more than ever, a politicised issue.

An added political influence is the global concern about terrorism. Different countries' responses to this are not only translated into safety concerns, but actions too are seen as necessary in the name of personal and country security. Fear is used as a weapon by politicians (Furedi, 2002), taking personal safety and well-being out of the health domain and into the political domain. Schools are subject to violent attacks, and children are used as weapons of war when schools are targeted for attacks and bombing in civil conflicts. In this political context, mental health can be a victor (more focus and funding) or a victim (human rights violations such as restricted movement in a neighbourhood) in the name of safety and security.

Addressing the mental health[1] and well-being of school community members is a recent addition to the history of school health, even though it builds on earlier practice and research in the field. However, in a range of ways it illustrates new research and practice, draws attention to the importance of acknowledging who exerts power and the underpinning influence of professional politicking, and exemplifies some of the current debates about evidence-based practice and practice-based evidence. These kinds of research and practice are reviewed in this article, in light of the current forces shaping mental health promotion and prevention in schools. From this review, strategies are proposed that acknowledge and incorporate various areas of action, in order to advance practice and achieve progress in the field.

School mental health promotion: expanding the concept

School mental health promotion requires expanded conceptualisation, moving on from its existing focus on practice in mental health services in and for schools. Much of the research and conceptualisation that are the basis for existing practice arise from linear thinking that delineates specific causes and effects. The expansion aims to achieve a more balanced approach which includes a positive, enhancing focus. It also involves changing the power balance in implementation between 'experts' and 'clients'. Rather than single-issue, single-implementation change, whole-school change involving complex, multiple, interacting factors is required (Rowling & Jeffreys, 2006).

The conceptualisation and complexity of this enhanced approach can be illustrated by two ideas from systems theory that help to explore adolescent mental health interventions (Cichetti & Rogosch, 2002). They are equi-finality, where you reach similar outcomes from different starting points, and multi-finality, where you reach different outcomes from the same starting point. The importance of these two concepts for this paper is that they help to elucidate the limitations of linear thinking in school mental health practice (Rowling, 2006). Systems theory's concept of multi-finality is supported by educational change and innovation research, which indicates that schools are at different starting points and that interventions can have different effects depending on the school's state of readiness (Reynolds & Teddlie, 2000).

A generic implementation approach such as the health-promoting schools framework offers a whole-school approach with a breadth and balance of action, involving co-ordinated action between the three components:

- curriculum, teaching and learning
- school ethos and environment
- partnerships and services (Sheehan *et al*, 2002).

In this settings approach, as well as concern for developing personal competencies, there is:

> *a desire to act in various ways on policies, reshape environments, build partnerships, bring about sustainable change through participation, and develop empowerment and ownership of change through the setting* (Whitelaw *et al*, 2001 pp340–1).

Acknowledgement of the wider determinants of health, for example educational level as a determiner of health, underpins the health sector's actions through other

[1]In this article 'mental health' refers to a positive concept, 'mental health promotion' involves strengthening the capacities of individuals and communities for mental health and well-being, and 'mental illness' denotes a diagnosable mental disorder that interferes with an individual's functioning (Rowling, 2002).

sectors such as the education sector, and involves building the organisational capacity of the school to address mental health issues (Rowling, 2003).

Politics in school mental health promotion

In the fields of school health promotion and school mental health promotion there has been increasing emphasis on approaches that are wider than efforts that focus on the school health curriculum and those that view the school community as a healthy place (Peile, 2004). This changed emphasis is counterposed to the practice of seeing schools as places with a captive audience for the reception of programs and services developed and implemented in a 'one size fits all' model. The paradigmatic shift moves practice from an information-giving orientation (health education in the classroom) and intervening with children and young people with problems, to a whole-school change approach. The school community's status as a 'healthy place' involves the culture and conditions in the physical and psychosocial environments of schools for students, staff, parents and the wider community.

Creating conditions such as safe and friendly schools involves comprehensive action, co-ordination within the school and collaboration with service providers (Rowling & Jeffreys, 2000). While the impact of the social setting on school health is recognised, the politics of both the health and education sectors is also important. Although the term 'politics' is most commonly applied to behaviour within governments, politics is observed in many human group interactions. It is the process by which individuals or relatively small groups attempt to exert influence over the actions of an organisation. It is also the process by which groups make decisions. It is the authoritative allocation of values. In its most basic form, politics consists of 'social relations involving authority or power' (en.wikipedia.org/wiki/Politics, accessed 19/03/07). The questions 'who has the power?' and 'what do they value?' are key to understanding the wider forces influencing professional school mental health promotion and prevention practice.

Mental health promotion as a field of practice is a relatively new endeavour. The impetus for actions arises from growing recognition of the expected burden of disease by 2020 from the impact of depression on individuals and communities (Murray & Lopez, 1996) as well as increasing anxiety (Twenge, 2000). School mental health promotion and prevention are distinct from other school health concerns in their focus and implementation. In particular, there is far less emphasis on dimensions of social control; there are strong 'don't messages' in nutrition, sex education, and alcohol and other drugs education, but mental health, taking a positive perspective, results not in 'don't messages' but in personal and social enhancement 'do messages'.

Experts

Another significant difference is that there is a sizeable existing mental health/mental illness workforce, and some of the professionals are already employed by the education sector as service providers within schools, in centralised education departments or linked health service organisations. In most cases these professionals are psychologists or psychiatrists who bring to the school domain particular world views, experiences and values. Until recently, in most countries the general orientation of the work has been the individual – students with problems and 'at risk' students – and the focus has been on identification and intervention. This orientation represents a linear and 'one size fits all' view of the world: identify a problem, and treat/intervene with the individual, while ignoring the context and conditions that may contribute to and reinforce the problem. There is growing awareness of the limitations of the single-issue approach. For example, the 'positive psychology' movement has highlighted the previously skewing of practice and argued for addition of a focus on 'health' rather than illness and disease, and on the wider environment that affects mental health and well-being (Seligman & Csikszentmihalyi, 2000).

As established professionals, psychologists and psychiatrists occupy a hegemonic position, with their well-developed research and practice standards, and so have exercised influence on educational bodies in the community and in the political realms as the recognised 'experts' in school mental health (illness). The current power of their position is clear, in that the 'language' of mental health is filtered through an illness lens. This positioning may have been reasonable, given the training and orientation of these professional groups and their situated practice as service providers. But shifts in health issues with a high political profile, morbidity and mortality figures, and concerns about 'best' value for funding, have resulted in changes in priority areas and strategies.

Greater knowledge about the long-term outcomes

of investment in mental health promotion and prevention has demonstrated the need for a full continuum of practice (WHO, 2004). Changes in funding allocations based on acknowledgement of the wider field of practice have occurred, to accommodate this broader range of activity. The re-orientation and expansion of focus have had an impact on existing mental health workers whose speciality now has a lower profile. They may feel threatened, and lack the confidence and knowledge to work in different ways, and may lobby to maintain their position. They see that what they value is being challenged and their work undervalued, and react negatively, typically with the assertion that 'there's no evidence to support school mental health promotion'. While an expanded approach is not a replacement for current practice but an enhancement, conceptually it is different practice from what they have been trained in.

Mental health promotion and prevention work can be compromised when there is fear and little understanding, by the existing 'expert' groups, of the different timeframes for outcomes for promotion and prevention (to create the evidence), and the different measurements required for complex situations rather than the single, focused intervention in clinical/research conditions. An outcome is that understanding is often lacking about a realistic assessment of the period required to achieve school mental health promotion and prevention that involve individual, organisational and societal change.

Power relationships

The outcomes of the professional hegemonic position of many psychologists and psychiatrists, albeit unintentional, are clearly seen in their work with schools. Action is 'in' schools rather than 'with' schools, casting students and teachers as passive recipients. Yet educational research highlights the essential component of changed teaching practice as the capacity for teachers to adopt and use knowledge and skills to suit their specific context. Similarly, health promotion supports the building of capacity, the transfer of power by working with participants and clients. Power is a key to understanding the different work paradigms evident in the relationships with schools of many mental health professionals, and in good school mental health promotion. If providing environments for empowerment of school community members is critical for their mental health, then ways of working with schools need to build these supportive environments, not impose experts' preconceived plans.

The positioning of school community members in relation to the power they have in interactions is often ignored by outside agencies. In many health sector interactions with schools, there is little or no recognition of the dynamic nature of schools, the extensive research on school change and innovation, and the well-developed expertise of teachers and teaching (Rowling & Jeffreys, 2006). Schools and their staff have authority and power. They value children and young people and their learning; they have the ability to connect with young people and provide significant adults in their lives. They can create environments where young people are respected and where they achieve. There is extensive research on school connectedness (Anderson & Freeman, 2004), which Goodenow (1993) defined as:

> *the extent to which students feel personally accepted, respected, included, and supported by others in the school environment* (p80).

However, little is known about the beliefs and perceptions of school staff on how to keep students with high mental health support needs connected to school.

The main charter of schools is to engage the full range of students in successful learning, so educators are deeply interested in strengthening educational outcomes for young people who do not engage. As schools work with this group of students for the benefit of their education and training, they also play a vital role in promoting and protecting their mental health (Anderson & Freeman, 2004). The findings of a recent Australian pilot study using in-depth interviews aimed to identify staff perceptions about 'connection to school', especially in relation to students with high mental health support needs (Anderson & Freeman, 2004). Twelve staff members from four schools participated. They had a range of roles including principals, school counsellors, psychologists, co-ordinators of pastoral care and teachers. Staff described a number of ways in which high school students can be connected to school. They included:

- school provides identity
- school as a physical place to be
- school as a place for personal and social relationships
- school as a place to contribute, to learn and to be recognised

- school as a caring, safe place.

They identified the following characteristics which they developed to keep students connected:

- strong leadership
- capitalising on the diversity among staff
- positive support to staff
- a climate and a curriculum that are open and responsive to the real lives and aspirations of students
- pastoral care that makes sure everyone is known
- safety as a bottom line for everybody
- many opportunities to shine and develop identity
- valuing relationship building, especially through informal activities.

An important element in this connection is youth participation, involving young people in decision-making about issues that affect their well-being at school.

Staff had advice for other school personnel.

- Involve particular staff members in the specific task of reaching out to students with high mental health support needs.
- Nurture strong collegial support among these staff members.
- Provide multiple points of contact for students with high mental health support needs.
- Actively seek to build bridges for students with high mental health support needs from first contact.
- Search for a hook to establish a connection (one teacher suggested connecting with students through humour).
- Close the distance between staff and students.
- Help kids feel 'normal'.
- Add extra structure to help the students succeed.
- Be upfront about confidentiality.
- Be prepared to persist.

The advice teachers have for achieving student connection to school is grounded in their experience, practice-based evidence (Eraut, 2004), an area underused in school mental health promotion and prevention.

Keeping students at school is important not only for educational and mental health reasons, but also on economic grounds. Many schools now have their school funding based on student daily attendance. Schools budget for 'unexcused absence days', 'slush days', and 'snow days' to cover some non-attendance. But decision-making about unexpected events such as outbreaks of violence or a violent death that might keep a significant number of students away from schools can be influenced by the politics of school funding as much as by mental health needs. That is, school leaders are required to achieve a delicate balance between competing demands. They may refuse to close a school for a day to re-create a safe environment, because of the economic implications for the school budget.

Practice

Each of the preceding sections, politics, experts and power, is linked to practice. Prevention science has identified that, to be adopted, prevention programs need to be developed in partnership with those organisations for which they are designed and which will be responsible for their ongoing implementation (Ialongo, 2002). This is in contrast to the 'expert'-driven, top-down orientation of much previous work in the prevention of mental illness.

Case study: Check it Out!

A whole-school approach to mental health provides a supportive context for the implementation of specifically targeted programs. A key point in the section on power, above, was the need to work 'with' schools in the implementation of promotion and prevention action. That is, programs need to be developed and implemented in partnerships. Collaboration with education staff at school, district and state levels has been a key element in the development and implementation of Check it Out!, a program for adolescents aimed at reducing depression (Rowling & Kasunic, 2006). As a project based in a health service, rather than a university research context, Check it Out! originated in a climate of increasing local collaboration between health and education sectors. This provided opportunities to consult on and promote the initiative through key meetings, provision by education staff of advice on methodology and ethical issues related to consent, and their help in gaining the commitment of key personnel such as school counsellors. Local district staff from both sectors reviewed the screening battery to determine the acceptability of the screening measures, and conducted a district-wide survey to determine the most commonly

spoken languages, to assist in translation of consent materials.

Recruitment of schools occurred via the local principals' association – an important strategy, given the vital role of the support of principals in implementing successful changes in schools (Stoll, 1999). Once schools were involved, ongoing development meetings between the project coordinator, teaching and executive staff, and the school counsellor occurred. The eight-session program was designed to be easily accommodated into the school term, and the content was designed to be consistent with the health curriculum for that age group.

In the trial evaluation, the Check it Out! program was implemented by a clinical psychologist from the health service and the school's counsellor (a trained psychologist). This was found to improve collaboration between the agencies, as evidenced by increased referrals from the school to the health service, provision of clinical consultation regarding students, and co-facilitation of other group programs. The project provided training and experience for school counsellors on implementation of cognitive behavioural group programs and improved follow-up care for the students in the program.

The development of these local relationships has contributed to the sustained implementation of the Check it Out! program by schools in the local region. The local area health service continues to provide Check it Out! facilitator training, whole-school training, consultation and program materials to schools seeking to implement the program. It was concluded that reduction of depressive symptoms for the cohort that followed the trial may have been a result of the context of the program delivery and of building awareness and support with school staff. Drawing on school organisational change and culture, school effectiveness and practice-based evidence ensured that the local area health service program had relevance to schools and that the approach taken was relevant to the education sector. The collaborative practice in this model contributed to effective adoption and implementation.

Young people and power

Another power to practice issue focuses on young people. While youth participation may occur in recognition of young people's rights to be involved in all decisions that affect them (Harden *et al*, 2001), meaningful participation can itself enhance a young person's sense of connectedness (Oliver *et al*, 2006). For example *Reach Out!* (www.reachout.com.au) is an online service connecting young people and providing them with information, referrals to appropriate sources of help and stories about how others manage mental health problems. Youth participation is a key underpinning principle, as well as positive youth development models that stress recognising capacity and building skills. A key feature of the *Reach Out!* model is the participation of young people at all levels of the program, ensuring that they are involved in developing ideas and making decisions on the program goals and activities (Oliver *et al*, 2006).

Discussion

Professional positioning in relation to evidence-based practice and practice-based evidence creates controversy in implementation and evaluation of school mental health promotion and prevention (Rowling & Jeffreys, 2006). The United States (U.S.) Surgeon General's report on mental health (U.S. Department of Health and Human Services, 1999) focused on prevention, but did not include the health promotion concepts of adopting a comprehensive approach with acknowledgement of local context. This is because the criteria used to select the research that made the recommendations were based on a particular definition of evidence: evidence-based practice using a hierarchy of evidence in which the highest standard is that of randomised controlled trials (RCTs), highly controlled and standardised interventions. These research designs do not transfer to the naturally occurring conditions in schools. The report did not examine the advances in thinking and recommendations for practice in the wider school health promotion field, nor did it consider the importance of fidelity of implementation (Seligman, 1995; Rowling & Kasunic, 2006). These advances have identified the need to add at least two other data sources.

A World Health Organisation report on mental health promotion and prevention (WHO, 2004) advances practice, highlighting that transferable prevention action needs to combine knowledge from the science with local characteristics. The dilemma created is that, in the process of wider dissemination, the intervention may lose the elements that created the outcomes in the RCT. Thus evidence of the fidelity of implementation becomes an essential prevention outcome (Barry & Jenkins, 2007), along with the evidence

of treatment outcome. Trial prevention programs must be able to identify the core elements for successful implementation. Using this knowledge together with local factors assists in accommodating variation in cultural and economic conditions in interventions in new and diverse settings (Rowling & Kasunic, 2006).

A shift is also evident in a recent definition from the American Psychological Association (APA) Presidential Task Force on Evidence-based Practice (APA 2005). The report defined evidence-based practice in psychology as:

> *the integration of the best available research with clinical expertise in the context of patient characteristics, culture and preference* (p5).

In the educational field this practice-based evidence is defined as:

> *explicit knowledge derived from reflective scrutiny of evidence from research or from teachers' own pupils* (Cordingley, 2004 p78).

Combining these two definitional structures and ideas to describe evidence-based practice (for mental health) for teachers results in:

> *the integration of the best available mental health and educational research with pedagogical expertise in the context of student characteristics, school culture and context.*

Pedagogical expertise has been identified as including intellectual quality, relevance, supportive class environment and recognition of difference (Gore *et al*, 2004). The contribution of using both sectors' evidence-based practice has resulted in delineating some key components of school health promotion, namely:

- professional development of school staff
- active involvement of school staff in the planning and implementation of the intervention
- provision of resources to support schools to implement interventions
- an implementation period of at least 18 months
- a sound theoretical base and attention to changing social norms and influences
- a focus on at least two areas of the health-promoting school framework
- curriculum programs delivered by trained teachers in the usual school context
- engaging parents in the intervention (Rowling & Jeffreys, 2006 p716).

These components, combined with prevention science research (Greenberg & Weissberg, 2003), are equally applicable to school mental health promotion and prevention. If they are also well-grounded in the practice-based evidence of both professional groups, the complexity of the task becomes evident. Using evidence-based practice and practice-based evidence in implementation and evaluation of the Australia secondary school program MindMatters reveals the complexity of the school site in determining how interventions actually occur at school, year level or cohort and classroom levels (Rowling, 2006). Difficulties in managing this complexity have been echoed by the evaluation of the National Healthy School Standards in the United Kingdom (Warwick *et al*, 2005).

Conclusion

A number of debates have been highlighted in this article, arising from different sources, people, their disciplinary practice and research orientation, professional positioning and views about what counts as evidence. The added layers of issues associated with politics and power, combined with the complexity and diversity of the school environment, establish the enormous challenges that the school mental health promotion field has yet to overcome.

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School-based Interventions for Students with or at Risk for Depression: A Review of the Literature

Key words: depression; anxiety disorders; internalizing disorders; school-based intervention

Introduction

Depression is increasingly recognized as a significant problem for school-aged children. When left untreated, childhood depression is associated with several negative outcomes, including lowered self-esteem, social withdrawal, poor academic performance in school, and, in severe cases, even suicide (Rawson & Tabb, 1993). The existing literature suggests that as many as 2.8% of children and up to eight percent of adolescents in the United States experience depression, making it one of the most prevalent childhood mental health disorders (Collins *et al*, 2004). Considering the high prevalence, effective intervention options are imperative.

Despite the large number of children and adolescents affected by depression and depressive symptoms, the majority do not access intervention. Collins *et al* (2004) identified several barriers at the individual, provider, and systemic levels that influence whether an individual seeks and/or receives services. Variables at the individual level include willingness to disclose

A B S T R A C T

Internalizing disorders are increasingly recognized as a significant problem for school-aged children. Students with depression may experience lowered self-esteem, withdrawal, lack of concentration, and poor academic performance. Given these negative outcomes, as well as growing support for school-based mental health services, it is critical to examine the evidence supporting school-based interventions for students with or at risk for depression. This paper provides a review of research on interventions implemented in school settings to reduce children's depressive symptoms. A variety of variables related to intervention implementation and effectiveness were considered. Cognitive behavioral therapies emerged as the intervention with the strongest evidence base for reducing depressive symptoms, showing moderate to large effect sizes. In addition, relaxation training was identified as a promising practice, particularly for children with co-morbid symptoms of anxiety. Implications for both research and practice are discussed.

problems, fear of stigma and embarrassment, and demographic factors (such as age). Provider variables include knowledge of mental health problems, skill level in assessing problems, and willingness to diagnose and treat mental health issues. Finally, systemic variables consist of factors such as awareness of the range of effective treatment options, availability of mental health providers, and integration of mental health services into primary care. While these variables affect individuals at all ages, additional barriers faced by children and adolescents, such as reliance on parent/caretakers to access services and the lack of family health insurance, result in this population being largely under-served.

Although the majority of children with mental health challenges do not receive the services they need, among those who do, schools are the primary provider (Burns *et al*, 1995). In fact, research indicates that schools provide 70–80% of the mental health services that school-age children receive. The *Individuals with Disabilities Education Act* (IDEA, 2004) holds schools responsible for providing support services to children identified as having emotional and behavioral disorders. Unfortunately, there has been little understanding of what types of school-based practices and programs are effective and what makes them effective (Kutash *et al*, 2006; Weist & Evans, 2005). The poor outcomes among children identified as having an emotional or behavioral disorder underscore the urgency to identify evidence-based practices (Bradley *et al*, 2004). Thus, given the central role of schools in providing mental health services, coupled with marginal student outcomes, it is critical to scrutinize carefully the effectiveness of school-based intervention practices.

Existing reviews

In the recent past, several reviews have examined the evidence to support a variety of school-based mental health programs and practices (Rones & Hoagwood, 2000; Foster *et al*, 2005). These are summarized in a comprehensive monograph by Kutash, Duchnowski, and Lynn (2006). The reviews greatly advanced our understanding of the empirical data underlying the immense number of programs used in America's schools. For the most part, however, the programs and practices evaluated in the reviews were broad in scope, in that they were delivered to all or most of the school student body. In addition, they usually focused on prevention and frequently targeted general behavior problems (for example emotional and behavioral problems, bullying) or skill development (such as social skills, academics). As Rones and Hoagwood (2000) reported, few studies have targeted particular clinical syndromes (such as depression). Nor did the reviews evaluate specific program features that would make them applicable and feasible in school settings. Thus, a reasonable next step is to examine closely effective school-based interventions for targeted populations and psychiatric problems.

A relatively recent literature review by Curry (2001) examined the effectiveness of psychosocial interventions for childhood and adolescent depression. A total of 15 studies were reviewed, and the findings indicated that psychosocial intervention was indeed effective for reducing depressive symptoms into the normative range. Specifically, applying Chambless & Hollon's (1998) criteria, cognitive behavioral therapy (CBT) was both efficacious and superior to no intervention or other types of intervention (including family therapy and relaxation training). These findings were encouraging; however, the majority of studies (n=10) were conducted in clinical settings. Considering that the vast majority of children receive mental health intervention at school, it is imperative to examine intervention effectiveness when implemented in school settings (Kahn *et al*, 1990).

The review

The purpose of the present review was to examine the literature on school-based interventions for depression and depressive symptoms. The literature was reviewed to determine:

- what interventions have been implemented in the school setting
- whether interventions were effective in the school setting
- who implemented the interventions.

In addition, once efficacious interventions were identified, we further evaluated issues related to implementation in school settings by typical school personnel.

Method

Two methods were used to identify studies for inclusion in this review. First, computer searches were conducted using Psycinfo, Medline, and ERIC for articles published between 1982 and 2006. The following search terms

were used to identify articles: depression, depressive symptoms, social withdrawal, school, intervention, school-based intervention, children, and adolescents. Through this initial search 1473 articles were identified. Abstracts were reviewed for relevance, and those that met inclusion criteria (described below) were retrieved and the full article reviewed. In addition to the computer search, an ancestral search of each reviewed article was conducted by examining the reference section to locate additional articles not identified by the computer search.

Articles were identified for inclusion using the following criteria. Only articles appearing in peer-reviewed journals were included (dissertations were excluded). The study also had to describe a prevention or intervention program designed to reduce depressive symptoms. Intervention had to be implemented with children, aged 6 to 17, enrolled in grades K-12. Only studies that described interventions implemented in a school setting (public or private) in the United States were included.

Areas of evaluation

Each identified article was coded along the following dimensions. Average age, age range and/or grade of all participants were coded. In addition, ethnicity, when described, was coded. The type of school (private or public; elementary, middle, or high) in which the intervention was conducted was also noted.

The procedures for participant enrollment were coded as one of the following: a) open, in which enrollment in the study was open to all students in the class or school; b) inclusion contingent on screening for depressive symptoms, using cut-off scores on measures of depression or c) enrollment based on non-specific symptoms suggestive of depression.

The type of intervention (for example CBT, relaxation therapy) was coded along with the duration of the intervention, features of intervention delivery (such as group size), and the individual who conducted the intervention (researcher, teacher, psychologist, for example).

The research design and dependent variables were coded for each study as well. Studies were also coded for presence of treatment fidelity. The effectiveness of each intervention was coded by determining effect size. Lastly, the presence of follow-up data was noted.

Coding procedures

Each article was independently coded by two individuals. One coder was a doctoral student and the other had a doctorate. Both coders had previous experience of reviewing and coding research articles. Before the start of coding, all categories were defined operationally, and examples and non-examples were discussed by the two reviewers.

Inter-observer agreement

When all studies had been coded, each coded category was reviewed to assess inter-observer agreement. Agreement was determined by dividing total category agreements by agreements plus disagreements. Agreement was 100% across all categories, with the exception of type of intervention. Reviewers disagreed on the nature of the intervention (CBT & relaxation training vs. CBT only) for one study, making overall agreement for this category 93%. Coders subsequently reviewed the study and established consensus for analysis purposes.

Results

Fifteen studies met the inclusion criteria. ***Table 1***, opposite, provides detailed descriptions of the individual studies. There were a total of 2652 participants across all studies. Participants ranged in age from 6 to 17 years. Intervention programs were implemented with students from 1st to 12th grade. The ethnicity of participants was reported in 10 of the 15 studies. In these studies, 48% of participants were Caucasian, 34% African American, 16% Hispanic, and less than 1% other. It is important to note that some minority populations, such as Asian and Native American, were under-represented in these investigations. Studies were conducted in a range of school settings. Sixty-six percent of the studies were conducted in public school settings, and the remaining third in either private school or residential settings.

Criteria for participation in intervention

None of the 15 studies required an existing psychiatric diagnosis of depression for participation in the intervention. Instead, the majority of the studies (eight) conducted multi-tiered screening for depressive symptoms. This consisted of initial screening of all potential participants using a standardized measure of depressive symptoms (such as the Child Depression Inventory (CDI) or Beck's Depression Inventory (BDI)). Those who met a pre-determined cut-off score were further assessed using additional standardized measures,

TABLE 1 ***Description of Reviewed Studies***

Article	Participants/Diagnosis	Intervention	Dependent measures and Effect Sizes
Asarnow, Scott, & Mintz (2002)	23 students; 15 female, 8 male Grade= 4-6 57% White,17% Hispanic,13% Asian, 13% African American No diagnosis	CBT	CDI= .31
Cardemil, Reivch, & Seligman (2002)	152 students; 81 female, 71 male Grade= 5-8 Latino: 23 intervention, 26 control African American: 47 intervention, 56 control No diagnosis	CBT	CDI (Latino)= 1.01 CDI (African American) = .16
Clarke, Hawkins, Murphy, & Sheeber (1993)	Study 1: 622 students; 361 intervention, 261 control Grade=9-10 Study 2: 380 students; 190 intervention; 190 control Grade=9-10 No diagnosis	Depression Education	CES-D = .016
Clarke, Hawkins, Murphy, Sheeber, Lewinsohon & Seeley (1995)	150 students; 90 female, 60 male 76 prevention group 74 usual care control Mean age = 15.3 years 92.5% non-Hispanic White No diagnosis	CBT	CES-D = .35 HDRS = .30
Hains & Szyjakowski (1990)	21 males Age=16-17 years No diagnosis	CBT	BDI = .18
Hains (1992)	25 males Age=15-16 years No diagnosis	CBT AM/RT	RADS = .93 RADS = 1.14
Hains (1994)	10 intervention; 7 females, 3 males 9 control; 7 females, 2 males Grade= 11th 2 African American, 1 Hispanic 16 Caucasian No diagnosis	CBT	RADS = .78
Kahn, Kehle, Jenson, & Clark (1990)	68 students; 35 females, 33 males, Grade 6-8 No diagnosis	CBT AM/RT Self Modeling	RADS = 1.9 CDI = CNC RADS = 1.30 CDI = 1.01 RADS = 1.11 CDI = 1.11
Kellam, Rebok, Mayer, Ialongo, & Kalodner (1994)	685 students; 350 female, 335 male Mean age=6.3 years 56.9% African America, 19.2% Caucasian, 1% other ethnic groups, 22.8% unspecified No diagnosis	Academic Intervention	CDI (males) = -.22 CDI (female) =.18
Jaycox, Reivich, Gillham, & Seligman (1994)	143 students 69 treatment (34 female, 35 male) 74 control (32 female, 42 male) Age=10-13 years 83% White, 11% African American No diagnosis	CBT	CDI = .27 RCDS = .38
Miller & Cole (1998)	1 male student Age= 14 years Emotional behavioral disorder and previous diagnosis of depression	Social skills	Effect size could not be calculated. Scores on measure of depression reduced to sub-clinical range post intervention

TABLE 1 ***Description of Reviewed Studies (continued)***

Article	Participants/Diagnosis	Intervention	Dependent measures and Effect Sizes
Rawson & Tabb (1993)	99 students; 9 female, 90 male Age=8-12 years Behavior Disorder	Reinforcement	RCDS = .36
Reynolds & Coats (1986)	30 students Mean age=15.65 years No diagnosis	CBT AM/RT	BDI = 1.64 BID = 2.22 RADS = 1.32 BDI= 1.67 BID = 2.45 RADS = 1.31
Stark, Reynolds, & Kaslow (1987)	28 students; 12 female, 16 male Mean age=11.17 years No diagnosis	CBT Problem solving	CDI = 1.25 CDS = .82 CDRS-R = .98 CDI = 1.04 CDS = .41 CDRS-R = .65
Weisz, Thurber, Sweeney, Proffitt, & LeGagnoux (1997)	48 students; 22 female, 26 male Mean age=9.6 years 30 Caucasian, 18 ethnic minorities No diagnosis	CBT with Relaxation training	CDI = .63 CDRS-R = .39

Notes

CDI =Child Depression Inventory (CDI),
CES-D = Center for Epidemiologic Studies - Depression Scale
HDRS = Hamilton Depression Rating Scale
BDI = Beck's Depression Inventory
RADS = Reynolds Adolescent Depression Scale
RCDS = Reynolds Child Depression Scale
CDRS-R (Children's Depression Rating Scale - Revised) (13%)
BID = Bellevue Index of Depression, CDS = Child Depression Scale.

structured interviews, or a combination of both. In six studies, participation was open to all students in the school, district, or classroom. In one study, participants had to meet a list of inclusion criteria suggestive of symptoms of depression (for example learning and adjustment problems, classroom behavior problems).

Type of intervention

Several types of intervention were used in the 15 studies reviewed, and many of the studies compared multiple interventions, so the number of interventions exceeds 15. Cognitive behavior therapy (CBT) was implemented most often. This intervention was used in 73% (n=11) of the studies examined. Of the eleven studies, three compared CBT with anxiety management/relaxation training and one evaluated CBT and anxiety management/relaxation training in combination. All other interventions were implemented in only one study. These were reinforcement, academic intervention, education about depression, and social skills training.

The term 'cognitive behavior therapy' describes techniques that incorporate cognitive and behavioral models of behavior change. A number of different techniques and combinations of techniques were used as CBT interventions. Cognitive restructuring was used in the majority of studies (n=8). Cognitive restructuring involves teaching children to challenge distorted and negative cognitions about themselves and their environment and to replace those cognitions with more realistic ones. This technique is based on the assumption that children are depressed due to a maladaptive style of information processing (interpreting events as negative). If cognitions are more realistic (and potentially more positive), the individual should experience less depression.

Problem solving, also considered a CBT approach, was the second most frequently implemented technique, occurring in six studies. Problem solving involves teaching children to evaluate stress-provoking situations by gathering relevant information, thinking about alternative responses, and choosing the best response.

Pleasant activity scheduling was implemented in five studies. This intervention entails systematic planning of children's or adolescents' daily activities to incorporate pleasant and desirable events. For instance, children generate a list of preferred activities, which are incorporated into their daily routine to increase pleasant experiences.

Self-change (making self-evaluations and changing behavior as a result), attribution retraining (teaching children to make more realistic and adaptive attributions), and activities to link thoughts, feelings, and behavior (teaching children how all three are linked and influence

each other) were used in three intervention packages. Self-instruction was employed in two studies while self-modeling was used in one.

Duration of intervention

The duration of intervention implementation was reported in terms of the number of weeks, number of sessions, and length of each session in 13 studies. The interventions lasted from five to twelve weeks, and required between two and sixteen sessions, lasting from twenty to ninety minutes. Two studies did not specify intervention duration; one reported that the intervention was delivered through the entire day, and the second indicated that the intervention was delivered throughout the year.

Intervention delivery

With the exception of one single subject study, all interventions were implemented, at least in part, in a group format. For CBT interventions, 73% (n=8) were conducted exclusively in group sessions and 27% (n=3) used a combination of group and individual sessions. All anxiety management/ relaxation training interventions were delivered in a group format. Other types of intervention used group formats, with the exception of social skills instruction. One study implemented family therapy in addition to group intervention for the participant. Detailed information regarding group size for interventions identified as effective is provided in ***Table 2***, below.

Intervention agent

Interventions were conducted by school staff (teachers, school psychologists, etc) in 33% (n=5) of the studies reviewed. In the remaining studies, interventions were conducted by graduate students not affiliated with the school (27%; n=4), trained personnel not affiliated with the school (20%, n=3), graduate students placed in the school (13%, n=2), or the researcher (7%, n=1).

Intervention agent training

The level of experience of intervention agents varied. Interventionists had psychological training in 73% (n=11) of studies. Of those individuals, 36% (n=4) had previous experience of implementing similar interventions. In the remaining studies, information was lacking or teachers had no intervention experience. The amount of training provided to the intervention agent varied as well. Forty-seven percent of the studies reported providing specific training, ranging from two to forty hours. A detailed intervention/training manual was used in 40% (n= 6) of the studies.

Research design

The most common design implemented was some form of pre-test/post-test with random assignment to conditions (73%, n=11). Other designs included non-random assignment of participants (20%, n=3) and a multiple baseline across behaviors in the one single-subject research study. Twelve of the fourteen group design studies included a control condition, most often in the form of a wait-list control.

TABLE 2 ***Summary of Evidence-Based Interventions***

	Intervention	
	CBT (N=11)	AM/RT alone (N=3)
School Characteristics		
Public	73%	67%
Private	27%	33%
Elementary	0%	0%
Middle	55%	33%
High	45%	67%
Intervention setting		
Individual	0%	0%
Group	73%	100%
Combination	27%	0%
Group size		
2-5 students	27%	33%
6-12 students	36%	33%
Not specified	36%	33%
Intervention Agent		
Graduate student	55%	67%
Trained outside agents	27%	0%
Researcher	9%	0%
School staff	0%	0%
School staff & Researcher	9%	33%
Intervention Agent Training		
Intervention manual	45%	33%
Intervention training	36%	67%
Previous intervention experience	36%	33%
No information	27%	0%
Intervention Duration		
Number of sessions	8-15	9-12
Minutes per session	30-90	30-50
Total minutes	260-1080	270-600
Number of weeks	5-12	5-8

Dependent variables

All the studies reviewed used one or more standardized measure of depression as a dependent variable. Measures used were:

- Child Depression Inventory (CDI) (47%)
- Reynolds Adolescent Depression Scale (RADS) (33%)
- Reynolds Child Depression Scale (RCDS) (13%)
- Children's Depression Rating Scale – Revised (CDRS-R) (13%)
- Beck's Depression Inventory (BDI) (13%)
- Center for Epidemiologic Studies – Depression Scale (CES-D) (13%)
- Child Depression Scale (CDS) (7%)
- Bellevue Index of Depression (BID) (7%)
- Hamilton Depression Rating Scale (HDRS) (7%).

Additional dependent variables included self-esteem (33%), anxiety (27%), anger (20%), and explanatory style (13%). One study also assessed problem behavior, classroom behavior, reading achievement, daily and major life stressors, and negative cognitions.

Intervention fidelity

Studies varied in the assessment and reporting of intervention fidelity. In four of the fifteen studies, fidelity was not assessed. For an additional five studies, there was mention of measures to ensure treatment fidelity, such as training, supervision, and comprehensive treatment manuals, but fidelity data were not reported. For the remaining investigations (40%, n=6), fidelity was assessed and reported. In all six studies, intervention implementation was assessed by trained observers, who reviewed and scored audiotapes of intervention sessions using various measures, such as Likert scale ratings, treatment adherence rating scales, and point by point scoring of intervention components. Reported fidelity was high for these studies, averaging 93% (range, 83%-100%).

Intervention effectiveness

The effectiveness of each intervention was assessed by calculating effect sizes. Effect size was computed for each dependent measure by subtracting the treatment mean from the baseline mean and dividing by the pooled standard deviation (Cohen's *d*) for each study with a group design (93%). In the 11 CBT studies, the range of effect sizes was 0.16–2.22 (note: does not include 'low emotional arousal' students who did not have depressive symptoms in Hains, 1994). The effect sizes across the majority of CBT studies were moderate to large. Low effect sizes were found in two studies. In the first study (Hains & Szyjakowski, 1990) an effect size of 0.18 was obtained for depressive symptoms. The authors hypothesized that limited effects were due to reduction in depressive symptoms of both experimental and control groups, most probably related to low levels of initial symptoms.

The low effect size for the second study (Cardemil *et al*, 2002) was attributable to a sub-group of participants. The same intervention program was provided to two ethnically diverse groups of students at two schools. While results were positive for the Latino children (ES =1.01), little positive effects were noted for the African American participants (ES=.16). The authors provided several possible explanations for these results, including regression to the mean, differential expression of symptoms across ethnic groups, and ethnic variation in the response to different intervention components. The effect size was large in the study that combined CBT with relaxation training (.63).

Three studies evaluated relaxation training in isolation. Effect sizes were large, ranging from 1.14 to 2.45. Other interventions, such as academic interventions (ES=-.22 for males, .18 for females), education about depression (ES=.016), and non-contingent rewards (ES=.36) had small to moderate effect sizes. The study implementing a social skills intervention was a single-subject study with one participant. Although an effect size could not be calculated, results indicated that depression was reduced to non-clinical levels following intervention.

Follow up

Maintenance of intervention effects was assessed in 53% (n=8) of the studies at 1–12 months post intervention. Among these studies, treatment gains were maintained for all CBT and relaxation training interventions. In the study using depression education, follow-up data revealed that the small post-intervention decreases in depressive symptoms were not maintained at 12 weeks. Likewise, maintenance of effects for self-modeling alone did not occur.

Evidence-based interventions

Chambless and Hollon (1998) developed criteria to determine empirically supported efficacious interventions.

The criteria include:

- a randomized control trial with results superior to no treatment or equivalent or superior to another treatment of known efficacy
- use of a treatment manual, a specified population, valid and reliable outcome measures
- use of appropriate statistical analyses.

The criteria must have been met in at least two different research settings. Applying these criteria, CBT is considered an evidence-based intervention when implemented in school settings. Although Anxiety Management/Relaxation Training (AM/RT) does not meet the definition of an evidence-based practice, the only criterion that was not met was the use of a treatment manual, absent in two of the three studies. Thus we consider it a promising practice.

Table 2 provides a detailed summary of the interventions that emerged as evidence-based or promising practices. Both CBT and AM/RT have been implemented in public and private school settings, but neither intervention has been implemented with elementary age children. The interventions have been implemented almost exclusively in a group setting, generally by graduate students as part of a research study. The total intervention duration for CBT ranged from 4 hours, 20 minutes to 18 hours, while the AM/RT intervention duration ranged from 4 hours, 30 minutes to 10 hours.

Discussion

The results of this review indicate that, among the school-based interventions for depressive symptoms, CBT is the most researched, and benefits from the strongest empirical support with respect to effect size and maintenance of intervention gains. The CBT interventions used in the studies reviewed included variations, using different types of cognitive and behavioral components, all of which proved to be effective. The most frequently used components were cognitive restructuring, pleasant activity scheduling, and problem solving. Self-change skills, attribution retraining, and linking feelings, thoughts and behaviors were also relatively common components of school-based CBT.

Anxiety management/relaxation training appears to be a promising intervention, particularly for children with co-morbid symptoms of depression and anxiety. Given the limited number of studies, however, it is difficult to make conclusive remarks regarding this intervention. The absence of an intervention manual also limits the supportive evidence.

Despite the positive findings described above, there are several issues that need to be addressed related to implementation of interventions in the school setting. First, although CBT and AM/RT decreased depressive symptoms in middle and high school aged students, there were no studies that included participants with a diagnosis of depression. As mentioned earlier, the majority of studies conducted multi-tiered screenings for depressive symptoms, but did not require a diagnosis of depression for inclusion. There are two reasons why this might have occurred. First, there may have been ethical considerations about assigning children with a clinical diagnosis to a control group. In fact, in one study, potential participants who were identified as having major depressive or dysthymic disorder were excluded from participation and referred for community services (Clarke *et al*, 1995).

Second, children with internalizing disorders often go undiagnosed. Past research indicates that up to 30% of adolescents will exceed clinical cut-offs on self-report measures of depression (Hammen & Rudolph, 1996), although only a fraction of these children will ever receive a diagnosis. By including children with depressive symptoms, rather than just those with a diagnosis of depression, it is most likely that a larger and more representative sample was identified. Thus, although the effectiveness of school-based intervention with a clinical population *per se* was not evaluated, the results with symptomatic populations were positive.

Whether interventions for depression can be implemented by typical school personnel remains unanswered. Of the five studies with intervention implemented by teachers, three had low to moderate effect sizes, indicating that these interventions were moderately efficacious at best. It is important to note, however, that the implemented interventions had limited or no empirical support for the treatment of depression (depression education, academic intervention, reinforcement). The lack of effects, therefore, may have been due to the intervention itself, rather than the interventionists. The studies provided little to no training for teachers, and did not assess intervention integrity.

It is possible that, with adequate training and feedback on fidelity, positive effects might have been observed, as was the case in the fourth study that used school personnel (Miller & Cole, 1998). Intervention was implemented by a well-trained interventionist, and

high levels of fidelity were documented, which may have contributed to the reduction of depressive symptoms to non-clinical levels after the implementation of a social skills intervention with the study's single participant.

Considering just the interventions identified as evidence-based or promising, the feasibility of implementing CBT and AM/RT by typical school personnel also remains unclear (Adelman & Taylor, 1998). CBT and AM/RT were implemented by school staff in only one study. Specifically, in Kahn *et al* (1990), the school counselor implemented CBT, relaxation training, and self-modeling for some intervention groups after training from the researcher. On-going supervision and frequent integrity checks were conducted throughout the intervention. Results indicated that the interventions were effective in reducing depressive symptoms, with effect sizes above 1.0 for all three interventions. There were no discernable differences in effect sizes or implementation fidelity between this study and other CBT and AM/RT studies implemented by outside intervention agents. These results strongly suggest that, with the proper training, school personnel can implement effective interventions. Future research should document the amount of training to school-based personnel and level of fidelity necessary to ensure positive student outcomes.

The findings of the current review indicate that CBT and AM/RT required an average of approximately 10 hours of intervention. Given the high risk of later negative *sequelae* without intervention, including lower educational attainment, substance abuse, and poor work history (Weersing & Brent, 2006), this seems to be a minimal investment on the part of schools. In addition, from a cost–benefit analysis, without intervention, the need for academic remediation and social/emotional/behavioral interventions is almost certain. Many students will require costly tertiary interventions, including placement in more restrictive educational settings or hospitalization. In the long run, considering student outcomes and cost-effectiveness, the reasonableness of 10 hours of intervention seems indisputable. It is important to note also that CBT and AM/RT were demonstrated to be effective in a group format, thus minimizing the time and resources required. Future research should identify barriers to implementation.

Another issue important to address in future research is determining which CBT components are necessary and/or sufficient for positive outcomes. Given the numerous variations described in the literature, it is important to ascertain which components, or combinations of components, are most efficacious. By identifying the components that have the quickest, largest, and longest-lasting effects, intervention can be streamlined.

A promising intervention identified through this review was anxiety management/relaxation training. It appears that this intervention may be effective because, if anxiety is reduced, an individual will have less cause to be depressed and consequently depressive symptoms should decline. AM/RT appears to be somewhat easier to implement than CBT and requires less training and expertise. Additional research should be conducted to determine whether this promising approach can be considered evidence-based and to evaluate ease of implementation.

Ultimately, what is most important is that children and adolescents with depressive symptoms receive evidence-based interventions before negative outcomes occur. Considering data on the provision of children's mental health services, this will happen only if interventions occur in school settings. Preliminary research suggests that the interventions will be effective when implemented by school personnel. It is imperative that schools identify staff members who can receive training and begin to implement evidence-based interventions. Simultaneously, research must continue to refine effective practices, evaluate promising practices, and develop models of collaboration that allow school personnel and mental health experts to work together to ensure that schools provide effective interventions to all children in need.

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Teachers' Thinking about Classroom Management: The Explanatory Role of Self-Reported Psychosocial Characteristics

Key words: elementary secondary education; beliefs; classroom environment; classroom techniques; discipline; teacher stress; burnout

Introduction

The number of students with clinically significant emotional and behavior problems in today's regular education classrooms is growing, now accounting for 10–20% of the young population (New Freedom Commission, 2003). Unfortunately, 75–80% of these young people do not receive needed treatment (U.S. DHHS, 2001; Katoaka *et al*, 2002). Left untreated, these problems take a substantial toll on affected youth, placing them at risk for more serious conditions (such as substance use disorders and delinquency), poor peer relations, and decreased learning opportunities (Frick, 1998; Loeber & Farrington, 2000). For instance, between 38% and 75% of young people with a serious emotional disturbance (SED) also have a learning disorder or serious learning problems (Rock *et al*, 1997). Similar rates are found for those displaying conduct problems and aggression more specifically (Hinshaw, 1992).

For many young people experiencing emotional and behavioral problems, some form of aggression

A B S T R A C T

The aim of the current study was to expand upon research related to classroom management of student discipline problems by examining whether teachers' thinking about student aggressive classroom behavior and classroom management practices varied as a function of psychosocial characteristics. The first goal was to examine whether teachers experiencing higher levels of stress and burnout, and lower efficacy, rated student behavior as more severe and problematic and endorsed the use of punitive techniques. The second goal was to consider teacher psychosocial factors as possible moderators of the relationship between thinking patterns and use of punitive classroom management. Using a sample of 121 middle school teachers from 11 public schools in Southwestern Virginia, results partially supported hypotheses. Findings are discussed in terms of relevant literature related to educational climate, classroom management practices, and occupational stress in the teaching profession.

may also be present. Indeed, it is estimated that between five and ten percent of children display clinically significant forms of aggression (Kingery *et al*, 1998). This means that every regular education teacher may have at least one such child in each of his or her classes. For some, aggressive behavior patterns also tend to increase in frequency and severity over time, and the overall cumulative effect often includes a lifetime of impairment across domains of functioning (Loeber *et al*, 2000).

In the classroom, aggressive behavior also has a negative effect onthose in the surrounding environment, including peers, teachers, and family members. Children with these behavioral problems account for a high percentage of all discipline referrals annually (Nelson *et al*, 2004). Teachers are often spending precious class time focusing on classroom management, safety, and discipline needs, limiting learning opportunities for affected classes. Many also report feeling unprepared for the demands of these young people, noting both deficiencies in pre-service education and lack of opportunities for in-service training related to non-academic topics. Indeed, according to Merrett and Wheldall (1993), teachers reported that classroom management skills were of major importance to them professionally, and approximately one third felt that they had not received sufficient training in this area. Not surprisingly, discipline problems are also cited as the primary source of stress and burnout for many educators (Byrne, 1994; Friedman, 1995). Teachers' interactions with students are negatively affected by their own stress level, such that they use more harsh discipline and spend less time engaging students in a positive manner (Bibou-Nakou *et al*, 1999; Capel, 1992).

The school context has been an important factor in explaining why teaching continues to be a demanding occupation. It is all too often the case that well-intentioned policy makers, administrators, and professionals outside the classroom are setting forth expectations and limitations that make one's tasks inside the classroom more challenging. First, initiatives to improve school mental health and student learning have been on the rise during the last few decades. For instance, recent federal policy through the *No Child Left Behind Act* of 2001, designed to increase school accountability in improving student achievement, requires that students of all backgrounds and abilities achieve academic proficiency. Second, researchers in school mental health often require considerable teacher participation in training, service delivery, and evaluation of new programs and interventions. Although these programs may be effective in their anticipated goals, the increased burden on teachers is often not fully realized. As a result, it is not surprising to find that teachers are more affected by occupational stress than any other public service professional (Schwab *et al*, 1986).

Together, extant research in the areas of teaching and school mental health points to a potentially toxic environment that contributes to the ensuing stress experienced by educators in the school setting. However, the degree to which these stress reactions influence professional behavior and practices may be moderated by a number of factors that differentiate one teacher from another. In this regard, the aim of the current study is to evaluate the impact of certain psychosocial factors, including stress and burnout, on teaching and classroom management practices.

Psychosocial factors

Stress and burnout

Stress and burnout among teachers, and their impact on professional behavior and functioning, have received considerable attention in recent literature. First, there is increased concern over the rate of burnout, and its consequences, reported among teachers (Friedman & Farber, 1992). Second, given the increased attention to rates of stress and burnout among teachers, there is greater recognition of the importance of early identification and prevention of these emotional reactions to stressors in the school environment.

The focus on stress and burnout among teachers first emerged in the late 1970s (Kyriacou, 2001) in response to high rates of teacher turnover, and it has since become a major topic of research interest. In the educational literature, numerous definitions of the term teacher stress have been offered. They generally reflect some degree of mismatch between the demands on the teacher and his/her ability to cope with these demands which manifests as some sort of negative emotional reaction (Kyriacou, 2001). The term 'burnout' is typically defined as a more complex syndrome of negative reactions, including emotional exhaustion, depersonalization, and reduced personal accomplishment in response to occupational stressors (Brouwers & Tomic, 2000; Maslach, 1993).

Specifically, emotional exhaustion is characterized by feelings of being emotionally overtaxed and lack-

ing emotional resources. 'Depersonalization' refers to callous or excessively detached responses to others. 'Reduced personal accomplishment' is a self-perception that one has declined with respect to job performance. In relation to stress, burnout is thought to occur after a prolonged experience of unmediated stress (Friedman, 1995). Roger and Hudson (1995) also suggest that a key feature in the transition from stress to burnout is lack of emotional control and the tendency to ruminate about negative emotions.

It is not surprising to find that increased burnout is negatively associated with high-quality teaching practices, and more specifically with classroom management. For instance, teachers with higher ratings of burnout demonstrate less flexibility and acceptance with regard to various student needs, and poorer overall teacher–student interactions (Capel, 1992). According to Bibou-Nakou *et al* (1999), teacher burnout is also related to perceptions of child discipline problems and preferred teaching practices. However, the relationship between stress reactions and teaching practices is not well understood across cultures and contexts, and warrants further investigation among teachers at different levels of the developmental spectrum and across diverse community contexts where resources for teachers may differ.

Teacher efficacy

Podell and Soodak (1993) suggest that a teacher's willingness and ability to work with difficult students may depend on their beliefs about their ability to effect change. The construct of self-efficacy is based on Bandura's social learning theory (1977). According to Bandura, self-efficacy refers to:

> ***beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments*** (Bandura, 1997 p3).

He further notes that self-efficacy is based on active and observational learning experiences, as well as feedback provided by other individuals and one's own physiological responses during these experiences. Bandura (1997) also asserts that self-efficacy has an important indirect relation with one's functioning, by affecting one's goals and goal-attaining strategies, motivation and persistence, self-perception during goal-directed activities, and selection of situations in which to attain one's goals.

Teacher efficacy has been conceptualized as a more specific dimension of efficacy, reflecting the roles that a teacher takes. Specifically, it has been defined as the extent to which the teacher believes he or she has the capacity to affect student performance (Bergman *et al*, 1977 p137), regardless of presenting student factors such as difficult behavior or motivation (Guskey & Passaro, 1994). Teacher efficacy is related to a host of critical social and professional factors for the teacher, as well as a range of academic outcomes for students. Higher teacher efficacy is related to a higher likelihood that positive, helping strategies will be used with child behavior problems (Schwartz *et al*, 1997; Soodak & Podell, 1997). In studies where teachers were presented with hypothetical vignettes of child behavior problems, high efficacy was related to increased efforts to address these problems on one's own rather than refer to an outside professional (Hughes *et al*, 1993). In addition, findings from the work of Saklofske, Michayluk, and Randhawa (1988) suggest that self-efficacy is also inversely related to teachers' experience of stress, emotional exhaustion, and negativity towards others. Under the condition of low teacher efficacy, child behavior problems were viewed as a greater source of stress, and in turn led to more negative disciplinary actions.

The impact of teacher self-efficacy on instructional and classroom management practices also seems to be gaining empirical support. However, with few exceptions, the process by which efficacy affects teachers' reactions to behavior problems in the classroom is not yet well understood. Bandura (1997) suggested the importance of cognitive and affective processes (such as goal-setting and motivation) as pathways by which self-efficacy influences behavior. He also acknowledged that these processes are context-dependent, such that teachers' sense of efficacy is not uniform across the different tasks they are responsible for performing (Bandura, 1997). There remains a need to evaluate further the indirect impact of self-efficacy among teachers in particular, and to explain better the process by which this relation is found.

Present study

The aim of the present study was to expand on previous research related to student discipline problems and teachers' teaching and classroom management. The first goal was to examine whether teachers' thinking about student discipline problems and their class-

room management practices varies as a function of self-reported psychosocial characteristics. In particular, it was hypothesized that teachers experiencing higher levels of stress and burnout would be more likely to rate discipline problems as more severe and problematic and to endorse the use of punitive techniques to manage the discipline problems. The influence of teaching efficacy was also considered as a possible factor differentiating both teachers' thinking about classroom discipline problems and their proposed intervention strategies. The second goal was to elaborate on the contribution of psychosocial factors as it relates to these teaching practices. Both teacher stress and teaching efficacy were considered as possible moderators of the relationship between teachers' thinking patterns with regard to classroom discipline problems and their selection of classroom management practices.

Methods

Participants

Teachers who taught students in grades 5 through 8 during the 2002–2003 academic year were recruited from 31 public schools in Southwest Virginia. Participants who agreed to participate in the study included 121 middle school (grades 5 through 8) teachers from a total of 11 public elementary and middle schools in Southwestern Virginia. This sample consisted of 102 females (84.3%) and 19 males (15.7%), with a majority identified as Caucasian (98.3% Caucasian; 1.7% African-American). Participants ranged from 23 to 61 years old (M age=41.53; SD=10.54).

Participants reported a range of experiences related to their teaching. Most teachers (64.5%) had received a bachelor's degree; 33.9% and 1.7% respectively had received master's and doctoral degrees. Years of teaching experience ranged from 1 to 33 (M years=15.18; SD=10.37). Daily student loads (number of students taught each day) also varied considerably, ranging from 10 to 200 students (M=90.33; SD=36.12). More than two thirds (N=81; 66.9%) of teachers indicated that they teach special education students every year, about one third (N=37; 30.6%) of the sample teaching emotionally disabled students in particular.

Of the schools participating, eight (73%) of the eleven school principals were male and three (27%) were female. Schools were either fully (N=8) or provisionally (N=3) accredited by the state, reflecting whether students were able to pass the critical academic areas on Standards of Learning testing (Virginia Department of Education, 2003). Participating and non-participating schools were also compared on a range of variables during the two years before study involvement, to establish the generalizabilty of findings, including student enrollment, teacher–student ratio, principal gender, percent of students receiving free lunch, percent of students passing standards of learning (state-wide achievement) tests, and school safety. Significant differences were found only in annual number of physical violence incidents during the 2000–2001 school year by participation status, participating schools having reported a mean of 3.73 (SD=3.82) incidents compared with a mean of 0.50 (SD=0.93) incidents reported by non-participating schools (F=5.39; p=0.03).

Measures

Measures for this study included self-report assessments of participants' demographic and teaching characteristics, teaching efficacy, stress, and burnout. In addition, participants responded to a series of four hypothetical vignettes of classroom discipline problems with measurements of teacher perceptions, affective reactions, and proposed interventions.

Teacher background

A teacher background questionnaire was developed to ascertain background demographic variables, including gender, ethnicity, grade taught by teacher, years of teaching experience, and nature of teacher training.

Occupational stressors

The Teacher Stress Inventory (TSI; Fimian, 1985) consists of forty-nine items across ten subscales that reflect five sources of stress (time management, work-related stressors, professional distress, discipline and motivation, professional investment) and five manifestations/reactions to those sources of stress (emotional, fatigue, cardiovascular, gastronomical, behavioral). Fimian (1985, 1987, 1988) demonstrated acceptable psychometric properties for this measure, including high convergent and construct validity. Internal consistency reliability scores within subscales ranged from 0.75 to 0.88 for regular and special education teachers. The total scale alpha reliability estimate was 0.93. Two-week test–retest reliability scores were highly acceptable, ranging from 0.81 to 0.99 across scales.

Educator burnout

The Maslach Burnout Inventory – Educators Survey (Maslach *et al*, 1996) consists of twenty-two statements that assess three aspects of burnout: emotional exhaustion, depersonalization, and personal accomplishment. Items are scored on a seven-point scale (0=Never to 6=Every day). The emotional exhaustion subscale consists of nine items, with a possible range of scores between 0 and 54. The depersonalization subscale consists of five items (possible range: 0 and 30). The personal accomplishment subscale comprises eight items (possible range: 0 and 48), and is reverse scored. According to a normative study of 4,163 elementary and secondary teachers conducted by the authors of the measure, high burnout is indicated for scores at or above 27 on the emotional exhaustion subscale, at or above 14 on the depersonalization subscale, and at or below 35 on the personal accomplishment subscale.

Confirmatory factor analyses support the three subscales used in this measure with teachers (Belcastro *et al*, 1983) as well as other professionals (Lee & Ashforth, 1993). Factor loadings range from 0.54 to 0.84 on the emotional exhaustion subscale, from 0.55 to 0.67 on the depersonalization subscale, and from 0.43 to 0.59 on the personal accomplishment subscale. This measure is shown to have moderate to high test–retest reliability, subscale correlations ranging from 0.50 to 0.82 on time spans of three to twelve months (Leiter & Durup, 1996; Lee & Ashforth, 1993; Jackson *et al*, 1986). The discriminant validity of the MBI-ES has been established when compared to measures of job satisfaction (Lee & Ashforth, 1996), depression (Leiter & Durup, 1994), and occupational stress (Cox *et al*, 1993).

Teaching efficacy

The Teacher's Sense of Efficacy Scale (TSES; Tschannen - Moran & Woolfolk Hoy, 2001) is a 24-item measure of efficacy specific to one's role as a teacher. The items yield three subscales reflecting different domains of teaching (student engagement, instructional practices, classroom management). All subscales consist of eight items, with a range of scores from 1 to 8. Internal consistency reliabilities for the subscales are high, Cronbach's alphas ranging from 0.87 to 0.94. For the purposes of this study, only the efficacy in classroom management subscale was considered.

Classroom vignettes

Written vignettes describing aggressive behavior problems in the classroom were developed by the experimenter for the current investigation. Descriptions of the aggressive behaviors reflect items on the Teacher Rating Scale (TRS) developed by Brown, Atkins, Osborne, & Milnamow (1996) to operationalize common examples of aggressive behavior. Following each vignette, participants rated their perceptions of (causal locus, controllability, stability, intentionality), and reaction to (affective and behavioral), a hypothetical child's aggressive behavior on 10-point phrase completion (Hodge & Gillespie, 2003) scales. Six possible affective reactions (stressed/anxious, helpless/depressed, hurt/offended, angry/resentful, sympathy/compassion, irritated) and six possible interventions (punishment, threats, support, refer for counseling, explanation of school rules, teacher education) were considered. Teachers were asked to rate the degree to which each listed response would apply to their own likely reaction to the child (1=very unlikely to 10=very likely). This questionnaire format combined items from measures developed by Johnston and Leung (2001), as well as Poulou and Norwich (2000), who evaluated parent and teacher attributional patterns, respectively.

Procedures

The recruitment process included first contacting administrators representing each of the public schools and gaining permission for the school's participation in the study. Of those schools that agreed to participate, either telephone or face-to-face meetings were scheduled and held with each principal to describe the project and plan recruitment and project administration procedures. Teachers were first introduced to the project by the school principal during a faculty meeting, with a brief discussion of the focus of the project, based on the wording used in the introductory letter. A meeting was held at each participating school with teachers in grades 5 through 8 and the experimenter. At this meeting, the project was described in greater depth, including a detailed review of study consent, instructions, and assessments. In addition, teachers' questions and concerns about the study were answered, either in the group or individually. Participants mailed the project materials directly to the experimenter in a sealed, pre-stamped and addressed envelope. A total of 121 teachers returned signed consent and completed project materials.

Results

Descriptive analyses

With one exception, analyses conducted to test the relation between teacher demographic characteristics and responses on study measures revealed non-significant results. Specifically, in the case of gender independent samples t-tests showed that females reported higher scores (M=6.53, SD=2.39) than males (M=4.65, SD=2.52) on the Learn More variable, indicating that they are more likely to seek additional education/ training in an effort to intervene in classroom discipline problems (t=2.65; p<0.01).

Means, standard deviations, and internal consistencies of the MBI, TCI, and TSES are presented in ***Table 1***, below. With few exceptions, participant responses are generally consistent with normative evaluations presented by the respective authors of the measures. Specifically, on the MBI, participants fell in the low range of depersonalization (scores under 8) and were just above the cut-off of 35 on the personal accomplishment subscale. Correlations between variables are presented in ***Table 2***, overleaf. A two-tailed analysis indicated that the subscales were moderately correlated, with coefficients ranging from r=–0.39 to r=0.61 (p<0.01).

Hypothesis 1

In order to test the hypothesis that stress and burnout had an impact on ratings of, and responses to, disciplinary behavior problems, between-subjects ANOVAs were used. Two levels were created for the TCI Total Score and the MBI subscales by taking a median split of the responses. With regard to teacher perceptions, significant main effects were found as a function of TCI Total Score and MBI Personal Achievement subscales (***Table 3***, overleaf). First, teachers in the high stress group (high TCI Total Score) rated discipline problems as more intentional than did those with low stress (F=3.87; p<0.05). Additionally, teachers reporting high personal achievement on the MBI rated discipline problems as significantly more stable than did those with low personal achievement (F=4.85; p<0.05).

TABLE 1 ***Descriptive Statistics for MBI, TCI, and TSES***

	M	SD	Range
MBI			
Emotional Exhaustion	22.98	10.98	2-45
Depersonalization	7.34	5.65	0-24
Personal Accomplishment	36.48	7.31	19-48
TCI - Sources of Stress			
Time Management	3.40	0.67	2-5
Work-Related Stressors	3.05	0.94	1-5
Professional Distress	2.76	0.99	1-5
Discipline and Motivation	2.40	0.76	1-5
Professional Investment	3.17	0.95	1-5
TSES			
Student Engagement	5.60	0.97	4-8
Instructional Strategies	6.50	0.81	5-8
Classroom Management	6.52	0.99	3-8

Teacher stress and burnout status also distinguished scores across a number of proposed interventions. Teachers in the high stress group were more likely to use punishment (F=3.73; p<0.05) and referrals to outside counseling professionals (F=5.35; p<0.01) as interventions for discipline problems than those in the low stress group. Teachers reporting high MBI depersonalization were significantly less likely to report that they would try to educate themselves about how to address discipline problems than those with low depersonalization (F=8.88; p<0.01). Finally, personal achievement related to whether teachers would generally try to address the problem on their own rather than referring the child elsewhere for services. Interestingly, it did not distinguish those using positive versus negative disciplinary strategies. Specifically, teachers in the high personal achievement group reported significantly higher likelihood than those with low personal achievement of using punishment (F=4.08; p<0.05), threats (F=7.31; p<0.01), and educational strategies to teach appropriate behavior (F=3.74; p<0.05). They were less likely to refer for outside services, however (F=16.29; p<0.01).

Teachers' sense of efficacy specific to classroom management was considered as a possible factor distinguishing teachers' thinking about, and responses to, student behavior. Specifically, teachers with low efficacy (M=4.91; SD=2.85) were more likely to refer the child to outside personnel for services than those with high efficacy (M=6.92; SD=2.66; F=13.12, p<0.01), and those with low efficacy (M=7.79; SD=2.36) were more likely than those in the high efficacy group to endorse use of punishment in the classroom to address the behavior problem (M=7.06; SD=2.37; F=4.03, p<0.05).

Hypothesis 2

The hypothesis that teacher psychosocial factors would moderate the relation between thinking patterns and

TABLE 2 ***Summary of Zero-Order Correlations between MBI Burnout Domains and TCI Stressors***

	1	2	3	4	5	6	7	8
1. MBI-EE	1.00	.605**	-.390**	.522**	.660**	.440**	.658**	.552**
2. MBI-DP		1.00	-.402**	.218*	.332**	.416**	.517**	.449**
3. MBI-PA			1.00	-.067	-.242**	-.097	-.460**	-.429**
4. TCI-Time Management				1.00	.640**	.515**	.415**	.362**
5. TCI-Work related Stressors					1.00	.558**	.593**	.510**
6. TCI-Professional Distress						1.00	.679**	.462**
7. TCI-Discipline & Motivation							1.00	.702**
8. TCI- Professional Investment								1.00

** p<0.05 ** p<0.01, two-tailed comparisons*

TABLE 3 ***Teacher Thinking Patterns and Proposed Teacher Interventions by Stress and Burnout***

	Low Stress		Hi Stress		Lo EE		Hi EE		Lo DP		Hi DP		Lo PA		Hi PA	
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Thinking Patterns																
Problem Severity	8.28	1.39	8.37	1.39	8.22	1.40	8.38	1.38	8.19	1.35	8.45	1.42	8.33	1.31	8.27	1.48
Locus	3.25	1.67	3.37	1.68	3.31	1.78	3.21	1.58	3.39	1.82	3.12	1.51	3.12	1.66	3.43	1.70
Control	3.64	1.77	3.72	1.64	3.60	1.78	3.73	1.66	3.72	1.75	3.61	1.70	3.60	1.69	3.75	1.77
Stability	8.09	1.66	8.57	1.17	8.30	1.59	8.33	1.36	8.12	1.58	8.54	1.31	8.11	1.47	8.55	1.44
Intentionality	3.72	1.81	3.17	1.75	3.45	1.84	3.37	1.78	3.53	1.74	3.27	1.88	3.25	1.70	3.60	1.92
Proposed Interventions																
Punishment	7.04	2.45	7.71	1.93	7.09	2.37	7.61	2.10	7.27	2.33	7.44	2.17	6.96	2.15	7.80	2.30
Threats	6.19	2.72	6.20	2.41	6.41	2.69	6.09	2.43	6.51	2.62	5.95	2.47	5.67	2.39	6.93	2.60
Explanation of School Rules	7.97	1.99	8.14	1.85	8.31	1.85	7.79	1.94	8.14	1.84	7.94	1.99	7.78	1.86	8.36	1.92
Learn More	5.97	2.55	6.53	2.44	6.12	2.65	6.20	2.34	6.79	2.28	5.45	2.55	5.90	2.23	6.48	2.74
Support	6.78	2.43	7.05	2.17	6.96	2.97	6.73	2.17	6.57	2.43	7.16	2.16	6.93	2.04	6.75	2.62
Refer to Counseling	5.24	2.82	6.37	2.54	5.25	2.97	6.18	2.43	5.35	2.80	6.13	2.65	6.61	2.42	4.67	2.75

intervention responses was tested with three sets of regression analyses. Median splits were used to dichotomize continuous moderators. Predictor variables were all centered before entry into the model.

In the first set of analyses, teacher stress was considered as a possible moderator of the relation between particular thinking patterns and intervention responses. It was hypothesized that, under conditions of high stress, thinking patterns that attributed high control, intentionality, and chronicity of the behavior problem would be significantly related to use of punitive disciplinary strategies, whereas under conditions of low stress, this relation would be less evident. Hierarchical regression analyses were conducted with both use of threats and punishment serving as dependent variables. Results partly supported this hypothesis. Specifically, the TCI total stress score moderated the relation between perceptions of intentionality and the use of threats to address discipline problems (***Table 4***, overleaf. *Post hoc* probing (Holmbeck, 2002) of the moderated effect was conducted. For teachers in the high stress group, increases in ratings of intentionality were significantly associated with increases in likelihood of using threats to address classroom discipline problems (t=2.37; p=0.02). The relation was no longer evident for teachers in the low stress group (t=1.41; p=0.16) (***Figure 1***, overleaf).

Second, teacher burnout was considered as a possible moderator of the relation between attributions of control, intentionality, and chronicity and intervention responses. As before, high burnout was expected to have the same impact, by providing a condition under which the positive relation between thinking patterns and punitive disciplinary strategies was strengthened. Hierarchical regression analyses demonstrated that the MBI Emotional Exhaustion score moderated the relation between perceptions of control and the use of threats to address discipline problems (***Table 4***). *Post*

TABLE 4 *Summary of Hierarchical Regressions: Supported Tests of Moderation*

Dependent Variable: Threats	R^2	B	SE	ß	Sig
Step 1: Intentionality	.071	.332	.129	.231	.011
Step 2: Intentionality	.100	.343	.131	.239	.010
TCI Stress Total Score		*.224*	*.465*	*.044*	*.631*
Step 3: Intentionality	.171	.625	.181	.435	.001
TCI Stress Total Score		*.237*	*.458*	*.047*	*.605*
Intentionality X Stress		*.569*	*.258*	*.276*	*.029*
Dependent Variable: Threats	**R^2**	**B**	**SE**	**ß**	**Sig**
Step 1: Control	.236	.344	.134	.236	.011
Step 2: Control	.236	.344	.134	.236	.012
MBI EE		*.046*	*.456*	*.009*	*.920*
Step 3: Control	.341	.681	.179	.466	.000
MBI EE		*.058*	*.443*	*.012*	*.897*
Control X MBI EE		*.719*	*.261*	*.337*	*.007*

hoc probing of the moderated effect revealed that, for teachers endorsing high emotional exhaustion, increases in ratings of control by the student over his/her own behavioral problems were significantly associated with increases in likelihood of using threats to address classroom problems ($t=3.81$; $p<0.01$). The relation was no longer evident for teachers in the low stress group ($t=0.20$; $p=0.84$) (***Figure 2***, below).

Finally, teacher efficacy was considered as a possible moderator of the relation between thinking patterns and intervention responses in the third set of analyses. Significant moderating effects were not found.

Discussion

The goal of the present study was to evaluate and expand on previous research on teachers' thinking about, and responses to, aggressive discipline problems in the classroom. Specifically, this study considered the relative impact of both positive and negative psychosocial characteristics as they related to these domains of professional teaching practice. Two primary hypotheses were tested and partially supported by the data.

- First, findings showed that teachers' thinking about aggressive discipline problems in the classroom was affected by stress and burnout, but not efficacy in classroom management. All three psychosocial factors did relate to proposed intervention responses, however.
- Second, in an effort to identify processes that might help to explain the teachers' use of punitive interventions in response to classroom behavior problems, two sets of analyses were conducted to test the relation between teachers' thinking patterns and proposed punitive interventions (threats, punishment) as well as to consider whether teacher stress, burnout, and efficacy moderated this relation. Again, partial support for the moderating role of teacher psychosocial characteristics was found.

Some have argued that the characteristics of the perceiver, in addition to the target, affect the outcome of person perception processes. Numerous researchers have considered a wide range of specific demographic, psychosocial, and professional characteristics that may relate to individuals' perception of others' behavior, and the subsequent behavior affected by those perceptions. The current study found that, in some cases, negative emotional experiences in the form of self-

FIGURE 1 *Post-hoc Probing of Significant Moderation Effects: Moderating Effect of Stress on the Relationship between Attributions of Intentionality and Use of Threats*

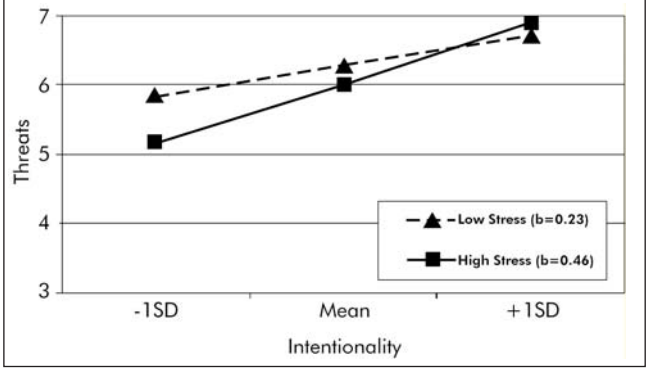
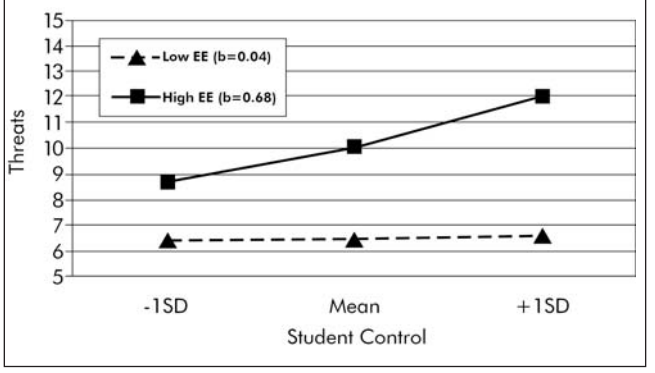


FIGURE 2 *Post-hoc Probing of Significant Moderation Effects: Moderating Effect of MBI EE on the Relationship between Attributions of Control and Use of Threats*



reported stress and burnout may have a detrimental effect on some of teachers' thinking patterns about the child's role with regard to classroom discipline (and aggressive behavior more specifically). Although the extant literature has not consistently supported the role of educator characteristics in the prediction of thinking patterns, much of this work has focused on demographic and professional factors such as pre-service training and educational background (Cunningham & Sugawara, 1988; Weist *et al*, 2000). For instance, Cunningham and Sugawara found that professional factors such as training related to differences in perceived costs associated with classroom behavior problems, but not to attributional judgments of the behavior itself. In addition, Weist *et al* found that behavioral problems were rated as more serious as students progressed through school levels.

Differences in responses to classroom behavior problems are also influenced by the characteristics of the person who observes the behavior. For instance, teachers' response to students is affected by the degree to which they feel comfortable or confident in handling their behavior. This comfort can arise from psychosocial factors (for example efficacy) and professional factors such as prior training in behavior management (Kandakai & King, 2002). In the current study, teacher efficacy was also conceptualized as a condition that would affect responses to classroom discipline problems. Findings showed that efficacy indeed influenced teachers' intervention suggestions, but not their perceptions. Additionally, teacher efficacy was also positively related to the likelihood that teachers would propose positive, active interventions in response to classroom aggression. This is consistent with previous studies of both characteristics (Hughes *et al*, 1993; Kandakai & King, 2002; Schwartz *et al*, 1997; Soodak & Podell, 1997). Saklofske *et al* (1988) showed that self-efficacy is also inversely related to teachers' experience of negative reactions (such as emotional exhaustion) towards others.

Respondents also vary as a function of their role and responsibility in the setting in which discipline problems take place (Guttman, 1982). For instance, a classroom teacher who is expected to maintain order and safety will be likely to differ in his/her response from a fellow student or a bystander. Response to behavior problems also relates to one's personal and professional attributes (Bondy & Mash, 1999; Borg & Falzon, 1990). Indeed, a number of characteristics have been found to influence teachers' reactions towards children with academic problems. However, considerably less attention has been focused on classroom management *per se*. It seems reasonable to suggest that, with these increasing demands on education and mental health in schools, we are compelled to provide the resources necessary for teachers to be successful as key change agents in the classroom environment. One direction that warrants further investigation is the understanding of teacher characteristics that relate to their interest in, and adherence to, school-based interventions.

Conceptualization of stress and burnout

Despite high correlations between stress and burnout scales, and considerable overlap in their relations with other constructs, this study supported existing literature suggesting that stress and burnout uniquely contribute to the understanding of teachers' thinking about, and reactions to, student behavior problems (Burke & Greenglass, 1995; Capel, 1987). Consistent with the stress literature (Bibou-Nakou *et al*, 1999), the current study demonstrated that high stress and burnout are both conditions that relate to a person's thoughts and behavior. However, patterns of responses as a function of the three burnout indices and the overall measure of stress did not overlap completely. For instance, stress and one burnout scale (personal accomplishment) significantly differentiated participants' thinking patterns in response to the behavior presented in vignettes. Specifically, teachers reporting high stress rated aggression as significantly more intentional than did those in the low stress group. Participants with high personal accomplishment rated behavior as significantly more stable than those with low personal accomplishment. One would expect that the burnout scales would affect attributions similarly if this characteristic were only quantitatively (not qualitatively) different.

Similarly, although teacher stress and burnout status both distinguished scores across a number of proposed interventions, patterns of responses varied. Teacher stress related to differences in the use of punitive interventions, whereas burnout indices better differentiated teachers' use of active rather than passive interventions. An understanding of the unique characteristics associated with stress and burnout adds to our prediction of teachers' responses to classroom behavior problems. This study also supports the utility of conceptualizing teacher burnout as a multifaceted characteristic.

It is also important to consider the way in which these concepts were operationalized in this and other

studies. Measures used in the current study assessed stress reactions that have been shown to differ both qualitatively and quantitatively. The TCI operationalized stress as both one's degree of exposure to sources of stress and degree to which one is experiencing negative reactions. Alternatively, the MBI captures only teacher reactions (not sources of those reactions). In addition, the MBI uses items that include a more severe range of stress reactions than the TCI. Although these tools reflect important conceptual differences between stress and burnout (Roger & Hudson, 1995), such measurement discrepancies suggest the need to interpret comparative findings with some caution. For instance, one's likelihood of experiencing negative reactions to aggressive student behavior may be more strongly related to the additive effects of different stressors experienced in multiple domains (as assessed by a subset of TCI items) than to the severity of one's stress reactions. Further study of stress and burnout concepts, and of the way in which these concepts are operationalized, is required to understand these relations more fully.

Moderator analyses

The current study evaluated the process by which teachers may respond to aggressive disciplinary problems, focusing on the relation between the perception and the response to the problem. Findings suggest that certain perceptions are more likely to elicit punitive disciplinary reactions in response to student aggression, particularly in conditions of high stress and emotional exhaustion. Unfortunately, use of punitive interventions in the classroom can contribute to a negative interactional style between teachers and students that promotes a more negative classroom climate for all involved.

Weiner (2001) acknowledges that the attribution of intentionality and controllability of one's behavior is also associated with a social and moral value judgment, which often elicits feelings of anger and a desire to hold someone personally responsible for their behavior. It seems probable that teachers who are already experiencing high levels of stress and negative emotionality will feel greater demands, as students are exhibiting behavior that they are likely to perceive as deviant from their expectations, understanding, and/or comfort level. It is also worth noting that use of threats or punishment often involves little effort or exchange on the part of the teacher, given the nature of such disciplinary methods. Indeed, Cunningham & Sugawara (1989) posit that punitive interventions serve to create distance or limit interaction between teachers and a problem child.

Educational implications and future directions

An understanding of characteristics that may affect teachers' response to aggressive behavior is valuable in that it may point to targets of intervention above and beyond the focus on the child. This is particularly important, given the well-established limitations associated with child- and family-focused therapy for children with aggression (Kazdin, 2001; Lochman & Lenhart, 1993). Traditional approaches to managing problem behavior (ranging from detention to out-of-school suspension) have not been responsive to the behavioral and learning characteristics of students with chronic behavior problems (Colvin & Kameenui, 1993). Despite evidence of the many effective school-based interventions that recognize and reward appropriate behavior to promote a positive school climate (Mayer, 1993), many classroom management procedures continue to be reactive, punitive, or control-oriented (Furlong *et al*, 2000).

It is widely recognized that teachers face the moment-to-moment responsibility of explaining students' past behavior and predicting students' future actions (Weiner, 1985). Extant literature has highlighted a number of conditions that may influence these thinking patterns. Weiner (2001) found that judgments about a person's behavior are more common when that behavior does not fit with the rules or expectations of the environment. In schools, this may include exceptional academic performance, behavior, and emotional functioning. Given the relationship between perceptions and teaching practices, an understanding of these underlying conditions may also have important implications for student academic and social functioning (Dornbusch *et al*, 2001; Schwartz *et al*, 1997).

Despite the clear clinical and educational implications for this line of study, there are some limitations to the generalizability of the findings. First, this study used hypothetical vignettes in an effort to control the possible effects of student history on teachers' responses. Without information about students' functioning in a broader context of day-to-day interactions, aggressive behavior may be viewed differently. Using the current methodology, participants were asked to report the

likelihood of their reaction in response to vignettes, but the study did not assess actual reactions to experienced events. Although the strong connection between one's intentions and actions has been well documented (Ajzen, 1996), these are not one and the same. It is also possible that teachers' reports of their intended behavior were subject to impression management effects, particularly given that the study was conducted in the workplace, with the endorsement of building principals.

In order to improve the generalizability of these findings, it will also be helpful to conduct further evaluations to compare responses of teachers from school districts in different localities and school types, and across the developmental spectrum, to determine whether approaches for teachers also vary with these contextual influences. For instance, elementary teachers may respond to students differently, given variations in their training, relations with students, and exposure to aggressive behavior compared with middle school teachers (Borg & Falzon, 1990). Finally, teachers' use of intervention also relates to the limitations set forth by state and district policies. Together, these differences may affect the generalizability of studies of this sort to other school districts and states where expectations and norms differ considerably. It will be helpful to gather more detailed policy information from individual schools in future studies of this kind.

This investigation has served as an initial examination of factors that may inform educational efforts to develop interventions for classroom disciplinary problems such as student aggression. Results confirm the importance of this line of research, as well as pointing to a number of future directions. Given the many stressful conditions present in today's schools (for example student mental health needs, parent or stakeholder demands, student achievement expectations), there is clear value in continuing to investigate ways to support professional effectiveness and personal well-being among teachers who are willing to face these many challenges in an effort to help our young people develop.

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NOTES FOR CONTRIBUTORS

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