Promoting youth mental health through the transition from high school – Literature review and environmental scan

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Introduction and background

Youth mental health is rapidly emerging as a public policy priority in Canada, as policymakers, service providers, and the public recognize the importance of promotion and early intervention to prevent mental health problems over the life course. In Canada, a number of recent reports have called for child and youth mental health to be made a priority (Government of Canada, 2004; Kirby & Keon, 2006; Leitch, 2007), and policies for child and youth mental health have been established in several provinces (e.g., Ontario, Alberta, and British Columbia). The Board of the Mental Health Commission of Canada (MHCC) has established the Child and Youth Advisory Committee and launched several initiatives under its mandate, including a policy framework for child and youth mental health services (Kutcher & McLuckie, 2010). Many of these policy documents identify the need to provide support at key transition points from one developmental stage to the next, and at educational transition points such as when youth leave high school.

Moreover, colleges and universities across Canada, the US, and internationally report that more post-secondary students are experiencing and seeking help for mental health problems, and that the problems they present are increasingly complex (MacKean, 2011). Epidemiological research suggests that mental health problems are highly prevalent among college and university students (e.g., Crozier & Wilihnganz, 2006). A number of recent suicides among high school and university students in Canada have underscored the urgent need to improve youth mental health services and reduce associated stigma, and for secondary and post-secondary schools to help protect and promote students' mental health.

While some colleges and universities are developing policy and programmatic responses to student mental health issues, there is little data about the mental health needs of those who take different pathways to post-secondary education (PSE), such as apprenticeships or trade school, or those who go directly into the workforce. Helping senior high school students plan for their mental health needs before they graduate may be a more effective way of helping all of them cope with the transition to life after high school, regardless of their intended destinations. Such an approach would be consistent with the increasing emphasis in many jurisdictions on school-based mental health, that is, mental health or substance abuse services and programs delivered in the school setting (Santor, Short, & Ferguson, 2009, p. 18).[1]

This literature review and environmental scan was conducted to inform the development of an intervention aimed at supporting students' mental health as they transition from high school. With support from a private foundation interested in the emotional health and wellness of youth, SRDC researchers sought to identify and explore the evidence-base regarding mental health promotion for senior high school students.

This report describes related concepts and the academic literature on student mental health promotion, identifies relevant programs, and outlines what we consider to be important components of

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[1] See also Kutash, Duchnowski, & Lynn (2006) and Rowling (2007) regarding the need for a clearer
   conceptual framework for school-based mental health.

an intervention to support students through this transition. Future work will focus on developing the parameters and content of an intervention, in collaboration with key partners in the mental health and educational sectors.

Objectives and method

The specific notion of supporting mental health of adolescents through the transition from high school touches on a number of other, broader concepts such as school-based mental health, resilience, mental health literacy and promotion, social and emotional learning, etc. Each of these concepts connects to a large body of research of considerable breadth and depth, each too large to be more than briefly noted here.

Given the number of related concepts, our search of the literature was wide-ranging and iterative rather than highly targeted, as we sought to outline the theoretical and empirical underpinnings of student mental health, and in particular, student mental health *promotion*. Our guiding research questions were as follows:

- What kinds of outcomes might characterize positive student mental health through the transition from high school?

- What conceptual frameworks might be useful to frame student mental health promotion through the transition from high school?

- What types of interventions exist to promote student mental health through the transition from high school, and what is the evidence of their effectiveness?

- What lessons can be learned from the research literature for adapting or designing such an intervention?

To address these questions, we searched a number of electronic databases available through OVID and PubMed such as ERIC, MEDLINE, and PsycInfo, as well as Google Scholar, using key words related to school-based mental health, student mental health promotion, and the other concepts identified above. We relied on meta-analyses and systematic reviews such as from the Cochrane and Campbell Collaboratives and the What Works? Clearinghouse wherever possible, and on the websites of organizations such as the Collaborative for Academic, Social and Emotional Learning (CASEL) and the Joint Consortium for School Health (Morrison & Kirby, 2010). We also relied on key documents such as the 2006 guide to school-based mental health produced by the University of South Florida (Kutash, Duchnowski, & Lynn, 2006), and the 2009 policy paper on school-based mental health for Ontario produced by the Provincial Centre of Excellence for Child and Youth Mental Health (Santor, Short, & Ferguson, 2009).

Our scan of programs that support students' mental health through the transition from high school was equally wide ranging and iterative. We searched the Web using similar key word searches to those identified above, and various compendia of programs such as CASEL. We also relied on previous environmental scans of school-based mental health programs conducted by the National School-Based Mental Health and Substance Abuse (SBMHSA) Consortium in 2012 and by Short, Ferguson, and Santor (2009) for the Provincial Centre of Excellence for Child and Youth Mental Health. As with the literature review, our knowledge of programs accumulated in a snowball fashion, aided by suggestions and information from colleagues working in the field of student mental health and education, which was much appreciated.

Our search strategy for the scan was to start with a narrow definition (i.e., Canadian school-based mental health promotion programs for students in transition from high school) and then broaden this as required. However, our intervention focus meant we did not explore in any depth programs provided out-of-school by community organizations, nor those to students who are not in high school. Resources also did not permit us to explore much of the literature on student transitions from elementary to secondary school (e.g., Tilliczek & Ferguson, 2007), although this would undoubtedly yield useful information to guide the development of a specific conceptual framework, and should be considered for a subsequent phase of research.

Findings

Defining student mental health

Mental health is a broad concept with many synonyms and proxies, including mental or emotional well-being, mental fitness, and subjective well-being. Traditionally, both mental health and well-being have been only implicitly defined in the literature as the absence of mental illness (Ryan & Deci, 2001; Wells, Barlow, & Stewart-Brown, 2003), itself defined as "alterations in thinking, mood, or behavior" that are associated with distress or impaired functioning (US Surgeon General, 1996, cited in Santor et al., 2009, p. 17). More recently, however, mental health is seen as distinct from mental illness and integral to overall health (Keyes, 2002, 2006; Mental Health Commission of Canada, 2012).

The World Health Organization defines mental health as "a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community" (2001). The Public Health Agency of Canada has also adopted a broad, holistic definition that also incorporates social determinants: "Mental health is the capacity of each and all of us to feel, think, and act in ways that enhance our ability to enjoy life and deal with the challenges we face. It is a positive sense of emotional and spiritual well-being that respects the importance of culture, equity, social justice, interconnections and personal dignity" (PHAC, 2006, cited in CIHI, 2009, p. 3).

These definitions reflect the influence of positive psychology, health promotion, and the concept of recovery as promoted in community mental health – that it is possible to live "a satisfying, hopeful, and contributing life, even when there are ongoing limitations caused by mental health problems and illnesses" (MHCC, 2012, p. 15). Based on this more inclusive, positive perspective, mental health and mental illness may be viewed as existing along two continua, as shown in Figure 1.

Figure 1   The mental health/illness continuum
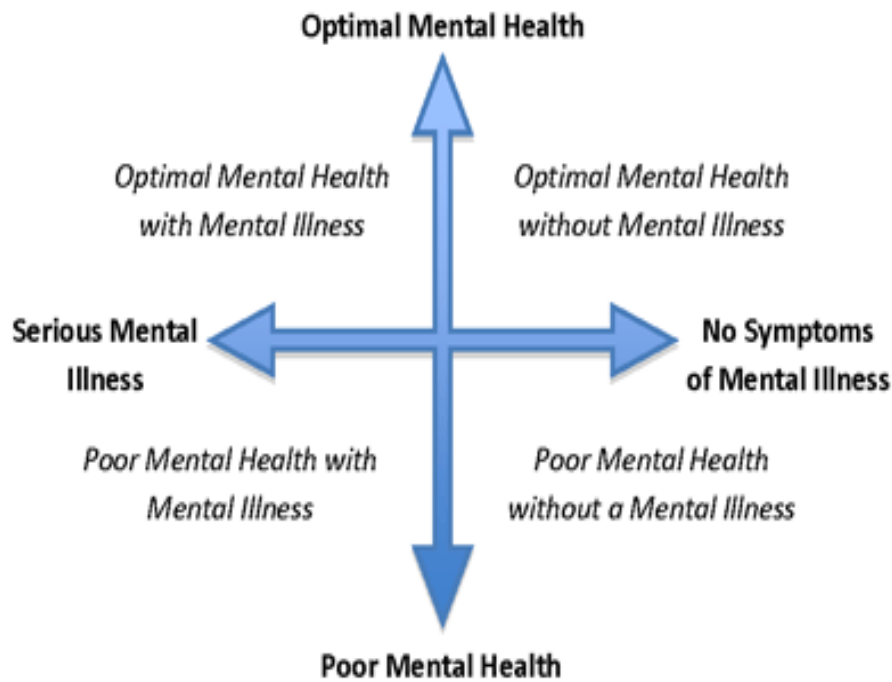
Source: CMHA Ontario (nd); adapted from Health and Welfare Canada, 1988, Tudor, 1996, and Keyes, 2007.

Corey Keyes (2002) coined the term "flourishing" to describe individuals with optimal mental health, that is, those who frequently exhibit several signs of positive functioning, regardless of mental illness. He views mental health as encompassing *emotional well-being* (i.e., positive effect, life satisfaction), *psychological well-being* (i.e., self-acceptance, positive relations with others, personal growth, purpose in life, environmental mastery, and autonomy), and *social well-being* (i.e., social contribution, integration, actualization, acceptance, and coherence). Those who exhibit low levels of positive functioning he described as "languishing."

Using national survey data of adolescents aged 12-18 years,[2] Keyes (2006) demonstrated that the absence of mental illness does not necessarily imply mental health. Whereas 80 per cent who would not normally be expected to develop some form of mental illness by age 18 (Shaffer et al., 1996, cited in Keyes, 2006), Keyes found that fewer than 40 per cent of adolescents in his study could be considered mentally healthy or flourishing. Overall, 55 per cent of adolescents in the Keyes sample fit the criteria for moderate mental health, and six per cent were deemed mentally unhealthy or languishing. Flourishing was found to be more prevalent in middle school, whereas moderate mental health was

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[2]   Specifically, the second wave of the Child Development Supplement (CDS-II) of the Panel Study of
Income Dynamics (PSID).

more prevalent in high school. Flourishing youth also had the fewest symptoms of depression and conduct problems, which were greatest among those considered languishing. Subsequent work by Keyes has indicated that barely 20 per cent of adults in the US could be considered flourishing; moreover, mental health was strongly and positively correlated with reduced prevalence of chronic disease and health limitations, and lower use of health care (Keyes, 2007).

Suldo and Shaffer (2008) found similar results with 349 middle school students. In their study, 57 per cent of the sample had complete mental health, 13 per cent was considered vulnerable, another 13 per cent was symptomatic but content (high levels of subjective well-being),and 17 per cent was troubled. These authors found that adolescents with optimal mental health (and low psychopathology) had better reading skills, school attendance, academic self-perceptions, academic-related goals, social support from their classmates and parents, self-perceived health, and fewer social problems compared to their languishing peers with low psychopathology. Among students with psychopathology, those with higher levels of subjective well-being perceived themselves as having better social functioning and physical health.

These findings are examples of a considerable body of research that reinforce the need to promote and protect mental health, as a complementary strategy to identification, prevention, and treatment for those with mental health problems or illness. In the UK, mental health promotion is a key component of public health policy, and schools have been identified as important venues of activity (Wells, Barlow, & Stewart-Brown, 2003). Similarly, the MHCC (2012) identified the need for Canada to do more to promote positive mental health and prevent mental illness throughout childhood, in addition to early intervention. The MHCC's new mental health strategy for Canada calls for comprehensive home-based approaches to support parents, and school-based programs to promote healthy social and emotional development, build resilience, reduce bullying and stigma, in addition to targeted programs for children and youth at greatest risk.[3]

"School-based mental health" is commonly used to refer to mental health programs or services delivered in a school setting (Kutash, Duchnowski, & Lynn, 2006; Rowling, 2007; Santor et al., 2009). As these authors point out, however, academic programming now takes place in a variety of locations, including hospitals and juvenile justice settings as well as neighbourhood schools. Moreover, for many years, schools have delivered mental health supports to students with emotional problems through special education services, further blurring the distinction between mental health and educational programming.

With this in mind, we define "student mental health" as a positive concept – akin to flourishing – for the subgroup of youth currently engaged in any kind of school or academic learning.[4,5] As the MHCC report and Keyes' work implies, there are numerous related concepts and components of positive mental

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[3] The Strategy also calls identifies children who are not connected to either family or school (e.g., in the child welfare system) as in need of significant support from community organizations (p. 25-26).

[4] Specific subgroups of students would then be defined by level of schooling i.e., elementary, middle, or secondary school (or k-12), or post-secondary education.

[5] School-based mental health is the term most often used in the research literature, and is used interchangeably with student mental health in this paper.

health, many of which take a positive, strengths-based approach. The Joint Consortium for School Health (JCSH) identifies a number of these, including mental fitness, resiliency, social-emotional learning, positive youth development, connectedness, diversity, and self-efficacy (Morrison & Kirby, 2010). The Canadian Institute for Health Information considers key elements of positive mental health to be the ability to enjoy life (as measured by happiness, subjective well-being, and life satisfaction), coping and resilience, and emotional and spiritual well-being (CIHI, 2009).

Similar to mental health, there is considerable overlap and lack of distinction among these concepts in the literature, and the relative emphasis of any given concept varies as an element of intervention or evaluation. Following Keyes' conceptualization, we conceive of positive student mental health as incorporating psychological, emotional, and social/behavioural components.

Understanding student mental health promotion

Addressing student mental health is part of a long history of school health initiatives on issues such as under-age drinking, teenage pregnancy, drug abuse, suicide prevention, bullying, and others (Rowling, 2007). Responses to these issues have generally involved (with varying degrees of emphasis) a combination of interventions targeted at those considered at-risk as well as broader health promotion efforts aimed at the larger student population.

School-based mental health efforts are similarly driven by concerns about the prevalence and impact of this issue on young people's lives. Roughly 15 to 20 per cent of young people are estimated to have some form of mental disorder (Waddell & Sheppard, 2002), and 75 per cent of psychological disorders appear before the age of 24 years (Kessler, Berglund, Demler, Jin, & Walters, 2005). Not only are mental health difficulties in youth one of the strongest predictors of academic failure and absenteeism (Kessler, Foster, Sasunders, & Stang, 1995; cited in Santor et al., 2009), but most young people experiencing problems either do not seek or receive professional help for their problems (Santor et al., 2009). Many are driven to self-harm and suicide, the second leading cause of death[6] among Canadian youth aged 10-24 years (Statistics Canada, 2010, cited in Butler-Jones, 2011).

To help address this situation, schools have been identified as "a unique setting where the greatest number of children and youth can be accessed and supported" (Morrison & Kirby, 2010, p. 17). This is not only because youth spend significant amounts of time in school, but also because schools have an important role in promoting the social and emotional development of children and youth (Kirby & Keon, 2006; Mcfarlane, 2005; Morrison & Kirby, 2010).

Traditionally, school-based mental health programs and services (like those in community and health settings) have focused on remediating problems and addressing risk for those with identified mental health or behavioural problems or who are considered at greatest risk of developing these (Morrison & Kirby, 2010). To a certain extent, the emergence of school-based mental health prevention and promotion initiatives reflects the influence of positive psychology, health promotion, and other

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[6]   After motor-vehicle accidents.

advances in education and population health that incorporate a social-ecological perspective.[7] However, according to Rowling (2007), school-based mental health promotion differs from other school health concerns in both focus and implementation: 1) its focuses on positive, asset-building approaches as opposed to social control (i.e., the "don't" messages inherent in nutrition, sex education and substance abuse campaigns); and 2) it involves comprehensive, coordinated, and collaborative action to change the psycho-social environment of the whole school, in addition to curriculum that promotes students' mental health.

Wells, Barlow, & Stewart-Brown (2003) articulate the many differences among school-based mental health promotion and prevention programs. *Indicated programs* involve children who are already showing signs of mental health problems, *targeted programs* are focused on those who are considered to be at increased risk of developing mental health problems, and *universal programs* aim to improve the mental health of the entire student body. Wells et al identify the first two approaches as mental illness prevention, and the third as mental health promotion.

Among universal approaches to school-based mental health promotion, Wells et al. identify different types of interventions, including those that are classroom-based, versus whole-school approaches or a combination of the two. Whole school approaches typically involve teachers and staff as well as students, engage the wider community, and aim to modify the school environment or culture. Figure 2 depicts the World Health Organization's model of a whole school approach to mental health promotion (Wyn, Cahill, Holdsworth, Rowling, & Carson, 2000).

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[7] That is, a focus on person-environment "fit" and social influences on functioning (Bronfenbrenner, 1989, 2005).

Figure 2   The WHO's four-level, whole-school approach to school change
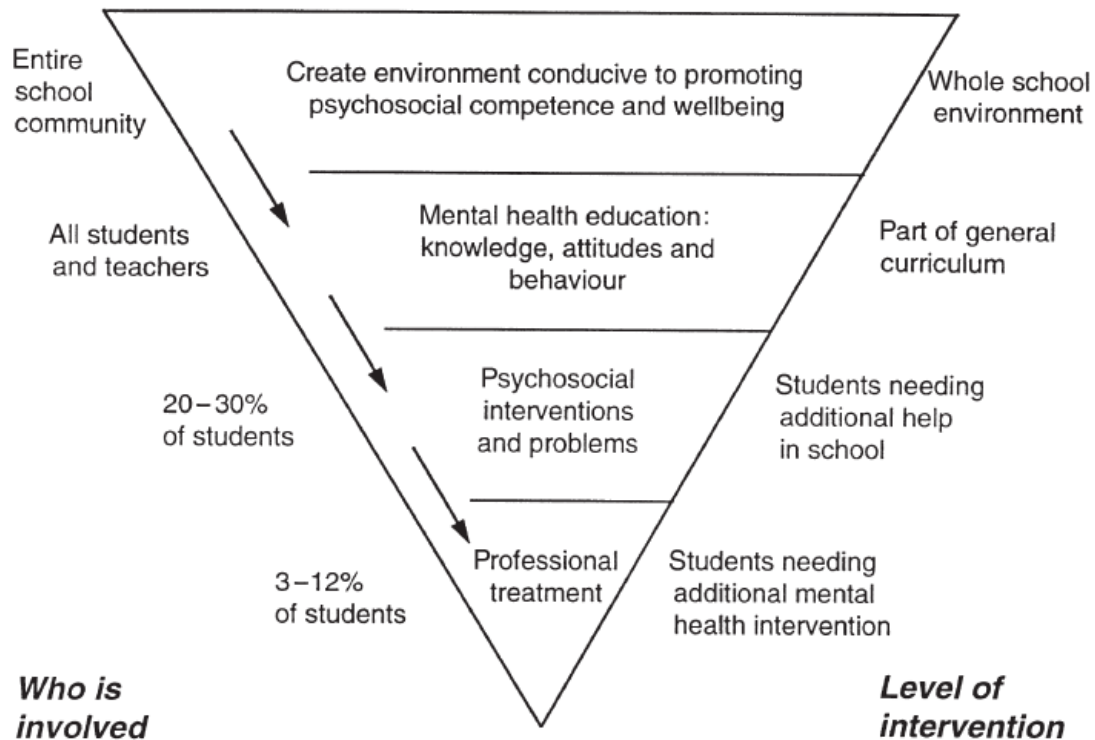
Source: Wyn, Cahill, Holdsworth, Rowling, & Carson, 2000.

Depending on the approach, the focus of promotion efforts may be on changing students' cognitions, affects, behaviours or skills, or environmental/cultural factors. Delivery methods may include teaching techniques, different approaches to discipline, involving students in co-operative or helping activities, training teachers or parents, to getting the parents and wider community members involved (Wells, Barlow, & Stewart-Brown, 2003).

In Canada, the field of school-based mental health is advancing quickly in both practice and policy, as well as research (Joint Consortium for School Health, 2008; Morrison & Kirby, 2010; Santor, Short, & Ferguson, 2009). Environmental scans across Ontario (Short, Ferguson, & Santor, 2009) and Canada (SBMHSA Consortium, 2012) indicate that school boards are developing and implementing diverse promotion, prevention, and treatment programs even in the absence of the comprehensive policy frameworks and resources educators say are needed.

Considerable work to date has been directed toward articulating conceptual models or frameworks for school-based mental health, with different and sometimes conflicting perspectives. This has been important, given that school-based mental health has evolved from both the mental health and education sectors, with different disciplinary traditions, vocabulary, and practice. The main conceptual models are described in detail in Kutash et al. (2006) and Santor et al. (2009) and are summarized below.

Mental health spectrum model

The mental health spectrum model (Mrazek & Haggerty, 1994; Weisz, Sandler, Durlak, & Anton, 2005; both cited in Kutash et al., 2006) has undergone numerous changes since it was first proposed by the Commission on Chronic Illness in 1957 and introduced the concepts of primary, secondary and tertiary prevention (Santor et al., 2009). Many of these changes have focused on the distinction between prevention and treatment strategies with respect to persons who already exhibit some signs or symptoms of mental distress or disorder, and on weighing the cost, risk, and discomfort of prevention against the risk of disease (Gordon, 1987, cited in Kutash et al., 2006).

The "protractor" model proposed by Mrazek & Haggerty (1994; see Figure 3) is the most well-known depiction, likely because it includes both traditional mental health services as well as prevention.

Figure 3   Mental health spectrum model

Reprinted with permission from Reducing Risks for Mental Disorders: Frontiers for Preventive Intervention Research © 1994, by the National Academy of Sciences, courtesy of the National Academies Press, Washington, D.C.
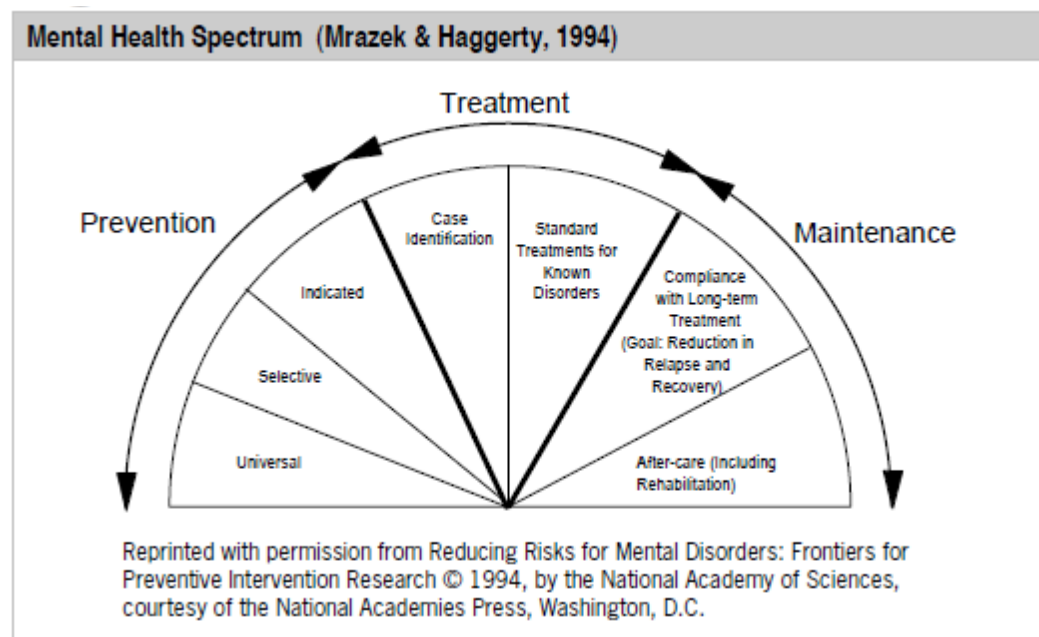
Source: Kutash et al., 2006.

More recently, Weisz et al. (2005) have adapted the original model into a more comprehensive framework that differentiates health promotion /positive development interventions from universal prevention, and articulates the life domain areas and settings in which interventions take place. These authors define prevention and treatment strategies as follows:

- **Health promotion/healthy development strategies** – target an entire population with the goal of enhancing strengths in order to reduce the risk of later problems and/or increase prospects for positive development;

- **Universal prevention strategies** – are designed to address risk factors in entire populations of youth, without attempting to identify those who are at elevated risk;

- **Selective prevention strategies** – target groups of youth identified as sharing a significant risk factor, and intervene to counter that risk;

- **Indicated prevention strategies** – aimed at youth who have significant symptoms of a disorder but who don't currently meet its diagnostic criteria;

- **Treatment interventions** – target those with high levels of symptoms or diagnosable disorders.

Weisz et al.'s (2005) health spectrums model also explicitly outlines the inter-connectedness of individuals and their social systems, as shown in Figure 4, below.

Figure 4   Mental health spectrum model (Weisz et al., 2005)

Reprinted with permission from: Weisz, J., Sandler, I., Durlak, J., & Anton, B. (2005). Promoting and protecting youth mental health through evidence-based prevention and treatment. American Psychologist, 60(6), 628-648, American Psychological Association
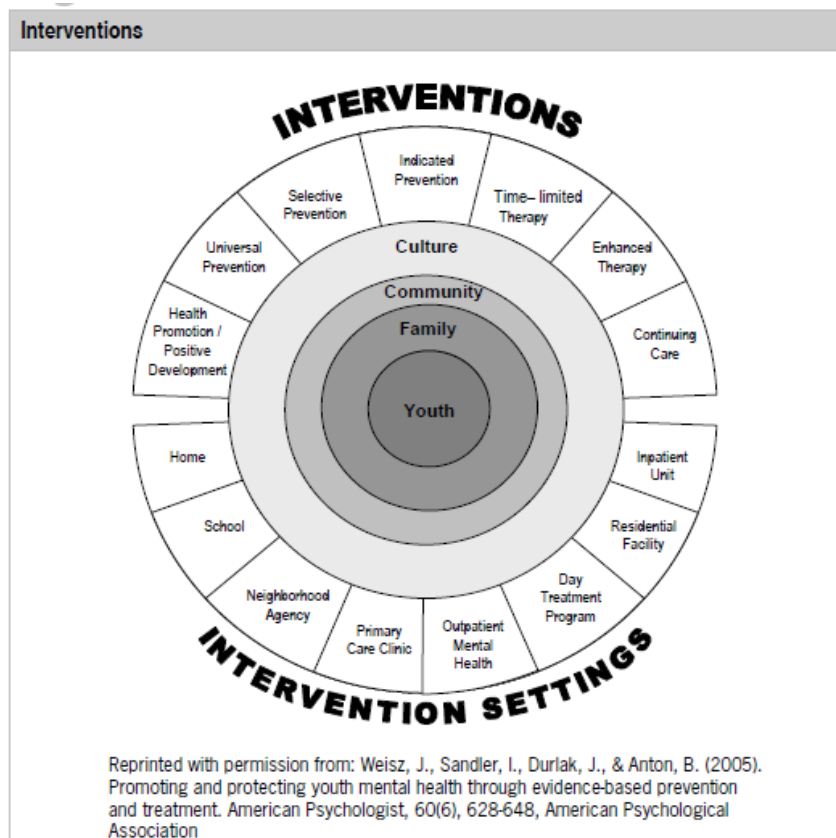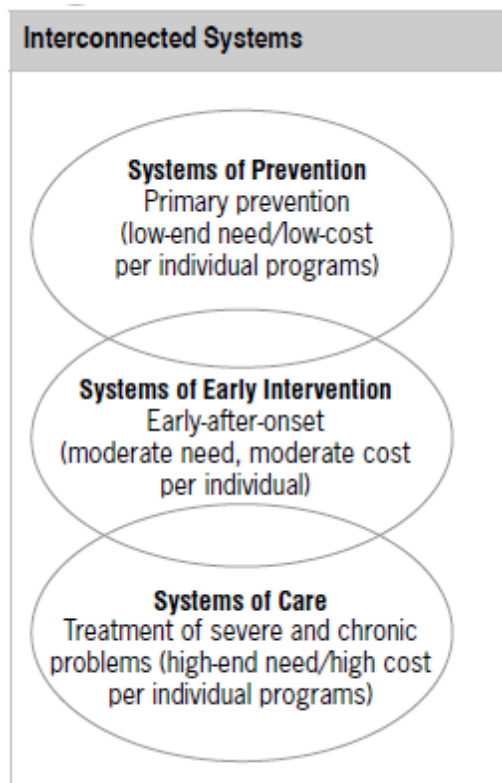
Source: Kutash et al., 2006.

Inter-connected systems model

The inter-connected systems model is also derived from the field of public health, articulated by the Centre for Mental Health in Schools at UCLA (Adelman & Taylor, 1999, 2006) and the Centre for School Mental health Assistance at the University of Maryland (Weist, Goldstein Morris, & Bryant, 2003; both cited in Kutash et al., 2006). This model incorporates some aspects of the mental health spectrums model, but emphasizes collaboration between educational, health and other sectors to pool resources in order to offer integrated programs at three levels of need. This pooling of resources results in three inter-connected "systems" of prevention, early intervention, and care (see Figure 5).

Figure 5   Interconnected systems model

Source: Kutash et al., 2006.

While the first two systems are equally likely to offer services and programs in communities and schools, the target group for systems of care is children and youth with severe, long-standing problems, who are likely to be in special education programs or treatment settings. At this level, effective systems of care (Stroul & Friedman, 1994; cited in Kutash et al., 2006) would coordinate required services using an intensive, "wrap-around" approach that tailors care to the strengths and needs of the family, using an individual care plan. While the interconnected systems approach has not typically engaged schools, its comprehensive, integrated, systemic perspective is seen as a way of potentially engaging schools and communities to restructure themselves in ways that reduce students' barriers to learning.

Positive behaviour support model

The Positive Behavior Support (PBS) model derives from the development disability sector and specifically, from applied behaviour analysis, which uses principles of instrumental learning such as positive reinforcement to modify behaviour, in combination with environmental redesign. The past two decades have seen a shift such that PBS is now used in a variety of settings to address a broad range of academic and social/behavioural challenges (Kutash et al., 2006) and improve quality of life (Schwean & Rodger, 2013).

While originally developed for use with individual case planning, PBS is now applied at a systems level, including school-wide interventions (Sugoi & Horner, 2002; cited in Kutash et al., 2006). Figure 6 illustrates how PBS can be tailored for use in universal, selective, or intensive interventions. An example of a universal intervention using PBS is "Teaching recess," a school-wide series of workshops about behavioural expectations on the playground of an elementary school in Springfield, Oregon that reduced recess-related office referrals by 80 per cent in its first year of implementation (Todd, Haugen, Anderson, & Spriggs, 2002).

Figure 6   Positive behaviour support model
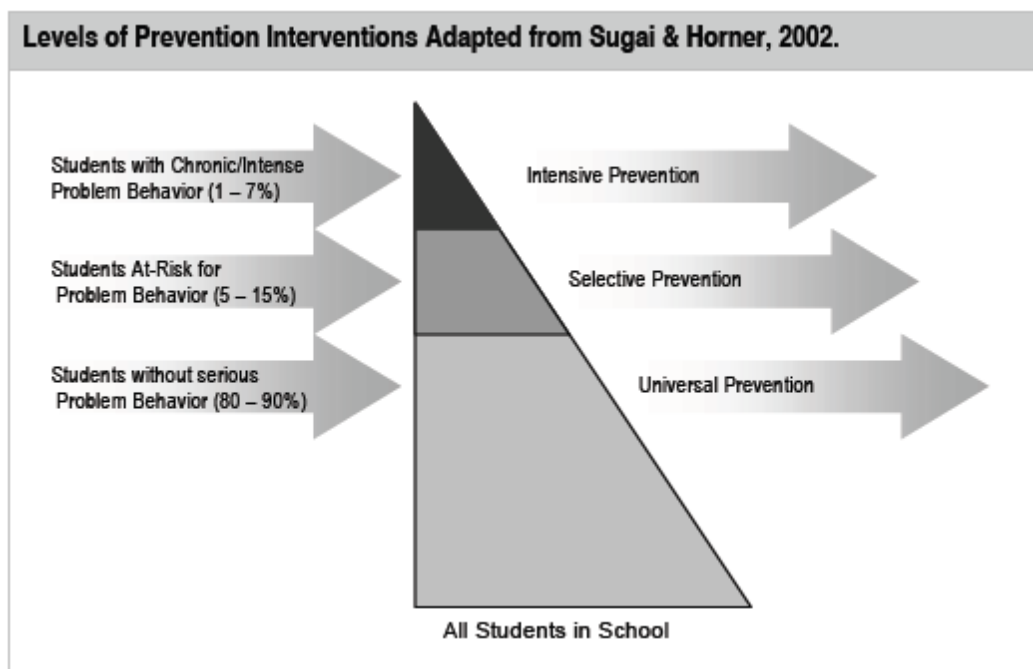
Source: Kutash et al., 2006.

Social-emotional learning model

Social-emotional learning (SEL) is defined as "the process of acquiring core competencies to recognize and manage emotions, set and achieve positive goals, appreciate the perspectives of others, establish and maintain positive relationships, make responsible decisions, and handle interpersonal situations constructively" (Payton, Weissberg, Durlak, Dymnicki, Taylor, Schellinger, & Pachan, 2008, p.5-6). In

this respect, SEL competencies may also be seen as emotional intelligence, in their focus on managing emotions, solving problems effectively, and establishing good relationships with others (Sklad, Diekstra, de Ritter, Ben & Gravelstein, 2012).

The Collaborative for Academic, Social and Emotional Learning (CASEL) in the US has specified five inter-related sets of cognitive, affective, and behavioural core competencies:

Box 1   The five social and emotional learning core competencies

- **Self-awareness:** The ability to accurately recognize one's emotions and thoughts and their influence on behavior. This includes accurately assessing one's strengths and limitations and possessing a well-grounded sense of confidence and optimism.

- **Self-management:** The ability to regulate one's emotions, thoughts, and behaviors effectively in different situations. This includes managing stress, controlling impulses, motivating oneself, and setting and working toward achieving personal and academic goals.

- **Social awareness:** The ability to take the perspective of and empathize with others from diverse backgrounds and cultures, to understand social and ethical norms for behavior, and to recognize family, school, and community resources and supports.

- **Relationship skills:** The ability to establish and maintain healthy and rewarding relationships with diverse individuals and groups. This includes communicating clearly, listening actively, cooperating, resisting inappropriate social pressure, negotiating conflict constructively, and seeking and offering help when needed.

- **Responsible decision making:** The ability to make constructive and respectful choices about personal behavior and social interactions based on consideration of ethical standards, safety concerns, social norms, the realistic evaluation of consequences of various actions, and the well-being of self and others.

Source: CASEL, 2013.

Together, these SEL competencies can determine the extent to which children are equipped to handle the demands of the classroom, to engage fully in learning, and benefit from instruction (Campbell & von Stauffenberg, 2008; Denham, Brown, & Domitrovich, 2010; both cited in CASEL, 2013) and are seen as the foundation of effective functioning in adult life. The assumption is that SEL skills can and should be taught at school as part of the broader mission of education to promote young people's social development (Sklad et al., 2012). As such, SEL programming is ideally begun in preschool and continued through high school (CASEL, 2013; Weissberg & O'Brien, 2004).

Within the school context, SEL programming can take different forms. While some SEL programs may primarily involve the delivery of classroom curricula, others supplement classroom programming with activities outside the classroom, such as with parents or as a school-wide initiative; programs may also involve an element of community service. Similarly, some SEL programs focus on specific skills or issues (such as refusal skills related to drugs, alcohol, premature sex, or violence) while others focus on more general social and emotional skills, with the assumption that these will act as protective factors

and reduce the probability that students will engage in problematic attitudes or behaviours (Catalano, Berglund, Ryan, Lonczak & Hawkins, 2002).

The assumption is that the same risk factors underlie many different risky behaviours (e.g., drug use, violence, bullying, and early school leaving), and that SEL skill development can reduce or prevent such problems. Moreover, SEL programs assume that optimal learning takes place in the context of supportive relationships that make learning "challenging, engaging, meaningful" (CASEL, 2013, p. 9).

Regardless of their specific focus, SEL is seen as providing a "common language and framework" (Weissberg & O'Brien, 2004, p. 88) for coordinating the various academic, prevention, health, and youth development activities within a school. Most SEL programs are based on social learning theory (Bandura, 1977) and use cognitive-behavioural methods for skill development (Tobler et al., 2000, cited in Sklad et al., 2012), in that they assume that fostering the development of the five core competencies will coincide with attitudinal changes and lead to increased positive social behaviours, decreased problematic behaviours and emotional distress, and improved students' grades and test scores (see Figure 7). These changes would in turn support better adjustment and academic performance, as well as optimal developmental trajectory over the life course.

Figure 7   Outcomes associated with the five SEL core competencies
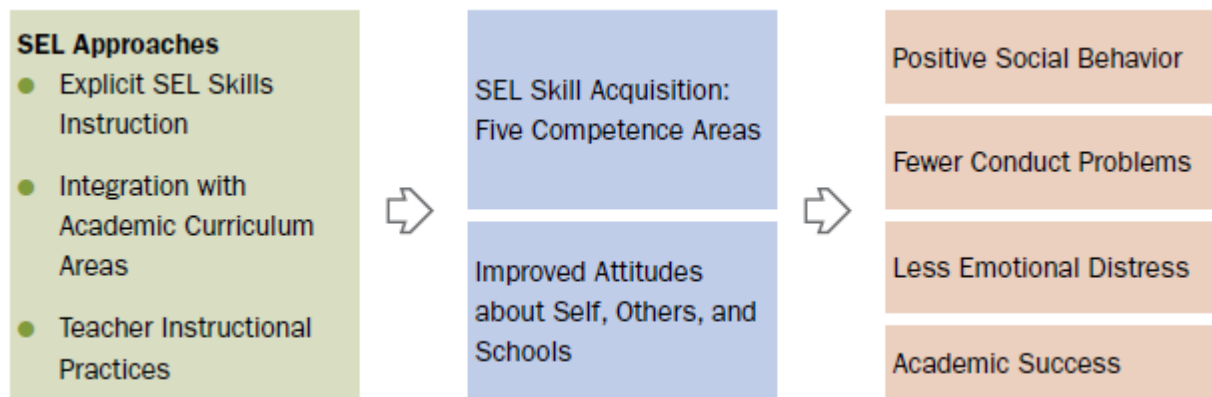
Source: CASEL, 2013.

Public/population health models

The public health model of children's mental health is recent, having only been articulated in the past decade or so (CIHI, 2009; Kutash et al., 2006) in response to the current lack of policy attention and resources directed at positive mental health promotion (Waddell, McEwan, Peters, Hua, & Garland, 2007; Wei, Kutcher, & Szumilas, 2011). Santor et al. (2009) describe four components to this model:

1. a focus on populations as opposed to individuals (i.e., all students);

2. analysis of the role of risk and protective factors – including social determinants of health as well as personal characteristics – in producing desirable or undesirable outcomes;

3. evaluation of the effectiveness of interventions in terms of reducing risk and/or strengthening protective factors; and

4. focus on ensuring that broad-scale implementation has a significant positive effect on the population, through monitoring and evaluation of effective practices.

Waddell, Shepherd, Chen and Boyle (2013) have developed a population health framework[8] for children's mental health that covers major developmental stages from early childhood to adolescence, in recognition of the different types of mental health needs that emerge at each stage. The model also incorporates a variety of mental health determinants and contexts, recognizing that mental health results from the interplay of protective and risk factors in both proximal and distal contexts. Mental health status is based on strengths – which Waddell et al. specifically define as flourishing and resilience – as well as difficulties, all situated in related developmental domains such as social, emotional, cognitive and physical domains. Finally, the framework is grounded in intervention approaches across the spectrum, from upstream approaches such as mental health promotion to downstream approaches such as treatment for mental health disorders that seek to minimize their impact.

The Evergreen framework developed by the Child and Youth Advisory Committee of the Mental Health Commission of Canada (Kutcher & McLuckie, 2010) has a similar focus on both values and the spectrum of services across four categories: promotion, prevention, intervention and ongoing care, and research and evaluation. Each category contains a number of strategic directions. Under the category of promotion, for example, strategic directions include developing pro-social mental health promotion programs, educating teachers, students and parents/caregivers about mental health through school curriculum and community programs, and embedding mental health promotion into all school health promotion programs to give it the same importance as physical health.

With support from the Substance Abuse and Mental Health Services Administration (SAMHSA), Miles, Espiritu, Horen, Sebian, & Waetzig (2010) have also elaborated a conceptual framework for children's mental health that takes a public health approach. There are two levels to this framework: the first sees intervention as one of three core functions, along with assessment/data collection and ensuring quality, access and sustainability of interventions. Miles et al. contend that together with a set of guiding principles or values,[9] these components provide a comprehensive and coordinated approach to children's mental health.

[8] This article is still in press, so the visual representation of the framework is not yet available for copy, though it can be viewed online at http://www.cjcmh.com/doi/pdfplus/10.7870/cjcmh-2013-003.

[9] These values include a population focus, cross-system/sector collaboration, creating supportive environments and building skills, local adaptation, and a balanced focus on positive mental health as well as problems.

The second component of the Miles et al. (2010) framework builds on these principles to identify the type and focus of intervention. As seen in Figure 8, these options are defined along two axes – much like the two continua model presented at the beginning of this paper – insofar as they consider an identified mental health problem, and focus on either optimizing positive health or reducing problems. Although the four intervention options cover the mental health services spectrum, this model introduces a new term – re/claiming health – to intentionally focus on optimizing positive mental health "even in the presence of a mental health problem" (p. 4), similar to the concepts of recovery and flourishing.

Figure 8   A conceptual framework for a public health approach to children's mental health
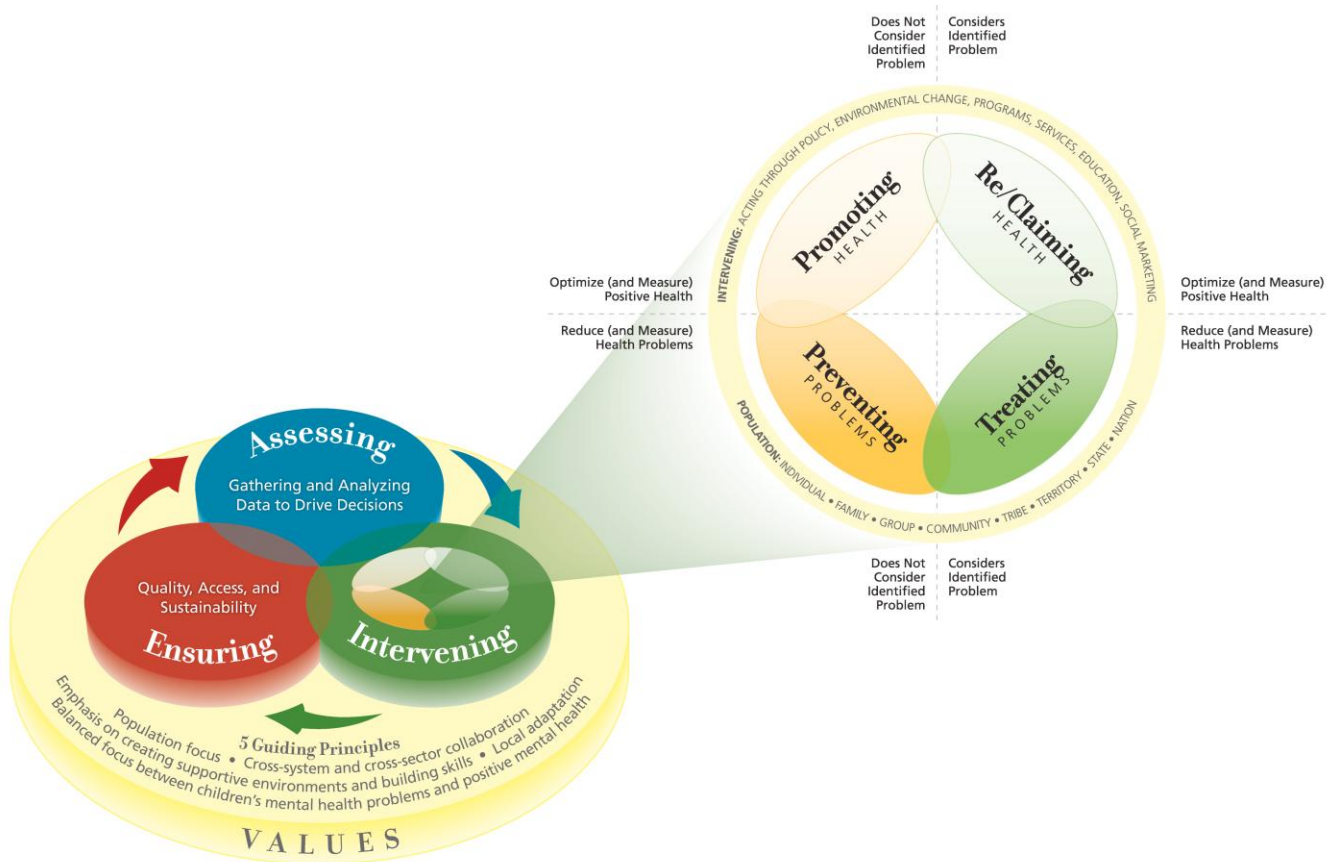
Source: Miles et al., 2010.

Comprehensive school health model

Comprehensive school health is part of the health promoting school movement that developed in the mid-1990s as a way to extend health promotion from teaching and skills development to take account of schools' social and physical environments and connections with the community. The concept was inspired by the Ottawa Charter for Health Promotion (1986) and its emphasis on environments and settings as influencing health and personal skill development (Stewart-Brown, 2006). The World

Health Organization (WHO) defines health promoting schools as those "where all members of the school community work together to provide students with integrated and positive experiences and structures which promote and protect their health" (WHO Regional Office for Europe, 1996, p. 2, cited in Wei et al., 2011).

Guidelines for health promoting schools[10] cover school health policies, the physical and social environments, relationships between school and community, development of personal health skills, and school health services. The guidelines also emphasize the importance of good relationships within the school, staff health and well-being, students' self-esteem, and staff as exemplars on health-related issues. The health promoting schools approach has been widely adopted, especially in Europe, Australia, the United Kingdom (Stewart-Brown, 2006).

In Canada, this approach is known as comprehensive school health (Morrison & Kirby, 2010). The pan-Canadian Joint Consortium for School Health (JCSH)[11] supports this approach (Wei et al., 2011) as a "better practice" framework for supporting students' academic development and health "in an intentional, multifaceted and integrative manner" (Morrison & Kirby, 2010, p. 19).

As its name implies, the comprehensive school health framework involves a whole-school approach to health based on four inter-related, foundational pillars (see Figure 9): 1) the social and physical environments; 2) teaching and learning; 3) healthy school policy; and 4) partnerships and services (JCSH, 2013; Morrison & Kirby, 2010). While the focus of specific programs or services may vary, activities undertaken using a comprehensive school approach must involve integrated action in all four pillars, and a comprehensive, long-term plan for sustainability (JCSH, 2013).

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[10]   First developed by WHO in 1996 and elaborated upon by the International Union for Health Promotion and Education (IUPHE) in 2009.

[11]   Which includes representatives from federal, provincial, and territorial governments with the exception of Quebec.

Figure 9   Comprehensive school health framework – JCSH

Source: Morrison & Kirby, 2010.

Summary

There is now a plethora of conceptual models for school-based or student mental health, depending on the disciplinary tradition involved. It is unclear whether one model will come to dominate as the field evolves, as each serves slightly different purposes and reflects different priorities and perspectives. The notion of a spectrum of mental health interventions is now firmly entrenched, thanks to the influence of public health, although the distinctions among universal, targeted and indicated prevention – while clear in terms of target group – are less clear in actual practice and evaluation (Wells et al., 2003).

Another contribution of public health has been the concept of social determinants, including risk and protective factors in different contexts. Whereas some of the models such focus primarily on the mental health of the individual (e.g., through SEL skills acquisition), others more explicitly acknowledge the role of the environment and the need for systems level change. Positive Behaviour Support and Inter-connected Systems (which includes Systems of Care), for example, target outcomes for systems rather than individuals, and suggest frameworks or strategies rather than programs for implementation. For these reasons, they are not yet identified with evidence-based programs (Kutash et al., 2006), but along with the population and public health model, are likely to receive more support as the field begins to prioritize – and evaluate – interventions at the level of policy, systems, and populations (Kutash et al., 2006).

For our purposes – informing interventions to support student mental health through the transition from high school – we feel the social-emotional learning model and public/population health models provide the most guidance. This is partly due to their familiarity, given our own backgrounds in population health and community mental health. However, we feel they also better reflect the concepts identified as being key to student mental health, and their inter-relationships in different contexts.

Specifically, they incorporate an explicit focus on positive mental health and mental health promotion; the influence of environmental and social factors such as the broader school context; a holistic understanding of health (i.e., social, emotional, physical, psychological); and the notion of skill development as a means of adaptation, coping, and thriving. The SEL model is also the only one we identified that indicates *how* individuals are expected to change as a result of participating in an intervention.

Current programs for student mental health promotion

Our search for Canadian school-based programs that universally promote positive student mental health through the transition from high school did not yield much that fit this narrow definition, although ours was by no means a comprehensive scan on the scale of those conducted by the SBMHSA Consortium (2012) or Short et al. (2009). Many positive mental health promotion programs have either a very specific aim such as bullying prevention, or else a much broader goal such as developing safe and caring schools (see JCSH, 2008). We did, however, find three programs that focus specifically on the transition from high school, one through the SBMHSA scan, another on the Web, and another through SRDC's own research. Each is described below:

- A prominent transition program in Ontario is *The Jack Project*, which was originally conceived to make Mental Health First Aid training more widely available to youth. In 2011-12 it delivered awareness workshops for parents, educators and Grade 12 students, as well as for college and university students. A landscape scan of existing mental health resources was developed for each participating schools, and students were provided with an online "toolbox" linking them with school-based, community, and online resources, as well as referrals to training curricula through MHFA and teenmentalhealth.org. This program was piloted in 22 high schools, mostly in the districts of Toronto, Hamilton and Peel, as well as 12 PSE institutions; evaluation results are pending. The focus of the project is now on developing different means of student engagement in mental health promotion and anti-stigma initiatives;

- *Healthy Transitions* has been offered by Gateway Community Health Centre in Tweed, ON for the past few years to Grade 12 students at a local high school. This program – which takes place during a special, one-day session in lieu of classes – provides instruction in stress management and relaxation techniques, along money management, health and fitness, cooking and nutrition, and other life skills. The focus of the program is on helping students "make better choices for independent living" and connect with community resources, regardless of where they are headed after high school. Each year's topics are developed with a committee of students, although discussion with program staff revealed some operational challenges with the program in terms of student engagement, scheduling, and sustainability. Evaluations have focused on participant satisfaction, which has apparently been good;

- *Future in Focus* was a component of the *Future to Discover* pilot project, a career education initiative tested by SRDC in Manitoba and New Brunswick from 2004-2012, with the aim of increasing access to post-secondary education for students from under-represented groups. The Future in Focus component aimed to help Grade 12 students manage the transition to PSE and overcome challenges by building or strengthening protective factors such as social and coping skills and interpersonal

supports, with the aim of increasing resilience. A longitudinal evaluation of the overall intervention found significant positive impacts of the overall intervention;[12] however, Future in Focus was not evaluated separately.

By broadening our search criteria somewhat, we found a few other programs that, although not focused on the transition from high school, could nevertheless inform such an intervention. These programs are still considered universal mental health promotion and prevention programs, but either have a different target population, or slightly different focus (see below). In general, we found that:

- **Social-emotional learning (SEL) programs in Canada tend to be for elementary and middle school students**, rather than for those in high school. Programs such as *MindUp, PATHS, Right from the Start, Second Step, Zippy's Friends, I'm Thumbody,* and *YODA* are all designed to provide younger students with the opportunity to learn about and develop skills in areas that relate to positive mental health; their emphasis is on coping, problem-solving, learning about and managing emotions, managing stress and interpersonal conflict, and developing self-esteem and self-confidence. Other examples of SEL programs with a specific focus on relationship skills include *the Fourth R program* and *Roots of Empathy. Lions Quest: Skills for Adolescence* is a positive youth development program focused on asset development, but its curricula are for primary and middle school students only;

- **The focus of programming in high school appears to be primarily on identifying mental health problems** and seeking appropriate help, i.e., mental health literacy. Programs such as *Signs of Suicide, Signals of Suicide, ASIST, TAMI, Mental Health First Aid, iMatter* and *Youth Mental Health Awareness, Early Identification and Intervention Program* all aim to increase awareness, deal with myths, stereotypes and stigma, and encourage help-seeking for mental health concerns. This orientation toward problems identifies these more as prevention programming, rather than promoting positive mental health, although the relative emphasis of each program appears to vary and needs to be verified.

  Clearly, mental health promotion and prevention are closely linked; the common element is development of coping skills, including assessment, problem-solving, decision-making and help-seeking. Programs with a more general focus on coping skills include *Stress Management in Schools,* offered in some primary and secondary schools in New Brunswick, and the *Stress Management Workshop,* offered in secondary schools throughout the Lower Mainland of B.C. by the Kelty Mental Health Resource Centre. These programs teach techniques such as visualization and mindfulness (meditative thinking) as techniques for stress reduction;

- **There is considerable program development in the PSE sector** to help students adjust to life on campus. Again, many of these tend to focus on mental health literacy rather than mental health promotion. One resource that focuses on both is *Transitions: Student Reality Check*, originally developed for students at the Ontario College of Art and Design (2008) by Dr. Stan Kutcher at the IWK Health Centre and Dalhousie University. *Transitions* is a 131-page booklet on a wide variety of topics such as relationships, sexuality, and mental health problems, as well as stress management,

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[12] In terms of enrolment in postsecondary education, though not in terms resilience.

coping and learning strategies. A smaller 44-page booklet is intended for distribution in "frosh packs" and online; both are available for purchase by PSE institutions. An evaluation found that 95 per cent of student survey respondents found the booklet relevant and readable, and 40 per cent discussed its content with friends. This resource appears to have considerable potential for adaptation to a classroom-based intervention for high school students;

- **A number of resources are being developed for educators** to develop awareness and mental health literacy, through toolkits, guides, and training curricula, several of which have also been developed by Dr. Stan Kutcher (specifically, the *Gatekeeper Training Program*, and *Mental Health Literacy: Understanding Mental Health and Mental Disability*). Others include the *Making a Difference* program offered by the Offord Centre for Child Studies at McMaster University and *iMatter*, offered by the Hamilton-Wentworth Catholic School Board. It is unclear how much of the focus of these programs is on positive mental health promotion.

  Two other programs that appear to have an explicit focus on mental health promotion include *the Mental Health Education kit* developed by Alberta Health Services, which includes lesson plans on student well-being, and *Resilience Knowledge* resources offered by The Learning Partnership.[13] These resources would need to be explored in depth to determine to what extent they could complement a classroom-based intervention for high school students.

- **There are a number of materials and resources available on the Web for youth** that could complement or be incorporated into a school-based intervention. Examples include:

  o *The student's guide to mental health and high school* (2004)*,* by the Canadian Mental Health Association. Available at http://www.cmha.ca/mental_health/the-students-guide-to-mental-health-and-high-school/

  o *Mental health and high school: Curriculum guide (2008),* by Dr. Stan Kutcher and CMHA. Available for purchase at http://teenmentalhealth.org/resources/entries/mental-health-and-high-school-curriculum

  o *Transitions: Student reality check* (2008), by Stan Kutcher. This resource focuses on social and emotional aspects of the transition to PSE, as well as mental health aspects. Available at http://www.ocadu.ca/Assets/PDF_MEDIA/OCAD/students/transitions_sm

  o *Stress management* and other fact sheets and toolkits on health living, by the Kelty Mental Health Resource Centre in B.C. Available at http://keltymentalhealth.ca/healthy-living/stress

  o *MyHealth magazine,* an interactive health and wellness program by Dr. Darcy Santor and colleagues at the University of Ottawa. Magazine available for purchase at students.myhealthmagazine.net

  o *Mindcheck,* an online resource about mental distress by Fraser Health and BC Mental Health and Addiction Services. Available at http://mindcheck.ca/

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[13]   Based on information in the SBMHSA scan (2012).

- o *iCopeU,* an online student mental health portal developed by mindyourmind in London, ON. Available at http://icopeu.com/

- o *mindyourmind,* an online community for youth dealing with mental health problems and illnesses, offered by the London Mental Health Crisis Service. Available at http://mindyourmind.ca/

- o *Building a healthy high school: Mental health,* by the Ontario Ministry of Education. Available at http://www.edu.gov.on.ca/eng/healthyschools/mentalHealth.pdf

- ▪ **We found several potentially relevant international programs, but none that focus specifically on the transition from high school**. Several of these international programs reflect the health-promoting schools movement, in taking a whole-school approach to mental health promotion and prevention. Examples include Scotland's *Curriculum for Excellence*,[14] the *Geelong Grammar School Project* in Australia, based on Seligman's (2011) model of positive education,[15] and the Secondary Social and Emotional Aspects of Learning (SEAL) program in the UK (although a rigorous evaluation of the latter did not find significant positive impact on students in terms of their social and emotional skills, general mental health difficulties, pro-social behaviour or behaviour problems).[16,17]

  In the US, potentially relevant programs include the *Penn Resiliency Program*, the *Strath Haven Positive Psychology Curriculum,* and the *Positive Psychology for Youth Project.* All of these programs have been developed by Dr. Martin Seligman's Positive Psychology Centre at the University of Pennsylvania. All embed positive psychology into the school curriculum, but the latter two have a more comprehensive focus than resiliency alone. While the Penn Resiliency program has been rigorously evaluated, it is not known what impacts the other two programs have had to date.

  CASEL is due to publish a report later this year on the effectiveness of SEL programs for high school students.

The evidence for student mental health promotion

Our environmental scan revealed very few initiatives with a specific focus on promoting the mental health of all students through the transition from high school; moreover, evaluations were either not available or not specific to indicate the effectiveness of these initiatives. In the absence of this

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14   The Curriculum Review Group (2004). *A curriculum for excellence: The curriculum review group*. Scotland: Scottish executive. Retrieved from http://www.educationscotland.gov.uk/thecurriculum/whatiscurriculumforexcellence/index.asp.

15   See http://www.ggs.vic.edu.au/PosEd/Overview.aspx.

16   Humphrey, N., Lendrum, A., & Wigelsworth, M. (2011). *Social and emotional aspects of learning (SEAL) programme in secondary schools: National evaluation*. UK: Department for Education.

17   Wigelsworth, M., Humphrey, N., & Lendrum, A. (2012). *Evaluation of a school-wide preventive intervention for adolescents : the secondary Social and Emotional Aspects of Learning (SEAL) program.* School Mental Health. DOI 10.1007/s12310-012-9085-x.

information, we reviewed the broader research literature regarding school-based mental health promotion as a means of determining the evidence for such an approach and guiding its design.

Research on school-based mental health has advanced considerably in the past 15 years (Durlak, Weissberg, Dymnicki, Taylor & Schellinger, 2011), to the point where there are now several syntheses, reviews, and meta-analyses of existing research. There are also compendia of empirically supported programs, including:

1. Substance Abuse and Mental Health Services Administration (SAMHSA)

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

3. US Department of Education

4. Centre for the Study and Prevention of Violence (CSPV)

5. Centre for School Mental Health (CSMH)

These compendia and reviews include programs for the treatment and ongoing care of students with mental illness, and for prevention of mental health problems as well as for mental health promotion, and their results have been comprehensively described elsewhere (e.g., Santor et al., 2009; SBMHSA Consortium, 2012). For the purposes of this project, we chose to focus specifically on reviews of research on school-based programs for mental health *promotion* and prevention rather than treatment, and on those published in the past ten years.

Wells, Barlow, and Stewart-Brown (2003) focused their review on universal rather than targeted or indicated programs for mental health promotion and prevention.[18] They reviewed 17 controlled trials of 16 diverse interventions and concluded that school-based programs could have a positive impact on children's mental health. Over half the studies showed positive results for more than 30 per cent of outcomes measured, and three for two-thirds of outcomes. Programs that were moderately or more successful tended to promote overall mental health (as opposed to mental illness prevention), to be provided continuously over a year or more, and to measure self-concept, emotional awareness, and positive interpersonal behaviours as opposed to focusing on conduct problems or antisocial behaviours.

The Wells et al. review also identified whole-school approaches that aim to impact school climate as more successful than class-based, curricular approaches alone. In terms of gaps, the authors noted the need to include additional aspects of positive mental health and young people's own goals and coping strategies, neither of which have traditionally been the focus of either programming or evaluation.

Kutash et al. (2006) summarized the results of earlier reviews of a wide range of school-based mental health interventions and conducted their own search of more recent literature. While noting a lack of consistency around the definition of "evidence," they found that the largest number of effective universal programs were those directed at social functioning, emotional regulation, or reducing

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[18] These authors distinguish between targeted programs as being for those at increased risk of mental health problems, and indicated programs for those already manifesting signs of mental health problems (p. 198).

aggression, particularly through skills development. They also found that universal prevention programs were more likely to involve parents and teachers in delivering and reinforcing the skills development curricula.

Stewart-Brown (2006) conducted a systematic review of the evidence on the health promoting schools approach for the WHO's Health Evidence Network (HEN), and found that programs that promoted mental health in schools (including preventing violence and aggression) were among the most effective, in addition to those that promoted healthy eating and physical activity. Those that were of long duration and high intensity, and involved the whole school were particularly effective. Some of the studies included in her review – though not all – found that peer delivery increased effectiveness, and were highly valued by the young people who participated.

Santor, Short, and Ferguson (2009) summarized these and other key empirical reviews and synthesis papers on school-based mental health, including a review by Payton et al. (2008) for CASEL that suggested SEL programs were among the most successful youth development programs offered to elementary and school-aged youth; results for high school students are forthcoming. Santor et al. also outlined the results of a 2009 review by O'Connell, Boat, and Warner for the US National Research Council and Institute of Medicine, which found increasing evidence that promoting positive aspects of mental health is "an important approach to reducing mental, emotional, and behavioural disorders" (Santor et al., 2009, p. 36).

The report of the Committee on the Prevention of Mental Disorders and Substance Abuse among Children, Youth and Young Adults – which incorporates the O'Connell et al. review – makes a number of recommendations for mental health prevention, including highlighting the importance of mental health promotion, using a public health approach and developmental framework to guide interventions, and the relevance of implementation research for the success of school-based mental health initiatives (cited in Santor et al., 2009).

On the basis of this and other evidence, Santor et al. (2009) conclude that the research "emphatically supports" the effectiveness of mental health promotion programs, that SEL programs appear to offer both health promotion and prevention outcomes, and that health and mental health literacy are "central to positive development, detection and help seeking" among youth for mental health problems (p. 67). These authors point out that there are large gaps in the evidence about what works best with youth from racialized and rural/remote communities, but suggest that overall, there is a high potential payoff to be achieved by integrating SEL and mental health literacy approaches.

A review by Durlak, Weissberg, Dymnicki, Taylor, & Schellinger (2011) focused exclusively on the impact of universal SEL programs across a range of student outcomes. Examining 213 programs from as early as the 1960s, they found that participants demonstrated significant and even large improvements in social-emotional skills, attitudes, behaviour, and academic performance, and that effects remained statistically significant for a minimum of six months. Moreover, SEL programs could be effectively delivered by educators rather than outside personnel, and at all educational levels including high school. In fact, students improved in twice as many outcome categories when school staff administered the SEL program.

Durlak et al. (2011) also found that program effectiveness was moderated by implementation problems and the use of learning strategies that were sequenced, active, focused, and explicit (SAFE). Unlike Wells et al (2003), these authors did not find that multi-component programs were more effective than classroom-only programs; in fact, given the importance of implementation fidelity, their findings suggest that less complex interventions – well-executed – may be more effective.

Like Durlak et al. (2011), Sklad, Diekstra, de Ritter, Ben and Gravelstein (2012) focused on universal school-based programs, and specifically those that focused on promoting development by enhancing social and emotional skills rather than preventing problems. Unlike Durlak et al. (2011), they limited their review to recent studies (since 1995), and compared programs in the US with those implemented in other countries.

Sklad et al. found considerable variation in effectiveness across the diverse programs, but overall beneficial effects in all seven categories of outcomes: social skills, antisocial behaviour, substance abuse, positive self-image, academic achievement, mental health, and prosocial behaviour. Immediate effects were generally stronger than those at follow up[19] but significant effects persisted in all categories. Programs that lasted less than a year had higher impacts on social skills and antisocial behaviour than longer programs. Similar to Durlak et al. (2011), Sklad et al. found that involving researchers or psychosocial professionals in delivery did not improve effectiveness over those that involved teachers. In addition, effect sizes of programs in other countries were similar to those in the US, suggesting that SEL programs may be relevant for children in different cultural contexts.

Finally, the Directions Evidence and Policy Research Group (Directions EPRG) conducted a review of 94 systematic reviews and meta-analyses on behalf of the SBMHSA Consortium in 2012. An overview of findings[20] echoes those of the previous reviews regarding school-based mental health promotion, noting that universal, school-based SEL programs are associated with enhanced prosocial skills, self-concept, and academic achievement. The overview further states that the best outcomes derive from teaching skills systematically in a class-wide manner, with opportunities for practice and collaboration, ideally conducted within a whole-school approach to mental health promotion. Since the evidence suggests that educators can deliver these programs effectively and that adherence to evidence-based protocols is key to successful outcomes, the overview calls for adequate professional development and ongoing program evaluation.

Lessons learned about student mental health promotion

The increasing depth and breadth of research in the field of school-based mental health is reflected in the number of systematic reviews described above, and in the various conceptual models for student mental health described in the previous section. Part of this breadth derives from the different disciplines or sectors (e.g., mental health, education) that have developed this field and are currently

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[19] Generally seven months after delivery, but more than half the studies reported only post-test data, so the authors suggest results of durability of outcomes be interpreted cautiously.

[20] The full review was not available, so it is not clear to what extent this review included new studies not previously reviewed elsewhere.

involved in its practice. As a result, there is tremendous diversity in the type and focus of interventions in school-based mental health, even when one considers only universal promotion programs.

However, this diversity makes it challenging to make conclusions about the empirical research. Not only did the authors of each of the reviews cited above have to contend with different definitions and degrees of empirical rigour in the studies reviewed, but the diversity of program goals, target groups, and delivery mechanisms makes it difficult to develop generalized conclusions about effective practice. In addition, several of the systematic reviews and meta analyses described above appear to have reviewed some of the same studies, so their similar findings are not surprising.

In this paper, we have tried to mitigate these limitations by focusing as much as possible on the research of empirically-based, *universal* school-based programs that promote positive mental health, instead of the more general research on prevention and intervention. We also did not examine research on programs for younger children in any depth, though meta-analyses did not usually differentiate by age group or schooling level. Finally, we have noted those areas where consensus appears to exist in the research literature, and where contradictions have been found.

With these caveats and our initial research questions in mind, we have identified the following key lessons about student mental health promotion:

Program theory:

- Positive mental health has many different components and possible indicators. Emerging definitions tend to include emotional/affective, psychological, and social/behavioural components. Skill acquisition in these areas is often used to indicate the development of positive mental health;

- The following outcome areas are particularly common in the research literature: social-emotional skills, pro/antisocial behaviours, substance abuse, positive self-image, mental health and subjective well-being, and academic performance;

- There are a number of different conceptual frameworks that could guide the development of an intervention, including several that recognize the influence of different contextual factors. Of these, we find the SEL and population/public health models to be most suited to an intervention focused on supporting students through the transition from high school because of their explicit focus on positive mental health and flourishing, social determinants, skill development, and an integrated view of health;

- The SEL model is particularly useful by providing an idea of the *mechanisms* or processes by which different components of positive mental health might be changed through an intervention.

Design:

- There is considerable scope to develop a program to promote student mental health through the transition from high school, since very little currently exists with this specific focus;

- Universal school-based mental health promotion programs should focus on enhancing social and emotional skills such as problem-solving, decision-making, social interactions, and self-regulation as a means of promoting and protecting students' mental health;

- Programs should be developmentally, culturally, and gender-appropriate, and sensitive to participants' other special circumstances (e.g., living in rural and remote communities);

- Programs should also be integrated with the curriculum and sustained over time. The evidence is mixed as to whether duration should greater than or less than one year;

- Programs that are implemented as part of a whole school approach can be particularly effective (especially by engaging families), but single-component initiatives may have a better chance of avoiding implementation problems and thereby demonstrating success;

- Programs can be delivered by educators with equal or greater success to those delivered by researchers or mental health professionals. Peer delivery may also be effective and succeed in engaging youth;

- Program design should incorporate learning strategies that are sequenced, active, focused, and explicit (SAFE principles) to increase effectiveness in multiple outcome areas. Specifically, they should

    o Use a connected and coordinated set of activities which links the learning steps and provides youth with opportunities to connect these steps (Sequenced);

    o Use active forms of learning to help youth acquire new skills, meaning that the program requires the students to put the material into practice (Active);

    o Allow for a sufficient amount of time and attention dedicated for skill development (Focus);

    o State clear and specific learning objectives, rather than general ones (Explicit).

Implementation:

- Even the best-designed program will not be effective if poorly implemented. To mitigate against implementation failure and increase adherence to evidence-based protocols, the following supports should be in place (Weare & Nind, 2011, cited in Sklad et al., 2012):

    o A sound theoretical base;

    o Well-defined goals;

    o Explicit guidelines outlined in an operations/program manual;

    o professional development/training;

    o Consistent staffing;

    o mechanisms for quality control/program monitoring;

    o Ongoing evaluation to provide feedback on intervention effects.

Evaluation:

- Integrated evaluation tends to enhance overall program effectiveness, likely because it systematizes program delivery and provides timely feedback to enable program refinements over time. Evaluation of student mental health promotion programs should use multiple outcomes. Measures

that broaden the scope of positive mental health and incorporate students' own goals and strategies are encouraged, as is assessment of cost-effectiveness.

Taken together, these findings are useful guidelines for the development of an intervention to promote students' mental health through the transition from high school. Consistent with the theoretical and empirical literature reviewed in this paper, the ultimate aim of such an initiative will be to equip senior students with the knowledge, skills, and resources they need to cope with, adapt to and thrive in their next phase as emerging adults.

References

Bandura, A. (1977). *Social Learning Theory*. Englewood Cliffs, NJ: Prentice Hall.

Butler-Jones, D. (2011). *The Chief Public Health Officer's Report on the State of Public Health in Canada, 2011: Youth and Young Adults – Life in Transition*. Ottawa: Public Health Agency of Canada. Retrieved from:http://publichealth.gc.ca/CPHOreport.

Canadian Institute for Health Information, (2009). *Improving the health of Canadians: Exploring positive mental health.* Ottawa: CIHI.

Canadian Mental Health Association (nd). *What is mental health and mental illness?* Retrieved from http://wmhp.cmhaontario.ca/workplace-mental-health-core-concepts-issues/what-is-mental-health-and-mental-illness

Catalano, R.F., Berglund, L., Ryan, J.A.M., Lonczak, H.S., & Hawkins, J.D. (2004). Positive youth development in the United States: Research findings on evaluations of positive youth development programs. *ANNALS of the American Academy of Political and Social Science. 591*, 98-124. DOI: 10.1177/0002716203260102.

Collaborative for Academic, Social, and Emotional Learning. (2013). *Effective social and emotional learning programs: Preschool and elementary school edition.* Chicago, IL: CASEL.

Crozier, S. & Wilihnganz, N. (2006). *Canadian Counselling Centre Survey 2004/2005.* Report prepared for the Canadian University and College Counselling Association.

Durlak, J.A., Weissberg, R.P., Dymnicki, A.B., Taylor, R.D. & Schellinger, K.B. (2011). The impact of enhancing students, social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development. 82* (1), 405-432. DOI: 10.1111/j.1467-8624.2010.01564.x.

Government of Canada (2004). *A Canada fit for children: Canada's plan of action in response to the May 2002 United Nations Special Session on Children.* Ottawa, ON: Author.

Joint Consortium for School Health. (2008). *Investigating positive psychology themes in school health: A scan and analysis of provincial/territorial education department websites*. Summerside, PE: Author.

Joint Consortium for School Health. (2010). *Schools as a setting for promoting positive mental health: Better practices and persepctives.* Summerside, PE: Author.

Joint Consortium for School Health. (2013). C*omprehensive school health framework.* Retrieved from http://www.jcsh-cces.ca/index.php/school-health

Kessler, R. C., Berglund, P., Demler, O., Jin, R., & Walters, E. E. (2005). Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry, 62*, 593-602.

Keyes, C. L. M. (2002). The mental health continuum: from languishing to flourishing. *Journal of Health and Behavior Research, 43,* 207-222.

Keyes, C. L. M. (2006). Mental health in adolescence: is America's youth flourishing? *American Journal of Orthopsychiatry, 76*(3), 395-402.

Kirby, M.J.L., & Keon, W.J. (2006). *Out of the shadows at last: Transforming mental health, mental illness and addiction services in Canada.* Ottawa: Standing Senate Committee on Social Affairs, Science and Technology.

Kutash, K., Duchnowski, A., & Lynn, N (2006). *School-based mental health: An empirical guide for decision-makers.* Tampa, FL: University of South Florida, The Louis de la Parte Florida Mental Health Institute, Department of Child & Family Studies., Research and Training Centre for Children's Mental Health.

Kutcher, S., & McLuckie, A. for the Child and Youth Advisory Committee, Mental Health Commission of Canada. (2010). *Evergreen: A child and youth mental health framework for Canada.* Calgary, AB: Mental Health Commission of Canada.

Leitch, K.K. (2007). *Reaching for the top: A report by the advisor on healthy children and youth.* Ottawa: Health Canada.

MacKean, G. (2011). *Mental health and well-being in post-secondary education settings: A literature review and environmental scan to support planning and action in Canada.* Report prepared for the June 2011 CACUSS pre-conference workshop on mental health. Canadian Association of College and University Student Services.

Mental Health Commission of Canada. (2012). *Changing directions, changing lives: The mental health strategy for Canada.* Calgary, AB: Author.

Miles, J., Espiritu, R.C., Horen, N., Sebian, J., & Waetzig, E. (2010). *A public health approach to children's mental health: A conceptual framework.* Washington, DC: Georgetown University Center for Child and Human Development, National Technical Assistance Center for Children's Mental Health.

Morrison, W., & Kirby, P. (2010). *Schools as a setting for promoting positive mental health: Better practices and perspectives.* Summerside, PE: Joint Consortium for School Health.

Payton, J., Weissberg, R.P., Durlak, J.A., Dymnicki, A.B., Taylor, R.D., Schellinger, K.B., & Pachan, M. (2008). *The positive impact of social and emotional learning for kindergarten to eighth-grade students: findings from three scientific reviews.* Chicago, IL: Collaborative for Academic, Social, and Emotional Learning.

Rowling, L. (2007). School mental health: Politics, power and practice. In M. Weist & M. Murray (Eds.) *Advances in School Mental Health Promotion: training and practice, research and policy, Inaugural issue.* 23-31.

Rutter, M. (2001). Psychosocial adversity: Risk, resilience, and recovery. In J.M. Richman and M.W. Fraser (Eds), *The context of youth violence: Resilience, risk and protection.* Westport, CT: Praeger.

Ryan, R. M., & Deci, E. L. (2001). To be happy or to be self-fulfilled: A review of research on hedonic and eudaimonic well-being. *Annual Review of Psychology, Vol. 52*, 141-166.

Santor, D., Short, K., & Ferguson, B. (2009). *Taking mental health to school: A policy-oriented paper on school-based mental health for Ontario.* Ottawa, ON: The Provincial Centre of Excellence for Child and Youth Mental Health at CHEO.

School-Based Mental Health and Substance Abuse Consortium (2012). *School-based mental health and substance abuse: A scan of Canadian practices.* Final report submitted to the Mental Health Commission of Canada.

School-Based Mental Health and Substance Abuse Consortium (2012). *School-based mental health and substance abuse: A review of systematic reviews and meta-analyses: An overview of findings in context.* Overview submitted to the Mental Health Commission of Canada.

Schwean, V. & Rodger, S. (2013). Children first: It's time to change! Mental health promotion , prevention, and treatment informed by public health and resiliency approaches. *Canadian Journal of School Psychology, 28*(1), 136-166. DOI: 10.1177/0829573513475773. Retrieved from http://cjs.sagepub.com/content/28/1/136.

Short, K., Ferguson, B., & Santor, D. (2009). *Scanning the practice landscape in school-based mental health.* Ottawa, ON: The Provincial Centre of Excellence for Child and Youth Mental Health at CHEO.

Sklad, M., Diekstra, R., de Ritter, M., Ben, J. & Gravelstein, C.(2012). Effectiveness of school-based social, emotional, and behavioural programs: Do they enhance students' development in the area of skill, behavior, and adjustment? *Psychology in the Schools, 49*(9), 892-909. DOI: 10.1002/pits.21641.

Stewart-Brown, S. (2006). *What is the evidence on school health promotion in improving health or preventing disease and, specifically, what is the effectiveness of the health promoting schools approach?* Copenhagen: WHO Regional Office for Europe (Health Evidence Network report).

Suldo, S. M., & Shaffer, E. J. (2008). Looking beyond psychopathology: The dual-factor model of mental health in youth. *School of Psychology Review, 37*(1), 52-68.

Tilleczek, K. & Ferguson, B. (2007). *Transitions and pathways from elementary to secondary school: A review of selected literature.* Report prepared for the Ontario Ministry of Education. Toronto, ON: The Hospital for Sick Children.

Todd, A., Haugen, L., Anderson, K., & Spriggs, M. (2002). Teaching recess: Low-cost efforts producing effective results. *Journal of Positive Behavior Interventions, 4*(1), 46-52 doi: 10.1177/109830070200400108.

Waddell, C., McEwan, K., Peters, R.D., Hua, J.M.,& Garland, O. (2007). Preventing mental disorders in children: a public health priority. *Canadian Journal of Public Health*. *98*(3),174-178.

Waddell, C. & Shepherd, C. (2002). *Prevalence of Mental Disorders in Children and Youth*. Research update prepared for the British Columbia Ministry of Children and Family Development. Vancouver, BC: University of British Columbia.

Waddell, C., Shepherd, C.A., Chen, A. & Boyle, M.H. (2013). Creating comprehensive children's mental health indicators for British Columbia. *Canadian Journal of Community Mental Health, 32*(1), 9-27. DOI: 10.78701/cjcmh-2013-003 .

Wei, Y., Kutcher, S. & Szumilas, M. (2011). Comprehensive school mental health: An integrated "School-based pathway to care" model for Canadian secondary schools. *McGill Journal of Education, 46*(2), 213-228. DOI: 10.7202/1006436ar.

Weissberg, R.P. & O'Brien, M.U. (2004). What works in school-based social and emotional learning programs for positive youth development. *ANNALS of the American Academy of Political and Social Science, 591*, 86-97.

Weisz, J., Sandler, I., Durlak, J., & Anton, B. (2005). Promoting and protecting youth mental health through evidence-based prevention and treatment. *American Psychologist, 60*(6), 628-648. American Psychological Association.

Wells, J., Barlow, J., & Stewart-Brown, S. (2003). A systematic review of universal approaches to mental health promotion in schools. *Health Education Journal, 103*(4), 197-220.

World Health Organization (2001). *The world health report 2001: Mental health: new understanding, new hope.* Geneva: WHO. Retrieved from: http://www.who.int/whr/2001/en/

Wyn, J., Cahill, H., Holdsworth, R., Rowling, L., & Carson, S. (2000). MindMatters, a whole-school approach promoting mental health and wellbeing. *Australian and New Zealand Journal of Psychiatry, 34,* 594-601.