The Provincial Centre of Excellence for Child and Youth Mental Health at CHEO
Le Centre d'excellence provincial au CHEO en santé mentale des enfants et des ados

Taking mental health to school:
A policy-oriented paper on school-based mental health for Ontario

August 2009

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EVIDENCE AND DIRECTIONS

Epidemiological studies indicate that up to one in five children and youth suffer from a diagnosable mental disorder including substance abuse. Many more students experience mental health difficulties that cause significant problems. These disorders and difficulties impose considerable barriers to the normal academic, emotional and social-developmental tasks of childhood and adolescence. Adult mental health disorders frequently onset in adolescence or before. Therefore, treating and coping with these students has significant financial costs to education, health and social service systems.

Mental health and substance abuse issues are recognized as critical for school systems. An international principal survey and our scan of Ontario school boards indicate that educators rank mental health problems as a key issue. A paramount concern is the recognition that mental health disorders and difficulties are closely associated with declining academic performance. Despite the existence of many school-based initiatives to prevent and intervene with students experiencing difficulties, educators acknowledge that current approaches are not dealing with the problems systematically and effectively.

EVIDENCE

Recent reviews and meta-analyses of the research on school-based prevention and intervention for mental disorders and substance abuse indicate that there is solid research evidence for programs for prevention, early intervention and treatment. Offering programs such as stress or anger management, reducing violence and substance abuse, and modifying the school environment to promote prosocial behaviour (skills for self-awareness, decision making, and positive relationships) both facilitates the development of good mental health and prevents the development of disorders and difficulties.

Effective programs share key characteristics and must be implemented with fidelity. Knowledge mobilization, leadership, training and resource support are central to implementing and

sustaining programs. Health and mental health literacy improve mental health and enhance the capacity of educators to detect problems and encourage students to seek help.

Ontario school boards have established a wide range of programs to prevent and intervene with mental health and substance abuse problems. There is broad acknowledgement that student mental health needs exceed the current capacity of school systems to respond adequately. Education leaders are looking for: leadership and coordination, professional development, guidance in selecting programs and models of cross-sectoral service delivery at the local level.

FUTURE DIRECTION

In Ontario, the care and support of children and youth are the collective responsibilities of many agencies and providers. Mental health and substance abuse issues are dealt with by hospital and community-based mental health professionals and some components of care are provided within education, child welfare and youth justice systems. For this reason, evolving and implementing the most effective school-based mental health and substance abuse programs will require leadership and coordination at the provincial, regional and local levels.

Moving forward successfully on a broad scale will require:

1. Establishing an inter-Ministerial leadership body which can:
   - make the mental health of children and youth a priority and develop a consensus for wide adoption of a strategy of prevention and early intervention in the school context
   - lead and coordinate a provincial strategy based on the evidence and current practice innovations
   - facilitate and sustain partnerships and deepen existing integration initiatives
   - provide resources to the field for collaborative program development and evaluation
   - develop mental health curricula and training for students, parents and educators

2. Professional development and guidance for selection of evidence-based programs in the context of local needs and resources and the training/resources necessary for local agencies to monitor outcomes.

3. Broad implementation of programs guided by current evidence in knowledge translation and implementation science. Future initiatives in Ontario will provide rich opportunities for researchers to collaborate with school boards and community agencies to add to our knowledge regarding how to implement and sustain effective school-based programs.

4. A provincial research presence that would have a positive impact on building the organizational cultures which enables programs to be rolled out, optimized and sustained. Ontario school boards and community agencies have established some outstanding examples of specific programs. These existing initiatives provide fertile ground for research partnerships to examine program effectiveness as well as implementation science.

USEFUL SOURCES

School-Based Mental Health: An Empirical Guide for Decision-Makers (2006) by Kutash, Duchnowski and Lynn
http://rtckids.fmhi.usf.edu/publications.cfm

The Positive Impact of Social and Emotional Learning for Kindergarten to Eighth-Grade Students: findings from three scientific reviews (2008) by Payton. Weissberg et al.
http://www.casel.org/downloads/PackardTR.pdf

National Implementation Research Network – closing the gap between research and practice
http://www.fpg.unc.edu/~nirn/

EXECUTIVE SUMMARY FOR PRACTITIONERS

Taking mental health to school: A policy-oriented paper on school-based mental health for Ontario

EVIDENCE AND DIRECTIONS

Epidemiological studies indicate that up to one in five children and youth suffer from a diagnosable mental disorder including substance abuse. Many more students experience mental health difficulties that cause significant problems. These disorders and difficulties impose considerable barriers to the normal academic, emotional and social-developmental tasks of childhood and adolescence. Adult mental health disorders frequently onset in adolescence or before. Therefore, treating and coping with these students has significant financial costs to education, health and social service systems.

Mental health and substance abuse issues have become a key concern for school systems as well. International principal surveys and our scan of Ontario school boards indicate that educators rank mental health problems as a key issue in the current school environment. A paramount concern is the recognition that mental health disorders and difficulties are closely associated with declining academic performance. Despite the existence of many school-based initiatives to prevent and intervene with students experiencing difficulties, educators acknowledge that much more needs to be done and are actively looking for effective programs to address the needs of both students and staff.

EVIDENCE

Recent reviews and meta-analyses of the research on school-based prevention and intervention for mental disorders and substance abuse indicate that there is solid research evidence for multiple strategies for enhancing the well-being of children and youth. There are proven programs for prevention, early intervention and treatment. Moreover, offering programs such as stress or anger management, reducing violence and substance abuse and modifying the school environment to promote prosocial behaviour (skills for self-awareness, decision making, positive relationships) both facilitates the development of good mental health and prevents the development of disorders and difficulties.

Effective programs share key characteristics and must be implemented with fidelity. Knowledge mobilization, leadership, training and resource support are keys to successfully implement and sustain effective programs. Health and mental health literacy are central to improving mental health as well as enhancing the capacity of educators to detect problems and encourage students to seek help.

Ontario school boards have established a wide range of programs to prevent and intervene with mental health and substance abuse problems. While many initiatives have been developed and implemented entirely within boards, there are outstanding examples of cross-sectoral collaboration to detect and treat youth with serious disorders. School leaders are looking for guidance and assistance in selecting and implementing effective prevention and intervention programs at all levels. There is broad acknowledgement that student mental health needs outstrip the current capacity of school systems to respond adequately. Education leaders are looking for leadership and coordination, professional development, guidance in selecting programs and models of cross-sectoral service delivery at the local level.

FUTURE DIRECTION

In Ontario, the care and support of children and youth are the collective responsibilities of many agencies and providers. Mental health and substance abuse issues are dealt with by hospital and community-based mental health professionals and some components of care are provided within education, child welfare and youth justice systems. The interference of mental health and substance abuse problems with academic performance makes school-based interventions of interest to educators. The opportunity provided by the school context for mental health promotion and prevention initiatives is unmatched. The unmet need of students with untreated mental health and substance abuse problems and disorders and the long-term costs to the individual students and society make school-based intervention imperative.

Moving forward successfully on a broad scale will require:

1. Boards and educators to recognize that acting to improve mental health and prevent and intervene with mental health and substance abuse problems/disorders is a priority.
    a. Individual boards and schools must develop strategies including leadership and management plans for addressing mental health and substance abuse problems.

b. Strategies must include plans for increasing mental health literacy of teachers, staff and students, for specific training of staff and for increasing system capacity to deal with mental health and substance abuse problems.
c. Strategies must recognize that programs promoting positive self development enhance mental health, prevent disorders, improve academic performance and are effective starting in the elementary grades.

2. The development of the capacity to select evidence-based programs that are appropriate for local schools and communities.
    d. Boards must work with community partners, researchers and Ministries to implement programs with fidelity.
    e. Plans for programs must take long-term sustainability into consideration.

3. A high degree of collaboration among boards, educators and community-based mental health and substance abuse agencies, parents and other stakeholders.
    f. We must establish community collaboration structures and processes around the mental health and substance abuse issues of the local community.
    g. Boards and agencies must train and support staff for collaborative initiatives.
    h. Boards and agencies must permit and incent staff to partner to deliver programs.

4. Communities and boards to work together to create the resources and processes to:
    i. Select appropriate programs given the local problems, infrastructure and resources.
    j. Develop the skills and collaborative capacity to monitor program fidelity and continuously evaluate program outcomes.
    k. Establish collaborative research relationships to enable continuing program development, evaluation and refinement.

USEFUL SOURCES

School-Based Mental Health: An Empirical Guide for Decision-Makers (2006) by Kutash, Duchnowski and Lynn
http://rtckids.fmhi.usf.edu/publications.cfm

The Positive Impact of Social and Emotional Learning for Kindergarten to Eighth-Grade Students: findings from three scientific reviews (2008) by Payton. Weissberg et al.

http://www.casel.org/downloads/PackardTR.pdf

State Implementation of Scaling-up Evidence-based Practices (SISEP) - establishing adequate capacity to carry out effective implementation, organizational change, and systems transformation strategies
http://www.fpg.unc.edu/~sisep/about-us.cfm

National Implementation Research Network – closing the gap between research and practice
http://www.fpg.unc.edu/~nirn/

EXECUTIVE SUMMARY FOR RESEARCHERS

Taking mental health to school: A policy-oriented paper on school-based mental health for Ontario

EVIDENCE AND DIRECTIONS

Epidemiological studies indicate that up to one in five children and youth suffer from a diagnosable mental disorder including substance abuse. Many more students experience mental health difficulties that cause significant problems. These disorders and difficulties impose considerable barriers to the normal academic, emotional and social-developmental tasks of childhood and adolescence. Therefore, treating and coping with these students has significant financial costs to education, health and social service systems.

Mental health and substance abuse issues are recognized as critical for school systems. An international principal survey and our scan of Ontario school boards indicate that educators rank mental health problems as a key issue. A paramount concern is the recognition that mental health disorders and difficulties are closely associated with declining academic performance. Despite the existence of many school-based initiatives to prevent and intervene with students experiencing difficulties, educators acknowledge that current approaches are not dealing with the problems systematically and effectively.

EVIDENCE

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sustaining programs. Health and mental health literacy improve mental health and enhance the capacity of educators to detect problems and encourage students to seek help.

Ontario school boards have established a wide range of programs to prevent and intervene with mental health and substance abuse problems. There is broad acknowledgement that student mental health needs exceed the current capacity of school systems to respond adequately. Education leaders are looking for leadership and coordination, professional development, guidance in selecting programs and models of cross-sectoral service delivery at the local level.

FUTURE DIRECTION

Research in school-based programs to enhance development and wellbeing and to prevent or intervene with mental health and substance abuse problems has proliferated in the past two decades. Future research must delineate effective programs in all areas for different developmental levels and advance our understanding of how to implement programs successfully on a broad scale.

There are several outstanding challenges and new opportunities for researchers to better understand the processes and factors that govern and moderate the manner in which outcomes are acquired through school-based mental health programming. These include:

1. Extending our understanding of the nature and size of the effects. Research needs to define:
   - factors that may moderate the effectiveness of interventions (including the pre-existing literacy levels and attitudes of students, educators and parents, as well as socio-economic and regional differences).
   - factors that may mediate or explain the mechanisms which govern the nature of the effect (including attitudes towards learning and the intrinsic quality of the information provided). In this way, we can refine proven programs and develop new interventions.
   - developmental differences in both the ability of students to learn different types of materials and the manner in which materials are learned optimally at different stages.

2. Enhancing our understanding of the factors that can affect and maximize knowledge uptake and program implementation. Future research must continue to explore:
   - factors affecting knowledge translation and exchange (e.g., different types of format for information)
   - factors affecting the manner and extent to which a program is implemented (e.g., the role of champions, the ability of program facilitators to correctly implement the program over sustained periods of time and the extent to which various program elements may or may not be essential).

3. Establishing the extent to which the acquisition of proactive coping and adaptive skills (i.e., skills taught through social-emotional learning interventions) can prevent or diminish the onset of symptoms and disorder (with a focus on the elementary school years) and how best to integrate health promotion with illness prevention programs.

In Ontario, the care and support of children and youth are the collective responsibilities of many agencies and providers. Mental health and substance abuse issues are dealt with by hospital and community-based mental health professionals and some components of care are provided within education, child welfare and youth justice systems. For this reason, evolving and implementing the most effective school-based mental health and substance abuse programs will require research partnerships to implement and evaluate program models that will work effectively in Ontario. The current environment in Ontario offers several productive possibilities for researchers.

1. There are previously unmatched opportunities to establish collaborative research enterprises between university-based researchers and colleagues in educational and community-based agencies. These collaborations offer the capacity for long-term research projects which examine program development, refinement and effectiveness as well as the detailed study of implementation and collaboration itself.

2. Ontario is a large and diverse jurisdiction. The broad racial, cultural and ethnic diversity demands that research be harnessed to adapt successful programs to work with aboriginal, immigrant and refugee populations. In addition, the challenges of establishing

and sustaining effective programs in the rural and remote northern areas of the province create unique opportunities for our researchers.

3. Collaborative, long-term projects provide key opportunities to strengthen research by examining long-term results across multiple outcomes (e.g., positive development, problems/disorders, academic outcomes, program sustainability). In addition, continuing research relationships across agencies permit study of questions of replicability in multiple situations.

4. Finally, the large and diverse geography and population of Ontario provide a rich laboratory to study the use of new media (e.g., the Internet and the interactive web) in promoting well-being as well as in preventing and intervening with issues of mental illness and substance abuse.

USEFUL SOURCES

School-Based Mental Health: An Empirical Guide for Decision-Makers (2006) by Kutash, Duchnowski and Lynn
http://rtckids.fmhi.usf.edu/publications.cfm

Preventing mental, Emotional, and behavioural Disorders Among Young People (2009)
By O'Connell, Boat and Warner (Eds.)
http://books.nap.edu/openbook.php?record_id=12480&page=R1

National Implementation Research Network – closing the gap between research and practice
http://www.fpg.unc.edu/~nirn/

INTRODUCTION

MENTAL HEALTH IN CHILDREN AND YOUTH

It is now understood that the majority of mental health difficulties and illnesses originate during childhood and adolescence. Estimates suggest that about 15 percent of young people have a mental disorder of some kind (Waddell & Sheppard, 2002), growing to as high as 25 percent in adulthood (Kessler et al., 2005). About 50 percent of all psychological disorders emerge before the age of 14 years, and 75 percent before the age of 24 years (Kessler, Berglund, Demler, Jin & Walters, 2005). These disorders range from those that are highly prevalent but amenable to treatment (such as anxiety and depression) to those that are less common but extremely debilitating and persistent (such as autism and schizophrenia). Although the use of alcohol and drugs increases dramatically during adolescence, reviews of epidemiologic studies suggest that the prevalence of substance abuse *disorders* is relatively low (0.8 percent) in children and youth (as reported in a review of studies conducted by Waddell & Sheppard, 2002).

The influence of mental disorders on individuals can be both immediate and far reaching. Each year, thousands of young people end their lives by suicide, making this the second leading cause of death following motor vehicle collisions in Canadian youth aged 10 to 24 years (Anderson & Smith, 2003; Statistics Canada, 2009). Despite the high prevalence of mental illness, including substance abuse disorders (albeit to a lesser degree), and its impact on the lives of children and families, most young people do not seek help or receive adequate timely access to evidence-based mental health services and supports (Leaf, Alegria, & Cohen et al., 1996; National Advisory Mental Health Council, 1990; Offord, Boyle, Szatmari, 1987; Surgeon General's Report, 1999). These concerning statistics led Waddell et al (2005) to propose a public health strategy to address the urgent needs underlined by epidemiological data.

Addressing the numerous barriers (e.g., stigma) and factors (e.g., poor health literacy) that inhibit the early identification of difficulties and active help seeking is a national priority identified by the Mental Health Commission of Canada. Schools have been highlighted as an important venue for mental health promotion activities in this regard (Kirby & Keon, 2006; WHO, 1994). Most school-based health professionals and teachers are working on a daily basis with youth at

risk with mental health and substance abuse problems without the services, education, training and supports they need. At the same time, mental health difficulties in youth represent one of the strongest predictors of academic failure (Kessler, Foster, Saunders, & Stang, 1995) and school absenteeism (Kessler et al., 1995). Since the majority of children and youth attend school, and there is a link between social-emotional well-being and academic performance, these settings provide an attractive venue to locate anti-stigma programs, mental health literacy efforts and coordinated strategies for mental health promotion, prevention and intervention.

DEFINING MENTAL HEALTH

In this report, we define mental health, mental health problems and mental illness in a manner similar to that reported in the US Surgeon General's Report on Mental Health (1999) which adopts a broad public health approach to mental health and mental illness including addiction and substance abuse. Those definitions are quoted here:

> *"Mental health is a state of successful performance of mental function, resulting in productive activities, fulfilling relationships with other people, and the ability to adapt to change and to cope with adversity. Mental health is indispensable to personal well-being, family and interpersonal relationships, and contribution to community or society. It is easy to overlook the value of mental health until problems surface."*

> *"Mental illness is the term that refers collectively to all diagnosable mental disorders. Mental disorders are health conditions that are characterized by alterations in thinking, mood, or behaviour (or some combination thereof) associated with distress and/or impaired functioning."*

> *"Mental health problems [refers to] signs and symptoms of insufficient intensity or duration to meet the criteria for any mental disorder. Almost everyone has experienced mental health problems in which the distress one feels matches some of the signs and symptoms of mental disorders. Mental health problems may warrant active efforts in health promotion, prevention, and treatment."*

The category of mental illness refers to disorders diagnosed using one of the current systems of diagnostics such as DSM-IV (American Psychiatric Association, 2000) or ICD -10 (World Health Organization, 2007).

There are no known prevalence data for mental health *problems*. Although by definition not meeting criteria for a formal disorder, such problems may still cause significant difficulties in young peoples' lives, and may warrant or benefit from intervention of some kind. In some instances, mental health problems – although not sufficient in severity, duration or disability to require a clinical diagnosis – may constitute a significant risk factor for mental illness. Large-scale studies have shown, for example, that the presence of four of the nine symptoms of depression (one symptom short of meeting full criteria for a diagnosis of major depressive disorder) increases the likelihood of developing the full disorder (Horwarth et al., 1992).

DEFINING SCHOOL-BASED MENTAL HEALTH

The term *school-based mental health* has generally come to be understood as any mental health or substance abuse service or program that can be delivered in a school setting. This would include programs designed to promote mental health, prevent the onset of mental illness, increase the identification of young people with mental health difficulties and provide mental health services, such as therapy, in the school setting.

The term *school setting* can, however, range from neighborhood schools to academic public school-administered programs in hospitals and juvenile justice facilities, to programs that are delivered during school hours or after hours. Schools also deliver mental health services and support through the special education programs for students with emotional disturbance. Programs may be delivered by formally trained mental health professionals or by educators with or without any formal mental health training.

These diverse school environments challenge the clarity of the concept *school-based mental health*, as does the history of uneven collaboration between mental health and education. The source of funding is irrelevant as services may be provided by school or community-based personnel. The key is that services/programs be sited in the school context differentiating them from services provided off-site by agencies collaborating with the schools.

THE IMPORTANCE OF SCHOOL-BASED MENTAL HEALTH

The importance of addressing mental health difficulties in a school-based setting has been widely acknowledged by policy makers, researchers and educators, not only because of the importance of facilitating the early identification of difficulties when they first emerge but also because of the importance of mental health in the development of young people throughout the life span (Middlebrooks & Audage, 2008). The New Freedom Commission on Mental Health (2003), and recently released report from the National Research Council and Institute of Medicine (2009), among others, have emphasized the importance of mental health in both learning and development and have recommended improved and expanded school-based mental health services (Brener et al, 2007).

School-based programs and initiatives have been developed to address a number of broad goals, including health promotion, prevention, early identification, crisis response and treatment in schools. Programs have utilized one or more distinct delivery mechanisms, including full-service school-based health centres to provide on-site services to young people, mass screening programs to identify young people with unmet mental health needs and school-wide curriculum-based programs designed to prevent or minimize the onset of difficulties (Foster et al, 2005).

PURPOSE AND SCOPE FOR THE SCHOOL-BASED MENTAL HEALTH POLICY PAPER

The purposes of this report are:

- to provide a policy-ready overview and synthesis of the existing models and approaches to implementing school-based mental health
- to synthesize the published systematic reviews that summarize the effectiveness of different programs and interventions, but not to review individual studies
- to provide an overview of existing Internet-based programming as examples of innovations for addressing one or more areas of mental health in a school-based setting
- to highlight the various challenges that are likely to be faced in mobilizing the existing knowledge base and in implementing programs on a large scale
- to report on a purposive scan of the current situation in Ontario
- to develop recommendations for moving forward in Ontario

POLICY CONSULTATION PROCESS

Since a policy-ready paper is designed to be relevant and meaningful for those in Ministry decision-making roles, it was important to gather information about current and planned initiatives and knowledge needs of senior officials from the Ministries of Children and Youth Services, Education, Health and Long-term Care, Health Promotion, and Citizenship and Immigration. Senior representatives from each of these five Ontario Ministries attended a cross-sectoral meeting in Toronto in April 2009. During the meeting, Ministry officials indicated a strong interest in school-based mental health initiatives and reported that there was already considerable communication and collaboration taking place across sectors.

In addition, so as to complement other provincial data-gathering efforts, the School-based mental health policy-oriented paper team met with consultants engaged by the Ministry of Education and by the Ministry of Children and Youth Services to learn about the methods and scope of their information-gathering initiatives (e.g., supporting the Student Support Leadership Initiative, Special Education and the implementation of the Safe Schools legislation). There was a commitment on the part of the writing team to share information when the policy-oriented paper was completed. In turn, the Ministry consultants indicated that they would to continue to emphasize communication and collaboration around mental health and substance use issues.

CURRENT STATE OF THE KNOWLEDGE

The current state of knowledge about school-based mental health is extensive and only likely to grow substantially in the next decade. By the end of 2002, there were estimated to be over 1,200 outcome studies on prevention, health promotion and substance use programming in youth (Weisz, Sandler, Durlak, & Anton, 2005). There are now a large number of published systematic reviews, as well as reviews of reviews, that have examined and synthesized the prevailing models and approaches for delivering school-based mental health.

MAJOR MODELS FOR CONCEPTUALIZING SCHOOL-BASED MENTAL HEALTH

School-based mental health programs have been conceptualized in many different ways, each of which has advantages as well as certain shortcomings. Generally, there have been four major perspectives that characterize the literature on models in school-based mental health. These are the *Mental Health Spectrum Model*, the *Interconnected Systems Model*, the *Social-Emotional Learning Model*, and the *Public Health Perspective Model*.

Mental health spectrum model

The original classification system for prevention in the public health field was proposed by the Commission on Chronic Illness in 1957. The system was comprised originally of three types of prevention interventions, stated in terms of primary goals which were related to disorder or illness. However, the model has been modified repeatedly since its original inception. In this original version (Model 1A), the various mental health service strategies and interventions used by schools and the mental health system are classified in terms of when the intervention is implemented in relation to the onset of a condition or disorder.

MODEL 1-A:

Universal Prevention Programs refer to programs provided to ***all*** children through school-wide implementation to ***prevent*** onset of emotional or behavioural conditions.

Selective or Secondary Programs refer to prevention programs that combine children with similar risk factors for *group* interventions aimed at helping to *prevent* the onset of behaviour or emotional problems.
Tertiary or Indicated Prevention Programs refer to mental health *treatments* usually employed once the disorder or condition is *present* in a child or adolescent.

Gordon (1987) modified this view (Model 1B), developing a new classification system using a *risk-benefit* perspective. He proposed that the risk of getting a disease must be weighed against the cost, risk and discomfort of the preventive intervention.

MODEL 1-B:
Universal Measures are desirable for everyone in the eligible population. The benefits outweigh the costs for everyone.
Selective Measures are desirable only when the individual is a member of a subgroup whose risk of becoming ill is above average.
Indicated Measures are desirable for an individual who, on examination, is found to manifest a risk factor or condition that identifies them as being at high risk for the future development of a disease.

Despite several other modifications, these approaches represent what has been referred to in the field as the ***Mental Health Spectrum Model*** (Mrazek & Haggerty, 1994). The key feature of this approach is the focus on behaviours and conditions that are generally viewed as problematic. Accordingly, this approach includes what may be considered traditional mental health interventions applied to school settings, which would include promotion and prevention strategies, psychotherapy and other standard treatments for known disorders, psychopharmacology and maintenance and recovery strategies.

One important refinement has been suggested by Weisz and his colleagues (2005) who broadened the scope of their system of classifying school-based intervention to include strategies aimed at both health promotion and at improving positive development and behaviour (Model 1C).

MODEL 1-C:

Heath Promotion/Positive Development Strategies refer to strategies that target an entire population with the goal of enhancing strengths so as to reduce the risk of later problem outcomes and/or to increase prospects for positive development:

Universal Prevention Strategies refer to strategies that are designed to address risk factors in entire populations of youth – for example, all students in a classroom, all in a school or all in multiple schools – without attempting to discern which students are at elevated risk.

Selective Prevention Strategies refer to strategies that target groups of youth identified because they share a significant risk factor and mount interventions designed to counter that risk.

Indicated Prevention Strategies refer to strategies that are aimed at youth who have significant symptoms of a disorder, but who do not currently meet diagnostic criteria for the disorder.

Treatment Interventions refer to strategies that generally target those who have high symptom levels or diagnosable disorders at the current time.

Interconnected systems model

The **Interconnected Systems** model has been most clearly articulated and promoted by the Center for Mental Health in Schools at UCLA (Adelman & Taylor, 1999; 2006) and the Center for School Mental Health Assistance at the University of Maryland (Weist, Goldstein, Morris, & Bryant, 2003). In this model, resources from the school and the community are pooled to produce integrated programs at the three levels of service need. The model is composed of three overarching systems: prevention, early intervention and care for children with the most serious impairments. These three systems collaborate to form an integrated continuum of services for children that aims to balance efforts at mental health promotion, prevention, early detection and treatment, and intensive intervention, maintenance and recovery programs (National Institute for Health Care Management, 2005).

Social-emotional learning model

Each of the proceeding models has focused primarily on the prevention and or treatment of an illness or difficulty. A growing number of researchers in both psychology and special education have recently begun to pursue a more proactive approach, expanding the scope of intervention to include fostering healthy behaviours. Several terms have been used for this general approach: Social-Emotional Learning and Positive Behaviour Interventions. Social and Emotional Learning has been described as the process through which children and adults acquire the knowledge, attitudes and skills to (a) recognize and manage emotions, (b) set and achieve positive goals, (c) demonstrate caring and concern for others, (d) establish and maintain positive relationships with others, (e) make responsible decisions and choices and (f) handle interpersonal situations and conflict effectively.

Social-Emotional Learning and Positive Behavioural Approaches have an established track record at reducing challenging behaviours and increasing positive social interaction at the individual level, which have also yielded benefits in terms of reducing the onset of illness (Payton, Weissberg, Durlak et al, 2008). This proactive approach aims to replace the need to develop several different interventions for students with uniquely different types of behavioural difficulties and conditions that have typically required specialized programs, with a more generic program that is more universally applicable. The underlying principal of social-emotional learning programs is that the skills and behaviours acquired will be beneficial to preventing or reducing the severity of a whole range of difficulties (e.g., depression, anxiety, drug use, conduct problems), which would otherwise be addressed through several separate programs, each targeting a different problem or condition.

The clear advantage of this approach is that it is a single intervention that is beneficial for preventing several different types of difficulties. A possible challenge is that a high degree of consensus about implementation must be achieved among staff, given that the single intervention is being provided (although there is no reason to exclude selected or indicated programs for designated subgroups of students alongside this universal program).

Public health perspective model

The public health approach to school-based mental health has only recently emerged (Kutash, Duchnowski & Lyon, 2006; Weist, 2005). This approach has four distinct components. The first component is a focus on populations as opposed to individuals. That is, interventions are aimed at all school-aged children, not just those with the most severe emotional disturbances or those who may be at-risk for mental illness. Accordingly, risk and protective factors are examined at the community level, and decisions are based on data collected at a population level, rather than on the perceived benefits to a single individual. Consequently, the school district is the unit of change, as opposed to individual schools or classrooms. Surveillance information can be derived from district-wide data, census information, county health department data and other similar databases. This information helps to produce estimates of the magnitude of the problem and possible geographic and demographic relationships, and may lead to the development of strategies for improved outcomes. The goal of this approach is to identify and develop specific interventions that are targeted toward enhancing protective factors and reducing the impact of known risk factors that are likely to lead to undesirable outcomes in the population.

In the second component of the public health approach, potential causes for undesirable outcomes are identified through an analysis of the risk and protective factors (often determinants of health), their correlates, and how these factors could be modified to decrease the risk. Risk and protective factors are not causes or cures themselves but rather are statistical predictors that have a theoretical and empirical base. Risk factors are personal characteristics or environmental conditions that research has demonstrated to increase the likelihood of problem behaviour. Some examples of risk factors include gender, poor cognitive or social skills, family history of mental illness or substance abuse and lack of adult support. Protective factors are personal characteristics or environmental conditions that have been shown to reduce the likelihood of the occurrence of problem behaviour. Some examples of protective factors are good coping skills, presence of a caring adult, living in a safe environment, opportunities for positive recreation and interest in and success at school. Effective interventions must reduce risk factors or strengthen protective factors.

The third component involves developing and evaluating interventions, which are on a continuum that includes health promotion/positive individual development, universal prevention interventions, selective interventions and indicated interventions.

For the fourth component, the focus is on broad scale implementation at a level that will have significant positive impact on the population. In this step effective practices are implemented and monitored and their cost effectiveness is evaluated.

Comment

Clearly, there is some overlap across these models. One may argue that the Social-Emotional Learning Model is already adequately captured in Model 1C. Indeed, the focus on health promotion and positive development interventions in Model 3 was clearly anticipated with refinements to the Mental Health Spectrum Model (Model 1C). However, it should be acknowledged that the origin of the Social-Emotional Learning Model is distinct from the Mental Health Spectrum Model. The Social-Emotional Learning Model arose out of a child and adolescent development model focusing on optimal growth and development, whereas the Mental Health Spectrum Model, despite the numerous modifications over the years, has remained a framework largely characterized by illness and disorder. In many ways, the differences between the Mental Health Spectrum Model and Social-Emotional Learning Model reflect the difference between definitions of health and mental health. It is important to note that, despite the effectiveness of health promotion and prevention programs, there will always remain a considerable number of young people who will develop mental health difficulties requiring treatment. This underscores the importance of developing a school-based framework that addresses both mental health and mental illness, while addressing the knowledge, skills and attitudes that will foster help seeking in a timely manner.

The implications of considering the relative risks and benefits of an intervention at a population level (Public Health Perspective Model) are profound, particularly for policy makers that will be tasked with the responsibility of implementing programs. A risk-benefit/health promotion approach implies that an extensive consultation and assessment process should be completed prior to implementing a program and that the decision to adopt a program will be based on empirically identified needs of large groups rather than the likely benefit for individuals. Including

health promotion and positive development approaches (Model 1C) alongside programs designed to target difficulties or illness (Model 1A) represents a fundamental shift in the purpose and target of school-based interventions, which must be integrated meaningfully. Finally, the Interconnected Systems Model recognizes the importance of aligning any school-based program with existing mental health services. No matter how effective school-based programs are in preventing the onset of illness, or in increasing young people's skills to manage challenges and stresses, they will not meet the needs of every student. Children and youth with mental illness and substance abuse problems will always be present in school and their educational, psychological, social and behavioural needs must be met. Given this reality, schools need tools to facilitate the identification of mental health problems and to access appropriate and integrated services.

The School-Based Mental Health Practice Scan (described in detail beginning on Page 58) describes a cross-section of programs currently used in Ontario school boards. Elements of several of the above models are found in practice in many communities throughout the province. In the examples that appear to be most established and successful, there is an intersection between Model 1C, the Interconnected Systems Model, and Social Emotional Learning (delivered as a universal prevention strategy). This combined model is aligned with the philosophy of mandates like Education for All and the Student Support Leadership Initiative (SSLI).

There is widespread interest in comprehensive school health in Canada. This is evident in the partners for the Canadian Association for School Health (http://www.cash-aces.ca/index.asp) and the safe and healthy schools movement (http://www.safehealthyschools.org/). Perhaps the broadest expression of this approach is the *school as hub* concept where the school is the designated centre of community activity and could house child and maternal health services, early childhood education/child care, after-school care, recreation, social service and health services as well as promotion, prevention and interventions for mental health and substance abuse problems. The *school as hub* model is widely discussed but so far untested and not yet evaluated in a comprehensive form. It offers an ideal context for school-based mental health and substance abuse programs and evaluating the model should be a priority for Ontario school systems.

EVIDENCE-BASED PROGRAMS

Schools implement many programs aimed at preventing or reducing mental health and substance use problems, but historically many of these have not been adequately evaluated. The purpose of this section is to summarize the growing number of reports, review papers, meta-analyses and systematic reviews of the evidence-base supporting the benefit of mental health and substance abuse services in schools. In this report, s*ervices* include any strategies, programs or interventions aimed at preventing and treating mental health problems in youth. This can range from programs focused at the universal, selective and indicated levels of prevention, and includes programs designed to identify young people with difficulties, as well as those designed to promote healthy behaviours, improve knowledge about mental health and reduce stigma.

What constitutes evidence?

It is clear from our review of evidence-based practices that there is a range of criteria used to designate a program as *useful*, *effective*, or even *evidence-based*. For example, the Substance Abuse and Mental Health Services Administration (SAMHSA) has 15 criteria for distinguishing between a model program, an effective program, and a promising program. The US Department of Education has seven criteria that are applied by a 15-member expert panel to determine if a program is exemplary or promising. While there is no universally accepted definition of an evidence-based program at this time, there is some consistency in terms of core criteria. For example, a randomized controlled trial or very rigorous quasi-experimental design is required across the vast majority of agencies that evaluate and rank programs. These agencies may require a different number of studies and may have different requirements to their criteria, but there is a common emphasis on an empirical demonstration of effectiveness. This is an important distinction to consider, since some programs or interventions may be classified differently, even though those programs all have some empirically based evidence for their effectiveness.

There is on-going discussion about what constitutes the *gold standard* for evidence but no clear consensus has yet been reached. There is some momentum to direct the focus to what is *credible and actionable* evidence (Donaldson, Christie & Mark, 2009). A systematic approach to

making decisions about credible evidence is the GRADE approach: Grading Recommendations, Assessment, Development, and Evaluation (http://www.gradeworkinggroup.org). This approach has been developed and widely used to establish credible approaches to clinical and policy decision making in medicine/health care (e.g., Guyatt et al., 2008). The GRADE approach has the advantage of sophisticated systems to rate the quality of evidence in complex scenarios and allows for consideration of clinical practice issues in implementation. While the approach is resource intensive, efforts are being made to make it easier to apply by developing software etc. As the methodology is developed, it could be ideal for applications such as school-based mental health and substance use as it allows for inclusion of implementation issues in the development of guidelines and recommendations.

The variability in criteria from one agency/review to the next for designating an intervention as evidence should not lead administrators, policy makers or practitioners to conclude that the database is flawed. On the contrary, the available evidence clearly supports the effectiveness of many school-based interventions for a variety of difficulties, behaviours and conditions. The challenge lies in choosing the most appropriate intervention for the targeted behaviour, within the context of local school and community capacity.

Existing compendia of empirically supported programs

There currently exist several compendia of empirically supported mental health programs for children and youth. The following comprise the best-known and most-frequently referenced listings, all of which can be accessed online.

1. Substance Abuse and Mental Health Services Administration (SAMHSA), www.samhsa.gov/
2. Collaborative for Academic, Social and Emotional Learning (CASEL), www.casel.org
3. U.S. Department of Education (USDOE), http://ies.ed.gov/ncee/wwc/aboutus/
4. Center for the Study and Prevention of Violence (CSPV), www.colorado.edu/cspv
5. Center for School Mental Health (CSMH), http://csmh.umaryland.edu/

Together, these agencies list dozens of programs that are viewed as effective in a school-based context, to address a range of difficulties and disorders. Overwhelmingly, the bulk of evidence supports the view that school-based interventions can be effective in terms of addressing a number of mental health needs, difficulties, and disorders.

Substance Abuse and Mental Health Services Administration (SAMHSA)

SAMHSA created an inventory of *model* (<http://modelprograms.samhsa.gov/model.htm>), *effective* (http://modelprograms.samhsa.gov/effective.htm), and *promising* (http://modelprograms.samhsa.gov/promising.htm) programs. SAMHSA's *Model* programs have been used as a foundation for the National Registry of Evidence-based Programs and Practices, a searchable database at <http://www.nrepp.samhsa.gov/>. Programs are evaluated using six criteria, and receive a higher rating with stronger levels of evidence. A current search of school-based mental health and substance abuse promotion, prevention and treatment programs yields 49 interventions. The site contains a wealth of information about research methods, populations and outcomes, making it very useful in selecting potential programs.

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

Of the 242 programs reviewed, 80 met the specified CASEL criteria (<www.casel.org/pub/safeandsound.php>). Of these, only 11 (14 percent) of the programs met the highest level of scientific rigor set by CASEL: multiple studies (using different samples) that document positive behavioural outcomes at post-intervention testing, with at least one study indicating positive behavioural impact at least one year after the intervention. The common core outcomes of programs are: increased sense of connectedness at school, improved goal-setting and problem-solving skills, enhanced self-discipline, character development, and/or responsibility.

U. S. Department of Education (USDOE)

In 1998, a panel of 15 experts in safe, disciplined and drug-free schools acting on behalf of the Department of Education's Office of Educational Research and Improvement (OERI) began to document educational programs effective in combating both substance abuse and violence among youth. Applications were solicited from any program sponsor who believed a program might meet the review criteria. Of the 124 programs reviewed, 33 were designated as *promising* and nine were designated as *exemplary*. The monograph describing these programs was

published in 2001. Through the Institute of Education Sciences, the USDOE maintains the What Works Clearinghouse (WWC) to house information about effective practice in education (<http://ies.ed.gov/ncee/wwc/aboutus/>). Established in 2002, the site has eight categories of information, including some programs relevant to school-based mental health, in the content categories of *character education* and *dropout prevention*.

Center for the Study and Prevention of Violence (CSPV)

In 1996, the Center for the Study and Prevention of Violence (CSPV) at the University of Colorado at Boulder began an initiative to identify effective violence prevention programs. The project, called Blueprints for Violence Prevention, has identified 11 prevention and intervention programs that meet criteria for effectiveness (<www.colorado.edu/cspv/blueprints/modelprograms.html>). To be classified as a *model* program, the program must have met three criteria: (a) empirical evidence of prevention effect using a strong research design, (b) a documented sustained effect over time, and (c) multiple site replications. While *model* programs must meet all three criteria (*n* = 11), programs classified as *promising* must meet only the first criterion (*n* = 16).

Center for School Mental Health (CSMH)

CSMH has produced a document (<http://csmh.umaryland.edu/resources/CSMH/index.html>) that presents a brief description of 40 programs, divided by diagnostic condition (i.e., anxiety, depression and conduct problems) and by prevention level; indicated (*n* = 12), selective (*n* = 12) and universal (*n* = 16).

Results of key empirical reviews and synthesis papers

Reviews of school-based intervention

In 2000, Rones and Hoagwood (2000) conducted a review of the literature published between 1985 and 1999 examining some 5,128 documents of which less than 1 percent (*n* = 47) met the requirement of having a rigorous research design. They identified 37 strategies focusing on either emotional or behaviour problems (*n* = 4), depression (*n* = 5), conduct problems (*n* = 22), stress (*n* = 2) or substance abuse problems (*n* = 12). Results of this review concluded that of

the 37 strategies and interventions described by the 47 studies, 20 percent (*n* = 7) were found to be ineffective in treating the targeted problem. The remaining strategies were found to be either effective (35 percent, *n* = 13), mixed in their effectiveness (32 percent, *n* = 12), or a combination of effective on some outcomes and not on others (13 percent, *n* = 5).

In 2001, the Evidence for Policy and Practice Information and Co-ordinating Centre (Harden et al., 2001) released a review and synthesis of some 11,000 articles covering an array of topics including a review of mental health intervention studies. All of the studies in this section of the report have been included in other reviews.

The School Psychology Task Force of the American Psychological Association (Kratochwill & Stoiber, 2002) identified a total of 29 school-based programs that showed clear evidence of effectiveness through rigorous testing. Eleven of these programs focused on comprehensive prevention, nine focused on violence prevention and intervention, eight focused on substance abuse, five focused on social skills and emotional adjustment, two focused on academics and one focused on trauma.

In 2005, Weisz, Sandler, Durlak and Anton (2005) reviewed and summarized the findings and conclusions from several reviews and meta-analytic studies examining the magnitude of preventative effects and the magnitude of promotion effects. A meta-analysis of 177 universal prevention studies found significant mean effects ranging from 0.24 to 0.93, depending on program type and target population (Durlak & Wells, 1997). In a review of 130 indicated prevention studies (defined below), mean effects were found to be in the range of 0.50 (Durlak & Wells, 1998).

Interpreting Effect Sizes
Effect size (δ) provides a standard measure of the magnitude of study outcomes. It can be applied across studies using different designs, different outcome measures, for different interventions. Using effect sizes has become widely accepted and important to researchers and practitioners in their attempts to compare the results of different studies. At present, there is no standard for interpreting effect sizes. In general, in complex intervention research, an effect size of 0.2 is considered small, 0.4 medium and 0.6 is large.

Hoagwood (2006) examined over 2,000 articles produced between 1990 and 2004. Her examination revealed that 63 articles (< 3 percent) met the criteria of being a rigorously tested intervention dealing with mental health problems in children. Twenty-three of these studies (37 percent) tested the effects of a program on both academic and mental health outcomes and 14 found an impact on both types of outcomes. The remaining 40 studies (63 percent) examined only mental health outcomes with 38 demonstrating effectiveness in this area.

Kutash, Duchnowski, and Lynn (2006) identified a further 1,182 citations between from 1999 to 2005. Each citation was reviewed to determine if it described a quantitative analysis of a school-based program, used standardized measures, employed a comparison group, was published in a peer-reviewed journal and was written in English. Again, only a few studies of school-based programs were identified as having rigorous empirical designs, but this process uncovered many resources on the topic that may be of help to the field. Results of this review concluded that the evidence for the effectiveness of school-based programs is strong but that important differences among programs exist in terms of their effectiveness and demands on schools.

Also in 2006, the WHO Health Evidence Network summarized the findings from 32 reviews including those identified from the United Kingdom Health Technology Assessment review of reviews (Stewart-Brown, 2006). The reviews included (a) reviews of studies examining universal approaches to mental health promotion in schools, (b) reviews of studies examining barriers and facilitators to the health of young people, (c) studies examining the effects of school-based intervention programs on aggressive behaviour, (d) peer-delivered health promotion for young people, (e) school-based prevention programs for eating disorders, (f) effects of physical activity interventions in youth, (g) educating young people about drugs, (h) school-based adolescent drug prevention programs, (i) school-based violence prevention programs and (j) programs addressing depression and suicide.

The authors of this review concluded that there is “sound evidence that these programmes can be effective, but also that they are by no means always so.” The generally positive conclusion should not overshadow the large number of studies that have produced either unfavourable or mixed findings, again underscoring the importance of choosing programs carefully. The most notable finding of this synthesis is that school-based programs that promote mental health are effective, particularly if developed and implemented using approaches that include 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. In general, this review concluded that programs to improve conflict resolution and reduce violence and aggression were among the most effective, where as suicide-prevention programs showed evidence of beneficial effects for suicide potential but not necessarily behaviour. Programs for developing self-esteem were found to be less effective.

Finally, in December 2008, CASEL released the most comprehensive empirical review of school-based interventions designed to improve academic, social and emotional learning. The report by Payton, Weissberg, et al. (2008) summarizes results from three large-scale reviews of research on the impact of social and emotional learning (SEL) programs on elementary and middle school students — that is, programs that seek to promote various social and emotional skills. Collectively the three reviews included 317 studies and involved 324,303 children.

Results from three separate reviews, examining (a) universal programs (180 studies involving over 270,000 students), (b) indicated programs (80 studies involving over 11,000 students) and (c) after-school programs (57 studies involving over 34,000 students) suggest that SEL programs are among the most successful youth-development programs offered to school-age children and youth. In addition to social and emotional benefits, SEL programming improved students' achievement test scores by 11 to 17 percentile points.

For universal programs, results showed that gains in positive attitudes, positive social behaviours, conduct problems, emotional distress, and academic performance were modest (0.23 to 0.28) and that gains in social and emotional skills were substantial (0.60). For indicated programs, results showed that gains were even greater (ranging from 0.43 to 0.77). At follow up, results showed that improvements in the depressive symptoms were not sustained through universal programs (0.13), but were maintained in selected programs targeting individual groups (0.58). In one study, gains in academic performance were sustained in both universal (0.32) and indicated programs (0.67), but neither program showed any benefit for substance use (Payton, Weissberg et al., 2008).

Special report: Report of the Committee on the Prevention of Mental Disorders and Substance Abuse among Children, Youth and Young Adults from National Research Council and the Institute of Medicine (O'Connell, M.E., Boat, T. & Warner, K. E., 2009)

Many of the principles that have emerged in reviews over the past decade have been re-affirmed in a recently released report of the Committee on the Prevention of Mental Disorders and Substance Abuse among Children, Youth and Young Adults (National Research Council and Institute of Medicine, 2009). This report was created jointly by the National Research Council and the Institute of Medicine in the United States and includes a review of the knowledge base regarding the effectiveness of mental health prevention in families, schools and communities. It is by far one of the most ambitious and progressive reports published to date, not only summarizing the evidence for school-based and community mental health programming, but also considering the various factors affecting implementation, sustainability and integration with developmental psychology and neuroscience.

The report of the Committee on the Prevention of Mental Disorders and Substance Abuse among Children, Youth and Young Adults (National Research Council and Institute of Medicine, 2009) makes a number of recommendations and articulates several core principles that should guide the field. First, the report emphasizes that mental health promotion requires a shift in thinking. The prevention of mental, emotional and behaviour disorders *through health promotion* involves a fundamentally different way of thinking about health and mental health that goes beyond the traditional *disease* model. *Prevention,* when viewed in terms of an illness or disease model, focuses primarily on the elimination of risk factors or emerging symptoms and signs of illness. In contrast, *prevention*, when viewed from a health promotion model, focuses primarily on questions of sustained growth and well-being, namely on "what will be good for the child in five, 10 or 20 years from now". That is, mental health promotion is defined as follows:

> *Mental health promotion includes efforts to enhance individuals' ability to achieve developmentally appropriate tasks (competence) and a positive sense of self-esteem, mastery, well-being, and social inclusion and to strengthen their ability to cope with adversity (p. 67).*

There is increasing evidence that promotion of positive aspects of mental health is an important approach to reducing mental, emotional and behavioural disorders and that both health promotion and prevention programs should be considered for broad implementation. Indeed, "mental health promotion should be recognized as an important component of the mental health intervention spectrum, which can serve as a foundation for both prevention and treatment of disorders" (p.55).

Second, the report asserts that physical health and mental health are inseparable. Indeed, young people who grow up in good physical health are more likely to also have good mental health.

Third, the report emphasized a public health approach, consistent with several other organizations and policy papers (see all citations for Waddell in the reference list), that strikes a balance between approaches aimed at those at imminent risk, those at elevated risk and those who currently appear risk free but for whom specific interventions have been demonstrated to reduce future risk.

Fourth, mental, emotional and behaviour disorders should be conceptualized within a developmental framework. Indeed, understanding the manner in which different difficulties, disorders and competencies emerge over the course of development is essential for creating interventions for prevention and promotion. For example, interventions can be informed by epidemiological data that suggests that the median age of onset is earlier for anxiety disorders (age 11 years) and impulse control disorders (age 11 years) than for substance use disorders (age 20 years) and mood disorders (age 30 years) (Kessler et al., 2005).

Fifth, developing new approaches to large-scale program implementation will be increasingly important to ensure that programs meet the specific needs of the large number of diverse communities. The report notes that translation of research-based programs and initiatives often stumble toward uneven, incomplete and disappointing outcomes when they lack rigorous systems in place to ensure program fidelity. The authors highlight the relevance of implementation research to the success of future school-based mental health initiatives.

Sixth, the report acknowledges the importance of Internet-based technology in terms of new opportunities for both dissemination and research. Implementation of interventions on the internet has the potential to address several implementation barriers including fidelity, scalability and cost-effectiveness, as well as accessibility, stigma and the challenges of reaching numerous multicultural and multilingual communities simultaneously.

In summary, the research emphatically supports the effectiveness of mental health promotion programs and mental health and substance abuse prevention and intervention programs. A review of the small number of studies (n=14) in this area (Zechmeister et al., 2008) suggests that prevention programs are cost-effective, particularly programs developed for children and youth. The cost effectiveness of these programs is comparable to that of other public health interventions. Still, there remain important issues to untangle. For instance, some researchers have questioned the benefit of universal school-based programs given the tremendous resources invested (Spence & Shortt, 2007). Direct comparisons of different types of programs within a single domain, such as depression (Browne Gafni, Roberts, Byrne & Majumdar, 2004) suggests that the effectiveness of universal programs (delivered to all students) may be modest, relative to indicated prevention programs (delivered to students with elevated symptoms) and selected prevention programs (delivered to high-risk students). A recent meta-analysis of prevention programs for the onset of depressive symptoms (Horowitz & Garber, 2006) showed that although all types of programs were effective, the effect size was smaller for universal prevention programs ($\delta = 0.12$) than for indicated ($\delta = .23$) or for selective ($\delta = .30$) prevention programs. This highlights a case where further research and systematic evaluation of the evidence (e.g. the GRADE approach) may help implementation teams make appropriate decisions. The utility of the GRADE approach has been subjected to a first test in the child mental health sector and has proven to be useful in that context (Van Adel, 2009).

In the case of preventing mood disorders, the results of social-emotional learning interventions (Payton, Weissberg, et al. 2008), showed similar levels of effectiveness for improving mood, but much larger levels of effectiveness for social-emotional learning outcomes, such as social and emotional skills. If this finding continues to be replicated, it supports an approach of adopting social-emotional interventions as the universal program of choice. This is the type of decision where a GRADE-type analysis would be useful for practitioners and policy makers.

While the research indicates the existence of effective programs at the levels of promotion, prevention and intervention, there is a notable gap in addressing the needs of diverse populations and circumstances. In general, although the needs of aboriginal, immigrant, refugee and racial/ethnic communities are accepted as being high, specific school-based prevention/intervention research has not been reported. There is also a need for research examining the requirements of successful programming for rural and remote communities.

Reviews of screening programs

One way of addressing the challenge of identifying young people with mental health difficulties is to implement a school-wide screening program in which all young people in a school participate. There are several types of school-based screening programs, which target a range of symptoms and risk factors, such as suicidal thinking (Schaeffer et al., 2005). Screening programs enrol available students in completing measures and then provide feedback. Although results of studies have shown that young people with mental health difficulties, including mood disorders and suicidal thoughts, can be identified through screening, these studies suggest that many individuals with difficulties will still be missed, and that only a small number of young people identified with the condition or risk factor will, in fact, have that risk factor (Hallfors et al, 2006; Schaeffer et al., 2005).

Three systematic reviews of the literature on screening for depression have been published to date. In 1996, the U.S. Preventive Services Task Force (1996) found insufficient evidence to recommend for or against routine screening for depression for young people with standardized questionnaires. However, after a further re-evaluation of the existing evidence in 2002, this Task Force (Pignone et al., 2002) altered its position slightly. It recommended that “adults should be screened for depression when accurate diagnosis, effective treatment and careful follow-up can be assured.” This recommendation was extended to **adolescents in primary care** in 2009 (Williams, O'Connor, Eder, & Whitlock, 2009). Currently, there exists no evidence sufficient to argue for or against screening children or adolescents *en masse* in a school setting in the manner in which they are currently being implemented.

The decision of the US Task Force in 2002 was based in part on the poor predictive values associated with screening tools for children and youth. These findings challenge the viability of

most screening programs implemented in schools. The reasons for the less-than-optimal performance of screening programs is due to a range of factors affecting the predictive values of screening tests, including (a) the tendency for individuals with mental health difficulties to be absent from school more frequently than young people without mental health difficulties (Kessler et al., 1995) and (b) the increased likelihood that individuals with mental health difficulties drop out of school (Kessler et al., 1995). As a result, many of the young people in greatest need of being screened may not be present on scheduled screening days, which in turn will contribute to a lower base rate of available cases to be detected and therefore a poorer performing test.

This issue is related more to participation than utilization, given that screening programs are typically offered only once a year. The challenge is clear: individuals, who are not present on screening day for whatever reason, whether absent from school or without required parental permissions to participate in the program, are unable to access the resource, although it is available in the school. The ability of screening programs to detect individuals with mental health difficulties and illness is further complicated given that many difficulties, such as depression or suicidal ideation, are episodic and may fluctuate over the course of a year. That is, depending on when screening day is scheduled, individuals may or may not show signs and symptoms that could be detected. However, mental health problems can occur at any time and therefore require a more dynamic and continuous approach to monitoring the lives of young people. Research suggests that stressors precipitating suicide in adolescents often occur in the preceding 24 hours, and more than 70 percent of situations occur in the preceding month (Marttunen Aro, Lonngvist , 1993). This leads to many young people with mental health difficulties being missed by traditional once- or twice-per-year mental health screening programs; i.e. an issue of accessibility. School screening programs are not a stand-alone service, they need to be integrated in a broader approach as one component of an integrated school, family and community mental health framework to identify and deliver appropriate services to youth (Weist Rubin, Moore, Adelsheim & Wrobel, 2007).

Despite the challenges facing such programs, screening continues to remain an attractive undertaking for the early identification of difficulties, although it is recognized that the manner in which screening is implemented must be modified and most likely integrated with other school-based programming (National Research Council and Institute of Medicine, O'Connell et al.,

2009). One possibility includes integrating screening with a school-based health literacy program that capitalizes on the availability and accessibility of the Internet (Santor et al., 2007; Santor & Bagnell, 2008) or help-seeking program (Santor, Kusumakar, Poulin & Leblanc , 2006).

Reviews of full-service school-based health centres

Historically, school-based programs have addressed a wide range of needs and attempted to fulfill a number of goals, ranging from facilitating health promotion and prevention to providing direct clinical services. In this way, school-based programs offered the promise of reducing the gap between those in need of treatment and those actually receiving treatment by increasing accessibility to treatment, improving continuity of care and treatment compliance, as well as providing new opportunities for early intervention and prevention (Armbruster & Lichtman, 1999; Durlak, 1997; Jepson, Juszczak & Fisher, 1998; Weist, 1997). Although the majority of school programs have advocated for a range of services that include early intervention and prevention programs (Adelman & Taylor, 1999; Adelman & Taylor, 1999; Weist, 1997), most studies evaluating the benefits of these programs have emphasized the efficacy of the direct clinical services they offer (Adelman & Taylor, 1999; Romualdi & Sandoval, 1995; Tashman et al. 2000; Weist et al., 1999), rather than assessing the extent to which school health centres facilitate the early detection and prevention of illness.

Despite the increasing number of school-based services such as school health centres, relatively little research has examined the manner in which young people with and without difficulties use these resources. Interestingly, utilization statistics for school-based health centres show that there are no differences in youth mental health problems between those using services and not using services (Pastore, Juszczak, Fisher & Friedman, 1998).

Although school-based health services are in principle available to every student, in practicality they may not be perceived as either available or accessible for a number of reasons. Heavily used school-based health centres may be extremely busy at peak times during school hours, making the resource inaccessible to a large number of students at any given time. Recent data from one school health centre research group suggests that only a fraction of young people reporting high levels of distress actually use school-based health centres. This may be

attributable in part to the fact that school-based health centres are utilized disproportionately by individuals with the highest levels of distress (Santor, Kususmakar, Poulin, & Leblanc, 2006). Results of this study showed (a) that young people with difficulties were more likely to use school-based health centres than young people without difficulties, but (b) that only a fraction of young people with difficulties used school-based health centres – most did not, and (c) that a relatively smaller number of students with difficulties (21 percent) accounted for a larger proportion of the visits (51 percent). Interestingly, individuals with high levels of distress, who represent just 20 percent of the entire school population, accounted for more than half of all visits to the school-based health centres.

These results suggest that although school health centres are generally successful in achieving their mandate of providing service to students in need, school-based health centres are used disproportionately, much like every other health resource. Indeed, many individuals that may benefit from the resources do not utilize them. In this study (Santor et al., 2006), the modal number of visits to the health centre was one. However, some individuals used the school-based health centre repeatedly, as many as 30 times a year. This disproportional use of school health centres may represent a periodic or potentially sustained limit on availability. Stigma associated with visiting a school-based health centre and concerns about confidentiality within the school may contribute to the perception that the resource may not be accessible to individuals.

These data highlight some of the hidden challenges facing school-based health services, namely (a) how to reduce barriers that may be preventing the majority of young people with mental health difficulties from using school-based health centres and (b) how to balance the extent to which school-based centre resources are used to provide direct clinical services relative to resources allocated to early identification or screening. Both of these issues will directly affect the utilization rate of these resources.

The school-based health centre model opens the door to consideration of the broader *school as hub* model where a wide range of services are provided at the community school. While there is widespread interest in the *hub* model in Canada and other countries, there is no published evaluation of the model as yet. This untested concept provides yet another opportunity for Ontario's school, community and research partnerships.

Reviews of help seeking literature

Studies have consistently identified a number of factors that are predictive of help seeking behaviours, as well as a number of barriers to help seeking. Factors predicting help seeking include the severity of symptoms and difficulties (Rickwood & Braithwaite, 1994; Saunders, Resnick, Hoberman & Blum, 1994), being female (Rickwood & Braithwaite, 1994; Schonert-Reichl, Offer & Howard, 1995), availability of support from others (Rickwood & Braithwaite, 1994), confidence in the help being provided (Rickwood & Braithwaite, 1994) and a range of individual difference variables, including a willingness to disclose emotional information (Rickwood & Braithwaite, 1994), self-efficacy (Garland & Zigler, 1994) and attachment style (Larose & Bernier, 2001). Barriers to help seeking include (a) beliefs that the problem could be managed alone (Dubow, Lovko Jr. & Kausch, 1990; Kuhl et al., 1997), was unimportant, or did not warrant help (Culp, Clyman & Culp, 1995), (b) concerns about the lack of confidentiality (Reddy, Fleming & Swain, 2002), (c) the stigma associated with having or seeking help for mental health difficulties (Dubow et al., 1990) and (d) the perception that professionals and professional services would not be helpful (Dubow et al., 1990).

Despite the recognized importance of fostering help seeking among young people with difficulties, few studies have focused on facilitating help seeking directly. One reason for the absence of such studies may be that some research has shown that the benefits of help seeking for mental health difficulties may be minimal, particularly over the short term (Rickwood, 1995) and only emerge over the long term (Feehan et al., 1993).

One of the rare, recent studies examining the effectiveness of school-based programs to reduce suicidal behaviour and increase help seeking was conducted by Aseltine and DeMartino (2004). Results showed that the program was effective in reducing self-reported suicide attempts over the three-month duration of the study but did not change self-reported suicidal thinking or help-seeking behaviour among professionals, adults or friends, for young people who remained suicidal. This study is important for a number of reasons. First, it illustrates the need to consider how to manage the needs of young people who may not necessarily benefit from a valid and effective school-based mental health intervention. Despite the promising results for many initiatives, there will always be a number of young people who do not benefit from the program or who, despite early benefits, still develop a mental disorder of some kind. In addition, the

researchers cited several barriers to help seeking that they believed were responsible for the failure to find a help seeking effect for the intervention, including a shortage of staff available to help students with mental health concerns as well as student concerns about lack of confidentiality. In this regard, results are consistent with research on barriers to help seeking suggesting that in order to be effective, school-based health clinics should (a) ensure confidentiality, (b) promote use of the teen health centres as appropriate help-seeking behaviour and (c) reduce the real or perceived inaccessibility of help.

This issue was addressed explicitly in one of the few studies to show that actual help seeking could be enhanced in young people with mental health difficulties. Santor et al.(2006) showed that help-seeking behaviour for mental health difficulties and mental health referrals could be increased with only a moderate investment in time, and that benefits of a school-based help-seeking intervention may be greatest among students with specific needs, such as high levels of distress.

Reviews and the use of technology

Internet-based health resources targeting adolescents have increased dramatically over the past decade. These include electronic news groups and information websites (Winzelberg, 1997), mediated and non-mediated forums (Bremer & Beresin, 2000), anonymous question-and-answer bulletin boards (Suzuki & Calzo, 2004), symptom checklists designed to facilitate early detection of illness (Ayonrinde and Michaelson, 1998), disease and medication management (Bulger & Reeves, 2000; Sciamanna , Clark, Houston & Diaz, 2002), self-help and illness identification (Ayonrinde and Michaelson, 1998), help seeking (Nicholas et al., 2004), health promotion (Long & Stevens, 2004; Zalaquett & Sullivan, 1998) and health literacy (Dyer & Thompson, 2000). In addition, several targeted programs now exist for which there is favourable evidence in the area of high-risk drinking (Chiauzzi, Green, Lord, Thum & Goldstein, 2007), depression (Christensen, Mayer, Ferran & Kissela, 2009), health promotion (Skinner, Gardner, Rizzo & Ungerleider, 2009), HIV prevention (Ybarra, Mitchell, Finkelhor, Wolak, 2007), and mental health (Ybarra and Eaton, 2005).

Estimates suggest that as many as 75 percent of adolescents have used the Internet to locate health information online, slightly more than the numbers downloading music and playing games (Borzekowski & Rickert, 2001a, 2001b; Henry J. Kaiser Family Foundation, 2001). At present, approximately 45 million youth have access to information on the Internet in North America. Studies suggest that as many as half of all young people may prefer to obtain health information online as opposed to other media (Santor et al, 2007). A 2001 Canada-wide phone survey of youth conducted by the Media Awareness Network and Environics Research Group in Canada showed that over 99 percent of youth have access to the Internet and that 79 percent of youth have Internet access at home. Never before has a single delivery system had the capacity to reach such a large number of young people simultaneously. Accordingly, many of the challenges faced trying to improve knowledge uptake may be achieved or facilitated in part by supplementing school-based programs with interactive, Internet-based tools, irrespective of the type of program.

Websites are both a delivery mechanism and a data collection tool that can be used to address these specific challenges. Internet-based mental health resources offer a unique opportunity to link young people with health expert information and tools to help them with health decision making, identifying needs and accessing resources. However, despite the large number of websites and search engines available, a recent study reported that 69 percent of teens could not find information they were looking for about sex and adolescent sexuality and that 62 percent found obstacles in getting information online (Frappier, Kaufman, Baltzer et al., 2008). The ease with which information can be deployed online is certainly one of the most important successes of the Internet but may also be one of the greatest challenges facing online programs. With such a large number of websites and no way for most users to determine the credibility of the information provided, attracting and retaining any individual user and ensuring the dissemination of accurate and timely information will remain a challenge. Unfortunately, there is little research examining the extent to which users return to online health resources. In developing an Ontario-based online health literacy and early detection resource (YooMagazine.net), Santor and colleagues embedded evaluation tools within the resource, facilitating tracking of service utilization over the day, month or year and by user characteristics like mental health difficulties (Santor et al., 2007).

In its recently released report, the National Research Council and Institute of Medicine (O'Connell et al., 2009) emphasized the important role that technology can play in a addressing a number of challenges, including improving fidelity, increasing scalability and optimizing cost-effectiveness, as well as improving accessibility and reducing stigma while meeting the needs of numerous multicultural and multilingual communities simultaneously.

BRIDGING RESEARCH AND PRACTICE IN SCHOOL-BASED MENTAL HEALTH

School-based health and mental health programs have experienced dramatic growth in the past three decades, increasing by almost 600 percent in the past 10 years (Robert Wood Johnson Foundation, 2000; Lear, 1996; Schlitt et a., 2000). By the end of 2002, there were estimated to be some 1,200 outcome studies on prevention and health promotion in youth (Weisz, Sandler, Durlak, & Anton, 2005). Despite this successful expansion of research-based knowledge, there are challenges in bringing this information to bear on daily practice in schools.

In order to effectively bridge science and practice, (1) empirical knowledge must be mobilized (collated, packaged, vetted, shared), (2) school boards need criteria upon which to base local decisions about program and strategy selection and (3) a multitude of issues must be considered in order to support effective implementation of empirically-supported practices. Each of these areas: effective knowledge mobilization, program and strategy selection, and program implementation, adoption, and uptake issues, are discussed below.

Effective knowledge mobilization

Given the urgency associated with issues in student mental health, and the fact that implementation of school-based mental health programming will involve a large number of educators with varying degrees of existing expertise in this area, mobilizing the knowledge base to enhance the general level of mental health literacy amongst educators is critically important. Knowledge mobilization is a term used to describe the broad range of activities related to bridging research and practice in this way. There are many models for understanding the flow of knowledge from development through uptake (summarized in Levin, 2009a; 2009b; Mitton, Adair, McKenzie, Patten, & Perry, 2007; Sudsawad, 2007). Most of these models appreciate the

complexity of this activity and attempt to capture this intricate relationship-focused work using frameworks and multi-directional flowcharts. Several elements are typically highlighted within these broad frameworks, such as knowledge development, synthesis, dissemination and adoption/uptake (cf. B.C. Mental Health and Addictions Services framework). In the present report, the term knowledge mobilization is used to refer to the strategies and methods for collating and sharing research-based information with knowledge user audiences, such as educators and students, for the moment distinguishing this from implementation and uptake aspects of the construct.

Despite the overwhelming support for the effectiveness of school-based mental health programming, and the recognition of the important role that educators and school-based counsellors will ultimately play in implementing such programming, relatively little research has focused on evaluating the readiness and capacity of educators to deliver this curriculum. Indeed, a 2007 review of mental health literacy in Canada commissioned by the Canadian Alliance on Mental Illness and Mental Health (Bourget & Chenier, 2007) acknowledges the importance of increasing levels of awareness of mental health among teachers, but no substantive body of research examining the capacity of teachers or educators to deliver a broadly based mental health program has been identified. In addition, this initial scan of the literature revealed little research directly related to factors affecting knowledge mobilization amongst educators in the area of school-based mental health or substance abuse information.

Lacking specific information in this area, it is beneficial to draw on general principles of knowledge mobilization from related fields. For example, within the health-care sector, it has been posited that there are four central methods for knowledge translation: *push, pull, exchange* and *integrated systems* approaches (Lavis, Lomas, Hamid, & Sewankambo, 2006). *Push* techniques involve a flow of information from knowledge producer/purveyor to user audiences; *pull* strategies are employed when practitioners or decision makers seek knowledge on a particular topic; *exchange* models involve partnership and communication between research producers and research users; and *integrated* models feature a knowledge translation platform that fosters research exchange and use at an institutional or regional/national level. The two latter methods would be considered more active forms of knowledge mobilization, as they require engagement and participation from the audiences. An understanding of these broad methods can be helpful in considering knowledge mobilization efforts with educator audiences.

Likewise, information about the value of specific techniques in knowledge mobilization within health care sectors can inform similar work in education. For example, Grol and Grimshaw (2003) reviewed the effectiveness of more specific interventions to change clinical practice among physicians. Conclusions from an overview of 54 reviews were as follows.

Strategy	Conclusions
Educational materials	Mixed effects
Conferences	Mixed effects
Interactive small-group meetings	Mostly effective, but limited numbers of studies
Educational outreach visits	Especially effective
Use of opinion leaders	Mixed effects
Education with different educational strategies	Mixed effects, dependent on combination of strategies
Feedback on performance	Mixed effects
Reminders	Mostly effective, particularly for prevention
Computerized decision support	Mostly effective for drug dosing and prevention
Introduction of computers in practice	Mostly effective
Mass media campaigns	Mostly effective
Multiprofessional collaboration	Effective
Patient-mediated interventions	Mixed effects; reminding by patients is effective in prevention
Combined interventions	Most reviews: more effective than single interventions

The recent recommendation of the CME Guidelines Panel, published in March 2009 (Moores, Dellert, Baumann & Rosen, 2009).reached the following general conclusion, and may be a useful guide to parallel efforts in education:

> *"Based on the literature, didactic education, including traditional lecture-style teaching, as a single mode of instruction, was found to be the least effective form of learning, in terms of . . .knowledge retention, skill application and patient outcomes" . . . "In contrast, the most effective CME incorporates a diversified approach to education, utilizing a combination of multimedia, multiple instructional techniques and multiple exposures to topic areas."*

Within the domain of child and youth mental health, and therefore closer to the target content area, Barwick and colleagues (2005) completed a comprehensive review of the effectiveness of various knowledge exchange methods for this area of focus. The following key recommendations may also be relevant for mental health-related knowledge mobilization activities involving educators:

- It is not sufficient to transfer evidence-based practices to the field in the absence of understanding what is needed to prepare organizations and practitioners to receive and implement this new knowledge.
- The transfer of new knowledge is more successful when there is active collaboration and partnership with all stakeholders from the beginning.
- Knowledge is transferred best when done face to face, allowing for the communication of tacit knowledge.
- Passive dissemination of information is not as effective in creating practice change or knowledge uptake as are active strategies.
- Transferring knowledge is part of a larger context of innovation and change.
- Leadership, power and authority must be addressed in the knowledge transfer process.
- Organizations can foster environments that are conducive to change.
- Resistance to change – from the system, the leaders and the practitioners – needs to be recognized and addressed.
- Assessing readiness for change is integral to the success of knowledge implementation and adoption of new knowledge or practices.
- Distilling research knowledge into practice guidelines and making these available is not sufficient for creating practice change.
- A better understanding of practitioners' attitudes toward evidence-based practice is needed to address skepticism, distrust and resistance.

Each of these factors deserves careful consideration with respect to its potential influence on knowledge mobilization activities with educators. To highlight just one area, there now exist validated measures assessing readiness among both individual practitioners and organizations that may be adapted for use among teachers and school boards. For example, Aarons (2004) has developed the "Evidence-Based Practice Attitude Scale" to measure mental health provider

attitudes toward adopting evidence-based practices and programs. Similarly, there currently exist a number of scales to measure organizational readiness (Lehman, Greener, & Simpson, 2002; Simpson, 2002).

Although we cannot be certain that these techniques will have similar effects within an educator audience, this information can guide future research in this area. Note that several Ontario-based research labs are beginning to explore the generalizability of these highlighted methods and approaches within school-based audiences, but in most cases, only preliminary findings are available at this time (e.g., Davies, Gardner, Parkin, & Short, 2009; Levin, 2009a; Short, Gardner, Rizzo, & Ungerleider, 2009).

While educators are certainly a key audience for research-based information about mental health, children and youth themselves would also benefit from receiving accurate and timely information to enhance their mental health literacy. In 1994, the Institute of Medicine convened a committee of national experts on school health to carry out a major study of comprehensive school health programs in kindergarten through Grade 12. One of the report's most important conclusions (Allensworth, Lawson, Nicholson & Wyche, 1997) was that "the period prior to high school is the most crucial for shaping attitudes and behaviours. By the time students reach high school, many are already engaging in risky behaviours or may at least have formed accepting attitudes toward these behaviours." The report made several recommendations, including a number specific to learning outcomes for students, such as:

> *"All students should receive sequential, age-appropriate health education every year during the elementary and middle or junior high grades and a minimum of a one-semester health education course at the secondary level"*

There are now several mental health literacy programs showing good evidence for the benefits of fostering mental health literacy in reducing a variety of negative mental health attitudes and increasing social-emotional outcomes (Kelly, Jorm & Wright, 2007). Indeed, recent evidence has also shown the benefits of fostering mental health literacy. Naylor et al (2009) have shown that students receiving a mental health literacy curriculum showed significantly more sensitivity and empathy towards people with mental health difficulties and experienced significant reduction in conduct problems and a significant increase on prosocial behaviour compared with

the control group. Santor et al. (2007) showed that help-seeking behaviour for mental health difficulties could be increased following two brief classroom-based activities that focused on teaching young people about the signs of distress, the barriers to seeking help for distress and where help could be found within local communities.

Several factors require attention when considering the mobilization of mental health information for children and youth (Hemming & Langille, 2006). First, information needs to be easy to find, immediately available, relevant and useful to youth, and developed in conjunction with the target audience (Benigeri & Pluye, 2003). Evidence exists suggesting that knowledge transfer and ultimately knowledge uptake is enhanced when resources are customized to suit the needs of end users (Chiarelli & Edwards, 2006; Broner, Franczak, Dye & McAllister, 2001). Customizing the resources represents an enormous undertaking, which although difficult, may be essential to improving the effectiveness of programs. Second, high levels of youth engagement are essential to knowledge uptake and the long-term effectiveness of any health resource. If young people are not participating due to lack of interest, periodic absenteeism or more sustained absences from school, then the effectiveness of the program will be diminished. Given that absenteeism and drop out rates tend to be high among young people with mental health or substance abuse difficulties (Kessler et al., 2005), maximizing the effectiveness of programs may depend on developing alternate delivery mechanisms that will be less affected by absenteeism. Relatively little is known about the qualities of health resources or programs that promote youth engagement.

Advances in online technology also offer a number of interesting possibilities for fostering knowledge uptake in and beyond the classroom. Interactive learning modules have the advantage of presenting information at a manageable pace and facilitating the acquisition of decision-making skills by using interactive, choice based learning modules. The recent special report of the Committee on the Prevention of Mental Disorders and Substance Abuse among Children, Youth and Young Adults (National Research Council and Institute of Medicine, O'Connell et al., 2009) acknowledged the importance of Internet-based technology in terms of new opportunities for both dissemination and research. Indeed, implementation of interventions on the Internet has the potential to address several implementation barriers including fidelity, scalability and cost-effectiveness, as well as accessibility, stigma and the challenges of reaching numerous multicultural and multilingual communities simultaneously. For students, learning

materials presented in interactive formats, whereby young people learn about material by experiencing the consequence of the choices they make, are more likely to facilitate knowledge uptake. There are now a number of learning modules that have been evaluated formally and have produced promising results, including www.SmokingZine.org (Norman, Maley, Li, Skinner, 2008), www.youthbet.net (Korn, Murray, Morrison, Reynolds, Skinner, 2006) and www.yoomagazine.net (Santor et al., 2007; Santor & Bagnell, 2008). It appears that there is much to be gained by centralizing the dissemination of resources, for educators and students, with Internet-based programs. Economies of scale can result in significant savings while facilitating knowledge transfer, increasing the availability and accessibility of resources and fostering the ongoing evaluation and monitoring of the program.

Program and strategy selection

Despite the large number of empirical studies conducted to date examining the effectiveness of various programs and the burgeoning number of reviews of those studies, determining which program is most effective in a specific setting remains daunting. The task has been made more complicated due to the large number (and diverse sets) of criteria used by various agencies and researchers to designate whether an intervention is efficacious, as well as by the large number of reviews, which rarely examine the same body of work or pool of studies.

Decision makers, in both the education and mental health systems, have many options from which to choose in implementing school-based mental health services. **The task becomes to match the target population and system structure with the programs available.**

To overcome the difficulties in attempting to decide which single intervention is best, researchers have increasingly looked to identify what ingredients characterize the most effective classroom based interventions. For example, in their review of the literature, Rones and Hoagwood (2000) identified the following factors associated with program effectiveness:

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

Similarly, Browne and colleagues (2004) identified the following common elements in effective prevention and early intervention programs:

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

And finally, Greenberg and his colleagues (2003) recommended the following strategies for effective school-based prevention programming on the basis of their own review. These strategies involved the following:

1. Teach children to apply social and emotional learning skills in daily life through interactive classroom instruction
2. Foster respectful supportive relationships among students, school staff and parents
3. Multi-year, multi-component interventions are more effective than single-component short-term programs
4. Health promotion efforts are best begun before signs of risky behaviours emerge and should continue through adolescence

Such guidelines can assist in local decision making about the selection of particular school-based mental health programs and strategies. The GRADE approach is also a promising strategy in this regard.

Program implementation, adoption and uptake issues

The recent special report of the Committee on the Prevention of Mental Disorders and Substance Abuse among Children, Youth and Young Adults (National Research Council and Institute of Medicine, 2009) highlighted the need for developing new approaches to large-scale program implementation, to both maximize the effectiveness of existing programs as well as to ensure that programs meet the specific needs of the large number of diverse communities. The number of challenges that face the successful and sustained implementation of a program are numerous and the science of large-scale program implementation has emerged as a distinct discipline in the past several years. Implementation science is defined as the scientific study of methods to promote the uptake of research findings for the purpose of improving quality of care (Foy, Eccles, & Grimshaw, 2001).

Although a complete review of the numerous factors relevant to successfully implementing and sustaining a broadly based program are beyond the scope of the current report, the comprehensive synthesis of implementation research conducted by the US based National Implementation Research Network (NIRN, <http://www.fpg.unc.edu/~nirn/>) is highlighted (Fixsen et al., 2005). This report was not focused explicitly on school-based programs, but it makes several recommendations that are relevant for the implementation of school-based programs. First, the literature across domains consistently cites the importance of *stakeholder involvement* and *buy in* throughout all stages of the implementation process. The importance of key individuals, called purveyors, champions or intermediaries is similarly highlighted. The role of intermediaries is to represent a research-based program or strategy and to work actively to ready the organization for implementation with fidelity and good effect. In addition, careful attention needs to be given to the content of the program, both in terms of its suitability for the vast range of diverse subgroups as well as to what constitutes the core components of the program responsible for its effectiveness. NIRN also provides a number of additional resources related to implementation science, and recently has added Scaling Up Evidence-based Practices in Education (http://www.fpg.unc.edu/~nirn/resources/detail.cfm?resourceID=224).

This resource has been developed to facilitate state-wide quality and sustainable implementation of evidence-based practices. As research and experience continue to accumulate and be distilled, this site will be a valuable resource for educators and their partners.

In the area of teacher practice change, Denton, Vaughn, & Fletcher (2003) examined a number of reading programs that had been widely implemented and identified the following factors that seem to influence sustainability of high-quality implementation:

- Teachers' acceptance and commitment to the program
- The presence of a strong school site facilitator to support them as the teachers acquired proficiency in its execution
- Feelings of professionalism and self-determination among teachers
- Teachers are provided with professional development (training, in-class coaching and prompt feedback) that leads to proficiency
- Programs are perceived by teachers as practical, useful and beneficial to students
- Administrative support and leadership. Instructional practice is valued by the school leaders and administration provides long-term support

Indeed, in-class coaching may represent one of the most important factors in program implementation involving teachers. A meta-analysis by Joyce & Showers (2002), summarizing several years of systematic research on training teachers in the public schools, showed that in-class coaching may be crucial to transferring knowledge acquired through training to the classroom setting.

In addition to a consideration of potential strategies to optimize sound implementation, adoption and uptake, it is prudent to identify **challenges** facing the successful and sustained implementation of a school-based program. Below, we discuss those noted in the literature. Pragmatic structural and process issues like labour relationships and board structures have not yet surfaced in studies. Factors important in change management such as school culture, leadership and readiness for change have not yet been examined in the context of implementing and sustaining school-based mental health and substance-abuse programs.

Integrating numerous diverse programs. Zins, Weissberg, Wang, and Walberg (2004) report that a typical school in the United States delivers, on average, 14 separate programs that broadly address social-emotional issues, the majority of which were implemented in response to immediate pressures or trends. The findings of this review suggest an alternative to implementing and maintaining large numbers of programs. In addition to the high degree of effectiveness associated with social-emotional programs (Payton, Weissberg, et al. 2008), the broad spectrum of benefits associated with these programs offers a clear advantage relative to the piecemeal approach to difficulties that often takes place in schools.

Improving program implementation. There is now direct evidence that the effectiveness of a program will depend on the intensity with which it is implemented. This is, in turn, affected by a variety of local and regional school factors. These include the manner in which programs are developed locally, the process by which programs are integrated into school operations, the organizational capacity of the school, the level of administrative support and the extent to which program implementation is standardized (Payne, Gottfredson & Gottfredson, 2006).

Improving school climate, staff training and institutional readiness for change. Broadly based reviews of implementation research and the various contextual factors that can affect the successful implementation and eventual uptake of a program have identified a number of factors, including school climate, staff training and institutional readiness for change (Fixsen et al., 2005). One of the best-developed programs that explicitly addresses the importance of these various components is the Bullying Prevention Program developed by Olweus (2004), which is a multi-level, multi-component school-based program designed to prevent or reduce bullying. This program is designed to restructure the entire school environment to reduce opportunities and rewards for bullying rather than to simply implement a curriculum and has been shown to be effective in reducing bullying, as well as substance use and delinquency. ***School-level components*** include (a) the formation of a bullying prevention coordinating committee, (b) training for committee members and staff, (c) adoption of school-wide rules against bullying, (d) development of appropriate positive and negative consequences for students' behaviour, (e) holding staff discussion groups related to the program and (f) involving parents. ***Classroom-level components*** include (a) the reinforcement of school-wide rules against bullying, (b) holding regular classroom meetings with students to increase knowledge and empathy and (c) informational meetings with parents. Most school-based mental health

programs have also articulated the importance of factors such as school climate, teacher training and institutional readiness for change. However, little systematic research has evaluated to impact of various factors on outcomes.

Improving program sustainability. Despite the large number of school-based mental health programs that have been developed and validated favourably, only a relatively small number of programs have been implemented on a broad and long-term scale. The State Implementation of Scaling-Up Evidence-Based Practices (SISEP) resource in the United States was created in recognition that the expertise, capacity and infrastructure for system-wide scale ups does not yet exist (<http://www.fpg.unc.edu/~sisep/about-us.cfm>). Ensuring large-scale implementation and sustainability of implemented programs is one of the most important challenges facing educators and health professionals.

In their review, Han and Weiss (2005) identified four characteristics of successful and sustainable programs. These include (a) acceptability to teachers, (b) program effectiveness, (c) feasibility of ongoing implementation with minimal but sufficient resources and (d) flexibility and adaptability. Elias and colleagues (2003) identified the following factors: (a) presence of a program coordinator or committee to oversee implementation and resolution difficulties, (b) involvement of individuals with a good sense of moral and ownership for the program, (c) ongoing process of formal/informal training, (d) a high level of inclusiveness among students, (e) a high level of visibility in the school, (f) components that foster mutual respect and support among students, (g) varied and engaging instructional approaches, (h) links to stated goals of schools or districts and (i) consistent support from school principals.

Facilitating timely and ongoing program evaluation. Program evaluation is almost always costly and is typically conducted at the conclusion of a program. Although most school-based initiatives and programs are still implemented with little or no formal evaluation plan in place, (Weisz et al, 2005), some real progress has been made in the past decade. With more and more evidence available regarding the effectiveness of programs now available, the need for evaluation will shift from validation studies that demonstrate the effectiveness of a program to evaluation studies examining the fidelity with which programs are implemented. Ongoing and timely evaluation is essential to ensure that any program, whether or not it has been formally validated, is correctly implemented each and every time it is offered. There is now evidence that

without the evaluation findings being delivered back to the school and stakeholders, there is less likelihood of ongoing utilization and sustainability of the program (Rowling, 2003). In some situations, school-based programs may not be effectively implemented at all sites, leading to mixed results (Gillham et al., 2007). Again, note that there are efforts within Ontario to enhance the capacity of school boards to conduct proficient program evaluations, and there are several examples of districts that routinely contribute to the literature in this area (Association of Educational Researchers of Ontario, 2009).

In summary, to bridge the gap between *what we know* from the abundant research literature in school-based mental health, and *what we do* in daily practice with students in schools to support mental health, attention must be given to effective knowledge mobilization, selection of appropriate programs and strategies to fit local conditions and a number of critical implementation issues. At the present time, we lack precise information about how best to address the research-to-practice gap in school-based mental health. And while this is the case, given the urgency of need, school boards in Ontario have begun to gather information, select programs and strategies and implement school-based mental health programming in schools. A scan detailing the current state of practice in this province is summarized below, with a view to providing policy makers with a local context for considering the above research synthesis and for determining ways to bridge the research and practice gap as it presents in Ontario schools.

CURRENT STATE OF PRACTICE IN SCHOOL-BASED MENTAL HEALTH IN ONTARIO

RATIONALE FOR SCHOOL-BASED MENTAL HEALTH PRACTICE SCAN

The above review reveals that there exist a number of proven programs and strategies that can be employed in schools to promote positive student mental health. At the same time, there are challenges with respect to mobilizing this knowledge for an educator audience. In addition, even when key findings can be collated and effectively shared with school board professionals, the emerging literature on implementation science suggests that there are many barriers to the proficient execution of empirically supported school-based mental health practices. A scan of the practice landscape in Ontario was conducted in order to determine the degree to which school boards are currently identifying student mental health as a priority area for action, ways in which they are managing the needs and enablers and barriers to implementation of evidence-based practices in school-based mental health in Ontario. A full report detailing the methodology and findings of the School-Based Mental Health (SBMH) Practice Scan can be found in the companion paper, **Scanning the Practice Landscape in School-Based Mental Health in Ontario** (Short, Ferguson & Santor, 2009).

METHODS

A project team, comprised of two clinical child psychologists and a post-doctoral fellow in healthy child development, was assembled to design and conduct the SBMH Practice Scan. Though several methods were considered, key informant interviews were deemed to be the most appropriate vehicle for capturing the depth of detailed information required for the SBMH Practice Scan. This method would provide school boards with the opportunity to fully describe their programs, practices, successes, challenges and needs. In addition, the project team speculated that this format would inspire rich dialogue that could stimulate further conversation about student mental health.

Determining who, within school boards, would participate in the interview was not a straightforward decision. The project team had anecdotal information to suggest that the

responsibility for student mental health in school boards fell with a range of individuals with varied professional portfolios. School boards themselves were therefore asked to identify the appropriate key informant(s) for their area. Directors of Education were selected as primary contacts for the study.

There are 72 school boards in the province of Ontario; 31 public, 29 Catholic and 12 French language (four public, eight Catholic). These boards are organized into six geographic Ministry of Education regions: Barrie, London, North Bay/Sudbury, Ottawa, Thunder Bay and Toronto. The sampling strategy for the SBMH Practice Scan was to attempt to recruit one Catholic and one public board within each of the six regions, and four French boards, for a total of 16 boards. Rather than targeting specific boards, however, the project team decided to offer the opportunity to all boards, so that all of those who wanted to share their perspectives and practice examples would have the opportunity to do so. If certain regions were not represented, then individual boards were identified to receive a second, more specific, invitation to participate.

With assistance from the Council of Directors of Education (CODE) and the Special Education Branch of the Ministry of Education, the Directors of Education in every board in the province were informed about the SBMH Practice Scan. There was an excellent response to the invitation, with 25 boards volunteering to participate in the interview. Five additional boards were approached to assist in bolstering representation (two from Thunder Bay and three from Toronto) and two of these (Toronto region) agreed to participate (n=27). The complete sample consisted of: 16 public boards, seven Catholic boards, and four French language boards (two public, two Catholic). Boards from each of the six regions of the province were included in the sample.

The key informant interview questions were developed in consultation with policy officials from several Ministries, and consultants involved in the Student Support Leadership Initiative and in provincial mental health related data-gathering efforts. Several questions that appear on the *International Survey of Principals Concerning Emotional and Mental Health and Well-Being* (Intercamhs, 2008) were also adapted and included to provide a reference point for the information gleaned within the SBMH Practice Scan.

Most of the interview respondents were Superintendents of Education with main areas of responsibility for Special Education, Student Services, Safe Schools Program, Operations and

Student Success. Note that 50 percent of participants had Special Education as their primary portfolio. Two Directors of Education and two board-based mental health professionals also participated.

Most telephone interviews were completed within 20-30 minutes. In some cases, participants also sent additional materials to supplement interview comments (e.g., presentations, web links). Interviews were conducted in English or French, as per participant preference. Following completion of all interviews, participants were sent excerpts of the draft report that pertained specifically to their board to ensure the accuracy and completeness of the information recorded during the interview.

KEY FINDINGS

Responsibility for student mental health in Ontario school districts

Participants were asked to describe the organization of responsibility for student mental health in their school board. Specific probes were used to gather information about the role of senior administration, trustees and in-house mental health professionals.

See the full report for detailed findings from the current interviews. In brief:

There is no one consistent leadership structure within school boards for issues related to student mental health. For the most part, senior level responsibility falls with Superintendents of Student Services/Special Education, in concert with those responsible for Safe Schools and Student Success. Trustees have an advocacy and support role in student mental health. The presence and training of mental health professionals within districts is variable. Many participants described a shared responsibility for student mental health with community partners.

Extent of student mental health concerns

Interview respondents were asked about their degree of concern about student mental health, the perceived link with academic achievement and which specific issues are of greatest priority at the present time. Respondents were asked to respond to the first two questions using a five-

point Likert scale, and could elaborate on these ratings with examples and descriptions. In an open-ended question, participants were asked to identify their top three concerns related to student mental health. Note that these questions were adapted from the *International Survey of Principals Concerning Emotional and Mental Health and Well-Being* (Intercamhs, 2008). In that data set, principals (n=1,215) reported that a large proportion of their students were affected by mental health problems and that the link between social-emotional well-being and academic achievement was very or extremely important. They identified bullying, impulse control and anger management as the most pressing issues in their schools.

See the full report for detailed findings from the current interviews. In brief:

Key informants indicated that they are extremely concerned about student mental health and that they see a strong link between social-emotional well-being and academic performance. Areas of primary concern include, in rank order, anxiety and mood problems, oppositional behaviour and violent acts, substance use, and complex psychiatric problems. Many participants also indicated a sense of increasing urgency in the context of the current economic climate.

District response to student mental health concerns

Key informants were asked to report upon the degree to which they thought that educators were prepared to identify and manage student mental health issues. Using a Likert scale, over two-thirds of respondents indicated that educators are not prepared sufficiently to manage student mental health concerns.

See the full report for detailed findings from the current interviews. In brief:

Key informants indicated that educators are minimally prepared to accurately identify and respond to student mental health concerns. They suggest that, given the link with academic performance and the sense of escalating social-emotional problems in classrooms, there is an urgent need for capacity-building in this area.

Practices and programs around Ontario

Key informants were asked to describe their board's efforts to improve student mental health in any of the following areas:

1. Building awareness/mental health literacy
2. Promoting positive student mental health universally
3. Identifying and intervening with students at risk
4. Serving students with identified mental health problems
5. Innovations in mental health service delivery
6. Evaluation and research

Respondents typically provided information in several of these areas, but it is recognized that only a sampling of strategies was conveyed during each interview. See the full report for practice examples from participating school boards. In brief:

Key informants reported that they are taking action around student mental health! They are piecing together resources to build mental health literacy in schools and communities and have been working to promote student mental health universally through existing mandates, like character education and safe schools. Some boards are selecting and implementing evidence-based social-emotional learning programs that are delivered class-wide and/or with students at risk. Students with identified mental health needs are the greatest challenge for school boards, and many are working alongside community partners to co-create and provide services for these seriously distressed students. Some boards have developed interconnected systems of care in an attempt to offer a full continuum of service across the mental health spectrum. Note that in only a few cases have boards had the opportunity to systematically evaluate programs in student mental health.

Enablers and barriers to implementation

In order of priority, key **enablers** identified for promoting student mental health include:

- Collaboration with community partners
- Leadership and planning
- Funding
- Alignment with initiatives
- Professional development
- Program evaluation
- Board infrastructure and services

Almost all respondents cited the presence and deepening of partnerships with community mental health agencies as a critical factor in the success of their efforts to date. Participants also stressed the importance of leadership at the community and board level, and noted that when individuals from all levels of the organization recognize the urgency of this issue then educators feel supported and change is possible.

Significant **barriers** identified as interfering with student mental health promotion are:

- Lack/inequities of mental health services available to school boards
- Difficult work of collaboration
- Human resources issues
- Lack of coordination at the Ministry, community and/or board level
- Lack of educator training in mental health literacy
- Lack of dedicated funding to meet the needs
- Stigma
- Difficulty navigating the change process that this work represents
- Lack of parental engagement

Rather than stressing concerns noted in the literature, like “integrating numerous diverse programs”, respondents indicated that there is an overall lack of services available. Similarly, improving program implementation is less of a priority than overcoming basic logistical and procedural/structural issues that would allow for the introduction of any school-based mental health programming. Overall, the information gathered suggests that we are, as a province, in the early stages of finding effective ways to address student mental health problems.

Policy and practice recommendations from the field

Respondents were asked to identify their recommendations and needs for supporting school-based mental health in the future. Suggestions were made in the following areas:

Coordination and leadership. Respondents strongly highlighted the need for enhanced communication and coordination across Ministries that are involved in child and youth mental health. Further, they identified the importance of developing a provincial framework for school-based mental health to help to guide their efforts in this area.

Funding. Funding is required to train staff (release time), develop and evaluate programs, allow for the dedicated time required to build infrastructure and protocols and establish relationships with community partners.

Heightened attention to implementation at the community level. Participants had several suggestions that would assist with implementation of recommended practices at the community and district level, like having parents at planning tables, testing of the *hub model* and use of a champion who guides mental health initiatives, liases with community and transfers knowledge.

Enhanced professional development/mental health literacy. Respondents were clear in stating that the needs of students are great, but the ability for educators to respond is weak given their relative lack of mental health literacy. Board leaders are eager to receive materials and support in order to build capacity amongst district staff.

Evidence-based practice. Respondents suggested that it would be helpful to have a menu of empirically supported practices for various mental health issues available to school districts. They suggested that the Provincial Centre of Excellence for Child and Youth Mental Health at CHEO could be the knowledge centre through which evidence-based practice information flows out to boards through a key contact. Further, it was recommended that there be investment in the development, testing and promotion of promising evidence-based practices within the province.

DISCUSSION

Key informant interviews were conducted in 27 boards across the province of Ontario. Respondents were asked to provide their perspectives related to: responsibility for student mental health in school boards, degree of current concern, link with academic achievement, priority mental health issues, level of educator preparedness, current programming, enablers and barriers to implementation and policy recommendations. The findings described above should be considered in the context of study limitations, such as the relatively small sample size (33 percent of Ontario school boards) and uneven regional distribution. Future scans, such as the one planned by the School-Based Mental Health and Addictions Consortium for the Mental Health Commission of Canada, might consider (1) expanding the range of informants to include teachers, parents and community service professionals, (2) attention to special populations, like immigrants/refugees and the Aboriginal community and (3) explicit coverage of substance use issues. See the full report for more detailed coverage of these issues.

SCHOOL-BASED MENTAL HEALTH PRACTICE SCAN SUMMARY

Participants in the series of key informant interviews held in spring 2009 represented all regions of the province, public and Catholic, and English- and French-language boards. For the most part, respondents were senior leaders in each board and have primary responsibility for student mental health. They provided information about: responsibility for mental health in the board, extent of concern about student mental health, district response to these issues (including programs and practices) and enablers and challenges to implementation.

The interview participants were unanimous in their concern regarding student mental health. There was a sense from many respondents that the degree of emotional strain that students are experiencing is severe and escalating. Worrisome student social-emotional issues occur daily in our schools, and educators feel insufficiently equipped to respond effectively. They also recognize a clear association between mental health and academic achievement, and see a role for schools in identifying and preventing mental health problems, and supporting student wellness. Many individuals described student mental health as their top priority concern.

The heterogeneity of responses suggests that there is no single form of leadership structure within boards related to student mental health. Despite this, school boards are finding ways to respond to this urgent issue. Many are designing infrastructure, building protocols for communication and service delivery, implementing programs and engaging community partners. They are experiencing some successes, through enablers such as committed shared leadership and alignment with existing initiatives, and some indicated that they feel that they are saving lives through their efforts. At the same time, key informants indicated that they are disquieted by the sense that they are making district policy and practice decisions in the absence of a core direction or provincial mandate. Participants also noted that the implementation of high-quality evidence-based programs within the complex structure of school districts is challenging, and that there are insufficient resources to ensure that initiatives are introduced and sustained with fidelity. Similarly, while there are great rewards in developing integrated care models, the relationship building needed requires considerable time and effort and, even in the best cases, the structures do not yet meet the demand for service in communities.

When asked to provide on-the-ground recommendations, participants suggested that they have felt encouraged by recent cross-Ministerial efforts (e.g., SSLI) and would very much like to see enhanced collaborative ownership and continued funding for this issue at a policy level. They would like a call to action around student mental health that recognizes the severe needs in our system currently. A provincial response that includes attention to mental health literacy, evidence-based universal and preventive programming and systems of care for students in distress would be most welcome by respondents. In addition, very few boards have the capacity to evaluate mental health programs and strategies, and respondents recognize this as a clear need.

In closing, the individuals who took part in this interview process are passionate leaders who are making a positive contribution to the lives of students with mental health needs in our school boards. They have developed creative strategies and are using whatever resources they can assemble to respond to the serious student needs in their communities. We can learn much from their experiences, and should draw on their expertise in shaping a provincial school-based mental health strategy.

CONCLUSIONS AND RECOMMENDATIONS FOR SCHOOL-BASED MENTAL HEALTH IN ONTARIO

The field of school-based mental health is growing rapidly and is complex in terms of models adopted and in terms of assessing outcomes. Furthermore, the uptake of proven programs by schools is uneven but our scan of Ontario school communities revealed a variety of excellent and innovative programs currently in place.

The findings of our review and scan allow a number of clear **conclusions**:

1. **A number of models have emerged and the best approach for school systems appears to reside in combining current models.**
2. **There are effective programs for health promotion (positive development), prevention, early intervention and treatment.**
3. **Health and mental health literacy are central to positive development, detection and help seeking.**
4. **Social-emotional learning programs appear to offer both health promotion and prevention outcomes.**
5. **While there are successful prevention programs, there will always be children and youth who develop mental health and substance abuse problems so prevention initiatives should be accompanied by efforts to enhance detection, help seeking and referral to effective interventions.**
6. **Effective programs share a number of key characteristics and must be implemented with fidelity.**
7. **While implementation science is in a nascent stage, there is already much that is known about how to facilitate successful implementation of programs.**
8. **Emerging technologies offer obvious screening, assessment and program delivery potential that must not be neglected.**

There are also **recommendations** that arise from this review and scan:

1. There currently exists an impressive body of evidence that supports the effectiveness of several types of school-based mental health programs, including programs designed to reduce, prevent, or ameliorate the onset of difficulties or illness, as well as programs designed to foster a range of healthy attitudes, skills and behaviours. Despite the large number of empirical studies that show favourable support for many programs, there are also numerous examples of programs that were of questionable benefit or clearly of no benefit. **Programs must be selected with care and should be evaluated on an on-going basis.**
2. There are now policy reviews recommending the implementation of school-based mental health programs in a growing number of jurisdictions including Canada, the United States, Australia, New Zealand, the United Kingdom and the European Union. Although concern regarding the relative cost-effectiveness of various school-based programs has been raised, there appears to be no substantial criticism of school-based mental health programming. In fact, there appears to be support for **wide adoption of the strategy of prevention and early intervention in the school context and before high school.**
3. **Intervening effectively to prevent and intervene with mental health and substance abuse problems is complex and involves commitment, leadership and collaboration from schools, families and community**. Such commitment, leadership, and collaboration takes time to build in communities but there are many extant examples in Ontario where the process is already well underway.
4. Promoting and sustaining effective programming prevention/intervention in Ontario will require collaboration and leadership from multiple Ministries (and sectors) including Education, Children and Youth Services, Health and Long-term Care and Health Promotion. To be effective from the outset, any initiative aimed at wide uptake will require **a formal inter-ministerial leadership body be established to bring the players together to:**

- create and sustain partnerships and deepen current integration initiatives
- coordinate a provincial strategy that is based on the evidence and current practice innovations
- set out guidelines for program selection, development and implementation
- provide resources to the field for collaborative program development, program evaluation, and research including implementation research
- develop a systematic approach to mental health literacy training for students, educators and parents including curricula

5. At present, a priority expressed in the literature is the need to further **validate programs in culturally diverse or special needs samples, and to expand capacity of schools and researchers to implement existing programming on a larger scale** rather than on further debating the usefulness of school-based mental health programs.

6. Despite recent efforts to evaluate the effectiveness of school-based programming in large samples of young people, large-scale implementation remains a desired but as of yet unrealized goal. Increasing emphasis is being placed on **the importance of considering the use of internet-based technologies and emerging methodologies from the field of implementation science to maximize the effectiveness of these programs as they are implemented broadly.**

7. **Embedding school-based mental health programming within a health and mental health literacy framework** has a number of advantages. If one accepts that the fundamental mechanism of change in most curriculum-based interventions is knowledge acquisition, then issues of general literacy as a determinant of program effectiveness must be addressed explicitly, which is at present rarely done. There are a number of advantages of doing so:

- A mental health literacy perspective provides a framework in which a number of diverse programs (e.g., promotion, treatment and help seeking programs) and issues (e.g., knowledge about mental health, knowledge about barriers to seeking help), and skills (e.g., social emotional regulation skills, help seeking skills) can be integrated.
- A literacy perspective allows a number of avenues through which the effectiveness of programs may be increased, in terms of maximizing knowledge uptake and retention.
- A literacy perspective provides a framework in which both educators and health professionals can contribute and participate equitably.

8. There is considerable capacity and experience in several Ontario communities. This presents an opportunity to **recruit school boards and communities as "research partners" to field test programs with high potential payoff** such as combining excellent mental health literacy initiatives with effective social emotional learning programs.

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APPENDIX 1: EFFECTIVE SCHOOL-BASED MENTAL HEALTH PROGRAMS

Program	Level	Domain	Effectiveness
ALCOHOL & SUBSTANCE ABUSE			
Family Effectiveness Training www.cfs.med.miami.edu/Docs/Miscellaneous/FET.pdf	I	Substance Abuse	Excellent
Multidimensional Family Therapy http://www.modelprograms.samhsa.gov	I	Substance Abuse	Excellent
Not on Tobacco http://www.modelprograms.samhsa.gov	I	Substance Abuse	Excellent
Project EX http://www.modelprograms.samhsa.gov	I	Substance Abuse	Excellent
Reconnecting Youth http://www.modelprograms.samhsa.gov	I	Substance Abuse	Excellent
Multisystemic Therapy (MST) http://www.colorado.edu/cspv/blueprints/promisingprograms.html	I	Substance Abuse/Violence	Excellent
Functional Family Therapy http://www.colorado.edu/cspv/blueprints/promisingprograms.html	I/S	Substance Abuse/Violence	Excellent
BASICS (Brief Alcohol Screening and Intervention of College Students) http://www.colorado.edu/cspv/blueprints/promisingprograms.html	I/S	Alcohol abuse	Promising
All Stars http://www.modelprograms.samhsa.gov	S/U	Substance Abuse	Excellent
Across Ages http://www.ed.gov/admins/lead/safety/exemplary01/exemplary01.pdf	S	Substance Abuse	Excellent
Keepin' it REAL http://www.modelprograms.samhsa.gov	S/U	Substance Abuse	Excellent
Project ALERT http://www.modelprograms.samhsa.gov, http://www.ed.gov/admins/lead/safety/exemplary01/exemplary01.pdf	S/U	Substance Abuse	Excellent

Project Toward No Drug Abuse http://www.modelprograms.samhsa.gov http://www.colorado.edu/cspv/blueprints/	S/U	Substance Abuse	Excellent
Brief Strategic Family Therapy (BSFT) http://www.colorado.edu/cspv/blueprints/promisingprograms.html	S	Substance Abuse/ Aggression	Promising
CASASTART (Striving together to achieve rewarding tomorrows) http://www.colorado.edu/cspv/blueprints/promisingprograms.html	S	Substance Abuse/Aggression	Promising
Guiding Good Choices (GGC) http://www.colorado.edu/cspv/blueprints/promisingprograms.html	S	Substance Abuse	Promising
Nurse-Family Partnership (NFP) www.nursefamilypartnership.org/	S	Substance Abuse	Excellent
Athletes Training and Learning to Avoid Steroids (ATLAS) http://www.modelprograms.samhsa.gov http://www.ed.gov/admins/lead/safety/exemplary01/exemplary01.pdf	U	Substance Abuse	Excellent
Class Action http://www.modelprograms.samhsa.gov	U	Substance Abuse	Excellent
Community Mobilization for Change on Alcohol http://www.modelprograms.samhsa.gov	U	Substance Abuse	Excellent
Family Matters http://www.modelprograms.samhsa.gov	U	Substance Abuse	Excellent
Keep a Clear Mind http://www.modelprograms.samhsa.gov	U	Substance Abuse	Excellent
Midwestern Prevention Project http://www.colorado.edu/cspv/blueprints/	U	Substance Abuse	Excellent
Project Northland http://www.modelprograms.samhsa.gov, http://www.ed.gov/admins/lead/safety/exemplary01/exemplary01.pdf	U	Substance Abuse	Excellent

Project TNT: Towards No Tobacco Use http://www.modelprograms.samhsa.gov, http://www.ed.gov/admins/lead/safety/exemplary01/exemplary01.pdf	U	Substance Abuse	Excellent
Project Venture http://www.modelprograms.samhsa.gov	U	Substance Abuse	Excellent
Protecting You/Protecting Me http://www.modelprograms.samhsa.gov	U	Substance Abuse	Excellent
Start Taking Alcohol Risks Seriously (STARS) for Families http://www.modelprograms.samhsa.gov	U	Substance Abuse	Excellent
The Strengthening Families Program: For Parents and Youth http://www.modelprograms.samhsa.gov, http://www.ed.gov/admins/lead/safety/exemplary01/exemplary01.pdf	U	Substance Abuse	Excellent
Too Good for Drugs http://www.modelprograms.samhsa.gov	U	Substance Abuse	Excellent
Life Skills Training (LST) http://www.colorado.edu/cspv/blueprints/promisingprograms.html	U	Substance abuse	Excellent
Border Binge-Drinking Reduction Program http://www.modelprograms.samhsa.gov/model.htm	U	Alcohol and Substance Abuse	Excellent
Challenging College Alcohol Abuse http://www.modelprograms.samhsa.gov/model.htm	U	Substance Abuse	Excellent
Community Trials Intervention to reduce High risk drinking http://www.modelprograms.samhsa.gov/model.htm	U	Alcohol Abuse	Excellent
Family Matters http://www.modelprograms.samhsa.gov/model.htm	U	Alcohol and substance abuse	Excellent
Keep a Clear Mind (KACM) http://www.modelprograms.samhsa.gov/model.htm	U	Alcohol and substance abuse	Excellent
Making the Grade www.drugstrategies.org/pubs.html	U	Substance Abuse	Excellent
Not on Tobacco (N-O-T) http://www.modelprograms.samhsa.gov/model.htm	U	Substance Abuse	Excellent

Project Success http://www.modelprograms.samhsa.gov/model.htm	U	Substance Abuse	Excellent
Protect You/Protect Me http://www.modelprograms.samhsa.gov/model.htm	U	Substance Abuse	Excellent
Too good for drugs http://www.modelprograms.samhsa.gov/model.htm	U	Substance Abuse/SEL	Excellent
Exemplary and Promising Safe, Disciplined, and Drug-Free Schools Programs 2001 1-877-4ED-PUBS	U	Substance Abuse/ Violence Prevention	Promising
Project ALERT http://www.colorado.edu/cspv/blueprints/promisingprograms.html	U	Substance Abuse	Promising
Preventing Drug Use Among Children and Adolescents: A Research-Based Guide ("Red Book") www.nida.nih.gov/Prevention/Prevopen.html	U	Substance Abuse	Promising
Project Northland http://www.colorado.edu/cspv/blueprints/promisingprograms.html	U	Substance and Alcohol Abuse	Promising
Growing Healthy http://www.ed.gov/admins/lead/safety/exemplary01/exemplary01.pdf	U	Substance and Alcohol Abuse	Promising
Minnesota Smoking Prevention Program http://www.ed.gov/admins/lead/safety/exemplary01/exemplary01.pdf	U	Smoking	Promising
Preparing for the drug-free years http://www.ed.gov/admins/lead/safety/exemplary01/exemplary01.pdf	U	Alcohol and Substance abuse, violence	Promising
Project STAR http://www.ed.gov/admins/lead/safety/exemplary01/exemplary01.pdf	U	Alcohol and Substance abuse	Promising
VIOLENCE & AGGRESSION			
Adolescent Transition Program (APT) http://www.prevention.psu.edu/pubs/docs/CMHS.pdf	I	Violence/Aggression	Excellent
Anger Coping Program http://www.prevention.psu.edu/pubs/docs/CMHS.pdf	I	Violence/Aggression	Excellent
Attributional Intervention (Brainpower Program) http://www.prevention.psu.edu/pubs/docs/CMHS.pdf	I	Violence/Aggression	Excellent
Earlscourt Social Skills Group Program http://www.prevention.psu.edu/pubs/docs/CMHS.pdf	I	Violence/Aggression	Excellent

Early Risers "Skills for Success" http://www.modelprograms.samhsa.gov/model.htm	I	Violence/Substance abuse	Excellent
Brainpower Program http://prevention.psu.edu/projects/ChildMentalHealth.html	I	Violence	Excellent
Peer Coping Skills Training http://prevention.psu.edu/projects/ChildMentalHealth.html	I	Violence/aggression	Excellent
Social Relations Program http://prevention.psu.edu/projects/ChildMentalHealth.html	I	Violence/aggression	Excellent
Montreal Prevention Experiment http://prevention.psu.edu/projects/ChildMentalHealth.html	I	Violence/Aggression	Excellent
Coping Power Program http://prevention.psu.edu/projects/ChildMentalHealth.html	I	Violence/Aggression	Promising
FAST program http://prevention.psu.edu/projects/ChildMentalHealth.html	I	Violence/aggression	Promising
Contingencies for Learning Academic and Social Skills	I	Violence/Aggression	Promising
FAST track http://www.prevention.psu.edu/pubs/docs/CMHS.pdf	I/S	Violence/Aggression	Excellent
Multidimensional Treatment Foster Care (MTFC) blueprints	S	Violence/Aggression	Excellent
Adolescent Transitions Program http://prevention.psu.edu/projects/ChildMentalHealth.html	S	Violence/Aggression	Excellent
Behavioral Monitoring and Reinforcement Program (BMRP) Blue prints	S	Violence/Aggression/ Substance abuse/ Drop out	Promising
Linking the Interests of Families and Teachers (LIFT) Blue prints	S	Violence/Aggression /Substance Abuse	Promising
Preventive Treatment Program (PTP) Blue prints	S	Violence/Substance Abuse/Gang involvement	Promising
Strong African American Families (SAAF) program http://www.colorado.edu/cspv/blueprints/promisingprograms.html	S	Alcohol abuse	Promising

I Can Problem Solve (ICPS) http://prevention.psu.edu/projects/ChildMentalHealth.html	S/U	Violence/Aggression	Promising
Olweus Bullying Prevention Program http://www.modelprograms.samhsa.gov, http://www.colorado.edu/cspv/blueprints/	S/U	Aggression	Excellent
Good Behavior Game (GBG) Blue prints	S/U	Aggression/Delinquency	Promising
Responding in Peaceful and Positive Ways (RIPP) http://www.modelprograms.samhsa.gov, http://www.prevention.psu.edu/pubs/docs/CMHS.pdf, http://www.casel.org/projects_products/safeandsound.php	U	Aggression/Violence	Excellent
Safe Dates http://www.modelprograms.samhsa.gov	U	Aggression/Violence	Excellent
Second Step: A Violence Prevention Program http://www.modelprograms.samhsa.gov, http://www.prevention.psu.edu/pubs/docs/CMHS.pdf, http://www.casel.org/projects_products/safeandsound.php	U	Aggression/Violence	Excellent
SMART Team: Students Managing Anger and Resolution Together http://www.modelprograms.samhsa.gov	U	Aggression/Violence	Excellent
Excellent Teaching Students to be Peacemakers http://www.modelprograms.samhsa.gov	U	Aggression/Violence	Excellent
Too Good for Violence http://www.modelprograms.samhsa.gov	U	Aggression/Violence	Excellent
All Stars http://www.prevention.psu.edu/pubs/docs/CMHS.pdf	U	Aggression/Violence/Drug Use	Excellent
Fast Track http://prevention.psu.edu/projects/ChildMentalHealth.html	U/I/S	Aggression	Excellent
Safe Schools, Safe Students www.drugstrategies.org/pubs.html	U	Aggression/Violence	Promising
Seattle Social Development program http://www.colorado.edu/cspv/blueprints/promisingprograms.html	U	Aggression/Violence	Promising

Social Skills Training Program http://prevention.psu.edu/projects/ChildMentalHealth.html	U	Aggression	Promising
Resolving Conflicts Creatively http://prevention.psu.edu/projects/ChildMentalHealth.html	U	Aggression/Violence	Promising
Peacebuilders http://prevention.psu.edu/projects/ChildMentalHealth.html	U	Aggression/Violence	Promising
Positive Adolescent Choices Training Program http://prevention.psu.edu/projects/ChildMentalHealth.html	U	Aggression/Violence	Promising
Youth Violence: A Report of the Surgeon General (HHS) www.surgeongeneral.gov/library/youthviolence/report.html	U	Aggression/Violence	Promising
Aggression Replacement Training/Skill Streaming the Adolescent http://prevention.psu.edu/projects/ChildMentalHealth.html	U	Aggression/Violence	Promising
Aggression Replacement Training http://www.ed.gov/admins/lead/safety/exemplary01/exemplary01.pdf	U	Aggression/Violence	Promising
Aggressors, Victims, and Bystanders: Thinking and Acting to Prevent Violence http://www.ed.gov/admins/lead/safety/exemplary01/exemplary01.pdf	U	Aggression/Violence	Promising
All Stars (Core program) http://www.ed.gov/admins/lead/safety/exemplary01/exemplary01.pdf	U	Aggression/Substance Abuse, social competencies	Promising
Facing History and Ourselves http://www.ed.gov/admins/lead/safety/exemplary01/exemplary01.pdf	U	Aggression, social competencies	Promising
I can problem solve http://www.ed.gov/admins/lead/safety/exemplary01/exemplary01.pdf	U	Aggression, social competencies	Promising
Let each one teach one mentor program http://www.ed.gov/admins/lead/safety/exemplary01/exemplary01.pdf	U	Aggression, social competencies	Promising

Michigan Model for Comprehensive Health Education http://www.ed.gov/admins/lead/safety/exemplary01/exemplary01.pdf	U	Violence Prevention, social competencies	Promising
Open Circle Curriculum http://www.ed.gov/admins/lead/safety/exemplary01/exemplary01.pdf	U	Violence prevention, social competencies	Promising
Peace Builders http://www.ed.gov/admins/lead/safety/exemplary01/exemplary01.pdf	U	Violence prevention, social competencies	Promising
The Peacemakers Program: Violence prevention for students in grades 4-8 http://www.ed.gov/admins/lead/safety/exemplary01/exemplary01.pdf	U	Violence prevention, social competencies	Promising
Peers making peace http://www.ed.gov/admins/lead/safety/exemplary01/exemplary01.pdf	U	Violence, Social competencies	Promising
Positive Action http://www.ed.gov/admins/lead/safety/exemplary01/exemplary01.pdf	U	Violence, alcohol and substance abuse, social competencies	Promising
Say it straight training http://www.ed.gov/admins/lead/safety/exemplary01/exemplary01.pdf	U	Violence, alcohol and substance abuse, social competencies	Promising
SCARE program http://www.ed.gov/admins/lead/safety/exemplary01/exemplary01.pdf	U	Violence, social competencies	Promising
Students Managing Anger and Resolution Together (SMART) Team http://www.ed.gov/admins/lead/safety/exemplary01/exemplary01.pdf	U	Violence, social competencies	Promising
Social decision making and problem solving http://www.ed.gov/admins/lead/safety/exemplary01/exemplary01.pdf	U	Violence, social competencies	Promising
Teenage health teaching modules http://www.ed.gov/admins/lead/safety/exemplary01/exemplary01.pdf	U	Violence, social competencies, substance abuse	Promising
The Think time strategy http://www.ed.gov/admins/lead/safety/exemplary01/exemplary01.pdf	U	Violence, social competencies	Promising
School Development Program	U	Aggression/Violence/SEL	Promising

AGGRESSION & DEPRESSION			
Coping with Stress Course http://www.prevention.psu.edu/pubs/docs/CMHS.pdf	S	Aggression/ Depression	Excellent
First Step to Success http://www.prevention.psu.edu/pubs/docs/CMHS.pdf	S	Aggression/ Depression	Excellent
Functional Family Therapy http://www.colorado.edu/cspv/blueprints/	S	Aggression/ Depression	Excellent
Social Relations Program http://www.prevention.psu.edu/pubs/docs/CMHS.pdf	S	Aggression/ Depression	Excellent
TRAUMA			
Cognitive Behavioral Therapy for Child Sexual Abuse http://www.modelprograms.samhsa.gov	I/S	Trauma	Excellent
Trauma Focused Cognitive Behavior Therapy Healthy Babies http://www.modelprograms.samhsa.gov	I/S	Trauma	Excellent
Nurse-Family Partnership Program http://www.modelprograms.samhsa.gov, http://www.colorado.edu/cspv/blueprints/	I/S	Trauma	Excellent
Children in the Middle http://www.modelprograms.samhsa.gov	S	Trauma	Excellent
Children of Divorce Intervention Program (CODIP) http://www.prevention.psu.edu/pubs/docs/CMHS.pdf	S	Trauma	Excellent
Children of Divorce Parenting Program http://www.prevention.psu.edu/pubs/docs/CMHS.pdf	S	Trauma	Excellent
Family Bereavement Program http://www.prevention.psu.edu/pubs/docs/CMHS.pdf	S	Trauma	Excellent
MENTORING AND SEL			
Big Brothers/Big Sisters http://www.prevention.psu.edu/pubs/docs/CMHS.pdf, http://www.colorado.edu/cspv/blueprints/	S	Mentoring	Excellent
Brief Stategic Family Therapy www.modelprograms.samhsa.gov/pdfs/model/Bsft.pdf	I	SEL	Excellent
Counselors Care (C-CARE) and Coping and Support Training (CAST) www.sprc.org/featured_resources/bpr/ebpp_PDF/ccare_cast.pdf	I	SEL	Excellent

Early Risers: Skills for Success www.wch.uhs.wisc.edu/13-Eval/Tools/Resources/Model%20Programs/Early%20Risers.pdf	I	SEL	Excellent
Family Effectiveness Training www.cfs.med.miami.edu/Docs/Miscellaneous/FET.pdf	I	SEL	Excellent
Excellent Multidimensional Treatment Foster Care www.mtfc.com/	I	SEL	Excellent
Queensland Early Intervention and Prevention of Anxiety Project www.preventionaction.org/reference/queensland-early-intervention-and-prevention-anxiety-project-qeipap	I	SEL	Excellent
Incredible Years www.incredibleyears.com/	I/S	SEL	Excellent
Families and Schools Together (FAST) Substance Abuse www.nydic.org/nydic/programming/newideas/documents/FAST.pdf	I/S	SEL	Excellent
CASASTART (Striving Together to Achieve Rewarding Tomorrows) www.childtrends.org/what_works/city_scan/Denver/CASASTART.htm	I/S	SEL	Excellent
Leadership and Resiliency Program (LRP) www.modelprograms.samhsa.gov/pdfs/model/leadership.pdf	I/S	SEL	Excellent
Parenting Wisely www.modelprograms.samhsa.gov/pdfs/model/ParentWise.pdf	I/S	SEL	Excellent
Project Success www.projectsuccess.org/	I/S	SEL	Excellent
Residential Student Assistance Program www.sascorp.org/residesap.htm	I/S	SEL	Excellent
Across Ages www.modelprograms.samhsa.gov/pdfs/model/AcrossAges.pdf	S	SEL	Excellent
I Can Problem Solve www.thinkingpreteen.com/icps.htm	S	SEL	Preliminary
PENN Prevention Program www.childtrends.org/lifecourse/programs/PennPreventionProgramPPP.htm	S	SEL	Excellent

Primary Mental Health Project www.contactsyracuse.org/school-pmhp.shtml	S	SEL	Excellent
Reconnecting Youth	S	SEL	Excellent
Stress Inoculation Training I, II www.prevention.psu.edu/pubs/docs/CMHS.pdf	S	SEL	Excellent
DARE to Be You www.coopext.colostate.edu/DTBY/	S/U	SEL	Excellent
Project Achieve www.projectachieve.info	S/U	SEL	Excellent
SAFE Children: Schools and Families Educating Children www.findyouthinfo.gov/cf_pages/programdetail.cfm?id=417	S/U	SEL	Excellent
Strengthening Families Program www.strengtheningfamiliesprogram.org/	S/U	SEL	Excellent
Al's Pals: Kids Making Healthy Choices www.modelprograms.samhsa.gov/pdfs/model/AlsPals.pdf	U	SEL	Excellent
Caring School Community www.devstu.org/csc/index.html	U	SEL	Excellent
Child Development Project www.devstu.org/cdp/	U	SEL	Excellent
Families That Care: Guiding Good Choices www.channing-bete.com/prevention-programs/guiding-good-choices/	U	SEL	Excellent
Good Behavior Game www.interventioncentral.org/htmdocs/interventions/classroom/gbg.php	U	SEL	Excellent
High/Scope Educational Approach for Pre-School & Primary Grades www.highscope.org/	U	SEL	Excellent
Improving Social Awareness – Social Problem Solving www.findyouthinfo.gov/cf_pages/programdetail.cfm?id=677	U	SEL	Excellent
Life Skills Training www.modelprograms.samhsa.gov/pdfs/model/lifeskills.pdf	U	SEL	Excellent

Linking the Interests of Families and Teachers (LIFT) www.childtrends.org/lifecourse/programs/LinkingtheInterestsofParentandTeachers.htm	U	SEL	Excellent
Lions Quest Skills Series www.lions-quest.org/	U	SEL	Excellent
PATHS: Promoting Alternative Thinking Strategies www.wch.uhs.wisc.edu/13-Eval/Tools/Resources/Model%20Programs/PATHS.pdf	U	SEL	Excellent
Positive Youth Development Program www.ncfy.com/pyd/	U	SEL	Excellent
Safe and Sound (CASEL) www.CASEL.org	U	SEL	Excellent
School Transitional Environment Project (STEP) www.aypf.org/publications/compendium/C1S18.pdf	U	SEL	Excellent
Seattle Social Development Project www.depts.washington.edu/ssdp/	U	SEL	Excellent
Second Step http://prevention.psu.edu/projects/ChildMentalHealth.html	U	SEL	Excellent
Skills, Opportunities, And Recognition (SOAR) www.governor.oregon.gov/DHS/mentalhealth/ebp/practices/skills-opportunities-soar.pdf	U	SEL	Excellent
Social Decision Making and Problem Solving Program www.ubhcisweb.org/sdm/	U	SEL	Excellent
Suicide Prevention Program I, II www.yspp.org/	U	SEL	Excellent
Comprehensive Community Mental Health Services For Children and Their Families Program	U	SEL	Promising
Strengthening Families Program for Parents and Youth 10-14 (SFP) http://www.colorado.edu/cspv/blueprints/promisingprograms.html	U	SEL	Promising
Creating Lasting Family Connections (CLFC)/Creating Lasting Connections (CLC) http://www.modelprograms.samhsa.gov/model.htm	U	SEL/resiliency	Excellent
Lions Quest Skills for Adolescence http://www.modelprograms.samhsa.gov/model.htm	U	SEL/resiliency	Excellent
Positive Action http://prevention.psu.edu/projects/ChildMentalHealth.html	U	SEL/resiliency	Excellent

Coping with Stress Course http://prevention.psu.edu/projects/ChildMentalHealth.html	I	SEL/Depression	Excellent
Penn Prevention Program http://prevention.psu.edu/projects/ChildMentalHealth.html	S	Depression	Excellent
Primary Mental Health Project http://prevention.psu.edu/projects/ChildMentalHealth.html	I	Internalizing Sxs	Promising
HEALTH PROMOTION			
Know Your Body www.medindia.net/know_ur_body/index.asp	U	Health Prom.	Excellent