

# Mental Health Education In Canada

## Curricula Literature Review

**Prepared for Physical and Health Education Canada**

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Physical & Health Education Canada (PHE Canada) is the national voice for physical and health education. We work with educators and on-the-ground professionals to develop the resources, understanding, and networks to ensure that all children have the opportunity to develop the knowledge, skills and attitudes necessary to lead healthy, physically active lives, now and in their future. The foundation of our work is advocating for strong health and physical education curriculum, and providing the support to ensure its delivery by qualified educators supported by engaged administrators. We strive to achieve our vision by fostering healthy school communities where all students can develop the resiliency to be the citizens of our future.

Learn more about us at [www.phecanada.ca](http://www.phecanada.ca).



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The AstraZeneca Young Health Program is about helping young people in need around the world deal with the health issues they face, so that they can improve their chances of living a better life. In Canada, the AstraZeneca Young Health Program (YHP) is working in partnership with three leading Canadian charitable organizations to improve the mental and emotional wellbeing of youth ages 10-19. YHP supports the advocacy efforts of PHE Canada to ensure that teachers are equipped with the skills to project a positive mindset and to teach the skills that lead to positive mental health for Canadian youth.

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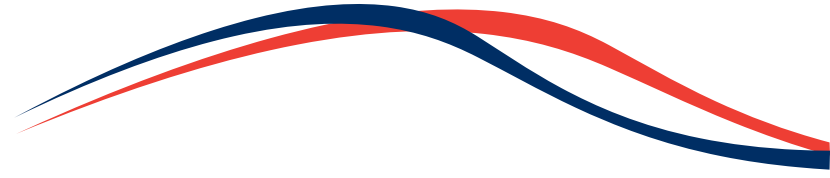
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## Executive Summary

In reviewing the existing mental health curricula in K–12 schools across this country, what becomes evident first is the lack of research that examines efficacy or any type of measurable outcome. This is not unique to mental health curricula, but may be an artefact of the responsiveness with which schools and systems try to address current concerns and deficits, and the lack of resources to systematically design, implement, and evaluate what they do. Although evidence-based practice is the “gold standard” to which professionals in many sectors aspire, it requires resources (time, money, and expertise among them) to which many decision-makers in education do not have access.

More research exists on mental health programming—the resources that a school board, system, school or individual teacher might bring in to support the mental health of the students. Because these programs are often built on theoretical frameworks and undergo extensive field testing before they are rolled out, we can often have access to the type of outcome data that does not exist within the context of school curricula.

Excellence in teaching and learning about mental health demands that we take into account these evidence-based practices and the research which supports them; developmental appropriateness; a strength-based approach; an appreciation for the lived experience of children and families and how this puts some children at risk for mental health problems; child-centred and family-based approaches to well-being; an understanding about effective treatment and prevention; community-family-school partnerships to support well-being and reduce stigma; and cultural awareness, respect and humility.

We have incredible opportunities within the context of daily school life and learning to address mental health and well-being, and it is essential that we approach these opportunities with the best information, evidence and commitment. Teachers and teaching make a difference in the lives of students, families and communities, and careful and planned development, delivery and evaluation of mental health curricula can improve the learning and life experiences of children far beyond the classroom, and into their adulthood.





# Curricula Literature Review

## Introduction

In a broad sense, the purpose of education is to provide students with the skills, knowledge and resources necessary to become engaged and active members of society. In particular, the goal of health education is to teach students about how to maintain good health and avoid unhealthy behaviours. It is critically important that we recognize and address the link between academic success and health-promoting behaviours. In a recent review, Bradley and Greene (2013) present the results of a comprehensive review of the research and conclude that, “among adolescents, health-risk behaviors are inversely related to academic achievement. While this inverse relationship is not new information, the reported strength of the interrelationship is compelling and suggests that a unified system that addresses both health behavior and academic achievement would have reciprocal and synergistic effects” (p. 523). While specific curriculum guidelines provide clear definitions of the knowledge, skills, and attitudes that students will develop as a result of planned learning experiences, broader curriculum programs are comprehensive approaches to the promotion and development of a wide range of competencies that support an overarching learning objective; in this case, mental health and emotional well-being, or education for resiliency, is the goal.

Described as possessing an ability to successfully adjust to situations despite difficult conditions and developmental threats (Woolfolk, Winne, & Perry, 2012), resilient students can communicate effectively, and have high expectations and high academic confidence (Borman & Overman, 2004). When it comes to resilience education, Brown, D’Emidio and Benard (2001) position teachers as responsible for creating a reciprocal relationship in which they are creative in supporting students’ goals and dreams, while students are asked to experiment in the school environment, where they will be supported and not penalized for doing so, with “decisions about their interests and strengths” (xi).

The education system and educators can help foster resilience by being dependable sources of both emotional and academic support, working with students to solidify their strengths, and evaluating missing experiences and resources necessary for successful learning (Ormrod, 2011). When considering mental health in education, research indicates educators feel they lack sufficient knowledge on mental health and on how to support student mental health issues (Gowers, Thomas & Deeley, 2004; Rothi, Leavey & Best, 2008). Moreover, and based on the current review, mental health curriculum programming does not make a consistent or significant appearance in Canadian schools. Teachers feel under-prepared to support children who may be at risk or struggling to develop resilience because of emotional well-being or mental health issues, and may not have the resources they need in order to promote academic achievement for them.

This convergence of evidence provides a solid foundation from which to consider the

benefits of developing and delivering mental health literacy for teachers, and promoting change in mental health-related curriculum for students.

The successful implementation of any program, whether related to health, curriculum, or some combination of the two, has been the subject of a great deal of in-depth research (see, for example, Fixsen et al 2004). In developing the Comprehensive Framework for Implementation Research (CFIR), Damschroder and colleagues (2009) suggest that in order for successful implementation of any new program, we must consider five groups of inter-related domains.

These dynamically interacting domains include 1) the intervention itself; 2) the inner setting; 3) the outer setting; 4) the individuals involved; and 5) how implementation is to be accomplished (see examples in Table 1 “Considerations from Implementation Science”). When these domains are considered in the planning phases before implementation, this can assist with a meaningful and smoother transition into the implementation phases themselves. This will be further elaborated on throughout this review.

## Prevalence of Mental Health Issues in Canada

In addressing the mental health needs of Canadian children and youth, it is important to distinguish between mental health disorders and mental health problems and challenges, and focus on building awareness, resilience, and well-being.

In Canada, between 14% (Waddell, Offord, Shepherd, Hua, & McEwan, 2002) and 25% of children and youth experience a mental health disorder (Boyle & Georgiades, 2009); however, less than one in five of these children will receive the help they need (Offord, Boyle, Fleming, Blum & Grant, 1989). There are compelling reasons to take seriously the risks associated with mental health problems: approximately 24% of all deaths between the ages of 15 to 24 are the result of suicide (Health Canada, 2002), making it the second leading cause of death, just behind accidental death, for this age category (Canadian Psychiatric Association, 2012). Mental health problems have been linked to low school achievement and higher rates of dropout for youth (Tolan & Dodge, 2005; Owens et al., 2012). Kessler and colleagues (2005) determined that in a national American sample of adults with mental health disorders, half reported that they were experiencing the disorder by the age of 14, and 75% by the age of 24. Not only do these statistics represent the prevalence and negative effects mental illness can have on children, but the need to make changes to properly address these issues is paramount now more than ever.

Characterized by distortions in mood, behaviours, cognitions or a combination of associated behaviours and symptoms, mental illnesses (also referred to as “mental disorders”) are associated with compromised functioning and suffering over a significant period of time (Health Canada, 2002). Mental illnesses include low incidence disorders such as schizophrenia (about 1 % of the population; Mueser & McGurk, 2004), to more prevalent ones, including depression (5% prevalence; Murry & Lopez, 1996) and anxiety (11.2 % prevalence; Bland, Newman & Orn, 1988). People living with a mental illness often experience significant distress which negatively impacts their schooling, social lives, and interactions with family members. Moreover, anyone is at risk of developing a mental illness and causal factors are the result of interactions of psychological, biological, genetic, social, and economic forces (Mental Health Commission of Canada, 2012).

Dr. Diane Sacks, president of the Canadian Pediatric Society, has highlighted a critical



The Intervention	The Setting: Outer	The Setting: Inner	Individuals Involved	How: The Implementation Process
Intervention source: internal or external development	Community needs and resources	Structural characteristics: age, maturity, size of organization	Knowledge and Beliefs about Intervention	Planning
Evidence strength and quality	Cosmopolitanism: degree of networks associated with intervention	Networks and Communication: nature and quality of social networks	Self-Efficacy: Team beliefs in their ability to carry process out	Engaging and attracting appropriate individuals to assist with implementation (opinion leaders, formally trained leaders in implementation, champions, external change agents)
Advantages over other approaches	Peer Pressure: stemming from a great need or others who are 'doing it well'	Culture: norms, values, beliefs present	Stages of Change: which stage team is in	
Adaptability to meet local needs	External Policies and Incentives offered	Implementation Climate: capacity for change and receptivity of those involved	Individual identification with organization and cause	Execution: according to plan
Trialability: ability to test on small scale		Tension/Need for change	Other Personal Attributes: personal traits	Reflecting and Evaluating: quantitative and qualitative feedback about progress
Complexity		Compatibility of intervention with community culture		
Design quality and packaging: how intervention is presented		Relative Priority		
Cost		Incentives and Rewards		
		Communication of Goals / Feedback		
		Learning Climate		
		Readiness for change		
		Leadership Engagement		
		Available resources		

**Table 1 - Considerations from Implementation Science**

issue in Canada's current response to childhood mental illness and health:

*The greatest omission in the work that I see is that it fails to stress the reality that most of the mental health disorders affecting Canadians today begin in childhood and adolescence. Failure to recognize this fact leads us to dealing with a stage-four cancer, often with major secondary effects, instead of a stage-one or stage-two disease. Like obesity, mental health issues, if not addressed early in life, threaten to bankrupt our health care system. (Standing Senate Committee on Social Affairs, Science and Technology, 2005)*

Converging evidence comes from Dr. Stan Kutcher, a noted scholar and champion of child and youth mental health awareness in Canada and Dr. Simon Davidson (2007), who noted that many persistent mental disorders tend to develop around the ages of 10-15. Smetanin et al. (2011) put this in context, projecting the cost of mental illness to the Canadian economy to be \$48.6 billion per year. In all, the economic burden mental health concerns place on our country is staggering and has been identified as the single largest drain on economic productivity in the Canadian workplace (Stephens & Joubert, 2001). However, despite the health-related, social, and economic demands for accessible, effective, and timely mental health care, our responses are still in need of development; for example, the mental health system in Ontario has been described as “a non-system of non-care” (Kutcher, 2011). This needs to change within our country as a whole.

Working from a strengths-based, health promotion and prevention perspective, and following the calls to action by research and practice fields (see for example, Bradley & Greene, 2013), the need to develop, deliver and rigorously evaluate health education and school-based supports and resources for our children and youth is clear. It is important to note here that mental health is not simply the lack of a mental disorder, but is a status of well-being where an individual is able to effectively cope with the stressors they experience in everyday life (WHO, 2001). A person is considered mentally healthy when they have the ability to handle change effectively, create and sustain important relationships with others, possess the ability to manage emotions and acknowledge thoughts, and communicate them effectively. Mental health is critical in being able to cope with stress, and in decreasing the chances of the development of mental illnesses and issues (Mental Health Commission of Canada, 2012). Being mentally healthy allows people to have a sense of worth, as well as an ability to understand internal and external processes (Bhugra, Till & Sartorius, 2013). An important factor to consider in this discussion about supporting mental well-being is the societal context in which we live; stigma, or the negative appraisal of a state of being, may pose a significant barrier to effective programming and education about mental health.

## What Role Does Stigma Play?

Many people who suffer from a mental illness have experienced discrimination and stigma (Kirby & Keon, 2006). According to Health Canada (2002), stigma develops from a lack of understanding and knowledge, as well as from fear of things that we think are different; this results in embarrassment and stereotyping, as well as avoidant and aggressive behaviours. Stigma and discrimination can change the way people present themselves and the confidence with which they interact with others. Sadly then, people with a mental illness may be less likely to seek treatment because of fear of negative judgement. In a study by Bowers, Manion, Papadopoulos, and Gauvreau (2012), researchers investigated differences in perceptions about stigma and its impact on mental health help-seeking with Canadian youth and school-based mental health service providers. Forty-nine high school youth ages 13–20 and 63 mental health service providers answered an online questionnaire. Results indicated 70% of students sampled identified stigma to be a major preventative factor for seeking mental health help, compared to 51% of the mental health providers. Importantly, 68% of the students indicated they were either “very concerned” or “concerned” about the substance abuse or mental health issues at their schools and 64% felt there were no available mental health resources there to help.

Another form of stigma which negatively impacts students suffering from mental illnesses is self-stigma (Hartman et al., 2013); it has been shown to have more substantial influence on a person’s opposition or willingness to obtaining professional help (Vogel,

Wade, & Haake, 2007). Self-stigma occurs when an individual suffering from a mental illness internalizes the prevalent negative stereotypes of mental illness. Hartman and colleagues (2013) conducted single-session interventions on anti-stigmatization of mental illness with high school students from Ontario; after the session, participant scores indicated more willingness to seek psychological aid and a reduction in self-stigmatization. When examining the impacts of gender differences on stigma and willingness to accept mental health support, Chandra and Minkovitz (2006) found that of the 247 grade 8 students interviewed, 59% said they would be too embarrassed by the opinions of others to access mental health services, 52% indicated they did not want to discuss mental health issues, and 35% reported moderate to high levels of mental health stigma. It was also found that boys were 2 times less likely than girls to accept mental health support. These findings are important because they highlight the need to find ways to reduce stigma, especially among males.

Research has been consistent in its findings about the effective ways to reduce stigma, namely through increasing contact with those who suffer from mental illness, through open discussions (Tognazzini, Davis, Kean, Osborne, & Wong, 2008), educating our students about mental illness (Hartman et al., 2013), and promoting mental health literacy in schools (Kutcher & Wei, 2012).

## Building Structure: A Continuum of School-Based Care

A common framework driving many school-based mental health initiatives and responses is building a continuum of care. In recognizing that mental health needs can span from promoting and maintaining wellness to the need for targeted interventions for people experiencing mental illness, services must be constructed to appropriately address the range of needs along this continuum (Fox et al., 2003). No one “stage” is seen as stand-alone, but rather, as an essential piece of a continuous whole. Based on the public health pyramid (see Appendix A), and including universal strategies (broad base of the triangle), selective strategies (middle section of the triangle), and targeted treatment strategies (narrow top of triangle), this continuum of care model has the potential to fill many needs (Vulin-Reynolds et al., 2008).

Universal strategies are applied to the entire population; for example, in the school context, this would include all students and staff, ranging from mental health psycho-education, wellness promotion, stigma reduction, awareness, and help-seeking. This level of intervention is sufficient for the majority of the population. Selective strategies are more specific, early interventions for those at high risk or vulnerable to developing mental health concerns, and are focused individual, family, or group interventions. Finally, targeted-treatment strategies are applied at the individual level and aimed at those actively experiencing acute mental health needs; these interventions are very person-specific, and tailored to their individual needs. When shaping school-based resources, it is important to remain cognizant of mental well-being on a continuum, and thus plan to support all students, rather than defaulting to the socially and economically expensive high level responses.

### ***What can schools do?***

Research has called for a push toward school-based mental health resources in that schools and teachers play a significant role in shaping healthy child and youth development (CYAC, 2010); often, there is a direct link between mental health problems and difficulty with academic engagement, school achievement, absenteeism, retention/dropout, and social relationships (Tolan & Dodge, 2005; Owens et al., 2012; Bradley

& Greene, 2013).

Unaddressed mental health issues in childhood put children and youth at risk for many long-term negative outcomes. Teachers and school staff play a significant role in the learning and development of children through their presence, supervision, and work with students during the majority of waking hours, and through relationship building that occurs on a daily basis (Herman et al, 2009). Educators' roles are changing as they take their place on the front lines of child and youth mental health; however, many educators report feeling inadequately prepared to cope with the demands of such support, but are keen to learn more (Gowers, Thomas, & Deely, 2004; Rothi, Leavey, & Best, 2008).

According to the Canadian Alliance of Mental Illness and Mental Health (2008), mental health literacy can be defined as the awareness and abilities people have which enable them to understand, apply, and access information for better mental health. There is an emphasis on doing more than simply making information on mental health available but rather supporting people in developing skills so that they can make informed choices in how best to promote mental health. The key to mental health literacy is that as individuals acquire information and are better able to think critically about it, social empowerment increases. This empowerment then leads to collective action targeting the contextual and social causal factors of mental health and illness. By enabling students and staff to become more "mental health literate" through education, it helps break the barrier between mental health professionals, their language, and the rest of the population who may struggle to understand this language.

Santor, Short and Ferguson (2009) created a document to help educational policy makers integrate more mental health awareness and programs into schools, and these researchers call on policy makers to include strategies that increase mental health literacy not only in students, but in teachers and staff as well. They emphasize the role schools play in helping children with mental illness detection as well as mental health promotion and awareness, emphasizing that this should be a priority. With Kirby and Keon's (2006) emphasis on early intervention and education for children regarding mental health, it is logical for there to be a push for greater mental health education and training in schools.

Researchers in the United States viewed schools as a uniquely positioned instrument which can serve as a conduit for improving access to mental health services but also in supporting mental well-being. Stephan, Weist, Kateraoka, Adelsheim and Mills (2007) conceptualized schools in serving this function through stigma reduction, suicide prevention, broadening/improving mental health programs, and helping to identify and treat co-occurring disorders. However, in a review of the literature on these topical suggestions, Kutcher and Wei (2012) found that most of the interventions and research in this area could not demonstrate empirical efficacy for these programs. The researchers stated much of the research is plagued with poor research designs; the heterogeneity of school environments creates difficulty for researchers to implement cross-location designs, and the relative youthfulness of the topic results in an empirical "learning curve". They also added that a more critical and focused lens must be worn by researchers in this field.

A quantitative study by Canadian researchers in Nova Scotia examined the mental health issues experienced by students, and their use of school-based mental health services. Just over 1600 students from three high schools were asked to complete questionnaires that included items about demographics, background variables, risky behaviours, and need for mental support.

Results indicated 49% of students were aware of the need for mental health support, while overall, 20% of females and 5% of males indicated they used the school-based mental health services at least one time during the school year. Depression, suicide ideation, and substance abuse were found to be the most prevalent issues. The researchers noted the large disconnect between students' perceived need for mental health support and the lack of support seeking, especially among males. They suggested that perhaps because the school-based mental health service was housed in the health centre at the participating schools, students may not have been aware of the mental health services offered; also the cultural view that the centres are more of a sexual health clinic, stigma, and concerns over confidentiality many have resulted in the low percentage of help seeking behaviour by students (Szumilas, Kutcher, LeBlanc & Langille, 2010). Other studies have demonstrated confidentiality concerns as a major factor for not seeking support (Juszczak, Melinkovich & Kaplan, 2003), especially among those with mental health issues (Lehrer, Pantell, Tebb & Shafer, 2007). A way to help students become more aware of services and reduce the stigma of mental health could be through the help of teachers.

In 2010, the Mental Health Commission of Canada created the *Evergreen Framework* in an attempt to promote mental health improvement among children and youth. In the document, directions for promotion were outlined by the authors and of the 30 directions listed, directions 12 and 13 call for action in education. Specifically, direction 12 called for action in creating and supporting secondary school well-being through trained personnel who can provide mental health interventions to students in need; while direction 13 called for mental health supports for grades 7 and 8. Although the document does not explicitly refer to teacher involvement, their role was implied; teachers must play an essential part in the mental health support of children and youth in order for school-based mental health to work.

#### ***What can teachers do?***

Teachers recognize the prevalence of mental health issues in students and the importance of schools in supporting these children. A study by Reinke, Stormont, Herman, Puri and Goel (2011) examined elementary school teachers' perceptions of student mental health and their roles in supporting student mental health. Of the 292 teachers who completed the study's questionnaires, 97% identified disruptive behaviours as a mental health concern in children, followed by inattention and hyperactivity at 96%. Family stressors such as divorce or death of a parent were next, endorsed at a rate of 91%, and peer-related social problems were identified by 87% of those responding. When asked if they felt schools should be part of addressing child mental health issues, 89% agreed or strongly agreed. Teacher responses indicated they felt their job, in relation to mental health, was more centred around employing behavioural interventions with students in the classroom, while they felt it was more the responsibility of school psychologists to screen for mental health issues, teach socio-emotional lessons, perform behavioural assessments, and make referrals to community and school-based services. Perhaps these perceptions could be explained by the fact that 36% of the teachers sampled felt they did not have the necessary skills to properly support their students' mental health needs, while 29% were neutral. Thus there is a strong disconnect between 89% of teachers indicating they believe they should play a role in attending to student mental health and yet only 34% reporting that they had the skills to do so.

Rothi, Leavey and Best (2008), using semi-structured interviews with 32 teachers, also found a disconnection between what teachers felt their roles should be in childhood mental health and their level of competency in the area. The sample generally acknowledged their responsibility in the mental health of their students but mentioned concern over the number of mental health issues that go unnoticed and are

inadequately addressed by schools. These teachers felt more training was necessary in order to properly address student concerns. Thus it is important that teachers are provided with opportunities to increase their knowledge on mental health, not only for their own benefit but for the benefit of their students and student well-being.

Mental health educational researchers Meldrum, Venn and Kutcher (2009) emphasized the critical position educators are in to help make a positive change in childhood mental health. They suggested teachers must advocate for policy reform and support those that integrate mental health into education, advocate for mental health to be part of the curriculum, establish a mental health program in their schools involving the community, and attend and ask for mental health professional development in order to better understand and recognize the issues children today are facing. Changes to the curriculum have occurred in some provinces to include mental health over the last number of years, but research is still limited on the implications of these changes.

## Evaluation of Mental Health Curricula in Schools

Research reports on mental health curricula in the current review were extremely limited.

Most research investigating any type of mental health education for students involved the evaluation of mental health education programming. Included here are a sampling of the school-based mental health programs that have been found in Canadian schools; some will be elaborated on to demonstrate what a sample of Canadian students are being exposed to for mental health education, and what the implications of these programs are. An examination of mental health curricula that have been created in Canada with the hopes of being integrated into the current curricula will follow. Finally, a review of the international community's offerings in mental health education is offered.

### ***Mental health programs in Canada***

There are many different mental health programs appearing across Canada. Popular among schools in both Canada and the US is the *Drug Abuse Resistance Education* program (D.A.R.E). This program is designed to help children learn about the risks associated with substance use, and strengthen their resilience to drug use. Research indicates that although it is run frequently in schools, the overwhelming evidence suggests it has limited to no effect on resistance to drug use (Vincus, Ringwalt, Harris, and Shambley, 2010; West & O'Neal, 2004).

There are a number of program evaluations for other youth mental health programs that have positive outcomes. Pitre, Stewart, Adams, Bedard and Landry (2007) implemented a program with grade 3 students from Near North District School Board, to reduce mental health stigma. The program involved presenting three puppet plays to students where the puppets exhibited a type of mental illness (i.e., depression/anxiety, dementia or schizophrenia). The plays were all written to "demythologize" mental health issues and their etiology, and to explain what society can do to help those with mental illnesses. Evaluations were conducted through the *Re-factored Opinion about Mental Illness Scale* (OMI) to determine the impact of these educational plays.

Results indicated those in the experimental groups had reduced post-intervention scores compared to pre-evaluation on factors pertaining to stigmatization (views mental illness as shameful), restrictiveness (views those with mental illnesses as a threat to society and thus these people should be restricted socially), and separatism (keep people with mental illnesses away from them), but not benevolence (have a kind orientation to the mentally ill), stereotyping (belief people with mental illness behave

the same), and pessimistic prediction (those with mental illnesses are not likely to improve). Thus, gains were made in helping inform students about mental health and reduce stigma toward it but improvement could still be made.

Another program run in Canada, called the *Reaching Out* program, was evaluated by Stuart (2006). Like Pitre et al. (2007), Stuart too, wanted to test the efficacy of a mental health awareness program to reduce stigma but with an older target population of high school students. The program was designed by the Schizophrenia Society of Canada to present students with real-life experiences involving mental illness, specifically schizophrenia, through video format. The program was given over two lessons where students first shared their basic knowledge of schizophrenia, then watched the 20 minute video and discussed what they saw. The video provided students with information about the symptoms and signs of schizophrenia and real-life experiences of five individuals dealing with schizophrenia. The program also included lesson plans to help guide discussions in the classroom after the video; the second lesson used role-playing to help students develop or practice empathy. After evaluating the difference in pre- and post-test survey responses adapted from the World Psychiatric Association's global anti-stigma program, results indicated that students were more knowledgeable and less socially distancing after the program. Other findings indicated that age and gender were mediating factors; older students reported more knowledge gained and female students demonstrated more gained knowledge and less desire for social distance from those suffering with schizophrenia.

Although evaluations of mental health education programs have occurred across Canada, there are mental health programs that do not include any type of program evaluation. For example, in 2009, Manitoba ran their Healthy Schools Mental Health Campaign where schools across Manitoba ran different programs to suit their specific needs. Parkside Junior High from the Border Land School Division implemented small group counselling sessions to help students learn and discuss issues surrounding anxiety, while École Belmont from the Seven Oaks School Division incorporated yoga into their school to be used as a tool to help teach students the importance of stress reduction and the usefulness of proper breathing (Manitoba Health, 2009).

Another example is Iris the Dragon, an organization which designed activities for teachers to implement during mental health awareness week (typically in May). For each grade, the document outlines specific activities that match that grade's curriculum. For example, the grade 3 curriculum expectation in Ontario is that children identify characteristics they admire in characters from books or texts they read. Iris the Dragon suggests conducting an activity with one of the books they created with its character "Iris the Dragon"; in this activity, students make a Web Diagram about what makes Iris a good helper for those suffering from mental illness or those experiencing mental health challenges (Iris the Dragon, 2011).

The Centre for Addiction and Mental Health (CAMH) has designed a 173-page document outlining a mental health program available to teachers for classroom implementation. (CAMH, 2001). The purpose of the program is to help students become more aware of personal mental health issues in themselves, and people around them, and help reduce stigma's negative impact. The document provides teachers with definitions of what stigma is, why it is an issue in mental health, how this program could help and what it offers. It also gives detailed descriptions of how to use the program with students, through activities such as multiple choice tests, overheads, and role-plays; has the teacher give a presentation on mental health; provides supplementary resources for student use such as help line numbers, useful websites, and other useful audiovisual resources; and it includes an evaluation guide so educators can determine the efficacy of the program with their students. Because of its organization and evaluation potential,

this appears to be an excellent resource teachers can use in their classrooms to promote awareness and reduce the stigma of mental illness.

The mental health programs outlined above appear to be efficacious in teaching children about mental illnesses and reducing the stigma surrounding mental illness. Pinfold, Stuart, Thornicoff and Arboleda-Florez (2005) conducted a number of short educational workshops with high school students to increase mental health knowledge in both Canada and the United Kingdom. The researchers found support for an increase in mental health literacy and decreased social distancing from those suffering from a mental illness but these researchers questioned the long-term impact of these types of programs. In their UK sample, they noticed a weakening effect of attitude change and mental health knowledge after six months. The researchers also noted the lack of any longitudinal study (over years) to determine how attitude changes are addressed in schools and maintained throughout the life span. Perhaps the maintenance of these newly changed attitudes toward mental health could both be taught and addressed through the development of a mental health curriculum across Canada. Researchers Schachter et al. (2008) made a case for the development, implementation, and evaluation of such a curriculum in their systematic review of school-based mental health interventions.

They identified 40 studies which met their criteria for school-based mental health interventions for those under the age of 18. Although there were a number of limitations which plagued the studies (such as poor research methods and lack of randomized controlled designs, among others) the researchers felt there was enough suggestive evidence for these programs to propose the design of a curriculum for mental health. Their research team made a number of recommendations to policy makers and educational reformers to ensure that methods involved in the curriculum are well validated and developmentally appropriate. They also suggested investigations into what potential harm could be caused when discussing mental health topics and that counter measures should be implemented to prevent or mediate the potential harm. They suggested the curriculum should be piloted, where randomized controlled designs are used to evaluate curriculum outcomes, and that issues students learn about should be ones that are most relevant to their age group (i.e., anxiety, depression). Dr. Stan Kutcher from Dalhousie University in Nova Scotia is a Canadian researcher who is a significant advocate for child and youth mental health, and who helped design, implement, and evaluate a Canadian mental health curriculum.

### ***Mental health curricula in Canada***

Before discussing Dr. Kutcher's and CMHA's mental health curriculum, it is important to stress that curriculum is not the "be-all, end-all solution" to mental health issues and stigma surrounding mental illness. Kutcher, Venn, and Szumilas (2009) discussed how the education system can address mental health, and of course the curriculum is a large part of this plan. Aligning with the Comprehensive Framework for Implementation Science (CFIR) advanced by Laura Damschroder and colleagues (2009), another important part of this plan is teacher and staff education surrounding mental health with the purpose of not only enabling educators to confidently teach their students the subject but also providing them with the knowledge to identify those students who are at risk of, or currently experiencing, a mental health related issue. Teacher-related mental health education is discussed in greater detail in our literature review of pre-service teachers. In regard to curricula, like Schachter et al. (2008), Kutcher and colleagues (2009) emphasized the importance of a cognitive and socio-emotional developmentally appropriate curriculum in order for children to grasp the concepts and understand mental health and illness. The socio-emotional and cognitive development of children is reviewed later in this document.



## Sun Life Chair Team and CMHA's Mental Health and High School Curriculum

Developed through collaboration between CMHA and the Sun Life Chair Team (CMHA, n.d.), headed by Dr. Kutcher, the mental health curriculum was developed to be a complete package to be implemented across Canada. The curriculum includes not only a mental health curriculum for high school students but also other important information on mental health and illness, protocols for teacher and staff training to help identify at-risk children, and tools for working to establish a seamless referral process between schools and health service providers.

Curriculum objectives include 1) Provide Canadian high school educators and staff with reliable and simple information which enables the promotion of basic mental health and illness understanding in the classroom; 2) Introduce students to normal brain functioning in relation to mental health and illness; 3) Enable students to understand the factors that can facilitate mental illness and the biological components of mental illness; 4) Provide students with enough information to be able to identify when they themselves, family or friends are dealing with mental health issues or illnesses; 5) Reduce stigma through clear information; 6) Stress the importance of seeking help; 7) Emphasize the importance of positive mental health and coping with stress; 8) Educate students about treatment options and factors which can help individuals recover from mental illness.

Along with the curriculum objectives, the document provides a strong rationale for inclusion of this curriculum, in that it is intended to be implemented in the Health and Physical Education courses but could also fit into areas such as Psychology, Child Studies, Personal Development, and Sociology. The document provides lesson topics from the basics of "what is mental health and illness" to more specific details on disorders such as anxiety and depression. Activities are included to make the mental health and illness topics engaging for students and the curriculum can be purchased from [teenmentalhealth.org](http://teenmentalhealth.org) for a small fee which is charged to fund further development of the curriculum (Teen Mental Health, 2013).

The curriculum was piloted at Forest Heights Community School in South Shore Region in Nova Scotia. Researchers Wei and Kutcher completed a number of evaluations (which are unpublished in peer reviewed journals but are available on the website) on the curriculum (i.e., teacher training, mental health services training etc.) but for the purposes of this review only the student curriculum outcomes were examined. Grade 10 students were used as participants for the curriculum intervention and were tested on their mental health attitudes and knowledge before the curriculum education, immediately after it was taught, and three months later.

Quantitative results indicated a significant increase in knowledge between pre-curriculum and immediate post-curriculum scores, but dropped at the three month follow-up to a non-significant level; this meant students, overall, did not possess significantly more knowledge between their initial pre-test and their three-month follow-up test. Change researcher Fullan (2005) emphasized the importance of cultural/ environmental considerations when trying to implement change. These results could thus be explained by the fact although "change" had occurred initially in students, after further exposure to their "unchanged" environment, students regressed to their old opinions.

Qualitative group interviews were also conducted and students indicated that they felt the curriculum was "new, informative and important" (p. 11). The information

provided helped students “debunk” myths about mental illness, and understand how mental illness affects emotions and senses. Students emphasized the need for more mental health competent teachers and staff they can turn to when needed, and more information on 1) the differences between clinical depression and stress; 2) signs of disorder symptoms so they would be able to identify someone with a mental disorder; 3) more information about the genetic links of disorders; 4) more information on posttraumatic stress disorder and obsessive compulsive disorder; and 5) information on alternative treatments (i.e., non-medical or psychological).

The information provided above is crucial to policy makers, educators, parents, and students alike because it helps guide what worked in the curriculum and what could be improved upon to strengthen student mental health education.

Dr. Kutcher has also recently collaborated with Ontario Shores Centre for Mental Health Sciences (OSCMH) to implement the Sun Life Chair Team and CMHA's curriculum to improve mental health literacy for Ontario students. Chosen to test the curriculum with their student population were one school from each of Thames Valley District School Board (London), Toronto Catholic District School Board, Toronto District School Board, and Waterloo Region District School Board as well as St. Clement's School and Upper Canada College. (Bovie, March 14, 2012). During a presentation in Calgary, OSCMH administrative director Cynthia Weaver (2012) outlined what the curriculum would look like in the selected Ontario schools and indicated the initial pre- and post-evaluations will be available during the winter of 2013.

### **Ontario Physical and Health Education Association (OPHEA) and Centre for Addiction and Mental Health (CAMH) Supplementary Curriculum**

OPHEA and CAMH helped design lesson plans for teachers to educate students about mental health. These lesson plans were designed to be used as “supplementary” to the Healthy Active Living Education course profiles in both public and Catholic school boards in Ontario. The supplementary curriculum is intended to be used with grade 11 and 12 students. The grade 11 supplementary material focuses on teaching students what positive mental health is and how to cope effectively with stress. Worksheets for students and suggested activities are included in the document as well as grading criteria expectations. The document elaborates on what stress is, what “good” and “bad” stress is, and what can be done to mitigate its negative effects (CAMH, 2009b). The overall goal for students is to learn and demonstrate effective stress management techniques, as well as discuss the impact of mental health on overall well-being, possess the ability to analyze factors that influence mental health, and to be able to identify and discuss suicidal behaviours and ways these can be prevented among others (CAMH, 2009a).

The grade 12 information is provided on CAMH's website and focuses the application of positive mental health strategies in a person's life. The overall goal of the supplementary lessons is to provide students with enough information to demonstrate the use of effective strategies to improve their own and others' mental health. Other expectations include 1) an understanding of mental health issues such as anxiety, depression, etc.; 2) application of positive techniques to manage stress and stressful situations; 3) description of the importance of communication and relationships to mental health; and 4) the ability to identify sources of mental health help in the community (CAMH, 2009a). The website provides educators topics to discuss, activities, and worksheets (CAMH, 2009c). Unfortunately, these lessons and programs have not been empirically validated in any research to date, but the website does provide educators with a

useful resource to use if they feel their current curriculum is lacking in mental health information.

With the apparent limited amount of readily available mental health curricula in Canada, let alone an empirical evaluation of such curricula, an international perspective on programs to address mental health through education was undertaken.

## **International Mental Health Education**

When searching for curricula outside of Canada, the same issues were detected, namely a lack of available curricula and a lack of research investigating the efficacy of these curricula. Of the curricula that were found, Australia appeared to have the greatest investment in mental health education for students, while others were found in the US.

### ***Australia's Health and Physical Education curriculum***

According to the Australian Curriculum Assessment and Reporting Authority (ACARA; 2012), Australia is in the midst of developing a new Health and Physical Education curriculum with mental health taking a prominent role. The curriculum has been in development since early 2011 and is to be published toward the end of 2013. Mental health is integrated into the curriculum beginning in year 3 (grade 3 in Canada) and continuing to year 12. Mental health development includes fostering positive self-talk, learning about community mental health agencies, where to turn to for reliable information, learning to identify mental health issues, and reflecting on and discussing the influence stigma and stereotyping have on mental illness and mental health. Since the curriculum is in development, no evaluations were found; however, one supplementary mental health initiative prevalent in Australia schools is MindMatters.

### **MindMatters**

MindMatters is an innovative initiative developed for high schools across Australia. Similar to the Canadian curriculum created by the Sun Life Chair Team and CMHA (outlined above), this initiative not only incorporates an educational approach to improve the mental health of students and reduce mental health stigma but it also works to change the student environment by engaging teachers, staff, parents, and community members alike to be involved in the process (MindMatters, 2012). The curriculum materials used were designed to be actively engaging, so youth would be more likely to learn the concepts. Elements such as activities, interactive and practical learning strategies, and group discussions are important elements in MindMatters to promote student learning. Resource materials provided to schools are focused in four areas: grief and loss, understanding mental illness, resiliency promotion, and how to deal with bullying and harassment. Suicide prevention guidelines are also available (Wyn, Cahill, Holdworth, Rowling, & Carson, 2000).

According to the MindMatters website, the program is funded by the Australian Government Department of Health and Ageing, and has been in existence since 1999 (Hazell, 2005). Overall, 83% of all secondary schools in Australia have sent staff to attend MindMatters professional development sessions, and 65% of schools surveyed still use MindMatters as a curriculum resource (MindMatters, n.d.). The purpose of MindMatters is to help schools, and their surrounding communities, take action in 1) developing climates for well-being and mental health; 2) being pro-active in improving and promoting the well-being and mental health of students; and 3) supporting early intervention and prevention initiatives for youth. What is interesting about MindMatters is that it actively calls for the re-surveying and re-collecting of data in order to make appropriate changes and ensure students, and the community, are benefiting from the

program (MindMatters, 2012).

Although there are many different aspects within MindMatters, the impact it has on students is most relevant to this review. According to Askeff-Williams, Lawson, Murry-Harvey, and Slee (2006), MindMatters helped improve immediate attitudes toward mental illness, behavioural intentions (i.e., willingness to be friends or associate with a mentally ill individual) as well as significantly increased knowledge on pre/post evaluations after students were taught the “Understanding Mental Illness” model, provided as a curriculum resource.

A large-scale evaluation by Hazell (2005) from the Hunter Institute of Mental Health evaluated a number of different factors based on questionnaires collected from students from 10 of the 15 participating schools in the MindMatters review. Data was collected at baseline levels and three years later while using grade cohorts as comparison groups (i.e., comparing grade 10 students from 2002 with students from 2005). Students answered questions related to resilience, help-seeking intentions, and attitudes and knowledge about mental illness (though not all schools allowed this data to be collected, thus major limitations existed in the data and were not evaluated as a result). In terms of resilience, a pattern of increased autonomy was found, as was a willingness to seek help for various issues; however self-esteem did not increase. In terms of willingness to seek help from adults at school about issues in their lives, results indicated no change in students and a general unwillingness to turn to them.

As such, there are improvements that could be made in mental health programming related to barriers that negatively affect mental health education; this can be seen in a lack of teacher competency and comfort with responding to mental health issues arising in schools, a lack of mental health resources, and the stigma associated with mental health as pointed out by Zubrick et al. (1997). Rowling (2007) suggests that a major obstacle (e.g., mental health not being acknowledged by schools) has been addressed, and perhaps, even overcome (Rowling, 2007). This acknowledgement of the need for an overall mental health strategy by the education system has allowed the current generation of children and youth more access to resources and knowledge around mental health issues, as well as an atmosphere of acceptance. Not only does this program seem to be well received in Australia, but research conducted by Evans, Mullet, Weist and Franz (2005) examined the feasibility of the program as it was extended to American schools. The researchers determined that their sample of 42 school representatives from urban, rural, suburban and small town environments believed a program like MindMatters would be effective in helping students feel more safe and that the MindMatters focal areas (i.e., grief and loss, understanding mental illness, resilience promotion, and how to deal with bullying and harassment) were relevant to US students. With the similarities between the US and Canada, important information from MindMatters could be used to help develop mental health curricula in Canada (as was done with the Sun Life Chair Team and CMHA's Mental Health and High School Curriculum).

More recently, Australia has developed a program that mirrors MindMatters but for those in year 8 and younger called KidsMatter.

#### KidsMatter

Like MindMatters, KidsMatter is a whole-school approach to mental health that provides resources for promotion, prevention, and intervention approaches. It is designed to create a positive school environment, provide education and support for parents, promote social and emotional learning among students, and provide opportunities for early intervention of students experiencing mental illness or health issues. The pilot program was implemented in 100 schools throughout Australia in

2007-2008. Evaluation of KidsMatter was conducted by having parents and teachers of students rate the social and emotional competencies of their children/students, and how it affected children's/students' mental health. Parents evaluated their children three times over the school year while teachers were asked to evaluate their students four times over the year. In relation to competencies, results indicated both parents and teachers saw significant improvements in social and emotional competence in their children/students. In relation to mental health issues, of those students who had pre-existing mental issues, students were rated by both their parents and teachers to have had a reduction in their issues. Moreover, when compared with "normal" students, KidsMatter had a greater impact on those who were currently experiencing or were at risk of a mental health issue (Slee et al., 2009).

In another evaluation study by Dix, Slee, Lawson and Keeves (2012) standardized academic performance across two years was measured. Using hierarchical linear modelling, those schools that used a large portion of the KidsMatter materials and resources in their schools were associated with higher academic performance when compared to those schools who implemented only a small amount of the KidsMatter materials and resources. This was interpreted by the evaluators as evidence that suggests that not only is KidsMatter associated with a perceived increase in social and emotional competency, as well as a reduction in mental health issues, but with an increase in academic performance among those students who were heavily engaged with the program as well.

### ***US and two different mental health curricula***

Although not nearly as extensively implemented as MindMatters or KidsMatter, research on curricula in the US similarly demonstrates the positive impact it can have on students.

#### Relaxation-response curriculum

Foret et al. (2012) designed and implemented a curriculum in a US secondary school with the hopes of examining the feasibility and potential effectiveness of a curriculum aimed at reducing student stress. Students in grade 11 were involved in the intervention while students in grade 10 served as the control group. The program was taught over four weeks during eight 45 minute sessions where trainers from Benson-Henry Institute for Mind Body Medicine taught students stress reduction techniques, the use of positive psychology, and cognitive restructuring skills (i.e., reframing unhealthy thoughts that lead to stress into more positive ones). Students were also asked to perform guided meditation at home through audiotracks for 5-10 minutes a day. Pre- and post- intervention measures were given to students and results indicated such a program could be feasibly implemented (though modifications and adjustments should be made), and students had improved levels of stated anxiety, health-promoting behaviours and perceived stress. Another curriculum developed in the US, and examined by two doctoral students, focused on middle school students.

#### I'm Not the Only One

A middle school mental health curriculum. I'm Not the Only One was a curriculum created by Farrell and Ryan (1997) for grades 6 to 8. The curriculum encompassed the causes, treatments and information of eight common mental health issues including attention deficit hyperactivity disorder (ADHD), depression, body image and eating disorders, posttraumatic stress disorder, gender issues, suicide, and sexual harassment. The doctoral dissertation authors each chose to focus on a particular aspect of the curriculum in that Farrell (1998) examined student attitudes and self-reported behaviours toward sexual harassment, while Ryan (1998) focused on the cognitive effects of the curriculum pertaining to the topics of ADHD, suicide, body image, and sexual harassment. Both studies used pre/post designs to measure student

outcomes; however, Farrell's (1998) study was qualitative, while Ryan's (1998) was quantitative.

Results from Farrell's (1998) study indicated that, after the curriculum, students were more assertive in responding to instances of sexual harassment and more empathetic toward sexual harassment victims; a disconnect was noted between student and adult perceptions of what constitutes sexual harassment. Ryan (1998), on the other hand, discovered a significant difference between student pre- and post- understanding and knowledge between students who received the mental health curriculum compared to those who served in the control group and thus received the regular health education administered in their school. Those in the treatment group learned and understood significantly more than those in the control.

What can be taken away from both Farrell's and Ryan studies is that a curriculum can be a productive avenue to educate students about mental health issues. Moreover, with the dissertations' completion dates being in the late 90s, it is clear mental health education is not a recent concern. In order to help future generations, we need to provide them with the tools to be mentally healthy, to be aware of mental health and illness' impact, and to identify where/who they can turn to in trying times. As discussed above, schools can be a great avenue to help provide students with these tools and enable them to maintain their mental health.

Although curriculum research is limited, there are a number of programs and initiatives (Hazell, 2005; Pitre et al., 2007; Slee et al, 2009 Stuart, 2006), as well as curricula (Farrell, 1998; Ryan, 1998; Wei & Kutcher, n.d.) and supplementary curricula (CAMH, 2009b; Iris the Dragon, 2011; Manitoba Health, 2009), in Canada and around that world that have a demonstrated, positive impact on student mental health and student mental health education. In the balance of this review, factors that need to be considered when designing a curriculum for students will be identified.

## Going Forward: Developmental Considerations for Curricula

Consider an exemplary health curriculum designed for a grade 10 class. This curriculum is founded in the latest evidence-based concepts that have been demonstrated to produce very positive outcomes, and teachers, as well as students, like it. It is very engaging, incorporates the latest technology, and is relatively light on resource demands. With all of these positive aspects, this curriculum sounds like a great fit. However, now consider how effective this program would be if delivered to students in grade 4. The point here is that it does not matter how well designed a curriculum is, or how well educators deliver the curriculum, if these factors do not align with the developmental level students are at, it will not be effective.

As such, there are some important developmental considerations that need to be taken into account before structuring curriculum, as well as identifying strategies for delivering that material in the classroom. Being aware of children's cognitive capacity at a given age is so important for teaching concepts to them in a way that they will be able to understand. Also, social contexts are an important factor to be cognizant of as well, as they too greatly impact children's ability to remain present and focused in the classroom. There is great opportunity to match cognitive and social developmental concepts together in the classroom, as these two domains are developing. As such, considerations around where children are in terms of psych- social and cognitive stages, and how this translates into age-appropriate teaching strategies, are essential

for the construction and effective delivery of curriculum. Furthermore, the consultation and inclusion of student “co-researchers” in curriculum design can be even more helpful in developing informed, relevant, and effective material.

### ***Stages of psychosocial development***

#### **Erikson's Theory**

Erik Erikson conceptualized eight stages of psycho-social development spanning from infancy to old-age (Siegler, DeLoache, & Eisenberg, 2006. See Table 1.). Each stage is depicted by age-related developmental issues individuals must resolve. Here, we give an overview of only three stages relevant to childhood and adolescence.

1. Initiative versus Guilt: Ages 4–6. In this stage, children begin to identify with and learn from their caregivers. Here, they are constantly setting goals, and working towards achieving them (e.g., learning to count, iterate the alphabet, and spell). Crucial to this stage is the development of a conscience; here, the child begins to internalize rules and standards, and experiences a sense of wrong or guilt when declining to abide by these standards. The challenge here is achieving a balance between motivation/initiative and guilt/punishment. If caregivers present as encouraging rather than highly authoritative, children can begin developing high standards as well as working up the initiative to achieve those standards without experiencing debilitating anxiety around self-efficacy.
2. Industry versus Inferiority: Age 6–Puberty. In this stage, children are learning to master cognitive and social skills relevant to their cultural and social contexts. They are largely learning interpersonal skills that will equip them to work cooperatively with peers.
3. Identity versus Role Confusion: Adolescence–Early Adulthood. Great emphasis is placed on this stage as major identity development is underway. Here, adolescents encounter many new influences: physically, with puberty and the onset of sexual feelings; social pressures from peer, familial, and cultural groups; as well as post-secondary and occupational pressures ahead of them. Here, adolescents are trying to answer the question of “who am I”; who they were in their past as a child, and who they would like to be as an adult, all within the context of peer, familial, and sociocultural pressures.

### ***Cognitive development and children***

When designing any type of curriculum for student learning, it is essential that there be an understanding of the cognitive development process of children and youth before the curriculum's design. With this understanding embedded in the curriculum, educators will be more informed as to what to expect from students' work and what concepts can typically be learned by students of specific age ranges. One of the most well-known theories of childhood development was devised by Jean Piaget, whose assumptions and beliefs about cognitive development arose out of his observations and research on children (Ormrod, 2011).

Ormrod (2011) outlined a number of Piaget's beliefs in regard to cognitive development:

- Children build knowledge, as opposed to simply absorbing information presented to them. Children make sense of things by organizing them into what are called schemes or groups of related thoughts or actions created after a number of encounters with the environment. These are the pillars of cognitive processing (Eggen and Kauchak, 2013). For example, a child may learn that when they drop something (a toy, book, food) it always falls down, therefore

Developmental Stage	Psycho-Social Development	Implications For Curriculum/ Teaching
Kindergarten to Early Primary	<p><b>Initiative vs. Guilt</b></p> <p>Identifying with care givers</p> <p>Learning to set and achieve goals</p> <p>Development of a conscience: internalizing rules</p>	<p>Finding a balance between boundaries/ authority and encouragement of students</p>
Junior to Early Senior	<p><b>Industry vs. Inferiority</b></p> <p>Mastering social and cognitive skills</p> <p>Learning to work cooperatively</p>	<p>Giving students the chance to not only learn about, but practice skills; group work is a good way to do this while building interpersonal social skills</p>
Senior to Early Adulthood	<p><b>Identity vs. Role Confusion</b></p> <p>Major identity development</p> <p>Gaining more independence</p> <p>Acute awareness of many changes and transitions happening</p>	<p>Remaining cognizant of the many pressures and influences on adolescents, health and wellness must be emphasized in a holistic view</p> <p>Stress management and coping skills are also paramount here; it can be helpful to model these to students, and build them into classwork</p> <p>Finding balance between authority/boundaries and encourage independence skills for next chapter of life: giving students a degree of autonomy in choosing books or project</p>

**Table 1** - Summary of Developmental Stages and Implications for Curriculum/Teaching

they begin to create the scheme that all objects fall down rather than sideways or up. As children mature, the organization of their schemes becomes more complex (e.g., rather than all dogs are dogs, classification is broken down into breed of dog).

- Children are proactively motivated learners. To Piaget, children are naturally curious about the world; this enables them to seek out information and allows them to understand how to live and adapt to their environment.
- Learning occurs through the combination of accommodation and assimilation. Accommodation is when a child encounters a situation where a previous scheme does not apply and they must accommodate for the discrepancy by either adjusting their current scheme to include the new event or object, or create a new scheme altogether. For example, a child learns that an animal that looks like a dog is not (e.g., wolf) but both can be classified under a scheme called Canine. Assimilation on the other hand, is handling a new object or event that is congruent with an existing schema; for example, a child



seeing the neighbour's Labrador for the first time and labelling it as a dog.

- A state of equilibrium supports the development of more complex thought. Equilibrium means children like using their existing schemes to explain new objects or events but as they get older they encounter scenarios where their current schemes do not fit. This state of unbalance then creates a mental discomfort which leads them to create, replace, accommodate, or assimilate the new information to an already existing or newly created scheme; this restores them to equilibrium and increases their knowledge. For example, perhaps a child has only encountered a dog before and not a cat. The child may initially label the cat a dog because of its fur and four legs. But once corrected, the child may create a new scheme for cat and notice the differing features between cat and dog (i.e., cats are typically smaller, purr instead of bark etc.).
- A child's relationships with their physical and social environments are key factors in cognitive development. By interacting, playing, and manipulating physical objects in their world (toys, dirt, water) children learn scientific principles such as gravity, force, and so on; social interactions lead to the conclusion that people are different and have different viewpoints and that their own viewpoint is not necessarily the best or most logical.
- As children mature cognitively, they begin to think qualitatively differently. Major neurological changes in the brain occur around the ages of 2; 6 or 7; and again around puberty. With these changes, new abilities develop. Piaget theorized there were four stages of cognitive development; only two are outlined in this review (Table 2) due to the focal age/grade range desired by PHE Canada (i.e., ages 9-19/grades 4-12).

Policy makers and educators alike should strongly consider the mental development and capacities of students in these age ranges when designing mental health curricula, in order to increase understanding. A way to ensure developmentally appropriate concepts and practices are used with children is through metacognitive learning strategies.

## **Metacognition and Developmentally Appropriate Teaching Strategies**

Metacognition is essentially “thinking about thinking” or an awareness and mastery of our cognitive processes (Eggen & Kauchak, 2013). Ormand (2011) views metacognition in three ways: 1) a person's understanding and ideas about the processes of human cognition; 2) thinking about their own cognitive process; and 3) purposefully engaging in thought or behaviours that increase memory and learning. From research evidence, it is understood that the more children and youth know about their learning and thinking, the more they will achieve and learn (Schneider & Lockl, 2002). According to Sawyer (2006), important in the metacognition process are the three skills of planning, monitoring, and evaluating. Planning entails selecting and using learning strategies, time management, how to go about starting something, deciding what to give attention to, and so forth. Monitoring is in the moment, while completing the learning task, checking how the task is going and asking questions such as, “Does this make sense? Am I ready to write the test now?” Evaluating is the process of judging the outcomes and processes of learning and thinking: “Did the learning strategies I use work? Do I need help with studying?” The building of these skills should be incorporated into curricula to help students succeed and to foster critical thinking skills. A way this could be accomplished is by understanding the mental ability of “typical” children around

Stage	Approximate Age	Description
Concrete Operational	7 to 11 years	<p>Ability to perform mental operations which involve problem solving.</p> <p>Can only problem solve with concrete objects (Rutherford, 2011).</p> <p>“Hands on” type of thinking.</p> <p>Concepts of reversal, classification of objects, orderly arrangement of objects understood.</p> <p>Identity of objects is also mastered where children understand if nothing is removed or added to the object, it is the same (Woolfolk, Winne, &amp; Perry, 2012).</p> <p>Understands the difference between their own and another person’s perspective.</p> <p>Have difficulty understanding abstract ideas and problems dealing with proportions (Ormrod, 2011).</p>
Formal Operational	11 or 12 years and older	<p>Ability to perform mental operations involving hypothetical or abstract concepts (Rutherford, 2011).</p> <p>Concerned about social issues and identity.</p> <p>Uses both inductive (using observations to identify general principles) and deductive reasoning (identify all possible outcomes and eliminate options till the most viable is reached).</p> <p>Adolescent egocentrism is present (Woolfolk et al., 2012). Individuals can learn new things but no new structures develop (Rutherford, 2011).</p> <p>Many children around this age may still be in the concrete operational stage of development (Flavell, Miller, &amp; Miller, 2002).</p>

**Table 2 - Piaget Cognitive Development**

specific ages and incorporating teaching strategies to complement the age of their student population. Age/grade characteristics of students and teaching strategies to match the age/grade of the students are provided in Table 3.

## Critiques

A critique of the developmental frameworks outlined above points to the lack of contextual consideration of greater socio-cultural effects on development. As the world becomes a smaller and more diverse place, it is becoming increasingly apparent that attitudes are changing around past concepts of identity, gender, ethnicity, sexual orientation, etc. What was once more “fitting” to the frameworks above, based on cultural norms, is now changing, as society changes, not only demographically speaking but in knowledge, awareness, attitudes, and beliefs regarding social diversity.

Stage	Student Characteristics of the Grade Range	Potential Strategies
8-12/3-5	<p>Beginning to understand learning is both a constructive and active process.</p> <p>Believe there is an absolute truth.</p> <p>Developing an understanding of their own thought processes (Ormrod, 2011).</p>	<p>While presenting a lesson present a card reading "If you're paying attention, raise your hand." Then encourage students who raise their hand to share their strategies for paying attention (Eggen &amp; Kauchak, 2013).</p> <p>Supply simple ways for students to monitor their learning (e.g., self-test).</p> <p>Use hands-on activities and have students predict what will occur and debate differing opinions of what occurred (Ormrod, 2011).</p>
12-14/6-8	<p>Limited understand and use of study strategies.</p> <p>Believes knowledge is knowing discrete facts.</p> <p>Developing understanding that knowledge is subjective and people can have different viewpoints (Ormrod, 2011).</p>	<p>Have students brainstorm ways to remember three important points from a textbook (Eggen &amp; Kauchak, 2013).</p> <p>Model and teach effective learning strategies in various subjects.</p> <p>Help students with studying by providing them with a basic structure to work from (e.g., question sheet to answer as they study).</p> <p>Ask questions which suggest or lead to multiple perspectives.</p> <p>Directly ask students for their opinions (Ormrod, 2011).</p>
14-19/9-12	<p>Increased understanding of effective learning strategies but rehearsal still used by some.</p> <p>More cognizant of the fact knowledge is an interrelationship among ideas.</p> <p>Developing an understanding knowledge and mastering topical knowledge takes time and practice.</p> <p>Minority are developing an understanding that opposing viewpoints should be evaluated based on logic and evidence (Ormrod, 2011).</p>	<p>Teacher should use themselves as a model for metacognitive practices (e.g., "When I read or hear new information, I ask myself how does this relate to the subject matter?"; Eggen &amp; Kauchak, 2013).</p> <p>Have students describe their learning strategies to one another, and model and teach good strategies.</p> <p>Design student projects which involve application, understanding, and integration rather than recall of facts.</p> <p>Demonstrate the continuing evolution of subjects through theories and discoveries.</p> <p>Ask students to objectively evaluate a topic (e.g., using pros and cons table; Ormrod, 2011).</p>

**Table 3 - Metacognition and teaching strategies**

As the field of psychology struggled to perceive the effects of history, culture, and context on development, Lev Vygotsky's work around sociocultural learning is relevant (Lee

& Smagorinski, 2000). Not only did his work explore these individual influences on development but it also examined greater contextual impacts, as quoted below (Vygotsky, 1978):

*"Every function in the child's cultural development appears twice: first, on the social level, and later, on the individual level; first, between people (interpsychological) and then inside the child (intrapsychological). This applies equally to voluntary attention, to logical memory, and to the formation of concepts. All the higher functions originate as actual relationships between individuals." (p.57)*

As such, important implications from this work arise for the development of not only psychologically and cognitively appropriate curriculum but also content that is informed by aspects of sociocultural development and consideration of the effects of the greater social context. In their document entitled *Embracing Cultural Competence in the Mental Health and Addictions System*, The Ontario Federation of Community Mental Health and Addictions Programs (2009) speaks to the above implications around sociocultural development and what this means for mental health services. In this document they draw attention to the fact that Ontario's demographic landscape has undergone and continues to undergo significant changes in becoming increasingly diverse. In acknowledging the impacts of sociocultural forces, and in striving to become more culturally aware and competent in service structure, many positive outcomes can result, including: increased service use and access for underserved groups; reduction in health disparities; improvement in service quality; and increased overall satisfaction with service care. Specifically, this group has noted key principles of cultural competence to be aware of not only around service development, but also around delivery. Many parallels can be extended here from service development and delivery to curriculum development and delivery.

*"Key principles of cultural competence, such as inclusiveness, holistic health, anti-oppression, and valuing diversity can inform the development of a conceptual base for programs and service delivery. These principles give rise to recommendations for increasing cultural competence at the front-line, organization and governance, and system levels." (p. 4)*

## Stakeholder Considerations and Perspectives

Another important factor to consider regarding the evolution of Canada's mental health curriculum are the perspectives of the various stakeholders involved and impacted by it. As mentioned earlier in this paper, the emerging field of Implementation Science has recognized the gap between theory and practice, and aims to assist in effective planning and capacity building, to transition into smoother implementation. For example, "characteristics of individuals involved" is one of the points highlighted as important to consider when preparing to implement something such as a new curriculum.. Damschroder et al. (2009) argue that factors such as individuals' knowledge and beliefs about the proposed changes, the stage of change individuals are in, as well as other personal attributes (i.e., culture, intellectual abilities, motivations, values, learning style, etc.) are important aspects to consider in planning for implementation.

### ***The Ontario experience with health curriculum reform***

The Ontario Physical and Health Educators Association (OPHEA) is a non-for-profit organization that works to advocate for and develop “ground breaking” resources, programs and services that promote healthy schools. OPHEA works in partnership with school boards, public health departments, government, non-government organizations, and private sector organizations to accomplish this. According to the OPHEA, Ontario’s revised Human Development and Sexual Health curriculum was retracted: “after misinformation was used to attack [it]” (OPHEA, n.d.). This led to the Ministry also backing away from releasing the revised secondary curriculum. OPHEA sees this as a problem, in that today’s students have been left with a 14-year-old curriculum that fails to address modern best practice and concerns such as holistic concepts of health, cyber bullying, and particularly, child and youth mental health.

In their document entitled, *It’s time to take Action for Ontario’s Kids*, OPHEA highlights some important stakeholder perspectives and implications regarding this issue (OPHEA, n.d.). These groups included students, parents, school leadership, and teachers. The following sections include excerpts from their report regarding the aforementioned stakeholders.

### Students

“As it stands, while the 1998 curriculum contains valuable information, youth are being left to fill in some important gaps. For example, students report that their sexual health education doesn’t focus strongly enough on building skills related to different types of relationships for all students, personal experiences, positive sexual health and sexual emotions” (pp. 3).

*“Thirty-six percent (36%) of students would not know where to go for help if they or a friend was experiencing mental health problems, such as stress, anxiety or depression” (p. 4).*

*“Every student has the right to feel safe and included in an Ontario school... but for many, that right had little bearing on reality. Three out of ten students report being bullied in the past year. A key part of the elementary H&PE curriculum that addresses mental health and bullying is missing and the finalized secondary curriculum has yet to be released” (p. 4).*

### Parents

*“Some parents fear having the ‘sex talk’...but perhaps what they should be afraid of is not discussing healthy sexuality with their children—especially when they can’t rely on school health class to cover all the bases. Studies have shown that 85% of Canadian parents agreed with the statement ‘sexual health education should be provided in the schools’” (p. 3).*

### School leadership

*“When asked to comment on the major issues in their schools, the most common response from principals was that they felt ill prepared to deal with the increasing number of mental health issues they were seeing. Between 14% and 20% of children and youth have a mental health disorder that affects their daily lives, yet fewer than a quarter of these students receive treatment” (p. 4).*

### Implications for teachers

*“We know that scare tactics, negative messages and old- school teaching methods that focus on each health topic as a separate issue don’t work. Kids need to learn about themselves as a whole and how the myriad of choices that they make each day impact their health and their community” (p. 2).*

*“This means that educators are struggling to work with a curriculum that was developed before ‘cyber bullying’ was even a recognized term, and without updated instructional approaches for teaching about bullying, mental health, social and emotional learning” (p. 4).*

### **Project Evergreen**

Another place to find stakeholder perspectives regarding mental health initiatives in Canada is the Evergreen Framework (CYAC, 2010). The need to address children and youth mental health here in Canada was formally called to order in 2006 by the Standing Senate Committee on Social Affairs, Science and Technology. In their publication, *Out of the Shadows at last; Transforming Mental Health, Mental Illness and Addiction Services in Canada*, they called for the urgent need to transform mental health services across the country. As a first step, the Mental Health Commission of Canada was established by the Government of Canada in 2008. From here, the Child and Youth Advisory Committee was formed to address the unique needs of young Canadians and further develop a concrete framework accessible to government, institutions, and organizations alike.

*The Evergreen project itself was directed by a team of Canadian and international individuals possessing both lived and professional expertise around the topic of child and youth mental health. Through the work of each the drafting, advisory, international advisory and youth advisory committees, an in-depth, web-based public consultation took place, as well as two conference-style consultations including children and youth, parents, health professionals and policymakers. These methods formed the basis for informing Evergreen’s development. What is key here is that Evergreen highlights stakeholder views on mental health, strongly emphasizing the need to involve schools:*

*“Consultation participants frequently identified primary, secondary and post-secondary schools as key locations to implement [mental health] prevention programs. As was the case with health promotion, the school environment was viewed by young people, parents, mental health professionals, educators and others as the ideal forum to implement a variety of prevention programs” (p. 24).*

*“Young people, parents, health professionals, advocates, educators, government officials, social service providers and others expressed the opinion that mental health programming should be an integral part of what children and youth are exposed to in school. [...] Regardless of the method of delivery, education for young people, parents, professionals and community members regarding child and youth mental health was endorsed as key to promoting mental health” (p. 20).*

Along with the above quotations taken directly from the Evergreen document, the following strategies from these national discussions yielded some insightful recommendations, regarding the topic of Identified Strategic Directions for Promotion (pp. 21-22):

*“Educate teachers, students and parents/caregivers about mental health and mental disorders through specific school mental health curriculum and community programs.”*

*“Embed mental health promotion (including pro-social development programs) into all school health promotion activities, requiring that mental health is given the same degree of importance as physical health.”*

*“Enable schools to create mentally-healthy environments, including effective pro-social behaviour programming, teacher education, parent/caregiver outreach, school-based mental health supports and training for school administrators.”*

This snapshot of Canadian perspectives on mental health curriculum overwhelmingly indicates that, for the most part, our country feels that mental health curriculum is an essential and long awaited area that needs to be addressed in schools. However, as in Ontario, the recall on new health curriculum also indicates that there still exists public concern around introducing these health concepts to our children and youth. While we know that forces such as stigma and misinformation can lead to resistance in accepting and promoting mental health, this leads us to suggest returning to the implementation science literature around considerations to be had in planning for an implementation process that is as smooth as possible (i.e., public education/awareness around the topics, dialogue around concerns and how these will be addressed). Nonetheless, this is something that policymakers will have to plan for, in that with any social issue, accommodations may have to be considered for the small few who do not see mental health the way the majority do.





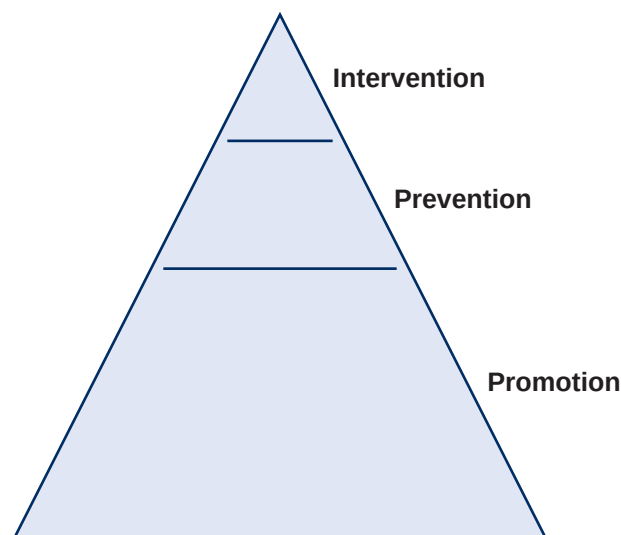
# Appendix A: The Three-Tiered Model of Health Service Delivery

The common goal driving many school-based mental health initiatives is achieving a continuum of services. No one “stage” of service is seen as stand-alone; rather, it is seen as an essential piece of a continuous whole. As can be seen in the figure to the left, these three stages (based on the public health pyramid) include universal strategies, selective strategies, and targeted treatment strategies (Vulin-Reynolds et al, 2008).

Universal strategies are targeted at the entire population. In a school context, this would include all individuals working at and attending the school. This can include widespread messages about mental health psycho-education and health promotion, stigma reduction, and awareness on how to access services. This intervention is sufficient for the majority of the population.

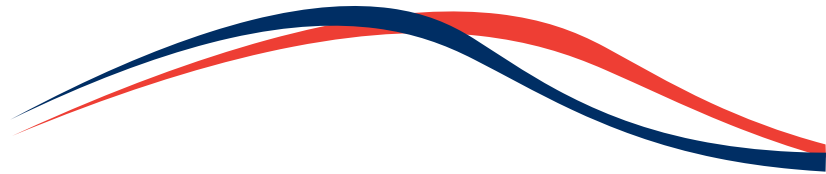
Selective strategies can be thought of in terms of more specific early intervention for those at high risk or vulnerable to developing mental health concerns. This may involve prevention strategies in the form of more focused individual, family, or group intervention.

Lastly, targeted-treatment strategies are much more individualized services aimed at those exhibiting more acute mental health needs than the prior two levels. These interventions are very person-specific, tailored to the needs of each individual.



*The three tiered model for structure of mental health service delivery*





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