

National Standard for the Psychological Health and Safety of Post-Secondary Students

Phase I: Scoping Literature Review

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Recommended Citation

Linden B, Grey S, Stuart H. National Standard for Psychological Health and Safety of Post-Secondary Students – Phase I: Scoping Literature Review. Kingston, ON: Queen’s University; 2018.

Project Management

The development of the new National Standard for the Psychological Health and Safety of Post-Secondary Students is a joint effort between the Mental Health Commission of Canada (MHCC), the Canadian Standards Association, Queen’s University, Bell Canada (Bell Let’s Talk), and the Rossy Family Foundation.

Research Team and Sponsorship

The Standard is sponsored and funded by Bell Canada (Bell Let’s Talk), the Rossy Family Foundation, and RBC Royal Bank. Researchers at Queen’s University are responsible for conducting the background research required for the development of the standard, including a review of the academic and grey literature, and undertaking of focus groups and online surveys among the target population and stakeholder groups.

Mental Health Commission of Canada assumed the role of the overall project lead, while the Canadian Standards Association (CSA) assumed the lead on the development process for the Standard, including recruiting members for and managing a Technical Committee to develop the language of the Standard.

Executive Summary

This report investigated themes common to the discussion around post-secondary student mental health, both nationally, and internationally. A detailed, scoping review of the literature was undertaken, exploring both peer-reviewed, academic sources, and grey literature. The main themes of interest to this report were selected in collaboration with the Executive Advisory Committee (EAC), the Mental Health Commission of Canada, and Bell Canada.

As part of this investigation we analyzed Canadian data from the American College Health Association's National College Health Assessment II Survey, which collected responses from over 43,000 post-secondary students attending 41 institutions across Canada. Many students reported experiencing average (31.4%) to above average stress (46.2%), with nearly 15% reporting tremendous stress levels. Overall, students reported moderate levels of distress. Anxiety (18.4%) and depression (14.7%) were the most prevalent diagnosed mental illnesses among the Canadian post-secondary student population. Just over one-fifth of students (20.4%) had received a professional diagnosis of depression at some point in their lifetime. Notably, the estimated prevalence of professional diagnoses was considerably lower than the prevalence of students' self-reported symptoms of these disorders. The implications of this are discussed. Only 35% of students reported that experiencing stress had not negatively impacted their academic performance. The literature has repeatedly linked students' stress and distress to negative academic outcomes, including reduced academic achievement, challenges with alertness and reduced ability to focus, and student attrition and retention. A number of post-secondary institutions have released their institutionally specific data on line, with similar results. The majority of students report mental health and substance (mostly alcohol) use problems that affect their academic goals, but a minority seek care.

With respect to suicidality, the NCHA II survey provides self-reported prevalence estimates of past twelve-month self-injury (8.7%), serious consideration of suicide (13%), and suicide attempts (2.1%) among Canadian post-secondary students, though there is currently no national compilation of completed suicides among post-secondary students. These estimates are slightly higher than the estimates from the United States that report the prevalence of self-injury among post-secondary students ranging between 3-7%, with males and females reporting different triggers. Males more often

attributed academic competition, financial strain, and workload to thoughts of suicide and self-injury, while females more often attributed heartbreak, family pressure, and pre-existing mental illness.

Not surprisingly, special subpopulations, including military service members, medical students, ethnic minorities, indigenous students, and international students, experience unique mental health needs. The literature suggests these students experience additional stress associated with cultural differences and stigmatization that make adjustment to the post-secondary setting particularly difficult. For example, LGBTQ students are often faced with mental health services that are not tailored to their needs and professional students (such as medical students) are faced with overwhelming stigma associated with both experiencing a mental illness, and help-seeking. Finally, military service members returning to the post-secondary setting often struggle more than others with the adjustment process and previous traumas. Males and on-line students (who may never attend campuses) have also been defined as at-risk groups for which there are tremendous service gaps. Males will rarely seek out help for mental health or substance use difficulties and on-line students do not have access to services available to students on campus.

The majority of Canadian post-secondary students (58%) identified academic stressors as their most significant source of stress. A significant source of stress for many students was revealed to be perceived safety on campus, revealing subthemes such as pressure to engage in substance abuse, sexual harassment and assault, and physical and emotional abuse or assault. A brief descriptive analysis of the safety-related data in the NCHA II survey provides a clearer picture of students' perceived safety, with males more often reporting physical abuse, and females more often reporting sexual or emotional abuse. These findings were in line with the academic literature.

There has also been considerable discussion of the factors that make up student resilience, such as individual characteristics (i.e., self-efficacy, optimism, locus of control), ability to cope (i.e., the use of positive vs. negative coping mechanisms, and the importance of a social support network), and help seeking behaviours. The literature revealed associations between self-efficacy, locus of control, tenacity and optimism (facets of "intrapersonal" resilience) and students' ability to weather stressors. Positive acceptance of change was another predictor of students' resilience in the face of major adjustment periods. Negative relationships with parents or harmful early childhood experiences were linked to poorer adjustment, and poorer resiliency. Successful coping was linked to both academic and social

integration in the post-secondary setting, with students reporting a strong social support network (both at home, and at school) faring better than those without. Negative coping methods, such as avoidance, withdrawal, or denial (most often marked by substance abuse among students) were linked to worse adjustment and negative mental health outcomes.

Help seeking behaviours were observed to be relatively low across student populations, despite relatively high levels of reported distress., but particularly so for males and members of marginalized groups (described above). The literature reports several barriers to help seeking, as identified by students, including: concerns about confidentiality, lack of time, not believing the problem warranted professional help, uncertainty that professional help would be beneficial, and preferring to rely on other sources of support (i.e., friends, family, romantic partner).

Post-secondary institutions have implemented a wide range of programs and initiatives to promote student wellness and reduce mental distress ranging from innovative interventions, such as animal therapy or mindfulness, to more traditional interventions such as cognitive behavioural therapy or skills counselling. The evidence base for the efficacy and effectiveness the majority of these interventions in post-secondary environments is thin. Even traditional treatments that have demonstrated efficacy and effectiveness in adult populations with mental health difficulties have not been evaluated for their impact on healthy post-secondary students or for their novel delivery systems (such as on-line courses or in class sessions).

In the grey and institutional literature, a number of themes for improving post-secondary student mental health emerge:

1. There is a need to create a mentally healthy environment for post-secondary students where they can maximize their ability to achieve their academic goals. It was clearly recognized that post-secondary institutions offer a pivotal environment in which to promote mental health and address student mental health needs, which are described as growing in both frequency and complexity.

2. Post-secondary student mental health is typically considered a provincial issue, rather than national problem. There is a lack of cohesion at the Pan-Canadian level and no national standard to guide the various mental health efforts occurring at provincial and institutional levels.
3. Within provinces, there is a lack of coordination between governments, institutions, student groups, and community mental health agencies with respect to mental health initiatives. Creating partnerships with community health and mental health services and supports to promote campus wellness and address student mental health needs is a priority for action.
4. An expanded definition of 'mental health' is needed; one that includes substance misuse and harm reduction approaches.
5. Post-secondary institutions need to adopt a whole-campus approach to mental health including a review and update of all health and mental health policies and institutional structures, financial assistance policies (e.g. for student loan payback) and mental health related accommodations.
6. Maintaining student centeredness in all activities was highlighted, including creating appropriate services for specialized groups (Indigenous, Immigrant, LGBTQ+, racialized, etc.) and understanding of the role of community belonging in promoting mentally healthy campuses.
7. There is a need for a comprehensive and coordinated mental health plan for post-secondary students that covers the range of services from prevention to treatment, including peer support counselling and a range of self-management options including telephone and on-line applications that can be accessed 24/7. In addition, suicide prevention and management strategies were identified as priority areas in a number of reports. This would include the provision of adequate and sustainable funding for student mental health initiatives.
8. There are a number of tools (e.g. institutional review frameworks, standardized courses, data bases, models of care etc.) that already exist; a few of which have been rigorously tested and validated but these have not been widely used. This suggests the need for a knowledge

exchange plan whenever tools are developed to ensure their appropriate uptake. Most initiatives have not been rigorously evaluated.

9. Anti-stigma and mental health awareness and literacy programs are needed to promote early identification and improve help-seeking.
10. As part of an institutional response, all faculty and staff need to be trained to support early identification and appropriate referral of students with emerging or ongoing mental health problems.
11. Finally, ongoing monitoring, quality assurance assessment, and systematic evaluation activities are needed to ensure that programs and initiatives are evidence-based and effective. This included the need for Canadian data to monitor the mental health needs and help-seeking behaviours of post-secondary students.

A review of documents accessed from post-secondary institution's websites shows that a number of universities and colleges across the country have embraced the idea that promoting mental wellness among students, faculty, and staff is part of their institutional mandate. In response, most offer multi-layered frameworks to address student mental health and wellness, mostly focused on students. The impetus for these activities has often been the institutional results from the National Campus Health Survey showing that the majority of students are experiencing significant mental health related problems without receiving mental health supports or care. There is also recognition that current wellness and accommodation services are overtaxed or not meeting the needs of specialized sub-groups of students, and that mental health problems are interfering with academic success.

Strategic frameworks are remarkably similar across institutions in their key themes. Typically, they include some combination of system-level activities (such as coordinated policy and policy reviews), training and education for faculty, staff, and/or students (including awareness and anti-stigma activities), improved access to treatment services (including coordinated care, extended hours for 24/7 care, and peer supports) and implementation of a crisis management and early detection system. A number of universities have also recognized the importance of creating a campus culture that promotes social belonging and social support for all students, but particularly for vulnerable groups such as those

at higher risk of mental health issues (e.g.: marginalized groups, Indigenous students, or members of the LGBTQ+ communities). Several documents described formal committee structures that had been invested with the responsibility for implementing and coordinating activities pertaining to the institutional frameworks. More often, multiple activities were undertaken across the institutions (at every level) without reference to a clear coordinating structure.

Although several institutions have identified the need for ongoing monitoring of student health and wellness, none of the documents reviewed identified a comprehensive performance monitoring system to ensure that wellness initiatives are evidence informed, are based on best practice models, or that a systematic evaluation strategy is in place. Many institutions participate in the National College Health Assessment survey and report remarkably similar findings (high frequency of mental distress; low frequency of access to care; high levels of alcohol misuse, all of which impact academic performance). Several universities have explicitly recognized the need for monitoring and research in this area.

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Introduction

Purpose

The intent in developing a National Standard for the Psychological Health and Safety of Post-Secondary Students (“the Standard”) is to provide systematic support for Canadian post-secondary institutions that will enable them to develop and continuously improve psychologically healthy and safe environments for their students.

The Standard will provide post-secondary institutions, communities, and other key stakeholders with guidance on best practices for the identification and assessment of hazards, management of the psychological health and safety risks faced by post-secondary students, and the promotion of improved psychological health and safety. Project outcomes are focused on the development of a Standard that is easily accessible and user-friendly to Canadian post-secondary institutions, students, and their families. The Standard will provide stakeholders with a framework that, when properly applied, will lead to measurable improvements in psychological health and safety and improved academic performance for Canadian students during their tenure at a post-secondary institution.

Background and Rationale

Based on current data from Statistics Canada (2017), enrolments in Canadian public postsecondary institutions (colleges and universities) totaled 2,034,957 in the 2015-2016 academic year. Over the course of their academic career, post-secondary students face an increased risk for exposure to psychological stress. Acute and chronic stressors affecting post-secondary students put them at risk for a wide range of mental health issues, including, but not limited to, acute stress disorder, depression, anxiety, anger, and burnout. Such problems can lead, or be coincident with, other negative outcomes such as substance misuse, relationship difficulties, absenteeism/drop-out, addictive behaviours, and suicide. The benefits of psychologically healthy and safe post-secondary institution environments and systems will have major, long term social and financial implications for all Canadians.

Purpose and Objectives of this Report

This report summarizes the results of a scoping review of academic and non-academic (grey) literature and a review of Canadian University web-sites for information pertaining to post-secondary students' mental health and interventions designed to promote mental wellness and prevent mental distress. The objectives for this review were developed in collaboration with the Mental Health Commission of Canada and Bell Canada, as follows:

1. Define the state of research relative to, and characterizing the current state of, student's experiences relative to their psychological health and safety in post-secondary environments;
2. Define the state of research relative to, and characterizing the current state of, post-secondary institutions experience relative to managing psychological health and safety in support of post-secondary students; and
3. Identify new and emerging strategies (nationally and internationally) relative to supporting psychological health and safety for students in post-secondary environments.

Approach

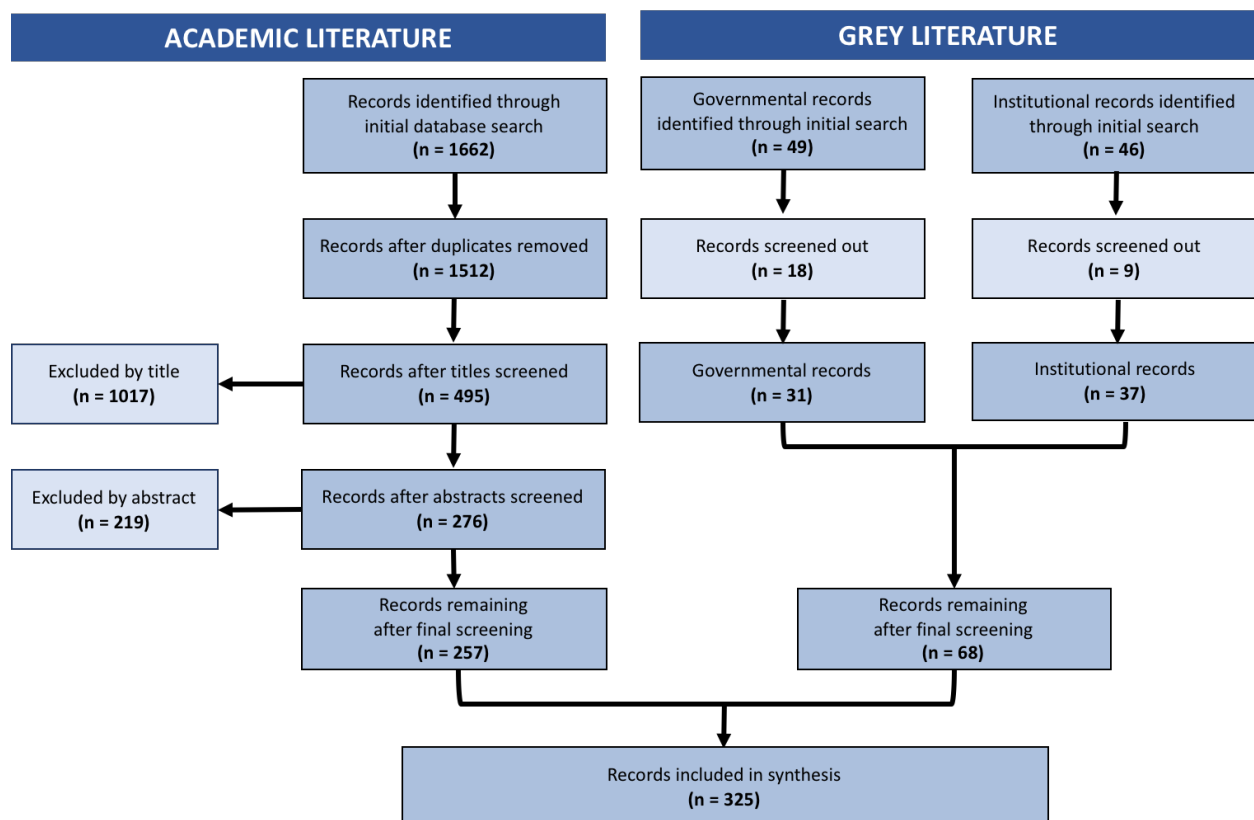
Academic Literature

Six academic databases were searched for published, academic literature. Diverse databases from the health sciences, social sciences, and educational literature were chosen in order to ensure a multidisciplinary perspective on student mental health was captured. Academic databases were searched by key word and mesh heading strings as recommended by a reference librarian at Queen's University. These search strings used for each database are detailed can be provided on request. Articles were restricted by English language, and publication date range between 2000 and 2018. One hundred and fifty duplicate articles were removed from the initial sample. Two reviewers conducted a screening process, where articles were filtered out by title, then abstract. A third party was available to break ties in the event of reviewer disagreement. Records were further excluded during the synthesis stage if they were not relevant to the interests of this report. Ultimately, 257 academic articles were included in the review.

Grey Literature

A search for government documentation was systematically undertaken by province and territory. Forty-nine governmental records were initially identified. Eighteen records were screened out for irrelevance or for being variations of the same report, leaving a total of 31 governmental records included in the review. A search for electronic institutional reports was conducted for each of Canada’s public post-secondary institutions¹, with 46 records initially located. Nine records were screened out for being variations of the same report, leaving a total of 37 institutional records included in the review. These records covered 32 institutions in total, with several detailing collaborative efforts across institutions. The final sample of screened-in grey literature (n= 68) was added to the final sample of screened-in academic articles (n= 257), for a total ample of 325 records included in the final synthesis (Figure 1).

Figure 1. Flow Diagram of Scoping Literature Review for Post-Secondary Standard



¹ Excluding non-university or college degree-granting institutions such as: CEGEPs, adult education centres, religious schools, or agricultural schools.

Executive Committee Input

Members of the Executive Advisory Committee were asked to complete a brief, online survey, available in both official languages, to assist researchers in setting priorities for review. Academic articles were collated into broad themes: state of student mental health, special subpopulations, programs and strategies, help seeking, impact, and safety on campus. Participants were asked to indicate the relative importance of each thematic category to the development of the overall Standard. We received a total of ten responses out of a possible fifteen. Based on the results of the survey, the following major themes were prioritized in this report and covered in the most detail: State of Student Mental Health, Help Seeking, and Programs and Strategies. Appendix A contains the results of the thematic analysis and the survey.

Major Findings

This section reports the major findings of the scoping review, including sources of both academic and grey literature.

Current State of Post-Secondary Student Mental Health

Prevalence of Stress and Distress

The prevalence of stress and distress among Canadian post-secondary students can best be estimated using data from the National College Health Assessment (NCHA), a national research survey organized by the American College Health Association (ACHA) to collect data about students' habits, behaviours, and physical and mental health. The NCHA was conducted in Canada in 2013 and again in 2016, and is currently the largest source of data on Canadian post-secondary students' stress, mental health, and related health behaviours. A total of 43,780 Canadian students from 41 post-secondary institutions participated in the 2016 iteration of the NCHA II, with a response rate of 19% (1).

For the purposes of this review, we conducted a descriptive statistical analysis of the ACHA-NCHA II 2016 dataset, reporting frequencies, measures of central tendencies (e.g., average "mean" responses), and graphical displays of data where appropriate. Findings from this data are discussed alongside relevant scholarly articles included in the scoping literature review that addressed the prevalence of post-secondary student stress and distress, both nationally and internationally.

Stress

Student respondents were asked to indicate the “overall level of stress” they experienced within the past twelve months. The majority of students reported experiencing average (31.4%) to above average stress (46.2%), with nearly 15% reporting tremendous stress levels. This is consistent with existing findings of above-average stress levels among the majority of post-secondary students in Canada (2) and elsewhere (3–5). When asked about the degree to which stress had impacted their academic performance during the previous year, one quarter of respondents indicated that they had received a lower grade on an exam or important project, 12% indicated having received a lower grade in a course, and 5.5% reported they had been forced to drop a course, received an incomplete for a course, or experienced a significant disruption to their research or thesis. Only 35% of students reported that experiencing stress did not affect their academics at all. Barker and colleagues’ (2018) longitudinal study explored Canadian post-secondary students’ stress levels over the course of a semester (6). They found that stress and symptoms of distress peaked in December, falling over the course of the second semester. In particular, when students reported experiencing above average levels of stress, higher levels of distress were also reported.

Students were presented with a short list of stressors and asked to indicate whether they felt any were “difficult to handle” during the past 12-month period. Students most frequently identified academics (58%), finances (40%), and sleep difficulties (37%) as being difficult to handle.

Table 1. Factors that were Difficult for Students to Handle in the Past 12 Months, 2016

Factor	Difficult to handle	Not difficult
Academics	58.1%	41.9%
Career-related	33.7%	66.3%
Death of a family member/friend	16.6%	83.4%
Family problems	32.3%	67.7%
Intimate relationships	33.8%	66.2%
Other social relationships	29.8%	70.2%
Finances	40.4%	59.6%
Health problem of family member/friend	24.4%	75.6%
Personal appearance	33.4%	66.6%
Personal health issue	27.0%	73.0%
Sleep difficulties	37.1%	62.9%
Other	13.6%	86.4%

Source: ACHA-NCHA II Data, 2016

Distress

The NCHA II includes several measures that can be used to assess the prevalence of distress among students, including self-reported symptoms of poor mental health, and past twelve-month diagnosis and/or treatment by a mental health professional. It is important to note that a degree of social desirability bias is present in all self-report data; in this context, largely owing to the stigma surrounding mental illnesses. As such, these results are likely underestimations of the true prevalence of distress and diagnoses among Canadian post-secondary students.

Self-Reported Mental Health

Corey Keyes's Mental Health Continuum - Short Form (MHC-SF) instrument was one method used to assess post-secondary students' self-reported mental health over the past year. This tool conceptualizes mental health as existing on a continuum between "flourishing" (positive mental health), and "languishing" (negative mental health). Students were asked to respond to 14 questions, indicating how often they "felt this way" during the past month, on a scale from 0 (never) to 5 (every day). Responses were then summed and categorized into three cut-points: languishing, moderate, and flourishing. The majority (46.9%) of Canadian post-secondary students fell into the "flourishing" mental health group, with 43.6% falling into the "moderate" group, and nearly 10% reporting "languishing" mental health.

Another general distress instrument was used to assess the prevalence of generally poor mental health. This instrument asked students to respond to 11 items, indicating whether they had "ever" felt this way. Possible response options included: 1) No, never, 2) Yes, but not in the past year, 3) Yes, in the past two weeks, 4) Yes, in the past month; and 5) Yes, in the past year. We re-ordered these responses in order of least recent to most recent (ending with "Yes, in the past two weeks"). For simplicity, we then regrouped responses into three categories: 1) No, never, 2) Yes, in the past 12 months, and 3) Yes, more than 12 months ago. Table 2 presents the self-reported past 12-month prevalence estimates for each of these symptoms.

Table 2. Student Respondents' Mental Health Experiences (Percent)

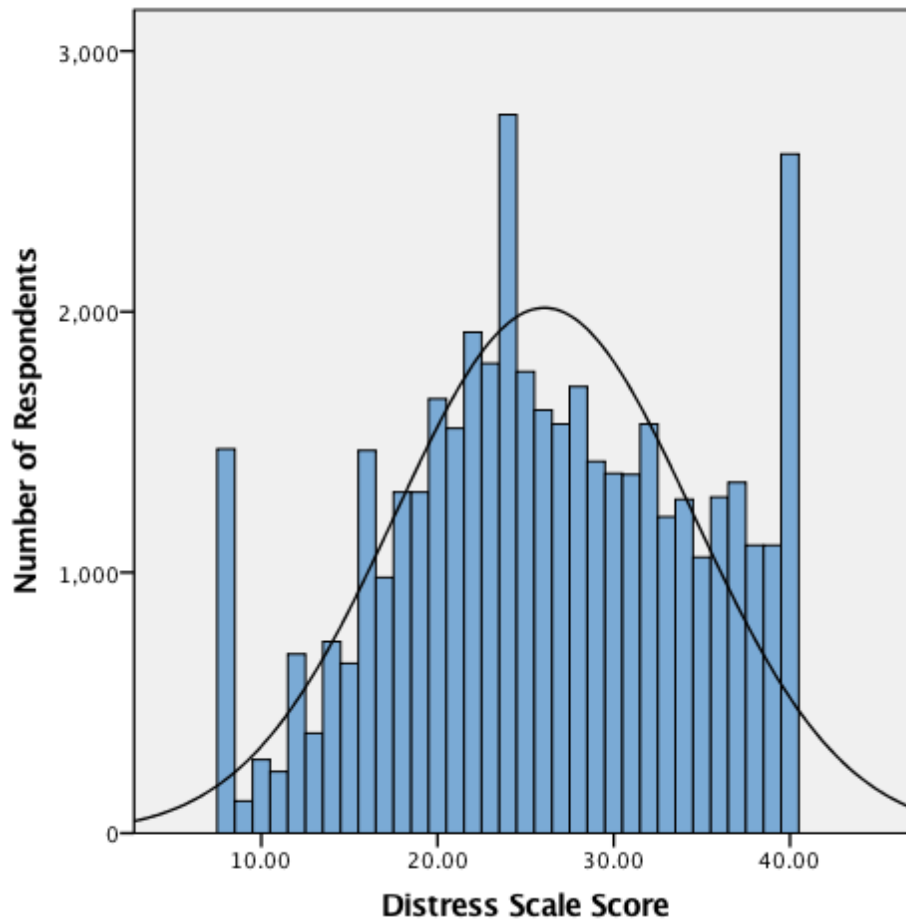
Have you ever...	No, never	Yes, more than 12 months ago	Yes, in the past 12 months
1. Felt things were hopeless	22.5%	17.9%	59.2%
2. Felt overwhelmed by all you had to do	6.3%	4.2%	89.5%
3. Felt exhausted (not from physical activity)	7.2%	4.6%	88.2%
4. Felt very lonely	15.7%	17.7%	66.6%
5. Felt very sad	12.2%	14.2%	73.7%
6. Felt so depressed it was difficult to function	34.8%	20.8%	44.4%
7. Felt overwhelming anxiety	22.7%	12.8%	64.5%
8. Felt overwhelming anger	30.3%	22.5%	47.3%
9. Intentionally injured yourself	76.2%	15.2%	8.7%
10. Seriously considered suicide	70.8%	16.3%	13.0%
11. Attempted suicide	88.8%	9.1%	2.1%

Source: ACHA-NCHA II Data, 2016

While psychometric information on the validity and reliability of this particular instrument was unavailable, a brief analysis revealed a two-dimensional scale², with acceptable internal consistency reliability (the degree to which we can be confident that all items in a scale are measuring the same thing, ranging from 0 to 1). The first scale was comprised of items 1-8, covering common symptoms of general distress, and showing excellent internal consistency (Cronbach's $\alpha = 0.89$). The second scale was comprised of the final three items 9-11, covering feelings and actions that reflect the highest level of distress (e.g., self-injury, suicidality). These items showed good internal consistency (Cronbach's $\alpha = 0.73$). Figure 2 shows the distribution of total scores for the first scale (items 1-8). Possible scores could range from 8-40. The mean score in this sample of students was 26 (SD= 8.5, median= 26). While the data wasn't quite normally distributed (skewness and kurtosis values both slightly negative), we do see many of the scores clustering near the mid-point of the distribution.

² Factor 1 eigenvalue = 5.14, accounting for 47% of the variance in responses; Factor 2 eigenvalue = 1.65, accounting for 15% of the variance in responses. All factor loadings were > 0.6 with no cross-loading.

Figure 2. Distribution of Distress Scale Scores for Scale #1 (Items 1-8) (n = 42,670)



Source: ACHA-NCHA II Data, 2016

Diagnosed Mental Illness

Respondents to the NCHA II were asked to indicate whether they had been diagnosed or treated for a number of mental illnesses in the past twelve months. Table 3 displays the percentage of Canadian post-secondary students in this sample who reported receiving a diagnosis or treatment for a mental illness from a mental health professional within the past twelve months.

Based on these estimates, anxiety (18.4%) and depression (14.7%) were the most prevalent diagnosed mental illnesses among the Canadian post-secondary student population, which is consistent with findings in previous studies (7). An additional one-off question on the NCHA II asked students whether they had ever been diagnosed with depression. This assessment of lifetime prevalence revealed that just

over one-fifth of students (20.4%) had received a professional diagnosis of depression at some point in their lifetime.

Table 3. Percent of Student Respondents who Self-Reported Having Been Diagnosed or Treated for a Mental Illness by a Mental Health Professional, 2016

Mental Illness	Diagnosed/Treated	Not Diagnosed/Treated
Anorexia	1.3%	98.7%
Anxiety	18.4%	81.6%
Bipolar Disorder	1.4%	98.6%
Bulimia	1.3%	98.7%
Depression	14.7%	85.3%
Insomnia	5.3%	94.7%
Obsessive Compulsive Disorder	2.5%	97.5%
Panic Disorder	9.3%	90.7%
Phobia	1.6%	98.4%
Schizophrenia	0.4%	99.6%
Substance Abuse	1.3%	98.7%
Other Addiction (Internet, Gambling, etc.)	0.7%	99.3%
Other Mental Health Condition	4.0%	96.0%

Source: ACHA-NCHA II Data, 2016

It is noteworthy that the estimated prevalence of professional diagnoses for these disorders are considerably lower than the prevalence of self-reported symptoms of these disorders as determined through the instruments on this survey. For example, while less than 15% of students reported being diagnosed or treated for depression, nearly 45% reported feeling “so depressed it was difficult to function” within the past 12 months. Similarly, 65% of students reported feeling “overwhelming anxiety” in the past 12 months, while only 18% had received a diagnosis or treatment. While it is difficult to draw definitive conclusions, we may consider that this apparent disparity between mental illnesses and their official diagnoses may be explained by the following: a) students are not seeking professional help for their mental health challenges; b) the self-report instruments are not sensitive or specific enough or are otherwise invalid; or c) students are overestimating their symptoms and are not truly experiencing a clinical level of distress.

Trends in Post-Secondary Student Distress

The question of whether or not the prevalence of degree of distress has worsened among students over the past few decades has long been a topic of discussion. For example, self-reported symptoms of past-

year anxiety and depression appeared to increase from 56.5% to 64.5% and from 37.5% to 44.4%, respectively between the 2013 and 2016 cycles of the NCHA II. While it often appears that prevalence estimates are increasing, it is difficult to determine whether more students are truly experiencing symptoms of distress than before, or whether improvements in the destigmatization of mental illnesses has led to increased help seeking, creating an artificial increase in prevalence.

In a ten-year longitudinal study conducted among American post-secondary students between 1992-2002, Schwartz (2006) found that student clients did not become more acutely distressed over time (8). However, an increase in the use of medication over time and a greater level of acceptance of medication use among students was observed. Though this study was bound to a single post-secondary campus, the findings reflect those observed at the national level among post-secondary students in the United States of America.

Academic Outcomes

Several studies have linked students’ stress and distress to negative academic outcomes, such as: reduced academic achievement (9,10), challenges with alertness and reduced ability to focus (11), and student attrition and retention (12). Student respondents to the NCHA II were presented with a list of factors and asked to indicate which factors, if any, had negatively affected their academic performance over the past twelve months. Table 4 reports the percentage of post-secondary students who reported that a mental health related problem had impacted their academic performance.

Table 4. Percent of Post-Secondary Students Reporting an Impact on Academic Performance

Factor	Did Not Occur - N/A	Academics Not Affected	Academics Affected
Alcohol Use	68.2%	27.3%	4.4%
Anxiety	45.3%	22.2%	32.5%
Depression	66.4%	12.7%	20.8%
Drug Use	92.1%	5.6%	2.3%
Eating Disorder	93.4%	4.6%	2.0%
Homesickness	76.8%	17.6%	5.6%
Stress	23.1%	34.7%	42.2%

Source: ACHA-NCHA II Data, 2016

Suicide and Self-Injury

Suicidal behaviours present significant personal safety and wellbeing concerns to post-secondary students, constituting the most severe forms of distress. A total of 6 articles explored the prevalence of these behaviours, and their associated risk factors. All six studies explored suicidal ideation. Among three, a range of 5.8-36% of post-secondary students sampled were reported to have had thoughts of suicide in their lifetime (13–15). Three articles examined suicidal behaviours, with the prevalence of self-injury estimated at 3-7% of students (13,16). Student-reported determinants of suicide differed between males and females. Male participants attributed academic competition, financial pressure, and workload as main contributors to suicidality, whereas female students associated heartbreak, family pressure, and prior mental illness as primary determinants of suicidal behaviour (15). Special consideration of minority groups was addressed in two studies. Members of the LGBTQ community, and non-Caucasian students demonstrated an increased likelihood of suicidal behaviours compared to their same-age counterparts (16,17). An exception to these findings was the low prevalence of suicide-related behaviours in African-American post-secondary students (17). Recommendations for addressing suicidality included training for campus healthcare providers, mental health educational programs tailored for minority groups (17), and adoption of intervention approaches that address sex-specific suicide risks (15,18). It is important to note that all of these articles studied post-secondary student populations in the United States. We could find no comparable Canadian data and have no information on the rate of suicide across Canadian post-secondary campuses.

Mental Health of Special Subpopulations

A total of 63 articles identified subpopulations within the post-secondary student body that have their own unique mental health and wellness-related needs. Identified groups included: students belonging to ethnic minorities (n=23), military service members (n=16), indigenous students (n=7), medical students (n=13), LGBTQ students (n=2), and international students (n=2).

Students belonging to ethnic minorities, Indigenous students, and international students may experience additional stress associated with cultural differences that make adjustment to the post-secondary setting particularly stressful. Obstacles such as language barriers, being faced with social settings to which they are unaccustomed, as well as being largely unable to work are each sources of stress for international students (19,20). Additionally, many students belonging to ethnic minorities continue to report experiencing racism on campus (21,22). Finally, these students may also struggle with

negotiating their mental health as a result of cultural beliefs that stigmatize mental distress. Students belonging to ethnic minorities often report greater perceived stigmatization of both mental illness and of help seeking, leading to lower intentions to seek help (23–28).

Students belonging to these subpopulations have reported feeling as though available campus mental health services do not adequately address their needs. One study found that students belonging to ethnic minorities preferred to seek help from a religious advisor who would be more understanding of their cultural and spiritual beliefs (29). Another study found that Aboriginal cultural practices helped indigenous students cope with stressors while encouraging them to maintain their cultural identity within the university setting (30). Services tailored to varied cultural beliefs and those that move away from ethnocentric assumptions of best practices for treatment are recommended to support these students' mental health and wellbeing (31).

Students who identify as being part of the LGBTQ community face similar challenges to those belonging to ethnic minority groups, in that services are not often tailored to their needs (32). Strides must be taken to foster a safe environment in campus health and student wellness centres where members of the LGBTQ community feel comfortable expressing themselves (33).

Internationally, medical students have been identified as a particularly at-risk subpopulation, in large part owing to the stigma associated with seeking mental health treatment and medical students' subsequent fear of professional jeopardy (34,35). Several studies have shown an underuse of mental health services among medical students (34,36,37) in tandem with greater levels of distress (36,38–40) and suicidality (41,42) relative to the general student population. Mental health supports should be promoted during both the on-campus and in-hospital portions of medical students' education, and additional efforts towards reducing the stigma around medical practitioners' mental health should be made (43).

Finally, military service members who have returned to complete or begin their post-secondary education also have unique needs in terms of psychological wellness while they navigate the adjustment from military service life to student life (44). Those who find this adjustment challenging are more likely to display greater symptoms of distress (45). A high prevalence of PTSD (46), stress (47), as well as self-injury and suicidal ideation (48,49) has been observed among post-secondary student military service

members, particularly among those who have been on deployment. Student military service members' struggles with help seeking are not dissimilar from the barriers experienced by medical students. Concerns associated with stigmatization and having a 'black mark' added to their military record are cited as large factors in determining whether or not to reach out for help (50,51). In fact, one study found that students who were military service members were more likely to perceive a need for help, but also more likely to perceive stigma surrounding help seeking relative to their non-military peers (52). These findings suggest that specialized training on how to best treat students who are active or returning military service members should be prioritized at student health and wellness service centres.

Perceived Stressors

A total of **23** articles included in this review addressed the sources of post-secondary student stress. Four of these articles were Canadian. Attending post-secondary school can be one of the most stressful periods in an emerging adult's life. Students may encounter a multitude of stressors within the post-secondary setting, each which compete with one another, necessitating time management and prioritization skills that emerging adults may have yet to develop. Students face the challenge of managing their time between academic obligations and those outside of the academic setting, such as work, social engagements, and relationships with friends, family, and significant others. Generally, the most common stressors found among students fall in to one of two categories: modifiable, or non-modifiable stressors. Non-modifiable stressors, or those that cannot be modified by the post-secondary institution, occur external to one's role as student. These are commonly referred to as "life stressors," and include things such as: experiencing a death in the family, early adverse childhood experiences, experiencing a divorce, or a parent's divorce, etc. Modifiable stressors are those unique to the post-secondary setting and the role of student. These stressors may be modifiable by the institution through policy, program development, or administrative action to minimize their effect on students' wellbeing. A number of perceived stressors have been reported by students in the literature.

Academics. The increase in, and management of, academic demands is one of the most commonly cited sources of stress among post-secondary students (7,53,54). Undergraduate students in particular often experience significant changes to both the quantity and difficulty of their academic workload, in addition to higher expectations for preparedness and individual management of priorities. Students have identified a number of academic stressors, including: amount of coursework or research (55–57), lack of time to complete assignments (55), difficulty

of course content (55), test anxiety (58), fear of failure (55), lack of motivation (55), and inability to concentrate (59). While graduate students are typically thought of as being more “hardy” than undergraduates, one study found that while graduate students reported lower rates of mental illness, they reported higher stress levels than undergraduates (60). Academic stressors reported by graduate students pertain more to the completion of milestones in their program, including dissertation research, writing, and defense (57,61).

Adjustment to Post-Secondary Life. Making the transition from high school to post-secondary school is often cited as a significant source of stress for new undergraduates. During this period of adjustment, students experience a variety of changes to their immediate environment, including shifts in living arrangements, social circles, access to transportation, as well as to regular amenities, such as laundry and groceries. Additionally, there is often a significant increase in academic expectations and workload as compared to students’ previous experience in secondary school. Stress related to adjustment has been linked to many factors, including parental relationships (62), engagement in unhealthy behaviours (63), and sense of academic control (64).

While traditionally, emerging adulthood is marked by a lessening of parental influence in favour of peer influence, Burke and colleagues found that students’ daily happiness at their post-secondary institution was positively associated with daily communication, positivity, and openness with their parents (62). Students under greater stress who engaged less with their parents reported a greater degree of loneliness (62). As social support is a key coping mechanism in mediating stressful periods in one’s life, these findings are not surprising. In another study, students who reported poor sleep patterns, skipping meals, and a lack of physical activity were more likely to report symptoms of mental illness (63). Each of these unhealthy behaviours can occur as a result of a student’s poor time management and feelings of being overwhelmed or overextended. Healthy behaviours, such as getting enough sleep and eating a balanced diet, have been linked to reductions in stress (59). Finally, a students’ sense of mastery over their future is an important component of the successful navigation of stressful situations and adjustment periods. Ruthig and colleagues found that students who had greater perceived academic control reported lower stress levels and better overall mental health (64). While individual characteristics, such as self-efficacy and optimism can be difficult to improve or

change, perceived academic control is a factor that can be enhanced through intervention, presenting an opportunity for future consideration in the development of stress management programs for students.

Campus Culture. A successful transition to post-secondary life is often discussed in the context of positive academic outcomes, but social integration into the campus culture and social space is also a key component of students' ability to thrive (9). Campus culture has consistently been linked to students' psychological health and wellbeing, with negative perceptions or experiences with campus culture predicting less favourable health outcomes. Students' perceptions of campus culture can be determined by factors such as: racism, sexism, or other discriminatory experiences; sense of community and/or belonging; and pressure to engage substance use or other social activities. One study found prejudicial attitudes (i.e., both racism and sexism) contributed to the prediction of depression among undergraduate students in the United States (65). Many students belonging to ethnic minorities continue to report experiencing racism on campus (21,22). A sense of campus community, or belongingness, has been shown to be an important predictor of students' overall wellbeing in terms of both psychological health and social support among students in the United States, Canada, Australia, and Japan (66–69). In fact, one study found that sense of belongingness was a critical factor in improving student retention in post-secondary institutions across Australia (70).

Concern for the Future. For many post-secondary students, concern for the future is a substantial source of stress. One study found that concerns about securing a future career post-graduation was one of the most common reasons Canadian post-secondary students sought help from campus counselling centres (53). Many students have reported feeling a constant pressure to succeed (71), and concern over whether they will be accepted in grad school, or a professional program of their choosing (i.e., law, medical school) after their undergraduate is completed. For graduate students, concerns for the future go beyond securing a job post-graduation (though this continues to be a significant source of stress) and into the realm of family planning and achieving work/life balance (60). Often, graduate students report struggling with excelling at multiple roles in their lives (i.e., student, parent, spouse, friend, etc.) (57).

Financial Strain. In addition to maintaining a demanding class schedule, many post-secondary students are required to work in order to pay for expenses as they become accustomed to their increased financial independence as emerging adults. In addition to affording the necessities of life, students are often faced with having to pay off copious student loans following graduation (72,73), creating an additional need for part-time work during studies. While working (or volunteering) in addition to attending classes has been linked to students feeling overwhelmed as well as experiencing increased stress levels, financial confidence has also been found to be a significant contributor to students' positive emotional wellbeing, necessitating a complicated balance (73–76). In several studies, students cited work-related problems and financial concerns as significant sources of stress (54,56). In keeping with the concept of financial confidence, one study explored the psychological impact of credit card debt, which is associated with overspending, a known risk behaviour among emerging adults (77). Mounting credit card debt was associated with poorer mental health outcomes (77).

Relationships. Particularly for young undergraduate students, the loss of frequent socialization with pre-college friends with whom they grew up can produce emotional distress, and can sometimes lead to decreased interest in forming new relationships and an overall maladjustment to the post-secondary environment (78). Buote and colleagues refer to this emotional response to the loss of pre-college friends as “friendsickness” (79). In some cases, the loss of early childhood friends not only suggests a loss of social support, but also the loss of an outlet where one can comfortably socialize and relieve stress. Losing this source of familiar support can be challenging, particularly for more introverted students who may be less comfortable in attempting to form new friendships in a new environment. A Canadian study found that students often sought help from campus counseling centers for relationship problems (i.e., friendships, romantic relationships, etc.) (53). In addition to missing pre-college friends, students may also struggle with distance from their parents and family home. In one study, students identified having less time spent with parents as having a negative impact on their stress levels (59). Difficulty navigating life with roommates for the first time has also been identified as a significant source of stress (59,80).

Safety on Campus

The safety of the campus environment is an important factor to consider with respect to post-secondary students' psychological health and well-being. A total of **18** articles included in this review broached the topic of perceived safety on campus. The reviewed literature revealed students' primary safety concerns stem from experiences with: sexual assault, stalking, physical violence, intimate partner violence, emotional abuse, and overall perceptions of safety.

Eighteen studies outlined these collective concerns. Of the eighteen, ten examined sexual assault and harassment. A report conducted among American post-secondary students indicated that an estimated 24% of students experienced sexual harassment or abuse victimization during their first semester of post-secondary education, and an additional 20% experienced victimization during their second semester (81). In a similar study of American students, 55% of women reported experiencing sexual harassment, and 22.2% reported multiple occasions of harassment (82). Additional literature indicated that 40% of surveyed American college students have received a rape disclosure from another woman or girl (83), and 90% have witnessed at least one risky event related to sexual assault, dating violence, or suspected abuse (84).

While incidents of stalking were explored in only one of the studies included in this review, 25% of university students surveyed cited exposure to stalking resulting in increased negative mental health symptoms (85). Additionally, the 2016 Canadian National College Health Assessment Survey revealed that nearly 7% of participants reported being a victim of stalking within the twelve-month period prior to survey participation. Of those students who identified as having been a victim of stalking, 87% were female students and 13% were male (1). Five studies in this review reported on general physical and/or intimate partner violence. A range of 42-48% of Finnish and American post-secondary students reported experiencing these types of abuse at the hands of a romantic partner (86–88). Additional studies identified emotional abuse as another safety concern for students, with one study estimating a 10.7% prevalence of emotional abuse among an American post-secondary student sample (89).

Increased vulnerability to various safety concerns were identified in minority groups in two studies. Among subpopulations in a large American college survey, women, and students who identified as members of the LGBTQ community had greater odds of becoming victims of sexual assault than their same-age counterparts (89). The highest prevalence estimates of mutual intimate partner violence were

observed in post-secondary Asian American males (90). Significant reductions in mental health and wellbeing resulting from experiences of intimate partner violence were reported by Asian American women, African American women, Latin American women/men, and European women/men (90).

The relationships between academic performance, wellbeing and safety were specified in four studies. The severity of sexual victimization as well as the violence experienced were associated with a significant, negative impact on the academic performance of post-secondary women (81). A link has also been established between coercion and adverse mental health symptoms, as well as negative social experiences in post-secondary women (91,92).

Perceptions of safety were addressed in three articles outlining the security of female university students, and safety of all students in relation to alcohol behaviours. Collected qualitative data determined women felt socialized into fearing for their own safety on campus, participated in avoidance behaviour in an attempt to cope with fear, and felt a lack of control during incidents of a threatening nature (93). Alcohol-related safety concerns were further explored in one study conducted among post-secondary students in Australia and New Zealand. The most common safety consequences of excess alcohol consumption for males included: engaging in unprotected sex with a regular or casual partner (23.8%), doing something dangerous just for fun (23.7%), driving a car after drinking too much (23.1%), verbally abusing someone (19.2%), and being taken advantage of sexually (2.6%) (94). The most frequent consequences for females included: engaging unprotected sex with a regular or casual partner (21.7%), driving a car after drinking too much (14.9%), verbally abusing someone (12.3%), doing something dangerous just for fun (8.4%), and being taken advantage of sexually (7.3%) (94). In a separate study, American students who identified as non-drinkers reported feeling less safe on campus than those who frequently consumed alcohol (95).

Within the reviewed literature, recommendations to address safety concerns on campus included: increased health promotion campaigns addressing stigma (93) and women's safety (93,96), increased information disclosure systems (97), improved threat assessment protocols (98), and enhanced expansion of primary prevention and care services for the bystander effect (84), sexual assault (82), intimate partner violence (89,91), emotional abuse (90) and victimization (86,95).

While the majority of the articles included in this review focused on women’s safety on campus, it is important to note that post-secondary men face similar safety concerns, if perhaps to a lesser degree. Table 5 outlines the campus safety results from the 2016 Canadian National College Health Assessment Survey. It is notable that while the majority of cases of sexual assault victimization were observed among women, 9% of men reported being a victim of attempted rape, while another 9% reported being a victim of a completed rape. Thirteen percent of men reported being a victim of stalking, and 13% reported experiencing unwanted sexual contact without consent. Prevalence estimates increased even more for post-secondary men concerning experiences of verbal and physical assault (ranging from 34-54%). While there is a dearth of literature examining these types of safety concerns among post-secondary men, it is important that campus health services are prepared to broach topics with men who may seek help. It is also vital to foster a safe and inclusive campus where occurrences of assault and harassment, whether of a physical, verbal, emotional, or sexual nature, are prevented and not tolerated.

Table 5. Canadian Students who Experienced Harassment or Assault on Campus by Sex, 2016

In the past twelve months were you...	Female	Male
In a physical fight	45.8% (n= 1033)	54.2% (n= 1224)
Physically assaulted	66.0% (n= 1153)	34.0% (n= 593)
Verbally threatened	64.3% (n= 6130)	35.7% (n= 3406)
Sexually touched without your consent	87.0% (n= 4031)	13.0% (n= 4631)
A victim of attempted rape	91.0% (n= 1425)	9.0% (n= 141)
A victim of rape	90.9% (n= 792)	9.1% (n= 79)
A victim of stalking	86.6% (n= 2508)	13.4% (n= 389)

Source: ACAH-NCHA II Data, 2016

Resilience

Despite the post-secondary setting presenting a number of stressors for students, stress reactions can be managed with the proper tools. The Diathesis-Stress Theory states that whether or not stress devolves into distress (i.e., languishing mental health, or symptoms of mental illness) depends largely on a student’s ability to weather daily stressors and negotiate their environment. This is referred to as resilience. An individual’s resiliency in the face of stress is made up of several components. In the

context of mental health, resiliency is predicted by three major factors: (1) pre-existing individual characteristics, (2) the ability to cope, and (3) help seeking behaviours. A total of **47** articles included in this review focused on elements of student resilience, spanning individual characteristics and impact of parental relationships and family dynamics (n=3), methods of coping (n=11), attitudes towards help seeking (n=31) and availability of campus resources at post-secondary institutions across Canada (n=2). Six of these articles were Canadian.

Individual Characteristics

At the individual level, a student's resiliency is determined by three main factors: genetic vulnerability (e.g., family history of mental illness, genes predisposing individuals to certain mental illnesses), psychological vulnerability (e.g., cognitive appraisal, self-esteem, social support, coping skills), and sociodemographic vulnerability (e.g., income bracket, dependents) (99). A person who is resilient may experience a great deal of stress, and manage it effectively, without developing symptoms of a mental illness. A person who is more vulnerable may not withstand stress as well.

Psychological vulnerabilities can take shape in several forms. To a large degree, personal characteristics such as sense of self-efficacy, locus of control, tenacity, and optimism (i.e., belief that things will work out) all contribute to a students' belief in their own ability to manage and work through stressful periods (100,101). These factors, which contribute to "intrapersonal" resilience, have been linked to better academic outcomes in post-secondary students (100). In another study, hardiness (a trait which allows individuals to sustain high degrees of stress without falling ill) and sense of coherence (a students' ability to understand what happens around them, to manage it, and to find meaning in it) were found to be significant predictors of students' mental wellbeing (102).

Positive acceptance of change is another component of a student's resilience (100). Two studies included in this review explored the impact of parental relationships on students' ability to experience a smooth adjustment to post-secondary life. Permissive parenting (characterized by over-responsiveness to a child's needs, enabling, and overindulgence) was found to hinder students' ability to navigate the independence expected of one throughout his or her post-secondary education and lead to academic entitlement (103). Academic entitlement (the belief that one is owed more in the academic setting than is deserved) has been shown to be associated with increased symptoms of depression and lower levels of wellbeing (103). Additionally, a meta-analysis explored the relationship between parental attachment

and students' adjustment to post-secondary life across 156 published studies, finding a moderate, significant relationship between the two (104). Attachment to one's parents was predictive of better adjustment, both in terms of cultivating social relationships with others, as well as individual growth (i.e., greater self-worth and sense of academic ability) (104).

Negative relationships with parents or harmful early experiences within the family setting have also been linked to poorer adjustment and greater distress among students. Two studies included in this review explored the impact of adverse childhood experiences on students' psychological health and wellbeing (105,106). These studies found that adverse childhood experiences predicted a decline in students' mental health over the course of a semester (105), and that students with a history of childhood sexual abuse reported significantly higher levels of global mental health problems (106). A third study found that a lack of warmth and encouragement of autonomy from parents was associated with symptoms of depression in first-year undergraduate students in Canada (71).

Coping

The ability to cope is another major component of resilience. Healthy coping mechanisms can help students to manage and negotiate the stressors they will inevitably encounter in the post-secondary setting. Coping is defined as "the process of attempting to manage the demands created by stressful events that are appraised as taxing or exceeding a person's resources" (59: 378). Coping mechanisms are the resources used to attempt to manage feelings of stress and can be employed in both adaptive (positive) and maladaptive (negative) ways. In fact, one study found that students' abilities to use effective coping mechanisms had the largest influence on mental disorder and produced the greatest change in mental health outcomes (108).

Positive coping mechanisms are generally healthful behaviours, marked by "taking direct action or confronting emotional responses to a stressor" or problem (59: 378). Examples of positive coping mechanisms include seeking social support from friends or family, looking for constructive solutions to the issue (e.g., increasing the time spent studying), or seeking help from a mental health professional. Students' "interpersonal" resilience is comprised of social support that is formed from relationships with parents, friends, and classmates (100). While academic integration is a key component of students'

successful adjustment to post-secondary life, social integration can be just as important. One study found that students who felt close to their peers were at decreased risk for symptoms of distress (109).

Negative methods of coping are less constructive and are less likely to culminate in a resolution to the problem. These methods are often “marked by avoidance, such as withdrawal or denial” (65:378). The abuse of alcohol and other substances, dangerous driving, excessive spending, and other risk behaviours are often cited as negative coping mechanisms. Methods of avoidance such as binge drinking alcohol (110–113) and the use of substances, including cannabis (114,115) have often been cited as negative coping mechanisms used by students to temporarily “forget” about the daily stresses that come along with post-secondary life (116).

Help Seeking

Though post-secondary students belong to one of the most at-risk groups for mental health related problems, a lack of help seeking and mental health service use has been observed among this population. A 2008 study of first year undergraduate students in the USA showed that over three quarters of those who reported clinically significant levels of distress had not received counseling (117). Another study found that 63% of post-secondary students surveyed at a mid-sized Canadian university reported they had experienced a need for mental health care, but had not received it (118).

Over the past decade, students have identified a number of barriers to help seeking, including: concerns about confidentiality (119), lack of time (119–123), not believing the problem warranted professional help (119,121,123,124), uncertainty that professional help will be beneficial or effective (119), as well as indicating a preference for relying on other sources of support, including family and friends (121,125,126), or managing the problem themselves through self-help options (119,121,123,125,127). Previous experience with, or exposure to mental illness is associated with a higher likelihood of help seeking (124,128). Similarly, several studies found that the greater a students’ distress, the more likely they were to seek help (28,117,122,128,129). However, one study found that previous experience with help seeking did not predict new help seeking attempts (130). A greater awareness of mental health services offered on campus and a higher level of mental health literacy have each been linked to greater intentions to seek help (120,127). While awareness of available services does not necessarily lead to help seeking behaviours, a *lack* of such knowledge has been shown to prevent help seeking in previous

studies (128). In addition, a number of consistent predictors of students' help seeking attitudes and behaviours have been reported.

Gender: Studies concerning the experiences of men in post-secondary settings have identified some unique challenges to help seeking. In one American study, men expressed a strong reluctance to seek help for emotional problems unless they were severe, indicating that seeking help without sufficient reason would provoke negative judgement from others (119). Men indicated that seeking help for emotional health was associated with a much larger stigma than seeking help for physical health ailments, itself still a stigmatized behaviour among young men expected to be strong, tough, and unemotional (119). In an another American study, male post-secondary students exhibited low overall mental health literacy, high stigmatizing beliefs about mental health, negative attitudes towards mental health and help seeking, high self-stigma with respect to help seeking, low intentions to seek help, and reported that help seeking produced a significant impact on their self-confidence (131). Across ethnicities, ages, and levels of study, female students have shown more positive attitudes toward help seeking than males, as well as more positive help seeking behaviours (23,26,29,122).

Age: Age has also been shown to be a significant predictor of help seeking, with several studies noting that older students and students in a higher year of study have a greater likelihood of help seeking relative to their younger classmates (24,28,121,122,130). Significant differences were also observed between undergraduate and graduate students, with graduate students reporting higher mental health literacy, and more positive attitudes towards help seeking (28,131).

Culture: Cultural differences may also pose challenges to help seeking. Several studies have shown that students belonging to ethnic minorities (particularly students of Asian descent) report greater perceived stigmatization of both mental illness and of help seeking, leading to lower intentions to seek help (23,25–28,132). Some students belonging to ethnic minorities expressed a preference for help seeking from a religious advisor, feeling that a mental health professional would not be sensitive to incorporating their religiosity or spirituality into a treatment plan (29). Lower mental health literacy has also been observed among students belonging to ethnic minorities (131).

STEM Students: Differences in help seeking behaviour were also observed by area of study. One study found that students studying in the Sciences, Technology, Engineering, and Mathematics (STEM) presented with lower overall mental health literacy than did non-STEM majors, across both undergraduate and graduate levels of study (131).

Expectations of Stigma: Stigma has been consistently associated with greater levels of distress (133) and is a notable barrier to help seeking among post-secondary students (25,127,134). There are several types of stigma at play within the post-secondary population: perceived public stigma (negative attitudes and beliefs about mental illness held by others within the community); personal stigma (negative attitudes and beliefs about mental illness held by an individual); and self-stigma (where an individual internalizes the stereotypes associated with a mental illness, applying them to oneself). One study found that self-stigma, rather than perceived public stigma, made the largest contribution to predicting mental health help seeking attitudes, with lower levels of self-stigma predicting positive help seeking attitudes (128). Those with high self-stigma were shown to be unlikely to engage in help seeking behaviour even if they held positive attitudes toward help seeking (128). Similarly, another study found that the self-stigma associated with seeking counselling eroded positive attitudes towards help seeking (134). Several subgroups within the post-secondary student population have been identified as being more susceptible to stigma than others, including male students (25), students belonging to ethnic minorities (23–28), and younger students (130). In one American study, students who obtained academic accommodations as a result of a mental health related challenge also reported feeling embarrassed or stigmatized by faculty, as well as by other students (124).

Service Provision Help Seeking Preferences

Two studies assessed the provision of mental health services at post-secondary institutions across Canada, finding notable differences by size of institution. Small institutions were less likely to have mental health promotion programs in place, and both small and medium campuses rarely reported peer counselling programs or group therapy options (135). Large institutions offered the greatest variety of supports (32).

While most institutions had some form of mental health promotion and outreach program in place, the majority of respondents (campus mental health services staffers and members of administration) felt that these were currently not a good use of their campus resources, and that institutions could benefit from expanding these programs (32). Furthermore, outreach toward special subpopulations within the student community (i.e., LGBTQ students, international students, indigenous students, etc.) were limited, particularly at small institutions (135), nor did counselling services offer a diverse complement (i.e., gender and race diversity) of service providers (32). Counselling sessions were generally limited, and follow-up procedures were uncommon, with complete diagnostic assessments rarely conducted (32). Many institutions did not have policies regarding at risk populations, crisis management, and people who have threatened and/or attempted suicide. Finally, long-term therapy was generally not provided at any Canadian post-secondary institution, favouring only short-term therapy, followed by referrals to external resources.

While these articles shed light on the potential gaps in service provision on Canadian campuses, in multiple studies, students expressed a preference for attempting to manage their mental health on their own through self-help resources, or through reaching out to friends and/or family before seeking help from a mental health professional (118,125). In one study among post-secondary students in the Ukraine, students described seeking help from a mental health professional as a last resort, and doing so only when the problem had become severe enough that they were unable to manage it on their own, or with the help of family and friends (125).

In a study of Canadian post-secondary students help seeking preferences, students identified the following components as being important aspects of campus service provision: cost of treatment, healthcare provider's training and experience, information about where the treatment would take place, and the time of day during which appointments were scheduled (118).

Cunningham (2017) explored students' attitudes towards the use of e-mental health services to see if the gap in service use might be mitigated through an e-solution. Results showed that given no wait times for standard counselling, students would *not* use an e-mental health option, but willingness to use an e-solution increased as wait times for standard counselling increased (126). Montagni et al. (2016) investigated Spanish students' attitudes towards use of the internet to search for mental health related information (136). Nearly 50% reported having looked for mental health information online at least once

in their lifetime, but only 22% reported trusting the information they found. Students identified the top three advantages to using the internet for mental health information and support as: easy, 24-hour accessibility, availability of information, and assurance of anonymity, privacy, and confidentiality. The major disadvantage identified by students was the general unreliability of online information.

Two studies included in this review investigated the specific help seeking attitudes and behaviours of students who experienced suicide ideation. Both studies found that lack of perceived need for care was the most commonly reported reason for not seeking help (123,129). The perception of persistent suicidal thoughts as being a minor issue is of concern given that this subpopulation of students are arguably the most in need of professional mental health care.

Among a sample of college students in the United States at elevated risk for suicide, common barriers to treatment such as stigma and discomfort discussing problems with a mental health professional were mentioned by 20% of students (123). In a study of American college students with a lifetime history of suicide ideation, a smaller proportion sought help from a psychiatrist (38%) or psychologist (33%) compared to seeking help from family (65%) or friends (54%) (129). Almost half (44%) of individuals who experienced suicide ideation since the start of college did not seek treatment for the problem at that time (129).

Programs, Interventions, and Strategies

A total of **56** articles included in this review focused on programs, interventions, and strategies that have been used or recommended to be used at the post-secondary level to reduce student stress and distress and improve mental health and resilience. Most Canadian institutions have a range of programs and supports, including prevention and promotion; however, counselling services are generally limited, follow-up procedures are uncommon, and complete diagnostic assessment using standardized tools is rare (32).

The transitional nature of post-secondary institutions offers a unique opportunity to assist students acquire strengths and skills that can help them manage academic challenges, role transitions, and stressors. Conley, Durlak, Dickson (2013) reviewed 83 universal prevention programs for post-secondary students and found that the most common interventions were cognitive behavioural techniques (34%)

psychoeducational programs (21%), relaxation strategies (16%), meditation techniques (10%), and mindfulness training (8%) (137). Most (75%) of the interventions were skill-oriented, though 69% of these employed the best practice of supervised skills practices. A quarter of the interventions were psychoeducational. Skills-oriented interventions with supervised practice were more effective compared to skills-oriented intervention without supervised practice. Psychoeducational interventions were not as effective, only attaining significant results ten percent of the time. Among the skill-oriented programs containing supervised practice, mindfulness interventions were the most effective followed by cognitive behavioural interventions. Those delivered as a class were more effective than small groups, as were those of longer duration. It is important to note that the quality of the research and the interventions varied from study to study. Nevertheless, this research does support the importance of preventive interventions for post-secondary institutions, with the caveat that interventions should be embedded in systematic evaluation strategies. The following provide examples of some of the more noteworthy approaches that have been used for prevention, promotion, early identification, and treatment.

Structural Frameworks and Approaches

Although the academic literature calls for comprehensive mental health strategies, the majority of the studies reported examined discrete interventions. While these can become part of a comprehensive strategy, little guidance is provided on how to incorporate best-practice approaches into system level or structural change and systematically monitor their effects (138). This section looks at the broad structural frameworks described in the literature. The next reviews discrete programs.

In 2017, De Somma, Jaworska, Heck and MacQueen (2017) reviewed mental health policies in post-secondary institutions in Canada. They surveyed 286 publicly funded post-secondary institutions included in the Association of Universities and Colleges of Canada and Colleges and Institutes Canada websites, of which 274 (96%) completed the survey (139). They noted a paucity of comprehensive mental health policies, particularly policies that included mental health research and evaluation. They recommended a national framework that outlines best practice policies that institutions could adopt. DiPlacito-DeRango (2016) also noted that policies in Canadian post-secondary institutions are underdeveloped and identified this as one of the major barriers to improving student mental health (140). Also noted was the stigma surrounding mental health and minimal opportunities for professional development and training. Assigning responsibility to a specific individual for student mental health policy development was recommended as well as improving training and awareness activities for

students, faculty, and staff. The goal should be to weave mental health and well-being into the fabric of post-secondary institutions at every level (in the classroom, institutionally, and nationally).

The American College Health Association was founded in 1920 to promote college health. The ACHA Health Campus 2020 is an evidence-based framework that contains tools and resources to address the broad health needs of post-secondary students (141). They identify five characteristics of a healthy campus that promote physical and mental health:

1. Creates a comprehensive, strategic framework that unites health issues under a single umbrella and aligns them with the mission and values of institutions of higher education.
2. Requires tracking of data-driven outcomes to monitor progress and to motivate, guide, and focus action.
3. Engages a network of multidisciplinary, multisectoral stakeholders at all levels.
4. Guides local research, program planning, and policy efforts to promote health and prevent disease, and
5. Utilizes population-level interventions, while addressing the social determinants of health.

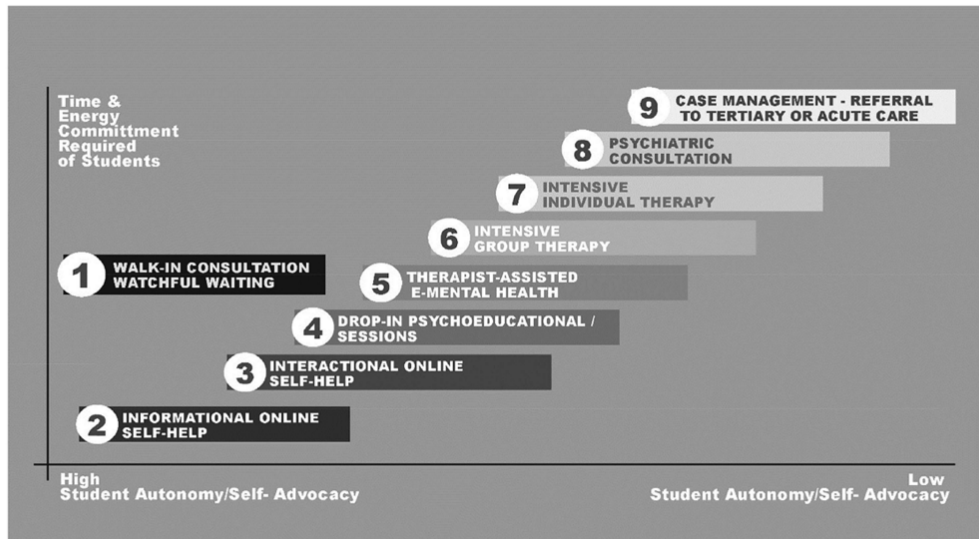
This model recognizes that health is determined by factors at multiple levels, including public policy, community, institutional, interpersonal, and intrapersonal factors. Because of this, interventions are likely to be most effective when they target the campus ecology (including making large scale policy changes) and the entire campus population.

Chung and colleagues (2011) implemented a chronic collaborative care model that required collaboration and coordination between physical and mental health providers on campus to systematically screen all students approaching services for depressive symptoms (142). Eight campus sites participated in this pilot project, though one withdrew before completion. Almost 72,000 students were screened for depression during the life of the project (69% of all eligible students receiving medical care). Of these, 801 met the inclusion criteria for clinical depression and were treated and systematically traced for process and outcome assessment at 4, 8, and 12 weeks. Due to attrition from the university, 755 (94%) of the students were in active treatment at the 8-week period and 695 (86%) were in treatment at the 12-week period. This study is noteworthy because it was multi-campus and used an approach that incorporated standardized screening for depression (a practice that has been

recommended for early identification in adult populations) and proactive outreach to improve help-seeking. It also required shared activities between medical and mental health services. Davidson and Beck (2006) also argue for systematic screening of students in order to promote help-seeking (143). Screening functions as an early warning system that detects at-risk students before their problems become so severe that they jeopardize academic accomplishments.

Stepped care is a relatively new approach to integrating a range of established and emerging mental health interventions into post-secondary environments. Originally developed in the United Kingdom, it has been reimaged and reformatted by researchers in Atlantic Canada based on the understanding that the traditional one-one-one treatment model is not sustainable in the face of increasing needs (144). The model contains nine steps ranging along a continuum of intensity from walk-in consultations and watchful waiting (the least intensive) to case management and referral to an acute or tertiary care facility (the most intensive) (Figure 3). After the initial walk-in, the client and the counsellor make step decisions and develop a collaborative plan. Low intensity services, such as self-care materials and use of interactive on-line resources are first line options, with more intensive interventions being reserved for more serious cases. Stepped care, with its emphasis on rapid access, flexible session length, and reduced emphasis on pre-treatment assessment, involves a major change in the way providers, patients, and trainees think about mental health counselling and services. Where implemented in Atlantic Canada, the number of clients seen, the number of appointments per counsellor, and the attendance rate has increased. This suggests that the Stepped Care approach was associated with more rapid care and increased counselor productivity. Stepped Care is not yet supported by an extensive body of evidence, service access is less restricted and practice-based monitoring guides decision making and ensures that positive outcomes are maximized. The energy and morale of the providers seems to have improved, though a minority still struggle to adapt.

Figure 3. Stepped Care levels in relation to intervention intensity and student autonomy and/or self-advocacy



Source: Cornish et al. 2017, p. 431

Many post-secondary institutions in Canada and elsewhere incorporate a system of disability assessment and accommodations as part of their treatment and management structures. Pardy (2016) provides a legal assessment of the requirement of post-secondary universities to provide accommodations to disabled students under Ontario (and more generally Canadian) law. Specifically, he challenges the common practice of providing extra time on exams and assignments for students with cognitive and mental health difficulties as discriminatory. He notes that, in most cases, exams and assignments are competitions where students' work is compared in order to determine relative grades (145). The legal objective of accommodation is to enable all to compete under the same conditions relevant to the skills that the test is about. Accommodations that require modifications to the rule of play (such as the time to complete an exam), create advantages for students that their competitors do not have. In his assessment, functional limitations in mental abilities cannot, therefore, be a basis for accommodations because testing functional abilities is the essence of the competition. The purpose of an accommodation should be to facilitate participation, not to compensate for a lack of ability that is relevant to the test. Unless all students are given extra time, this accommodation "does not level the field, but tilts it" (145).

An increasing number of Canadian post-secondary institutions are incorporating a fall reading week into their term calendars to improve academic performance and enhance student mental health. Poole and

colleagues (2017) have examined the effects of fall reading week on student stress (146). Though the majority of students reported that this was a positive experience, many reported increased perceived stress after the break and a portion considered the fall break to be a negative experience. The top three stressors before the break were worrying about the future (68%), sitting through a boring class (68%), and having too little sleep (65%). After the break, stressors were more focused on academic demands: having lots of deadlines to meet (69%), having projects due (69%), and having a hard week ahead (67%). This suggests that institutions may want to implement additional interventions to increase the benefits of fall break, such as reducing excessive evaluation density immediately after the break or holding the break later in the fall term. This is thought to be the first study examining the effects of this structural change on student stress.

Simon Fraser University has adapted a framework originally developed for the workplace (Guarding Minds @ Work) to assess the stressors and supports that university students experience (147). Using this tool, they collected data on a convenience sample of 690 students (73% response rate) who were attending health science and business classes. The survey included areas to improve (e.g. my professors promote work-life balance), areas of strength (e.g. as a student I know what I am expected to do), and a number of additional items dealing with university structures and university life (e.g. my professors appreciate my work, I enjoy my university). The most prominent area in need of better support was student work-life balance, reflected in issues of workload management and stress. Further research is needed to explore whether workplace policies and structures that support work-life balance could be adapted to post-secondary settings. Another important theme was the extent to which students felt part of a supportive campus community. These findings suggest that universities should explore ways to create a more caring campus. Improving the sense of community may benefit students' psychosocial health and wellness.

Effects of Discrete Interventions

The following discrete interventions are presented in alphabetical order.

Animal Therapy

A number of studies support the healing and stress reducing potential of therapy dogs and other animals, typically in hospitals, retirement homes, long term care facilities, and most recently, post-

secondary institutions (148–151). For example, the Gerstein Science Information Centre at the University of Toronto implemented a “Paws for Study Break” program in partnership with the St. John Ambulance therapy dog program (148). Over the six visits, 417 students and staff stopped by to pet ‘Bella’. Of the 19% of the students and staff who responded to an evaluation survey, 82% rated the event as excellent and 100% indicated they would attend events in the future. As no systematic evaluation on stress outcomes was conducted, it is not clear whether this program met its primary objective of reducing student stress. However, Delgado and colleagues (2018) noted significant reductions in psychological and physiologic stress indicators in 48 college students who engaged with a therapy dog for 15 minutes during the week of final exams showing that animal therapy can be an effective stress management strategy for college students (149). A much larger qualitatively oriented study of 403 students at three Canadian Universities was conducted by the St. John Ambulance Therapy Dog program (150). Students reported experiencing love and support from the therapy dogs. Although stress reduction was not a goal of the study, many students reported that their time with the dogs had helped reduce their stress both during the exam week and up to three months following.

Comprehensive Programs

While research has demonstrated that multiple factors coalesce to promote student mental health and well-being, there are few examples in the literature of comprehensive or multi-faceted programs. One exception is the “Study Happy” program offered through the academic library at the University of Warwick, UK (152). As part of a wider restructuring process, the library included community engagement as one of its strategic priorities to be achieved through skills development, tackling isolation, creating a stronger sense of belonging, and wellbeing support. Study Happy involved a range of activities that encouraged students to take a break and connect with others. Using Maslow’s hierarchy of needs, the program deliberately aims to address the higher-level needs such as belonging, esteem, and self-actualization. Activities range from a ‘crafternoon’ (offering opportunities to engage in crafts), Chinese New Year celebrations (offering mask painting and Chinese character calligraphy), colouring, ukulele lessons, yoga, body balance and ‘de-stress your desk’ sessions, meditation, post-it-note tips and traps provided by other students, dog petting, the smoothie bike (combining exercise with a smoothie created by the student’s pedal power), and a weekly well-being walk around campus—all of which encourage students to do something different, artistic, and connect with others. While a formal evaluation has not been conducted, this stands as an example of a multi-faceted intervention that is

based on a solid theoretical model where a library has taken a leadership role in creating a caring campus environment.

In Canada, Memorial University has argued for a similar, central role for the library in promoting initiatives and activities that help students de-stress (153). In addition to the traditional role of providing reference and instructional support, librarians argue that libraries now have an essential role to play as part of a broader campus culture that promotes and fosters wellness. Libraries are open on weekends and evenings and students spend a great deal of time there, making them uniquely positioned to promote mental health and wellness. For example, in the Grenfell library of Memorial University, extended study hours are offered (until 2:00 a.m.) along with free coffee, tea, a hot chocolate station, and healthy snacks. In collaboration with wellness services, the libraries also offer meditation, yoga programs, pet therapy, and a range of activities designed to help students relax and de-stress. Though the programs are popular with the students, it is not yet clear how they impact mental health or academic performance.

Counselling and Skills Development

Strategies for increasing student retention by improving mental health and wellness are among the most pressing needs facing universities. A number of studies have examined the effects of various forms of personal counselling (such as psychotherapy or cognitive behavioural therapy) on outcomes such as anxiety, depression, or stress, to good effect in Canada (154), and elsewhere (e.g., 144–148). In Canada, for example, Bilodeau and Meissner (2018) studied the effects of combined academic and personal counselling on student performance and emotional well-being in 289 at-risk university students (203 females and 86 males). At-risk was defined as academic struggles, mental health distress, or both. The program uses graduate students who have completed one year of post-graduate study as counsellors to provide a combination of personal and academic counselling to students. Students access the program through self-referral. The program uses a 12 session model and provides supplemental material such as learning strategies, coping skills, and healthy lifestyle habits. Results showed a significant overall increase in students' grade point averages, academic functioning, and mental health well-being (154). This single service, broad spectrum program may be a viable approach to assisting a variety of vulnerable students in addressing their various needs.

Recognizing the shortfall between mental health needs in post-secondary populations and the availability of services, Brown and Schiraldi (2004) have argued for a public health perspective that will find alternatives to one-on-one interventions provided by highly trained professionals (159). Secondly, they recommend putting more emphasis on primary prevention, recognizing that no mass disorder affecting large numbers of people has ever been controlled or eliminated by attempts to treat each affected individual. Of all of the treatments currently available, they consider that psychotherapy could be most easily adapted to provide the widest range of public health application. It can be given preventatively, does not require medical training, and versions of it can be delivered by nonclinical professionals. They tested a classroom based cognitive therapy approach that educates students to identify and eliminate negative and destructive thought patterns and teaches behaviours that help them stay in good physical health and cope with potential stressors. They provided training in the context of a full semester course (30 sessions) and measured subclinical symptoms of anxiety and depression. Participants learned relaxation and cognitive behavioural skills, contracted for 20 minutes of aerobic exercise most days, three nutritious meals daily, and sufficient rest. A comparison group received a stress management course. Students in the mental health skills course did significantly better than those in the stress management course. These results are promising and point to the need to further research the classroom as a setting for mental health promotion and prevention activities.

Conley, Travers, and Bryant (2013) examined the effects of a brief wellness seminar for first-year college students (160). Although the study was small (N=22 treatment and N=29 controls), positive results were reported. The intervention involved weekly meetings for 50 minutes over the fall and spring semesters led by a clinical psychologist. Topics covered related to a variety of aspects of psychosocial adjustment, emotional awareness, experience, balance, mindfulness, effective communication, life enrichment, positive qualities, resilience, strengths, stress management, relaxation etc. Students met in small groups to discuss common issues and they practiced the skills outside of class. The control seminar covered topics related to global issues. Intervention participants showed gains in psychosocial adjustment and stress management at the end of the academic year.

Mindfulness and Related Interventions

In an essay about mental health in post-secondary institutions, Kelly (2017) considers that students often indicate they would like support in creating a better work-life balance, stress management, relaxation techniques and coping skills, more so than programs to address symptoms of stress, anxiety,

and depression (161). This suggests that students may not realize they are experiencing a mental health problem, instead considering their distress a normal consequence of academic and life stressors. If true, such a non-pathologizing perspective may be helpful in creating space for non-medical interventions that promote positive emotions and are strength-based, rather than disability based. Mindfulness programs are gaining in popularity and may offer an effective stress management tool for students to promote their mental health (162).

Mindfulness is defined as the awareness that emerges by purposefully paying nonjudgmental attention to present experiences (in the moment) which improves mind-body awareness and cultivates thinking and reflection (metacognition). It may include meditation, psychoeducation, instructional material, elements of cognitive behavioural theory, diaphragmatic breathing and, in some cases yoga (163). Use of mindfulness programs has grown substantially in the fields of psychology, education, and medicine. The cultivation of mindfulness-based skills is thought to reduce emotional distress and foster psychological well-being. The cognitive behavioural aspects of mindfulness allow people to appraise stressors and recognize their patterns of avoidance and unhealthy coping strategies. A number of studies have shown that mindfulness-based programs can have positive effects on student stress and distress (158,163–166).

However, as Bergen-Cico, Possemato, and Cheon (2013) note, while the benefits of a full-length mindfulness intervention (based on a standardized program) have demonstrated effects, the time commitment is substantial (165). The standard curriculum involves 8 weeks for 2.5 hours per session and one 6-hour day-long retreat, for a total of 26 contact hours; well beyond what many students can manage in their overly busy schedules. They studied the effectiveness of a briefer (5-week, 10 hour) intervention adapted from the standard curriculum in terms of its ability to improve self-compassion, mindfulness skills, and trait anxiety among 119 nonclinical college student volunteers. Students experienced significant improvements in self-compassion and mindfulness skills, but no significant difference was noted in anxiety. Results suggest that students were able to learn a number of mindfulness skills that may promote resiliency but were unable to reduce distress using the shortened version. To improve psychological distress, longer programs still may be needed. Dvorakova and colleagues (2017) studied an 8 session Learning to BREATHE (L2B) mindfulness program in 109 first year freshmen. Results of this clinical trial indicated that students experienced a significant increase in life satisfaction, and a decrease in depression and anxiety (167). While there is still a need for further

research, this study highlighted the potential of mindfulness programs to improve the transition from high school to college.

Dispositional mindfulness refers to the amount of mindfulness a person practices in their daily activities. More dispositional mindfulness has been linked to improved health benefits, lower negative mood states, and more satisfying relationships. A small study conducted by Bodenlos and colleagues involving 310 volunteers from a private college in the United States showed that the observation facet of mindfulness was negatively associated with physical health (163). Acting awareness and nonjudging facets were related to improved emotional well-being, and nonjudging was significantly related to social health. Though mindfulness has much potential to benefit both the emotional and physical health of college students, this study highlights the importance of recognizing that specific facets of mindfulness may exert negative influences on certain aspects of health. Thus, future research is needed to understand how to tailor mindfulness interventions to student needs and dispositions.

As a further caveat to mindfulness studies showing positive results, Burrows (2017) undertook a qualitative investigation of a mindfulness intervention that showed some negative results (168). In this investigation mindfulness meditation was not necessarily a positive experience for vulnerable students—those with a history of trauma, addictions, mental health difficulties, or self-harm. They experienced dissociative symptoms and depersonalization. As the majority of mindfulness studies have been completed on adult populations and focus on positive outcomes, little is known about what constitutes “age-appropriate” mindfulness or the factors that may place students at risk for a negative reaction, the effects of which may be more commonly experienced than realized. The paper offers a number of recommendations to help safeguard mindfulness for teachers and students including recommendations pertaining to teacher knowledge and skill, vulnerability of the student cohort, and adjusting the intensity of activities. Large, good-quality randomized trials are needed to determine if mindfulness programs meet their objectives without adverse effects (169). These results are consistent with other studies of mindfulness in student populations that have shown mixed results (170).

Dowd and colleagues (2007) compared three nursing interventions that could be used to help students manage stress: the healing touch, coaching, and a combination of the two (171). The healing touch is described as a holistic, energy-based intervention that helps students gain a sense of control and relaxation (through activities such as mind clearing and light touches on or near the body to balance

energy fields). Coaching involves nurses learning what the illness means to the individual and what adaptive demands are required. Coaching is like counselling except that it is time limited and symptom oriented and promotes patients' goal setting. These interventions were tested in randomized controlled trial against a non-intervention (waitlist) group. A total of 52 (out of 58) students completed the study. The Healing Touch intervention was better for short term outcomes, whereas the coaching had better carryover effects. Findings from the combined group were inconsistent. As this was a small study with some inconsistent results, more research is needed.

Online Programs and Social Media

Literature reviews have found that internet based cognitive behavioural programs improve mental health outcomes, including reducing symptoms of depression, anxiety, and stress (172,173). Such programs may be used in the context of a stages or stepped care model with persons who have milder symptoms who are first referred to internet-based programs. Internet based programs can also provide services to a larger number of clients and respond to the needs of individuals who may not otherwise seek care. Post-secondary students are considered to be a group that would benefit from on-line self-help interventions. The "Feeling Better" program was designed to address symptoms of mild to moderate emotional distress in post-secondary students. It is an internet-based cognitive behavioural program that interactively teaches users about strategies to manage symptoms of depression, anxiety and stress through education, personalized reflection, and regular email and telephone communication (172). According to the authors, this is the first internet-based self-help program specifically designed to reduce symptoms of stress, depression, and anxiety in post-secondary students. The usability of the program has been tested with a small number of students (5 males and 5 females) who participated over the course of three cycles of improvement, and a small number of psychology staff (N=13). The program is now considered to be user-friendly and ready for more rigorous evaluation.

Levin et al. (2015) tested an online tool that used acceptance and commitment therapy. ACT therapy is a cognitive behavioural therapy that uses a combination of acceptance, mindfulness, values and commitment treatment to reduce mental distress. In this pilot, less than half (44%) of the students completed the evaluation surveys and only 38% of the students completed all three lessons (174). Satisfaction with the program for the students that remained was good and they rated the program highly usable; however it is of concern that a large number of students may have voted with their feet. Counsellors also rated the program and found it helpful and were highly satisfied. Students improved on

virtually all of the outcome measures used (depression, anxiety, stress, psychological inflexibility, mindful acting with awareness, “mindful non-judgementalness”, education success, and ACT knowledge). The only non-significant measures were for satisfaction with life, education values success, and mindful observing. As this was a small study (30 counsellors and 82 students), with considerable missing data and a high dropout rate, results provide only preliminary support for the feasibility and acceptability of a web-based adjunctive guided self-help program.

Melnyk et al. (2015) assessed the feasibility and preliminary effects of a 7-session online cognitive-behavioural skill-building intervention entitled Creating Opportunities for Personal Empowerment (COPE) against a control group. One hundred and twenty-one college freshmen were randomized to the study groups. Half of the students considered the program was helpful (e.g. in conferring stress reduction skills) and the grade point average was higher for the COPE students (175). However, results showed that the COPE program was only helpful for that sub-group of students who had elevated levels of anxiety at the outset. General results on anxiety and depression measures were not statistically different.

Social media use is pervasive, yet there is a lack of research about the effects of exposure to health messages via social media. This is an important gap in light of an increasing number of mental health related platforms. According to Johnson and colleagues (2017) investigation of the effects of using social media for the purpose of disseminating mental health information is a critical area of scientific inquiry for those who want to reduce the stigma associated with mental health challenges and prevent suicide in post-secondary populations (176). They compared the effects of testimonial information (vs. none) on Twitter and Facebook to explore the impact of mental health messages in 257 undergraduate student volunteers. Results showed that exposure to social media messages that featured mental health information embedded with a testimonial had poorer results (e.g.: more critical thoughts, less systematic message processing, and less cognitive elaboration). These findings indicate that the integration of health testimonials into social media may provoke psychological resistance to mental health information, reduce the impact of those messages, and increase stigma.

Peer Health Education

Peer counselling has been shown to be effective in addressing mental distress in college students and many post-secondary institutions have developed and implemented peer counseling and peer-to-peer

interventions. Peer counselling services have the advantage of being cost-effective and generalizable across cultural groups. For example, Ekore et al. (2016) implemented a peer counselling training program in Nigeria (177), and Li et al. (2009) describe how peer education was used in a Chinese university (178). Peer educators have an advantage of being similar to their clients, which can facilitate communication. Also, they are thought to be a cost-effective method of offering services in an overtaxed system. Peer education is based on the premise that participatory dialogue among equals encourages behavioural change.

Physical Activity

Physical activity is described as a promising approach to improving mental health but research has been inconclusive as to whether physical activity can prevent and treat poor mental health. Consistent relationships between physical activity and mental health have been consistently documented in unhealthy populations, but it is not clear whether physical activity promotes mental health in mentally healthy populations. Secondly, most of the existing research has been conducted in older populations, rather than post-secondary student populations. Adams, Moore, and Dye (2007) examined the relationship between physical activity and mental health from the National College Health Assessment (n=22,073). Weekly vigorous/moderate exercise reduced depression. Weekly strength training was associated with a reduction in depression, anxiety, and suicidal ideation, though more longitudinal research was recommended (179). However, because exercise is clearly associated with physical health benefits, is inexpensive, and has no pharmacological side effects, its application to improving the mental health of student populations warrants further exploration.

Yoga has also been identified as a technique to reduce stress though rarely studied in post-secondary students. Nevertheless, the physical postures in yoga are thought to reduce physical stress in the body and, when applied appropriately, create a sense of calm. Beck, Seeman, Verticchio and Rice (2015) studied 44 graduate students; 29 of which participated in a 6-week yoga class in the first half of the semester (when stress levels were expected to be high) and the remainder participating in yoga during the second half of the semester. Participation in the 6-week yoga, whether at the beginning or the second half of the semester was associated with reduced stress, both perceived stress and biological markers of stress, indicating that this may be a useful intervention for stress management among post-secondary students (180).

Physical Environment

Most post-secondary institutions have recognized the importance of environmental factors in shaping student mental health such as access to student support services, campus and community safety, and social inclusivity. According to Windhorst and Williams (2015), most have overlooked the importance of the natural environment in promoting mental wellness (181). They conducted a qualitative study to examine the types of natural environments university students consider beneficial to their mental health. Thematic analysis of photographs collected by 12 participants showed a wide variety of natural elements (soil, rocks, leaves, plants, animals, and water). The visual, audio, and tactile stimulation of the various natural elements were deemed beneficial. These places offered separation and solitude away from the stressors they encountered in their daily lives. They promoted self-reflection and relaxation and invoked pleasant memories. Elsewhere Windhorst and Williams (2016) argue that post-secondary institutions should find ways to foster student-nature relationships on their campuses and in their surrounding communities (182). These could include raising awareness of local natural environments, creating natural settings indoors, and using nature-based therapies.

Sleep Education

In recent years, the importance of good sleep hygiene for all ages has come to the forefront on wellness literature and popular health related literature (183). Inadequate sleep has been linked to a host of problems including accidents, decreased cognitive functioning, decreased emotional functioning, and poor mental health. Students with the highest level of academic performance get more sleep than their poorer performing peers. Orzech and colleagues (2011) conducted a sleep education campaign consisting of posters, newspaper advertisements and newsletters that featured sleep related topics. Results demonstrated that it is possible to teach students how to effectively manage sleep. Furthermore, sleep interventions may be a gateway for broader discussions of mental health and wellness.

Special Populations

Special populations include those from marginalized and racialized groups who may distrust mental health professionals and experience cultural barriers to accessing care. One consistent shortcoming of traditional mental health services is that they are inadequate to meet the needs of these special groups (184). In addition to the special populations that are typically identified based on indigenous status,

culture, LGBTQ+ etc., two additional populations were discussed in the literature that are worthy of note.

Online students: Universities are a patchwork of special populations and sub-groups, not all of which have full access to health services or have services appropriately tailored to meet their special needs. With the growth of online courses, large numbers of students may never set foot on campus yet may experience mental health challenges that could impact their academic achievement. Armstrong and Burcin (2016) conducted a small (n=63) exploratory study of college health professionals in the United States about the types of health strategies they used to engage online students (141). Mental health and stress management information or a website were the most common types of services offered but they noted that health educators are missing the mark in achieving healthy campus goals for the virtual on-line student.

Males: In much of the current post-secondary research, females significantly outnumber males and certain vulnerable groups are excluded. Davis, Shen-Miller, and Isacco (2010) consider that college males are in the midst of a health crisis (185). They suicide 4-12 times more often than females, engage in more risky and violent sexual behaviour, are more prone to misuse drugs and alcohol, have more referrals to the campus conduct office, and commit more sexual assaults and campus shootings. Yet, they are resistant to help-seeking. They underscore the need for culturally specific interventions for men and describe the creation of a Men's Centre at the University of Oregon to better address their needs and provide acceptable ways for men to learn about health and wellness. A key organizing theme pertains to "possible masculinity" in which they focus on men's aspirations and future goals for their identities and behaviours based on what men need to become healthy, responsible, and nurturing in their families and communities.

Suicide Prevention

According to King et al. (2015), approximately 6% of undergraduate students and 4% of graduate students report seriously considering suicide, and 1% attempt in any given year (186). More than half have not received professional help. Also, only 20% of students who died by suicide received help from the school wellness centre. The American Foundation for Suicide Prevention has developed and disseminated a college screening program to identify students at risk and increase their readiness to

accept treatment. Students are invited by email to participate in a web-based screening program. Trained counsellors review student responses and post a confidential personalised assessment on the website which students can retrieve with usernames and passwords. Students with high risk scores are encouraged to contact the counsellor for in-person evaluation. A randomized trial demonstrated that, at two months, students who received the online screening were significantly more likely to report being ready to talk to someone about their difficulty and seeing a mental health professional. They were also more likely to have received mental health treatment. While more research needs to be done, these findings suggest that offering students personalized feedback and the option of online counselling has a positive impact on their readiness to seek help.

Washburn and Mandrusiak (2010) describe how the University of British Columbia implemented a suicide prevention framework originally created by the Jed Foundation in the United States (187). The key elements of the framework span the continuum of services and supports: (1) social marketing to raise community awareness (2) life skills development to increase students' capacity to effectively manage demands, (3) social network promotion to increase students' sense of meaningful connection, (4) means restriction to limit access to potentially lethal means, (5) educational programs to provide training in identifying and reaching out to at-risk students, (6) questionnaire/screening programs to identify potentially high risk students, (7) mental health services to provide intervention, and (8) crisis management to enable a comprehensive response to suicide attempts and high risk behaviour. These domains have been well established in the field of suicide prevention and are consistent with national strategies for suicide prevention in Canada that call for broad based (in this case campus wide) suicide prevention efforts.

With increasing numbers of post-secondary students experiencing mental health problems, institutions in the United States have been evaluating their legal liabilities and duties in the case of a suicide. One step that some institutions have taken is the mandatory leave policy which requires a student who has attempted suicide or self-harm to take a leave of absence from residence for at least one semester and be evaluated by an internally appointed psychologist before returning. However, this has been questioned as discriminatory under the Americans With Disabilities Act. As such, mandatory leave policies have been deemed to be an inadequate solution to the problem of suicidality in post-secondary institutions (188).

Veeser and Blakemore (2006) describe the development and implementation of a student assistance program in a small US college, modelled after a traditional employee assistance program, to provide 24/7 coverage with immediate access to a trained health professional (189). Because this is a confidential service that is provided by an organization external to the university, students may feel that there is less possibility of a mental health concern being documented on their university file. This may promote early help seeking. They also considered that the legal risks to the university would be less because they are now able to offer services round the clock, seven days a week.

Grey Literature and Institutional Reports

A search of the grey literature uncovered **12** documents produced by national bodies that examine post-secondary student mental health. Eleven policy documents from provincial bodies were identified. The bulk were from Ontario (n=8). Two documents were from Alberta and one was from the Atlantic provinces. These documents are described broadly, in rough chronological order (first national and then provincial policy documents) to assist the reader in understanding the evolution of secondary student mental health discourse. The brief annotations offered are designed to help members of the Technical and Executive Committees highlight documents that may be particularly helpful and warrant a more detailed review. Full documents will be made available.

National Policy Documents

In 2005, the Association of Canadian Community Colleges conducted an environmental scan focusing on young adults' physical and psychological health and learning (190). They identified gaps in secondary students' knowledge of mental health services provided in post-secondary institutions and gaps in institutional knowledge on how to best address students' mental health challenges. They cited a 2004 campus survey showing the high prevalence of substance (specifically alcohol) misuse on campuses and noted the need for more health promotion activities pertaining to substances. Understanding the impact of community belonging and integration on the development of negative health behaviours, including substance misuse was identified as a priority area for action. Recognizing the high incidence of suicide in indigenous youth, they also identified a need for post-secondary institutions to develop specific health services for these youth and increased programming pertaining to health literacy. Finally, they noted the paucity of information pertaining to young adult immigrants and their specific health challenges in post-secondary environments.

In 2008, the Young Adults Working Group of the Canadian Council on Learning's Health and Learning Knowledge Centre conducted a study to examine institutional capacity to deliver mental health services in post-secondary institutions and the role of student services (191). Eleven student focus groups, twenty phone surveys of student service administrators, and email surveys of 900 members of the Canadian Association of College and University Student Services members (3.5% response rate) were conducted from across Canada. Students made the important link between their mental health and academic performance and identified a holistic perspective on their health including a broad range of factors including lifestyle, access to services, financial pressures, housing, and safety, to name a few. Conversely, student services administrators tended to focus on discrete mental health challenges such as depression and identified a lack of human, financial, and physical (space) resources as major barriers to improving student mental health.

In 2009, the Association of Canadian Community Colleges conducted a Policy Roundtable of the Young Adults Working Group which works under the Canadian Council on Learning (192). Participants were asked to put forth recommendations for the creation of healthy campuses and students using five action strategies from a particular campus population health promotion model. From these, participants identified short-term actions that could be accomplished within a year to promote greater physical and psychological health. To strengthen community action (the first of five action strategies in the model), a series of outreach and partnership activities were proposed with local stakeholders and health authorities. Building healthy public policies included reviewing campus policies to identify gaps and create new policies to promote student health and wellness. Creating supportive environments included collecting survey data to understand campus health, improve campus programs focusing on curbing the transmission of infectious diseases such as hand-washing or vaccinations. Developing personal skills involved online training related to stress and alcohol, wellness workshops, and health literacy training. Finally, reorienting health services involved social marketing approaches for staff, faculty, and students to improve knowledge of available resources.

In 2012, the Mental Health Commission of Canada published their national strategic plan titled, *Changing Directions, Changing Lives: The Mental Health Strategy for Canada* (193). Improving comprehensive post-secondary mental health initiatives that promote positive mental health and prevention was identified as one priority area for action. Their vision was to increase the capacity of

families, caregivers, schools, and post-secondary institutions to promote the mental health of children and youth to prevent mental illnesses and suicide; and intervene early when problems first emerge. Subsequently (in 2017), the Mental Health Commission of Canada conducted the first Canadian consensus conference on the mental health of emerging adults. Four broad policy themes formed the basis for discussion which resulted in eleven foundational principles underlying a responsive and functional health system for this target population. Strengthening opportunities in the educational system for children, youth, and emerging adults was one of the principles offered to foster resilience and mental well-being in children and youth. No specific recommendations for post-secondary institutions were provided.

In 2013, the Canadian Association of College and University Student Services and the Canadian Mental Health Association released a post-secondary student mental health guide to act as a framework for addressing student mental health in post-secondary institutions (194). *The Campus Assessment and Planning Inventory* was released as a supplementary document to this framework to provide a self-assessment guide for institutions to provide a comprehensive mental health strategy (195). Assessment questions addressed seven broad areas identified in the report: 1) institutional structure, organization, planning, and policy, 2) a supportive, inclusive campus climate and environment, (3) mental health awareness, 4) community capacity to respond to early indicators of student concern, 5) self-management competencies and coping skills, 6), accessible mental health services, and 7) crisis management. Institutional assessment questions contained in the guide are comprehensive and range from assessing the extent to which campus policies support student mental health and well-being, to training opportunities for faculty and staff on campus-specific mental health issues, to coordinated supports and resources for students with serious and ongoing mental health concerns. This type of self-assessment guide could be a useful tool within the context of implementing the Standard; though a technical review in light of the Standard's goals and objectives would be required. It has the advantage of being 'grown-in-Canada' with considerable input and buy-in from key stakeholders.

In 2014, a document exploring mental health training in 13 universities and colleges in Canada (as of July 2013) identified seven training programs that were in used to promote mental health and wellness and identify students in need (196). Three of the programs (used by 11 institutions) addressed suicide prevention and intervention skills, making this the leading area of intervention. Two programs, used by 9 institutions addressed mental health awareness, and a number of miscellaneous interventions

addressed internal training for staff, faculty, and students. Programs that were externally sourced (e.g. Mental Health First Aid, MentalHealthEduc.com, safeTalk, ASIST) tended to have been previously evaluated for their effectiveness, offered robust evidence-based content, and were recognized as legitimate certification and training programs within the sector. Schools also opted to develop programs internally, often led by health and wellness staff. Internal programs have the benefit of addressing unique needs but do not have robust evaluations or dedicated staff and trained facilitators to lead this work. Thus, there is a need for consistent standardized evaluations across internal training programs as well as dedicated resources to design and deliver these interventions.

In 2014, *The Roadmap for Federal Action on Student Mental Health* was published by the Canadian Alliance of Student Associations identified four areas where the federal government could improve its participation in student mental health initiatives (197). First, increased participation between government agencies, health care providers, private organizations to establish a national strategy was recommended. Secondly, stigma reduction was identified as an important step in increasing understanding of mental health. Third, the federal government should take initiative to collect and organize a national database using standard measurement tools to allow comparison of mental health problems over time. Fourth, increased funding, both federally and to post-secondary institutions was recommended.

The National College Health Assessment Survey is a national research survey organized by the American College Health Association to collect data about their students' habits, behaviours, and perceptions on the most prevalent health topics. Participating Colleges and Universities in Canada may have access to their own data, as well as request the entire dataset. Currently it is the only national database that could be used to monitor changes in students' mental health and stress. Executive summaries of the 2013 and the 2016 data (including data tables for the Canadian institutions) are available and many of the results have been presented elsewhere in this report. This involves 34,039 2013 surveys from 32 post-secondary institutions (198) and 43,780 surveys from 41 post-secondary institutions in the 2016 iteration (1). However, because it is developed by a large consortium of Canadian and US institutions, and covers a wide range of health topics, (e.g. alcohol, tobacco and other drug use; sexual health; weight, nutrition, and exercise; mental health; and personal safety and violence), it is less helpful in fully understanding mental health and mental distress in Canadian post-secondary students. Also, the response rate is low (about 20%). The mental health component (excluding substance misuse) measures

distress using a standardized scale tapping feelings of depression, anxiety, and suicidality; receipt of a clinical diagnosis or treatment for a range of disorders; receipt of psychological counselling or mental health services from a therapist, psychiatrist, other medical provider, or religious leader; receipt of services from the university (now or intended in the future); level of stress experienced in the last 12 months; and whether selected mental disorders (e.g. alcohol use, anxiety, depression, drug use, eating disorder, gambling, learning disability, or stress) have impeded academic performance. Items that may be important for a more comprehensive evaluation of student mental health such as positive mental health, resilience, campus culture, and sense of belonging are not included.

In 2018 the Canadian Alliance of Student Associations also addressed the Federal government's involvement with post-secondary mental health (199). They noted that while the Federal Government placed over \$12 billion dollars into post-secondary education, mental health had been viewed as a provincial concern. They also made a series of broad recommendations. The first pertains to academic accommodations and includes creating a national working group to study best practice accommodations on campuses. The second pertains to establishing funding to reduce stigma, improve mental health literacy, and increase awareness of support services. Included in this recommendation is the development of a national collection of data to support evidence-based solutions. Finally, they discuss financial accessibility and recommend creating better mechanisms to support students who need funds to cover assessments and documentation related to mental health accommodations. These might include enhanced loan repayment options and increasing loan limits for students who require longer period of study to achieve their educational goals.

Provincial Policy Documents

In 2010, the Council of Ontario Universities summarized key issues pertaining to student mental health (including substance misuse) and made a number of recommendations (200). These included early identification and intervention, provision of a seamless system of comprehensive and population-specific services, strengthening the mental health and addictions workforces, and reducing stigma. Actions to support implementation of these recommendations included establishing student-at-risk committees, developing clear guidelines for accommodation and tracking of these, implementation of culturally relevant assessment tools, creation of formal partnerships with community mental health care services, increased funding for multi-disciplinary care on campus, and health promotion and awareness campaigns targeting both faculty and students.

In 2012, the Ontario Undergraduate Students Alliance submitted a report to the Ontario Government recommending improved student mental health and wellbeing strategies for post-secondary institutions (201). The report highlighted a number of priority areas and recommendations for action. With respect to student ancillary fees, it recommended that the Provincial government reduce the use of ancillary fees as a primary funding source for campus health services; instead adopting a cost-sharing approach involving universities, the government, and students. With respect to physician compensation and off-campus clinics, the report recommended looking for an alternative to the fee-for-service model, such as enrolling all students into a family health team, providing physicians with an annual salary, and increase mobility of access to health services. With respect to mental health, the report recommended that the Government and institutions prioritize front-line mental health supports with an appropriate funding envelope, and system-wide initiatives to enhance students' mental health. Reducing stigmatization in the campus community was a third priority area. It was recommended that campus counselling centres promote anti-stigma initiatives aimed at improving help-seeking behaviours, and mental health awareness and referral options be part of training for all faculty and staff. Finally, with respect to access to mental health services, the report recommended that the Government should collaborate with institutions to provide training initiatives for specialized groups (Indigenous students, LGBTQ, and racialized students).

In 2012, a coalition of organizations (Colleges Ontario, Council of Ontario Universities, College Student Alliance and the Ontario Undergraduate Student Alliance) sponsored a conference focusing on the mental health of Ontario post-secondary students (202). Attendees heard about the student experience, how to build a healthy workplace and develop strong leadership for mental health strategies, proactive approaches to health and wellness, the importance of eliminating stigma and removing barriers to care, creating communities of practice, and how to lead change. Closing remarks focused on the importance of 'humanizing' mental illnesses, creating an online resource of best practices of institutions, and involving government commitment to post-secondary mental health strategies.

In 2012, an analysis of counselling services in 24 Ontario colleges was released which developed a comprehensive picture of the counselling services available in Ontario colleges, a description of the various models of counselling delivery, including the strengths and weaknesses of each model, and guidelines for service delivery and ethical practices (203). Cognitive behaviour therapy and crisis

intervention were the approaches most often used by counsellors. The majority of interventions were delivered to individuals face-to-face although just over half used phone counselling at times. Online counselling and group counselling were used much less frequently. All colleges reported difficulties in accessing community resources, but this was more pronounced for medium and large colleges (those with over 5,000 students). Counsellors identified a number of best practices such as: prompt access to services through walk-in and triaging, close collaboration with peers and regular team meetings, proactive approaches (such marketing), student-focused approaches, high quality counselling, workshop delivery methods, initiatives for special needs populations, development of protocols, electronic note-taking, online appointments, and early alert system implementation.

In 2015, the Alberta Post-Secondary Mental Health and Addiction Framework was released. The framework provides a five-step conceptual model to create systemic change to: 1) create a safe and supportive environment where students can pursue their academic goals, 2) create a comprehensive approach to improve campus policies and services, 3) create an implementation plan including a monitoring plan to demonstrate the institution's progress toward improved student mental health, 4), an evaluation plan to assess the impact of actions (including the development of measurement tools), and 5), implementation of a continuous quality improvement cycle.

In 2015, the White Paper on Post-secondary Student Mental Health was released by the Coordinating Committee for Vice-President Students of Colleges Ontario to help colleges develop healthy campus models through the identification of current issues in student mental health (204). They reported an increased demand for mental health services that was outstripping current capacities, increased complexity of need, the lack of a mandated scope of practice on most campuses, policy gaps regarding mental health delivery, lack of Canadian data on student mental health, unequal distribution of resources, particularly in remote or French-speaking communities, the need for a mechanism to help students make the transition to post-secondary life, and the need for community and government partnerships. Recommendations included wide ranging partnerships and collaborations between governments, colleges, community agencies, and other stakeholders; a clear vision promoting healthy campuses with mechanisms focusing on resiliency, transition programming, prevention and early warning systems for students in distress; a comprehensive policy review to determine if they support the mental health of students; enhanced data collection and analysis both institutionally and

systematically to support decision making, student advocacy; and a new funding model to be developed in tandem with college and university partners.

In 2017, Alberta's Minister of Advanced Education Advisory Panel released twelve recommendations to create a student-centred, comprehensive, systemic approach to address the key determinants of health to promote mentally healthy post-secondary environments (205). Several of the recommendations involved a review of policies and practices, including financial assistance policies for students who are unwell and cannot make debt payments during recovery. Expansion of services, such as crisis and referral hotlines tailored to post-secondary students was advocated. Enhanced funding for mental health in post-secondary institutions was also recommended. The goals were to create mentally healthy environments for students, improve awareness and literacy of staff, promote reconciliation with Indigenous peoples, improve access to mental health services, and promote student resilience.

In 2017, the Council of Ontario Universities summarized mental health and wellbeing initiatives in 20 Ontario universities according to outreach initiatives, counselling and specialized services, community partnerships, governance and policy, training and professional development, and knowledge mobilization (206). Outreach initiatives were most commonly reported (n=242 activities), followed by training and professional development initiatives (n=84). All universities indicated they had community partnerships (n=52). All but two universities identified knowledge mobilization activities (n=52) and all but one indicated they had governance and policy initiatives in support of student mental health (n=43). All universities had services on campus and several indicated they had peer-support programs, programs for specialized groups (such as Indigenous or international students), and 24/7 access to care.

In 2017, the College Student Alliance, Ontario Undergraduate Student Alliances, Colleges Ontario, and the Council of Ontario Universities identified three priority areas for taking action on student mental health (207). The first was to adopt a whole community approach with defined roles for government institutions, student associations, healthcare providers, and community partners. Recommended actions addressing this priority area included updating Ontario's Mental Health and Addictions Strategy to recognize post-secondary students as a target population with the mandate of provincial services, clear definitions of roles for health and community agencies for post-secondary mental health, ensuring students have the same level of health care services on campus as they would in their home community and post-secondary mental health strategies involving collaboration with community partners. The

second priority area was to provide universal access to cultural and gender sensitive mental health services for all students. Actions included provision of services to students not currently covered under OHIP, identification of off-campus professionals that could treat students without restrictions, online referral systems for community mental health services, expanded talk lines and online text messaging options, and peer-to-peer support counselling that would be Provincially funded. The final priority area was to include prevention and harm reduction as important elements of mental health practice. Actions included partnerships with a range of stakeholders, provincial funding for mental health strategy research, awareness campaigns with student leaders and post-secondary institutional support, development of resiliency training which would be mandated for K-12 students, an early warning system for all levels of education, establishment of common indicators, and examination of the effectiveness of current initiatives by mental health experts.

In 2017, the Ontario University and College Health Association examined notable student mental health strategy reports and summarized their main findings to assist with the development of a comprehensive provincial plan for student mental health (208). They identified the importance of collaborating with regional mental health and addictions strategies in partnership with post-secondary institutions and emphasised the importance of placing mental health and addictions centres near post-secondary campuses.

Documents from Multi-university Consortia and/or Partnerships

The Atlantic Universities have outlined their key priority areas and long-term institutional goals (209). These included making changes to institutional structures to integrate mental health and well-being into core mandates of post-secondary institutions, applying a healthy campus perspective to insure that initiatives were inclusive and sustainable, insuring that the campus community is responsive to early indicators of change in the mental health of post-secondary students, tackling campus interventions with a strength-based approach, providing highly accessible mental health supports and services, including proactive crisis management, and partnering with regional health programs to engage in action strategies. Actions associated with these priorities included allocating appropriate funding, staff and faculty awareness training, policy review and upgrade, and increased service capacity using comprehensive, stepped models of care.

The Ontario College of Art and Design in collaboration with Ryerson University (2014) conducted a policy scan regarding current trends, challenges, key issues and best practices in Canadian and UK universities (210). Twenty-four Canadian universities were reviewed by searching for their online policies. The majority of Canadian documents retrieved concerned disability and accommodation policies. However, accommodation policies were described as limited and unlikely to promote inclusivity in learning. Policy gaps with respect to students who might benefit from a temporary mental health leave were noted with the recommendation that institutions should try to reduce barriers to temporary leaves and returns to study. Other recommendations included increasing sensitivity to mental health issues by promoting connections toward counselling and health services, clarifying the current policy framework with respect to protection of student health information in the context of concerned staff or faculty, and using broad campus policies, such as anti-discrimination policies, financial and health security, and freedom from violence, to support student mental health.

In 2015, St. Lawrence College and Queen's University highlighted fourteen priority areas with respect to accommodating mental health disabilities that needed review and revision (211). Recommendations addressed improving clarity and access to accommodation policies with a clear appeal process and mental health training for faculty and staff. For example, it was recommended that accommodations be based on functional limitations and that they should be able to be made on the basis of the student's identification of needs while waiting for a formal assessment. This would reduce students' exclusion from educational activities while waiting for reports. Faculty and staff should be aware of all policies pertaining to disabilities and accommodations and there should be mental health training for faculty and staff regarding mental health awareness and interacting with distressed students.

Documents from Individual Post-secondary Institutions

This information was identified from a systematic search of university websites. A total of **69** post-secondary institutional websites were reviewed, with official reports or campus mental health strategies located among **32** (46%). Documents are presented in alphabetical order. Table C-1 (Appendix C) shows the reports successfully located from post-secondary institutions' websites. Those that were included in the review had posted specific documents pertaining to student mental health. Otherwise, all had postings describing available student wellness services. What is not represented are the CEGEP's (publicly and privately funded pre-university and technical colleges in Quebec), adult education centres, religious schools, and agricultural colleges. We identified 32 post-secondary organizations that had

posted documents pertaining to student mental health and wellness (slightly more universities than colleges). In some cases, full strategic documents were identified. In others, only brief statements or web postings were found. In still others, our search did not result in any web documents pertaining to student mental health or wellness. They may not exist, they may not have been posted on the web, or they may have been posted but not accessible using our general search terms. The following section summarizes these findings. More detailed data about recommended actions are available from the specific reports, all of which will be made available.

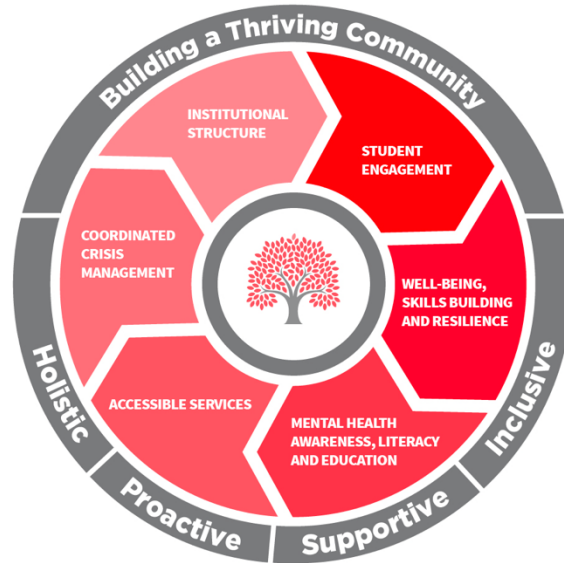
Brock University (St. Catharines): In 2012, Brock University released its campus mental health strategy in recognition of the high prevalence of mental health issues faced by students (as a result of participating in the National College Health Assessment Survey) and the service gaps experienced (212). Six key areas were identified as making up the campus's mental health strategy, (1) fostering a healthy living, working, and learning environment, (2) promoting social connectedness and resilience, (3) increasing help-seeking behaviour by community members, (4) identifying individuals in need of support and/or care, (5) providing medical and mental health services, and (6) delivering coordinated crisis management. The report outlines a number of gaps that need to be addressed to achieve these strategic goals (such as staff and student training and awareness, development of partnerships with local mental health agencies, awareness raising activities, and access to 24/7 care for students and employees in need of care).

Camosun College (Greater Victoria): The Camosun College Student Mental Health and Wellbeing Strategy 2016-2020, examines the current initiatives, recommendations, and guiding principles of the college in its commitment to promoting student mental health (213). Five priority areas for action are identified, (1) policies, procedures, and practices, (2) supportive campus environment and student connections, (3) mental health literacy, engagement, and support, (4) campus mental health services, and (5) supporting students at-risk and responding to crises.

Carleton University (Ottawa): In 2016, Carleton University posted a Student Mental Health Framework (Phase II) that built upon a previous framework originally released in 2009 (214). In Phase II, they continue to coordinate crisis management while building a holistic, campus-wide approach to mental health and well-being. This holistic approach includes a supportive campus climate that promotes student engagement. They identify six guiding values: (1) collaboration, (2) holistic approach, (3)

supportive environment, (4) inclusivity and accessibility, (5) effective communication, and (6) continuous improvement. Their six areas of focus are illustrated in Figure 4.

Figure 4. Carleton University’s Student Mental Health Framework



Source: Carleton University 2016, p. 9

Centennial College (Toronto): In 2014, Centennial College adopted a case management model to support student mental health (215). The objectives of the model were to: (1) implement an integrated care approach to mental health and wellbeing, (2) develop partnerships with the community to use community resources in support of a diverse student body, (3) increase the efficient use of staff resources under and build capacity of services, and (4) enhance department and organizational policies through the assessment of gaps in current structures. Four groups have been identified with responsibilities under this model, The Case Management Working Groups (responsible for suicide and violence risk assessment), the Case Manager Lead (responsible for intervening and managing acute crises), the Counselling Centre (managing student wellbeing), and the Centre for Students with Disabilities (providing supports and services to students with disabilities).

Confederation College (Thunder Bay): Confederation College has identified eight priority areas for mental health and well-being, (1) recognition and support of mental health, (2) building an inclusive, caring community, (3) promoting and supporting healthy lifestyles, (4) creating a physical environment that is conducive to positive physical and mental health, (5) increasing awareness of mental health, mental health promotion, and suicide prevention, (6) reducing stigma and discrimination, (7) developing

early identification and interventions strategies for students at risk or in distress, and (8) increasing strategic collaboration internally and externally (216). Examples of recommended actions include training, enriched programming, awareness raising, and collaboration with external partners.

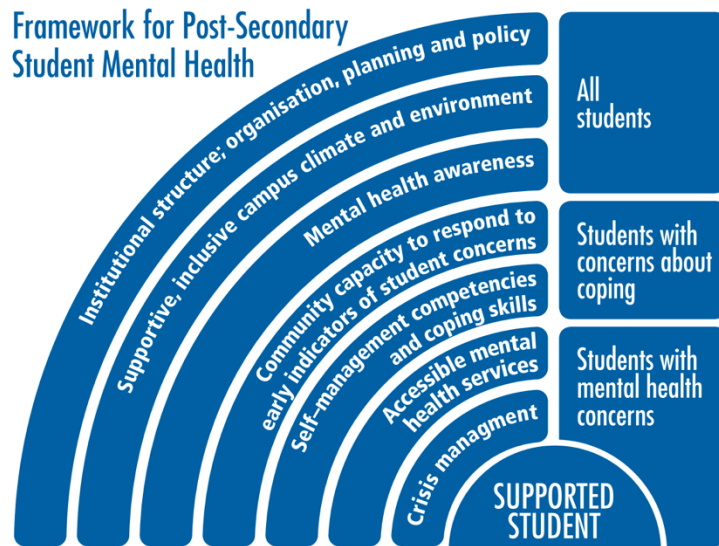
Dalhousie University (Halifax): Dalhousie University has released a 3-year progress report to document movement toward strategic directions developed for the 2014-2018 term (217). Strategic directions included, (1) enhancing the transformative power of teaching and learning and, (2) building institutional capacities. Toward these ends, the university is trying to raise 6.5 million to address student retention initiatives involving holistic advertising, developing health and wellness strategies and policies, piloting a walk-in counselling program, developing a framework for indigenous students, and increasing student access to mental health services. To build institutional capacities they have implemented a diversity and inclusiveness strategy and expanded their indigenous student centre. Faculty at Dalhousie also have developed a transitions resource book for first-year post-secondary students that addresses how to successfully navigate the challenges of university or college life (218,219). One key emphasis of the resource is to improve the mental health literacy of students. It is noteworthy that this resource has been described in the academic literature (220). It has also been systematically evaluated by the developers and found to improve student knowledge about mental health and mental illness, decrease stigma, and improve help-seeking (221).

Fleming College (Peterborough): Fleming College's annual report for 2016/2017 describes several initiatives that were undertaken with respect to student mental health (222). These included, (1) developing a mental health strategy that promoted a proactive and collaborative approach, (2) developing student-focused activities including community consultations, mental health awareness campaigns, and website creation, and (3) implementing a part-time position to support LGBTQ+ students, expanding the positive space program, and advocating for multi-faith space on campus.

George Brown College (Toronto): George Brown College's framework for a healthy campus community adopts a holistic "Whole Campus" approach involving coordination of policies, the physical environment, social inclusion, classroom interaction, faculty and staff education, counselling, and skill building (223). In addition, they adopt a "Whole Student" approach that recognizes the strong association between physical health, social health, emotions, thinking, behaviour, and student success. Their framework is shown below (Figure 5). Activities include expanding access to services, developing

flexible learning approaches, building mental health awareness and skills, creating student and peer led initiatives, improving information, and creating campus substance use support groups.

Figure 5. George Brown College Framework for Post-Secondary Student Mental Health



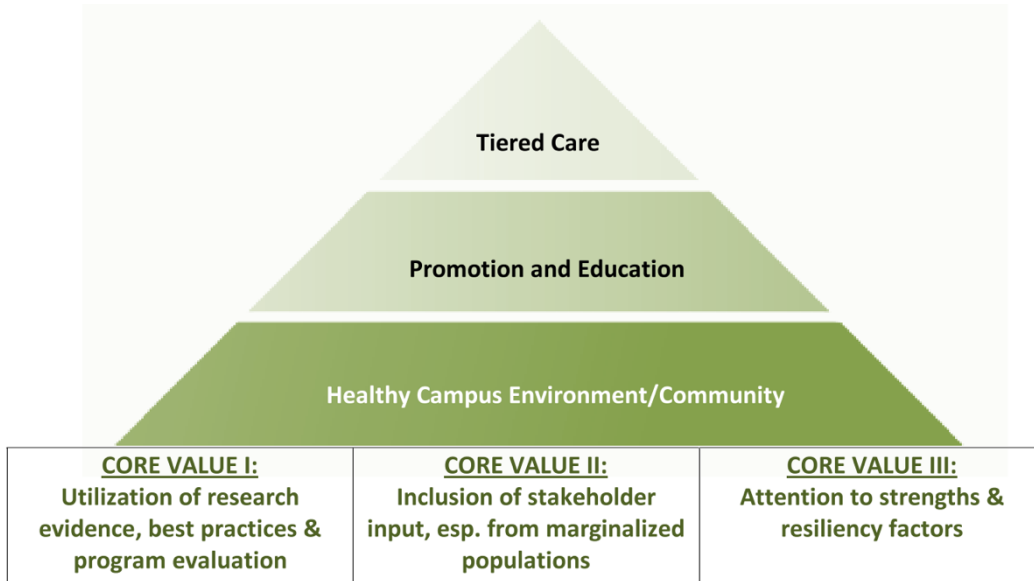
Source: Klein 2015, p. 7

Keyano College (Fort McMurray): Keyano College (2017) indicates that mental health and wellness are included in the institution’s overarching plan. Three initiatives are identified for a three-year plan, (1) renewing and maintaining learning spaces to support student engagement leading to positive mental health, (2) developing a healthy campus plan that addresses student, faculty, and staff wellness by identifying services, supports, and outreach activities that are needed to promote positive student mental health, and (3) initiating a healthy campus plan development for 2017/2018 to be implemented in 2018/2019 and maintain a commitment towards consistent evaluation (224).

King’s College (London): In 2018 King’s College released a pyramid-style student mental health strategy (Figure 6) that consists of three strategic levels and three core values that encompass current initiatives and future goals of improving mental health in the campus community (225). Recommended actions to create a health campus community include consistent re-evaluation of policies, increased promotion and awareness activities, and greater supports for indigenous, LGBTQ and other groups that need more support. No recommendations were stated with respect to promotion and education. With respect to

tiered care, it was recommended that student and employee mental health be considered when implementing effective strategies.

Figure 6. King’s University College Student Mental Health Strategy Pyramid



Source: King’s University College 2018, p. 2

Lambton College (Sarnia): Lambton College’s Student Mental Health and Well-being Strategy (2017-2020) identifies five priority areas, (1) policies, procedures, and practices, (2) supportive campus environment and student connections, (3) mental health literacy, engagement, and support, (4) campus mental health services, and (5) supporting students at-risk and responding to crises (226).

McGill University (Montreal): McGill has posted the results of a 2013 survey designed to assess students’ psychological wellbeing. Approximately 1800 undergraduate and 700 graduate students were assessed Using the Counseling Centre Assessment of Psychological Symptoms instrument (19% response) (227). Results showed high levels of distress and anxiety, but relatively low levels of service access. For example, depression was endorsed by 44% of students, but less than 10% received psychological support on campus and less than 5% received support off campus. Of note is the approximately 10% that indicated they had seriously considered attempting suicide while at university. Recommendations were to continue to monitor the mental health and wellbeing of students using this survey tool every 3-5 years, share the findings with the McGill community to help them identify future strategies, and examine national and international best practice models of community wellbeing. In

2017, McGill University's Senate issued a directive acknowledging their intention to implement a student mental health and wellness strategy by January 2018 (228). No additional information was found.

McMaster University (Hamilton): At McMaster, mental health services are delivered through the Student Wellness Centre, which were overtaxed. In order to address the diverse needs of their student population, McMaster administrators identified a strategic approach that included, (1) creating and supporting the use of one-stop access for information about available mental health resources and how to access them, (2) reducing stigma associated with mental illnesses and promotion of early detection of mental illnesses through strategic advertising, and (3) coordinating available mental health resources on campus to support greater accessibility and continuity of care for those in need. The report considered several options for addressing these goals but made no recommendations as to which option may be best (229). However, risks, benefits, barriers, and stakeholder views are considered, among other factors, for each option. In a separate report, McMaster also has summarized Phase One recommendations for its mental health and well-being strategy (230). In this report, five priority areas are identified, (1) provide robust mental health and wellbeing education, training, and resources for campus gatekeepers, (2) implement a proactive, coordinated, consisted and unified approach to students in difficulty across campus, (3) adapt accommodation policies, processes, organizational structures and pedagogies to address the changing and growing student mental health needs, (4) increase capacity within the Student Wellness Centre building on the existing collaborative care model, and (5) establish a program of research and health policy focusing on emerging adults in post-secondary settings.

Mohawk College (Hamilton): In 2012, Mohawk College included social inclusion as part of their strategic plan. The report, *A Sense of Belonging: Report on the Social Inclusion at Mohawk College*, details their progress in meeting their strategic initiative (231). At Mohawk College, 35% of students are Indigenous, international, new Canadians or living with a disability, and 10% are thought to identify as part of the LGBTQ community. A small online survey was conducted showing that 73% of the 188 respondents always or often felt a sense of belonging and acceptance and 34% said that diversity issues were rarely or never discussed in the classroom. Diversity training for faculty and staff was recommended with continued need to provide students with appropriate support. A number of other activities were undertaken (e.g. Share Your Experiences Postcard Submissions, and development of an inclusivity

inventory to document diversity initiatives across campus.) Results of this work demonstrated the importance of social inclusion to mental health and the need for continued awareness training and student support initiatives. In a subsequent report, Mohawk college outlines its plans to update its mental health strategy to provide a healthy campus community with a shared vision and responsibility for mental health (232). Mohawk is phasing out direct medical service delivery for students, instead referring students to community services. Partnerships have been developed with a number of providers. Health education and wellness is directed by the campus Counselling, Health and Accessible Learning Services, which offer students risk assessment, triaging, support programs, crisis support, and public health awareness and promotion.

Mount Allison University (Sackville): Mount Allison University Student Affairs Mental Health Strategy has published service use statistics for 2016 indicating that the 37% of students who accessed physician services did so for mental health concerns, representing an increase from 15% in 2006/2007; 21% in 2011/2012, 31% in 2012/2013, and 27% in 2013/2014 (233). Priority areas for their mental health strategy include, (1) organizational structure, organization, planning and policy, (2) supportive, inclusive campus climate and environment, (3) mental health awareness, (4) community capacity to respond to early indications of student concern, (5) self-management competencies and coping skills, (6) accessible mental health services, and (7), crisis management.

Nipissing University (North Bay): In 2017, Nipissing University recognized the need to strengthen campus mental health supports for Indigenous students, who were reluctant to access support services (234). A mental health strategy was developed with campus community input, a literature review, and student counselling service initiatives. Recommendations included reducing stigma, increasing capacity and support for counsellors through knowledge development and creation of supporting relationships with Indigenous peoples, and support for community engagement through participation in Indigenous committees, cultural events and professional development opportunities.

Olds College (Olds): Olds College has identified five priorities for a comprehensive institutional plan, (1) accessibility, (2) affordability, (3) quality, (4) coordination, and (5) accountability (235). They will strive to deliver flexible, innovative services that promote positive student experiences. Toward this aim, they will conduct a comprehensive assessment of student wellness, ensure supports for mental health and sexual violence are provided, and implement an indigenous student strategy. They also identify several

performance measures, including a student satisfaction survey to identify critical areas of improvement, participation in the National College Health Assessment Survey – II to assess changes over time, and an increase in self-reporting of indigenous status.

Ontario College of Art and Design (Toronto): This 2014 report outlines their progress in implementing a mental health strategy that began in 2011, which was funded by the Mental Health Innovation Fund (236). Four broad themes were used to develop campus initiatives, (1) curriculum and pedagogy, (2) programs and services, (3) awareness education and training, and (4) policies and procedures. Two additional themes under development include health and wellness services and peer-support training programs. Students, faculty, and staff were heavily involved in identifying gaps in the current system. Once the university completes its information-gathering phase, it will implement strategic initiatives while continuing to engage students.

Queen's University (Kingston): In 2012, Queen's University produced a report of the Principal's Commission on Mental Health (237). A four-level pyramidal framework was recommended along with 116 specific recommendations. Levels were, (1) promoting a healthy community, (2) addressing the challenges associated with transitions and promote resilience, (3) encouraging help-seeking behaviour, and (4) providing effective response, service, and care. Subsequently, Queen's released two documents outlining the results of their 2013 (n=1,241; 20% response) (238) and 2016 (N=1,152; 17% response) (239) National College Health Assessment Surveys. Both showed high levels of distress and alcohol misuse with implications for academic performance. For example, over half (61%) of students found it difficult to handle academics, and 45% reported receiving help from a counsellor, therapist, or psychologist. Thirteen percent had received help from a psychiatrist and 22% from a physician or nurse practitioner. Data were used in student leader training (for residence dons, orientation week leaders, clubs, peer programming, and volunteer groups), as well as in setting university priorities in health and safety-related subjects.

Ryerson University (Toronto): In 2016, Ryerson released a report summarizing the work of the Mental Health Committee from 2013 to 2016 that has three working groups, (1) policies and procedures, (2) awareness and education programs, and (3) curriculum and pedagogy (240). Their scope of practice includes implementing mental health initiatives, policy revisions and decisions, and building capacity to accommodate through workshops and training. Their activities have included holding town hall

meetings, creating a mental health website, implementing a mental health training program, and adding mental health positions.

Southern Alberta Institute of Technology (Calgary): Their 2016/2017 Annual Report contained a number of commitments that had been made and their progress toward these (241). The institutional commitments included developing a wellness strategy, outreach campaigns relating to mental health, enhancing campus life through initiatives such as speaker series, development of a student mental health strategy, including suicide prevention and increased online support systems, review of first-year orientation activities, continued collaboration with the student association, helping students learn about programs and opportunities on campus, continued support for indigenous learners, increased support for students with disabilities (including a goal of increased registration of students to accessibility services), and increased activities to promote inclusivity and diversity.

University of Alberta (Edmonton): The University of Alberta has released their institutional results from the National College Assessment Survey indicating significant mental health needs in its student populations (242). The majority of students reported feeling overwhelmed (87%), exhausted (87%), lonely (62%), or very sad (66%). The minority (less than 10%) had received treatment in the past 12 months and only about half of students (year 1 and 4) reported that the University of Alberta was supportive. Thirty-nine percent felt that the university did not have a sincere interest in students' wellbeing, and 34% did not experience a sense of belonging. Priority areas for activity included (1) counselling and clinical services, (2) a community social work team, and (3) the sexual assault centre. Current progress (as of 2013) involved adding more clinical staff in each of these areas, however recommendations included a much broader scope of activities such as promoting wellness, building sustainable funding, enhancing student-centred communications, and developing a campus-wide infrastructure for crisis counselling and wellness.

University of British Columbia (Vancouver): In 2012, UBC released their Mental Health and Wellbeing Discussion Paper outlining the university's rationale for action, the scope of the challenge at UBC, the overview of the mental health strategy, and priority areas for action (243). The challenges reported were the increased prevalence of mental distress and the impact that it was having on students' academic performance. In response, they outlined four principles for their strategy. They would adopt (1) a multi-level approach that effectively addresses the range of needs of students, (2) a systematic,

cohesive approach, (3) leadership and ownership at all levels of the institution, and (4) the importance of building off UBC's strengths. They launched a number of programs, including an early alert program, a new triage model, awareness and self-management skill campaigns, outreach to Indigenous populations, coordinated depression screening, additional time with a physician for mental health issues, community nursing outreach, and partnerships with the Vancouver Coastal Health Authority.

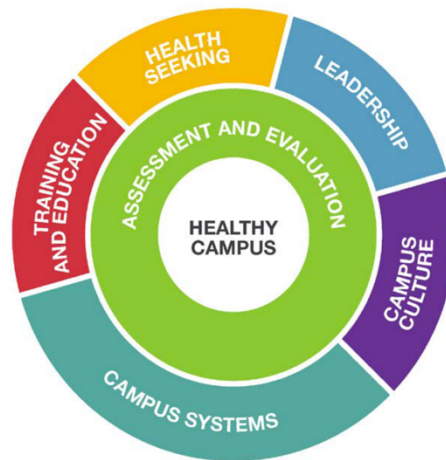
University of Calgary (Calgary): The University of Calgary released its mental health strategy in 2015 with six strategic priorities, (1) raising awareness and promoting well-being, (2) developing resilience and self-management, (3) enhancing early identification and response, (4) providing direct services and supports, (5) aligning institutional policies and procedures, and (6) creating and sustaining a supportive campus environment (244). Activities that were recommended to support these strategic initiatives included, awareness raising, increased program availability, promotion of self-screening tools and supports for students and staff with respect to early identification, development of external partnerships with 24/7 access to mental health resources, processes to ensure that policies on campus are supportive of mental health, development of peer mentorship programming, and adoption of the National Standard for Psychological Health and Safety (245) on campus.

University of Guelph (Guelph): The University of Guelph Student Mental Health Strategy (2016) describes the university's framework and strategies for addressing the increased demands for student mental health services (246). The framework developed by the Mental Health Advisory Committee, enacted in 2014, is shown below (Figure 7). Within the committee, five sub-committees have been created to address these priorities, (1) Supportive campus environment (campus culture), (2) Academic policies and procedures (campus systems), (3) Crisis response (campus systems), (4) Community capacity (training and education), and (5) Student awareness and self-management (health-seeking).

In their Fall 2017 mental health progress report (247), they describe the specific initiatives that have been implemented since 2013 (e.g.: creation of a mental health task force, mental health literature and services review, implementation of a student mental health strategy, establishment of a standing committee on student mental health, community consultations, adoption of the Okanagan Charter for Health-Promoting Universities (248), and completion of a mental health needs report). They report a significant increase in the need for mental health services, between 2014 (427 student visits) and 2016 (661 student visits) but a decrease in students presenting with mental health disabilities (from 958 to

363) over that same time period. They have raised and invested considerable funding in student wellness and implemented a wide range of activities, including investing \$10 million in a wellness hub. Their 2017 to 2019 goals are far reaching and include improvements to programming, outdoor space, and training, to name a few.

Figure 7. University of Guelph Mental Health Advisory Committee Framework



Source: Guelph University 2016

University of Montreal (Montreal): University of Montreal posted a report on the psychological health of students in 2016 (249). The report discussed the results of a student mental health survey and made sixteen recommendations. These included developing an institutional strategy and plan, including a suicide prevention plan, to ameliorate student mental distress; improving service coverage; creating interventions to reduce loneliness on campus, promote healthy eating, and reduce financial stress on students; promotion of collaboration and teamwork within programs; development of a culture of respect and acceptance throughout the campus; prevention of binge drinking; and consideration of the needs of minority groups in the development of policies and services.

University of Manitoba (Winnipeg): University of Manitoba’s campus mental health strategy (2014) aims to build a committed, caring, healthy, responsive, supportive, and resourceful campus community (250). Activities associated with these broad goals include enhancing policies and procedures, engaging faculty, staff and students, building awareness of mental health and its importance to academic and workplace success, training and education for faculty, staff, and students to help them identify early warning signs of mental ill health and available supports, increasing accessibility, integration of mental

health services, and building awareness concerning mental health and suicidal crises and available resources.

University of Ottawa (Ottawa): The Student Academic Support Services at the University of Ottawa has posted their 2016/2017 annual report outlining the supports provided to students during the fiscal year (251). A total of 2,254 students made 7,738 visits. Counselling and coaching was provided to 2,052 students amounting to 7,229 visits. Academic accommodations were made for 29% of students, where the biggest concerns were stress and anxiety (96%), academic workload (88%), motivation (86%), depression (84%), and self-esteem (77%). Priority areas for continued action include (1) reinforcing organizational cornerstones (including tracking performance indicators), (2) setting up a management framework, (3) developing a new service delivery model, (4) building strategic partnerships with other faculties, services, and other partners, (5) creating dynamic communication and marketing strategies, and (6) developing digital service platforms.

University of Saskatchewan (Saskatoon): The University of Saskatchewan has posted a general wellness strategy defined as a healthy mind (social, emotional, and intellectual), healthy body (nutrition, rest, substance use, physical activity), and healthy life (volunteerism, environment, finances, safety and care, sexual health, and spirituality) (252). Under promotion activities, they include ensuring a supportive foundation at the level of university life, fostering a healthy culture and environment, and raising awareness about healthy behaviours. With respect to prevention, they will focus on identifying risk and early identification, and developing resilience and self-management competencies. Finally, with respect to intervention, they will focus on providing services, training, and critical support.

University of Toronto (Toronto): In 2013, the University of Toronto created an advisory committee on student mental health to review current mental health initiatives, develop a tri-campus approach, recommend future policies, and implement a communication strategy for student mental health. Five priority areas were identified, (1) Institutional commitment, (2) awareness, education, training, and anti-stigma, (3) inclusive curriculum and pedagogy, (4) improved mental health services and programs, and (5) supportive policies and procedures (253). The University of Toronto has also published the results of their National College Health Assessment survey online (254), indicating that the majority of students had significant mental health issues such as feeling overwhelmed (88%), exhausted (87%), very sad (73%), very lonely (67%), overwhelming anxiety (64%), or hopelessness (62%). Close to half (43%)

reported stress as the primary factor limiting their academic performance, 33% reported anxiety, and 21% reported depression. These were on par with Canadian averages.

University of Victoria (Victoria): The University of Victoria's student mental health strategy (2014-2017) identified four primary goals, (1) embed student mental health policy within institutional strategic planning, (2) build a more welcoming, connected, and supportive university community, (3) enhance the university community's ability to support students who may be at risk, and (4) enhance supports for students who are experiencing distress or are in crisis (255). A wide range of activities and actions are identified including building awareness, stigma reduction, improving student-led supports, first responder training for campus security personnel, stress management programs, and increased access to health services, particularly urgent daily appointments.

Western University (London): Western University posted its plan for student mental health and wellness in 2018 identifying four priority areas, (1) promote and support a resilient campus community, (2) develop and deliver effective mental health and wellness education, (3) support inclusive curriculum and pedagogical approaches that promote student health, and (4) provide accessible and effective mental health and wellness services (256). Examples of recommended actions include providing mental health and wellness education through course curricula for all students, stigma reduction, better communication of available resources, provide faculties with information for course syllabi regarding mental health, increased integration of wellness services with greater collaborations for after-hours counselling, and review student deaths and critical illness policies.

Table B-1 (Appendix B) places these documents along the mental health service continuum of care. It shows that virtually all of the documents (all but two) called for additional mental health promotion. Eighteen discussed the need for greater prevention, 31 discussed early detection, 46 discussed treatment, and 17 discussed rehabilitation. It is not clear how the myriad of activities and interventions currently underway address each of these areas or whether they are resulting in improved mental health and academic performance for post-secondary students. Several universities have explicitly recognized the need for monitoring and research in this area.

Summary

This report investigated themes common to the discussion around post-secondary student mental health, both nationally, and internationally. A detailed, scoping review of the literature was undertaken, exploring both peer-reviewed, academic sources, and grey literature. The main themes of interest to this report were selected in collaboration with the Executive Advisory Committee (EAC), the Mental Health Commission of Canada, and Bell Canada.

As part of this investigation we analyzed Canadian data from the American College Health Association's National College Health Assessment II Survey, which collected responses from over 43,000 post-secondary students attending 41 institutions across Canada. Many students reported experiencing average (31.4%) to above average stress (46.2%), with nearly 15% reporting tremendous stress levels. Overall, students reported moderate levels of distress. Anxiety (18.4%) and depression (14.7%) were the most prevalent diagnosed mental illnesses among the Canadian post-secondary student population. Just over one-fifth of students (20.4%) had received a professional diagnosis of depression at some point in their lifetime. Notably, the estimated prevalence of professional diagnoses was considerably lower than the prevalence of students' self-reported symptoms of these disorders. The implications of this are discussed. Only 35% of students reported that experiencing stress had not negatively impacted their academic performance. The literature has repeatedly linked students' stress and distress to negative academic outcomes, including reduced academic achievement, challenges with alertness and reduced ability to focus, and student attrition and retention. A number of post-secondary institutions have released their institutionally specific data on line, with similar results. The majority of students report mental health and substance (mostly alcohol) use problems that affect their academic goals, but a minority seek care.

With respect to suicidality, the NCHA II survey provides self-reported prevalence estimates of past twelve-month self-injury (8.7%), serious consideration of suicide (13%), and suicide attempts (2.1%) among Canadian post-secondary students, though there is currently no national compilation of completed suicides among post-secondary students. These estimates are slightly higher than the estimates from the United States that report the prevalence of self-injury among post-secondary students ranging between 3-7%, with males and females reporting different triggers. Males more often attributed academic competition, financial strain, and workload to thoughts of suicide and self-injury, while females more often attributed heartbreak, family pressure, and pre-existing mental illness.

Not surprisingly, special subpopulations, including military service members, medical students, ethnic minorities, indigenous students, and international students, experience unique mental health needs. The literature suggests these students experience additional stress associated with cultural differences and stigmatization that make adjustment to the post-secondary setting particularly difficult. For example, LGBTQ students are often faced with mental health services that are not tailored to their needs and professional students (such as medical students) are faced with overwhelming stigma associated with both experiencing a mental illness, and help-seeking. Finally, military service members returning to the post-secondary setting often struggle more than others with the adjustment process and previous traumas. Males and on-line students (who may never attend campuses) have also been defined as at-risk groups for which there are tremendous service gaps. Males will rarely seek out help for mental health or substance use difficulties and on-line students do not have access to services available to students on campus.

The majority of Canadian post-secondary students (58%) identified academic stressors as their most significant source of stress. A significant source of stress for many students was revealed to be perceived safety on campus, revealing subthemes such as pressure to engage in substance abuse, sexual harassment and assault, and physical and emotional abuse or assault. A brief descriptive analysis of the safety-related data in the NCHA II survey provides a clearer picture of students' perceived safety, with males more often reporting physical abuse, and females more often reporting sexual or emotional abuse. These findings were in line with the academic literature.

There has also been considerable discussion of the factors that make up student resilience, such as individual characteristics (i.e., self-efficacy, optimism, locus of control), ability to cope (i.e., the use of positive vs. negative coping mechanisms, and the importance of a social support network), and help seeking behaviours. The literature revealed associations between self-efficacy, locus of control, tenacity and optimism (facets of "intrapersonal" resilience) and students' ability to weather stressors. Positive acceptance of change was another predictor of students' resilience in the face of major adjustment periods. Negative relationships with parents or harmful early childhood experiences were linked to poorer adjustment, and poorer resiliency. Successful coping was linked to both academic and social integration in the post-secondary setting, with students reporting a strong social support network (both at home, and at school) faring better than those without. Negative coping methods, such as avoidance,

withdrawal, or denial (most often marked by substance abuse among students) were linked to worse adjustment and negative mental health outcomes.

Help seeking behaviours were observed to be relatively low across student populations, despite relatively high levels of reported distress., but particularly so for males and members of marginalized groups (described above). The literature reports several barriers to help seeking, as identified by students, including: concerns about confidentiality, lack of time, not believing the problem warranted professional help, uncertainty that professional help would be beneficial, and preferring to rely on other sources of support (i.e., friends, family, romantic partner).

Post-secondary institutions have implemented a wide range of programs and initiatives to promote student wellness and reduce mental distress ranging from innovative interventions, such as animal therapy or mindfulness, to more traditional interventions such as cognitive behavioural therapy or skills counselling. The evidence base for the efficacy and effectiveness the majority of these interventions in post-secondary environments is thin. Even traditional treatments that have demonstrated efficacy and effectiveness in adult populations with mental health difficulties have not been evaluated for their impact on healthy post-secondary students or for their novel delivery systems (such as on-line courses or in class sessions).

In the grey and institutional literature, a number of themes for improving post-secondary student mental health emerge:

1. There is a need to create a mentally healthy environment for post-secondary students where they can maximize their ability to achieve their academic goals. It was clearly recognized that post-secondary institutions offer a pivotal environment in which to promote mental health and address student mental health needs, which are described as growing in both frequency and complexity.
2. Post-secondary student mental health is typically considered a provincial issue, rather than national problem. There is a lack of cohesion at the Pan-Canadian level and no national standard to guide the various mental health efforts occurring at provincial and institutional levels.

3. Within provinces, there is a lack of coordination between governments, institutions, student groups, and community mental health agencies with respect to mental health initiatives. Creating partnerships with community health and mental health services and supports to promote campus wellness and address student mental health needs is a priority for action.
4. An expanded definition of 'mental health' is needed; one that includes substance misuse and harm reduction approaches.
5. Post-secondary institutions need to adopt a whole-campus approach to mental health including a review and update of all health and mental health policies and institutional structures, financial assistance policies (e.g. for student loan payback) and mental health related accommodations.
6. Maintaining student centeredness in all activities was highlighted, including creating appropriate services for specialized groups (Indigenous, Immigrant, LGBTQ+, racialized, etc.) and understanding of the role of community belonging in promoting mentally healthy campuses.
7. There is a need for a comprehensive and coordinated mental health plan for post-secondary students that covers the range of services from prevention to treatment, including peer support counselling and a range of self-management options including telephone and on-line applications that can be accessed 24/7. In addition, suicide prevention and management strategies were identified as priority areas in a number of reports. This would include the provision of adequate and sustainable funding for student mental health initiatives.
8. There are a number of tools (e.g. institutional review frameworks, standardized courses, data bases, models of care etc.) that already exist; a few of which have been rigorously tested and validated but these have not been widely used. This suggests the need for a knowledge exchange plan whenever tools are developed to ensure their appropriate uptake. Most initiatives have not been rigorously evaluated.
9. Anti-stigma and mental health awareness and literacy programs are needed to promote early identification and improve help-seeking.

10. As part of an institutional response, all faculty and staff need to be trained to support early identification and appropriate referral of students with emerging or ongoing mental health problems.

11. Finally, ongoing monitoring, quality assurance assessment, and systematic evaluation activities are needed to ensure that programs and initiatives are evidence-based and effective. This included the need for Canadian data to monitor the mental health needs and help-seeking behaviours of post-secondary students.

A review of documents accessed from post-secondary institution's websites shows that a number of universities and colleges across the country have embraced the idea that promoting mental wellness among students, faculty, and staff is part of their institutional mandate. In response, most offer multi-layered frameworks to address student mental health and wellness, mostly focused on students. The impetus for these activities has often been the institutional results from the National Campus Health Survey showing that the majority of students are experiencing significant mental health related problems without receiving mental health supports or care. There is also recognition that current wellness and accommodation services are overtaxed or not meeting the needs of specialized sub-groups of students, and that mental health problems are interfering with academic success.

Strategic frameworks are remarkably similar across institutions in their key themes. Typically, they include some combination of system-level activities (such as coordinated policy and policy reviews), training and education for faculty, staff, and/or students (including awareness and anti-stigma activities), improved access to treatment services (including coordinated care, extended hours for 24/7 care, and peer supports) and implementation of a crisis management and early detection system. A number of universities have also recognized the importance of creating a campus culture that promotes social belonging and social support for all students, but particularly for vulnerable groups such as those at higher risk of mental health issues (e.g.: marginalized groups, Indigenous students, or members of the LGBTQ+ communities). Several documents described formal committee structures that had been invested with the responsibility for implementing and coordinating activities pertaining to the institutional frameworks. More often, multiple activities were undertaken across the institutions (at every level) without reference to a clear coordinating structure.

Although several institutions have identified the need for ongoing monitoring of student health and wellness, none of the documents reviewed identified a comprehensive performance monitoring system to ensure that wellness initiatives are evidence informed, are based on best practice models, or that a systematic evaluation strategy is in place. Many institutions participate in the National College Health Assessment survey and report remarkably similar findings (high frequency of mental distress; low frequency of access to care; high levels of alcohol misuse, all of which impact academic performance). Several universities have explicitly recognized the need for monitoring and research in this area.

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Appendix A

Detailed Method for the Scoping Literature Review

Objectives of the Literature Review

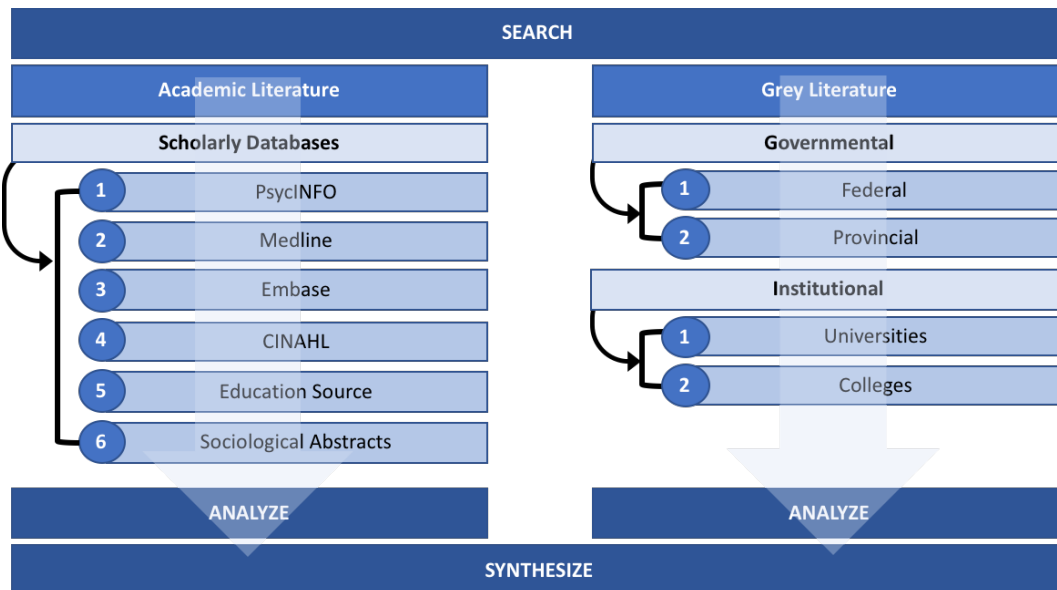
There are three key objectives for the literature review and environmental scan:

1. Define the state of research relative to, and characterizing the current state of, student’s experiences relative to their psychological health and safety in post-secondary environments;
2. Define the state of research relative to, and characterizing the current state of, post-secondary institutions experience relative to managing psychological health and safety in support of post-secondary students; and
3. Identify new and emerging strategies (nationally and internationally) relative to supporting psychological health and safety for students in post-secondary environments.

Research Design

Academic and grey literature were searched simultaneously by two research assistants at Queen’s University’s Centre for Health Services and Policy Research (CHSPR). Results from the academic and grey literature searches were analyzed independently, and then synthesized for the final report (Figure 1). Copies of all documents are electronically available upon request.

Figure A-1. Research Design for Scoping Literature Review



Sources of Academic Literature

Six academic databases were searched for published, academic literature. Diverse databases from the health sciences, social sciences, and educational literature were chosen in order to ensure a multidisciplinary perspective on student mental health was captured.

PsycINFO

The PsycINFO database provides abstracts and citations to the scholarly literature in the psychological, social, behavioral, and health sciences. The database includes material of relevance to psychologists and professionals in related fields such as psychiatry, management, business, education, social science, neuroscience, law, medicine, and social work.

MEDLINE

MEDLINE covers the international literature on biomedicine, including the allied health fields and the biological and physical sciences, humanities, and information science as they relate to medicine and health care. Information is indexed from approximately 5,600 journals published world-wide.

Embase

Embase (Excerpta Medica Database) is a biomedical and pharmacological database produced by Elsevier B.V., containing more than 30 million records including articles from more than 8,500 journals published world-wide. It contains bibliographic records with citations, abstracts and indexing derived from biomedical articles in peer reviewed journals, and is especially strong in its coverage of drug and pharmaceutical research, pharmacology and toxicology.

CINAHL

CINAHL plus Pre-CINAHL indexes close to 3,000 English-language journals covering: nursing, biomedicine, health sciences librarianship, alternative/complementary medicine, consumer health and 17 allied health disciplines (e.g. respiratory technology, x-ray technology, etc.).

Education Source

Education Source encompasses an international array of English-language periodicals, monographs, yearbooks, and many unique sources that were never previously available, covering all levels of education--from early childhood to higher education--as well as all educational specialties, such as multilingual education, health education and testing.

Sociological Abstracts

Sociological Abstracts covers sociological topics within such fields as anthropology, communications, counselling, crime, economics, education, ethics, medicine, community development, philosophy, public policy, political science, religion, social psychology and welfare. Coverage includes journal articles, books, dissertations, conference proceedings, and reviews.

Sources of Grey Literature

Both governmental and institutional reports were sought after in the grey literature search. Federal and provincial government strategies to address post-secondary student mental health and wellness were searched first, followed by institutional response documents (i.e., campus safety and/or mental health strategies) from both universities and colleges across Canada.

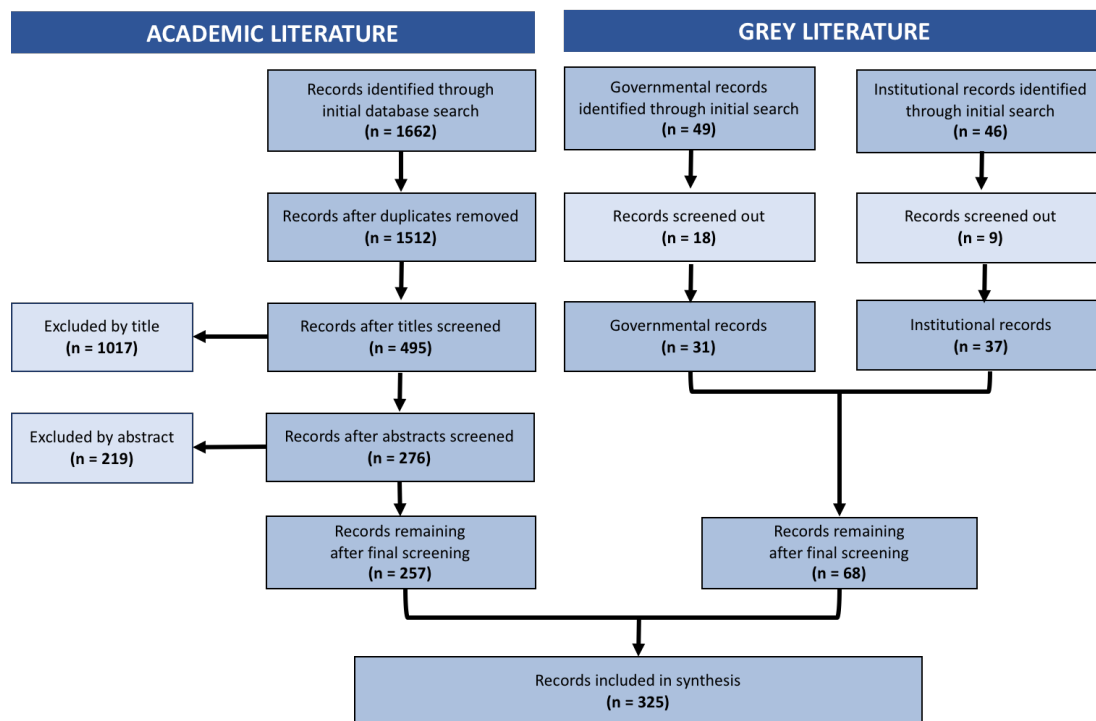
Search Strategy

Academic databases were searched by key word and mesh heading strings as recommended by a reference librarian at Queen’s University. The search strings used for each database are available on request. Articles were restricted by English language, and publication date range between 2000 and 2018. One hundred and fifty duplicate articles were removed from the initial sample. Two reviewers conducted a screening process, where articles were filtered out by title, then abstract. A third party was available to break ties in the event of reviewer disagreement. A total of 1017 articles were screened out by title, and 219 articles were screened out by abstract, leaving a final sample of 276 academic articles to be included in the review.

A search of the grey literature was also conducted, with a focus on policy documents and post-secondary institutional strategies targeted toward student mental health and safety. A search for policy documentation was undertaken systematically by province and territory. Forty-nine documents were initially identified. Nineteen were screened out for irrelevance or for being variations of the same report, leaving a total of 30 reports included in the review. A search for electronic institutional reports was conducted for each of Canada’s public post-secondary institutions³, with 46 documents initially located. Five were screened out for being variations of the same report, leaving a total of 41 institutional documents included in the review. These covered 32 institutions, with several collaborative efforts across institutions.

The final sample of screened-in grey literature (n= 71) was added to the final sample of screened-in academic articles (n= 276), for a total of 347 records included in the final synthesis (Figure A-2).

Figure A-2. PRISMA Flow Diagram of Scoping Literature Review for Post-Secondary Standard



³ Excluding non-university or college degree-granting institutions such as: CEGEPs, adult education centres, religious schools, or agricultural schools.

Analysis

Delphi Method

Members of the Executive Advisory Committee (EAC) were asked to complete a brief, online Delphi-style survey, made available in both official languages. The survey consisted of a brief description of each general category revealed in the academic literature pertaining to post-secondary student mental health. Members of the EAC were asked to indicate the relative importance of each to the development of the overall Standard by indicating whether each category was “not a priority,” a “minor priority,” or a “major priority”. We received a total of ten out of fifteen responses to the Delphi survey.

Table A-1 contains the results of the Delphi survey, indicating the percentage agreement for each category revealed in the literature. Based on the results of the Delphi Method, the following major themes were prioritized in this report and covered in more detail: State of Student Mental Health, Help Seeking, and Programs and Strategies.

Table A-1. Percent Agreement for Each Subcategory in the Academic Literature Review (n=10)

Themes and Subcategories	Not a Priority	Minor Priority	Major Priority
State of Student Mental Health	0%	36%	64%
Types of mental health problems on campus Articles that focus on identifying the prevalence of different mental disorders on campus.	0%	30%	70%
Sources of stress among students Articles that focus on identifying the sources of student stress, both specific to the university/college environment, and general life stress.	0%	30%	70%
Financial Stress Articles that specifically focus on the stress students experience as a result of concerns related to managing finances.	0%	80%	20%
Adjustment to university/college Articles that focus on stressful transitions for post-secondary students, including the transition from high school to the first year of university/college, the transition from university/college to the work force, etc.	0%	20%	80%
Environmental Considerations/Campus Culture Articles that focus on environmental considerations with respect to post-secondary student mental health (i.e., campus culture, drinking culture, racism, university life demands and changes, etc.)	0%	20%	80%
Impact	0%	44%	56%
Risk Behaviour Articles that focus on known risk behaviours of post-secondary students that may contribute to mental health related problems.	0%	40%	60%
Substance use Articles that explore the interrelationship between substance use and mental health problems on campus (i.e., drug use, binge drinking, etc.)	0%	40%	60%
Burnout Articles that focus on the phenomenon of “burnout” in post-secondary students.	0%	70%	30%

Table A-1. Continued

Themes and Subcategories	Not a Priority	Minor Priority	Major Priority
Academic Outcomes Articles that explore the relationship between students' mental health and their academic outcomes (i.e., performance, graduation, retention, attrition).	0%	40%	60%
Student Safety	10%	60%	30%
Safety on campus Articles that explore students' perspectives on their safety on campus, and their experiences with sexual harassment and assault, including intimate partner violence (IPV).	10%	60%	30%
Special Subpopulations	25%	50%	25%
Ethnic minority groups Articles that focus on the unique experiences of students who identify as belonging to ethnic minorities, or are international students.	10%	60%	30%
Indigenous students Articles that focus on the unique experiences of students who identify as having indigenous heritage.	10%	40%	50%
LGBTQ students Articles that focus on the unique experiences of students who identify their sexual orientation as non-heterosexual.	10%	50%	40%
Military service members Articles that focus on the unique experiences of students who are military service members or veterans.	50%	50%	0%
Medical students Articles that focus on the experiences of medical students (i.e., unique stressors, stress management, and prevalence of mental health problems in this population).	30%	60%	10%
Religiosity/Spirituality Articles that explore the impact of religiosity and/or spirituality on students' experiences in university/college and mental health outcomes.	40%	40%	20%
Help Seeking	0%	15%	85%
Help Seeking and Perceived Barriers Articles that focus on students' intentions to seek help, the type of help sought, and factors affecting their choice to reach out for help for mental health related problems (i.e., perceived barriers to help seeking).	0%	10%	90%
Coping Strategies Articles that explore the coping strategies frequently used by students to mitigate stress and other mental health related problems.	0%	20%	80%
Programs and Strategies	0%	10%	90%
Interventions/Programs Articles that outline interventions, programs, or strategies for bolstering student wellness and success.	0%	10%	90%

Content Analysis

Articles were first coded by overarching theme, followed by more specific subcategories. Six major themes were identified: state of student mental health, special subpopulations, programs and strategies, help seeking, impact, and safety on campus.

A content analysis was conducted, where the frequency (number of articles) for each subcategory was recorded, along with the percentage of articles each subcategory represented within each theme (i.e., 43% of articles that fell within the “state of student mental health” theme were categorized as defining or exploring “perceived stressors”). Table A-2 displays details of this content analysis after abstracts were scanned, and prior to beginning the literature synthesis.

Table A-2. Content Analysis of Major Themes Revealed in the Literature

Major Themes	Subcategories	Frequency	Percentage*
State of Student Mental Health (75)	Perceived Stressors	32	43%
	Prevalence of Mental Illnesses	27	36%
	Suicide/Self-Injury	6	8%
	Adjustment to College	6	8%
	Campus Climate	4	5%
Special Subpopulations (65)	Ethnic minorities	23	35%
	Military service members	16	25%
	Medical students	14	22%
	Indigenous students	8	12%
	LGBTQ students	2	3%
	International students	2	3%
Programs and Strategies (57)	Strategies	22	39%
	Interventions	18	32%
	Programs	17	30%
Help Seeking (36)	Attitudes towards help seeking	26	72%
	Awareness of resources	6	16%
	Available services	2	6%
	Help seeking and suicidality	2	6%
Impact (25)	Risk Behaviour**	11	44%
	Academic Outcomes*	10	40%
	Resilience*	4	16%
Safety on Campus (17)	Sexual assault	6	35%
	Violence (general)	4	23%
	Intimate partner violence	3	18%
	Policy development	2	12%
	Other abuse	2	12%

Appendix B

Table B-1. Grey Literature Records Along the Mental Health Service Continuum

Source	Institution/Agency	Promotion	Prevention	Early Detection	Treatment	Rehabilitation
2013 Student Health Survey Report	Queen's University	✓				
2016 Student Health Survey Report	Queen's University	✓				
A Roadmap for Federal Action on Student Mental Health	Canadian Alliance of Student Associations	✓	✓	✓		
A Sense of Belonging Report On Social Inclusion At Mohawk	Mohawk College	✓				
Addressing Student Mental Health Needs at McMaster	McMaster University	✓	✓	✓		
Advancing a Mentally Healthy Campus 2016 – 2017 Annual Report	York University	✓	✓	✓	✓	
Advisory Panel on Post-Secondary Mental Health	Alberta Advanced Education	✓	✓	✓		
An Analysis of Counselling Services in Ontario Colleges	Lees J, & Dietsche P	✓		✓	✓	
Breaking Down Barriers: Mental Health and Canadian Post-Secondary Students	Canadian Alliance of Student Associations	✓	✓		✓	✓
Brock University Campus Mental Health Strategy	Brock University	✓		✓	✓	

Source	Institution/Agency	Promotion	Prevention	Early Detection	Treatment	Rehabilitation
Campus Assessment and Planning Inventory	Canadian Association of College and University Student Services	✓	✓	✓	✓	✓
Campus Mental Health Strategy	University of Calgary	✓	✓	✓	✓	
Canadian Reference Group Data Report Spring 2013	American College Health Association	✓				
Canadian Reference Group Executive Summary Spring 2016	American College Health Association	✓				
Changing Directions Changing Lives	Mental Health Commission of Canada	✓	✓	✓		
Comprehensive Institutional Plan 2017 – 2020	Keyano College	✓				
Comprehensive Institutional Plan 2017 – 2020	Olds College	✓	✓			
Confederation College Student Mental Health and Wellbeing Strategy	Confederation College	✓	✓	✓	✓	✓
Consensus Statement on the Mental Health of Emerging Adults	Mental Health Commission of Canada	✓	✓		✓	✓
COU Submission to the Ministry of Health and Long-Term Care	Council of Ontario Universities	✓			✓	
Dalhousie University Strategic Direction 2014-2018: Year 3 Progress Report	Dalhousie University	✓	✓		✓	

Source	Institution/Agency	Promotion	Prevention	Early Detection	Treatment	Rehabilitation
Environmental Scan on Young Adults and Health and Learning	Association of Canadian Community Colleges	✓	✓		✓	
Fleming College Annual Report 2016-2017	Fleming College	✓				
Focus on Mental Health	Colleges Ontario, Council of Ontario Universities	✓		✓	✓	
FOUNDATIONS: MENTAL HEALTH AND WELL-BEING INITIATIVES AT ONTARIO'S UNIVERSITIES	Council of Ontario Universities	✓	✓	✓	✓	✓
From Surviving to Thriving	Great West Life	✓	✓			
In It Together Taking Action on Student Mental Health	College Student Alliance, Ontario Undergraduate Student Alliance, Colleges Ontario, Council of Ontario Universities	✓	✓	✓	✓	
KING'S VISION FOR MENTAL HEALTH	King's University College	✓			✓	✓
McMaster Student Mental Health and Wellbeing Strategy	McMaster University	✓			✓	
Mental Health Case Management Framework CENTENNIAL COLLEGE CAMPUS MENTAL HEALTH PARTNERSHIPS	Centennial College	✓	✓		✓	✓
Mental Health Committee Report 2016	Ryerson University	✓				

Source	Institution/Agency	Promotion	Prevention	Early Detection	Treatment	Rehabilitation
MENTAL HEALTH TRAINING IN THE POSTSECONDARY SECTOR	Ryerson, OCADU	✓		✓	✓	
New Beginning for SASS Annual Report 2016/2017	University of Ottawa	✓			✓	
New Vision of Wellness	Mohawk College	✓	✓		✓	
OCAD U: Meeting the mental health needs of postsecondary students Putting Evidence into Action	OCAD U	✓			✓	
Open Minds, Healthy Minds: Ontario's Comprehensive Mental Health and Addictions Strategy	Government of Ontario	✓	✓		✓	
Outline of a Strategic Plan	Association of Atlantic Universities	✓		✓	✓	
Policy Approaches to Post-Secondary Student Mental Health (OCAD U and Ryerson Collaboration)	OCADU, Ryerson	✓			✓	✓
Post-Secondary Student Mental Health: Guide to a Systemic Approach Post-Secondary Student Mental Health: Guide to a Systemic Approach	Canadian Association of College and University Student Services, Canadian Mental Health Association	✓				

Source	Institution/Agency	Promotion	Prevention	Early Detection	Treatment	Rehabilitation
Recommendations for Documentation Standards and Guidelines for Academic Accommodations for Post-Secondary Students in Ontario	St. Lawrence College, Queens University	✓	✓			
Report of the Provostial Advisory Committee on Student Mental Health Executive	University of Toronto	✓	✓		✓	✓
Report on Post-Secondary Institutions as Healthy Settings	Canadian Council on Learning, Association of Canadian Community Colleges	✓	✓		✓	
SAIT Annual Report 2016-2017	Southern Alberta Institute of Technology	✓	✓		✓	
Strengthening Campus Mental Health Supports for Indigenous Students	Nipissing University	✓			✓	
Student Affairs Mental Health Strategy	Mount Allison University	✓		✓	✓	
Student Health and Well-being at the University of Toronto	University of Toronto	✓				
Student Health: Bringing Healthy Change to Ontario's Universities	OUSA	✓		✓	✓	
Student Mental Health and Well-Being Strategy	Camosun College	✓	✓	✓	✓	
Student Mental Health and Well-Being Strategy	Lambton College	✓			✓	✓

Source	Institution/Agency	Promotion	Prevention	Early Detection	Treatment	Rehabilitation
Student Mental Health and Wellness Framework and Recommendations for a Comprehensive Strategy	Queens University	✓		✓	✓	✓
Student Mental Health at the University of Alberta	University of Alberta	✓		✓	✓	✓
Student Mental Health Framework 2.0: Building a Thriving Community	Carleton University	✓		✓	✓	
STUDENT MENTAL HEALTH PROGRESS REPORT FALL 2017	University of Guelph	✓		✓	✓	✓
STUDENT MENTAL HEALTH STRATEGY	University of Victoria	✓		✓	✓	✓
Student Mental Health Strategy	University of Guelph	✓		✓	✓	✓
Student Psychological Wellbeing at McGill University	McGill University	✓		✓		
Success through wellness	University of Manitoba	✓	✓	✓	✓	✓
Supporting the Mental Health of Emerging Adults in Ontario's Post-Secondary System	OUCHA	✓	✓	✓	✓	✓
Sustaining Student Health: Healthy Students, Healthy Campus Settings Report on the Outcomes and Recommendations from the National Policy Roundtable	Association of Canadian Community Colleges	✓	✓		✓	

Source	Institution/Agency	Promotion	Prevention	Early Detection	Treatment	Rehabilitation
The McGill Health and Wellness Strategy 2017	McGill University				✓	
Towards Healthy Campus Community	George Brown College					
UBC VANCOUVER MENTAL HEALTH AND WELLBEING DISCUSSION PAPER	University of British Columbia	✓	✓	✓	✓	
Western's Student Mental Health and Wellness Strategic Plan	Western University	✓	✓	✓	✓	
White Paper on Postsecondary Student Mental Health The Coordinating Committee of Vice Presidents Students	Student Coordinating Committee for Vice Presidents	✓	✓	✓	✓	

Appendix C

Table C-1. List of Post-Secondary Institutional Websites Hosting Official Reports or Strategies for Campus Mental Wellness

Institution	Website	Document Title(s)
Brock University	http://brockmentalhealth.ca/	Campus Mental Health Strategy
Camosun College	http://www.camosun.ca/	Student Mental Health and Well-Being Strategy
Carleton University	https://carleton.ca/	Student Mental Health Framework 2.0: Building a Thriving Community
Centennial College	http://www.centennialcollege.ca/	Mental Health Case Management Framework
Confederation College	http://www.confederationcollege.ca/	Confederation College Student Mental Health and Wellbeing Strategy
Dalhousie University	http://www.dal.ca/	Dalhousie University Strategic Direction 2014-2018 Transitions Dalhousie students survey 2014/2015
Fleming College	http://www.flemingcollege.ca/	Fleming College Annual Report 2016-2017
George Brown College	http://www.georgebrown.ca/	Towards a Healthy Campus Community: A College-Wide Initiative
Keyano College	http://www.keyano.ca/	Comprehensive Institutional Plan 2017-2020
King's College	http://www.kings.uwo.ca/	Campus Mental Health Plan 2018
Lambton College	http://www.mylambton.ca/	Student Mental Health and Well-Being Strategy
McGill University	http://www.mcgill.ca/	The McGill Health and Wellness Strategy 2017 Student Psychological Wellbeing at McGill University
McMaster University	http://www.mcmaster.ca/	McMaster Student Mental Health and Wellbeing Strategy Addressing Student Mental Health Needs at McMaster University
Mohawk College	http://www.mohawkcollege.ca/	A New Vision of Wellness A Sense of Belonging: Report on Social Inclusion at Mohawk
Mount Allison University	http://www.mta.ca/	Student Affairs Mental Health Strategy
Nipissing University	http://www.nipissingu.ca/	Strengthening Campus Mental Health Supports for Indigenous Students

Institution	Website	Document(s) Located
Olds College	http://www.oldscollege.ca/	Comprehensive Institutional Plan 2017-2020
Ontario College of Art and Design	https://www.ocadu.ca/	Meeting the Mental Health Needs of Postsecondary Students
Queen's University	http://www.queensu.ca/	2013 Student Health Survey Report: NCHA 2016 Student Health Survey Report: NCHA Student Mental Health and Wellness: Framework and Recommendations for a Comprehensive Strategy
Ryerson University	http://www.ryerson.ca/	Mental Health Committee Report 2016
Southern Alberta Institute of Technology	http://www.sait.ca/	SAIT Annual Report 2016-2017
University of Alberta	http://www.ualberta.ca/	Student Health at the University of Alberta
University of British Columbia	http://www.ubc.ca/	UBC Vancouver Mental Health and Wellbeing Discussion Paper
University of Calgary	http://www.ucalgary.ca/	Campus Mental Health Strategy: Creating a Community of Caring
University of Guelph	http://www.uoguelph.ca/	Student Mental Health Strategy Student Mental Health Progress Report Fall 2017
University of Montreal	http://www.faecum.qc.ca/	Enquête sur la santé psychologique étudiante
University of Manitoba	http://www.umanitoba.ca/	Success Through Wellness: University of Manitoba's Campus Mental Health Strategy
University of Ottawa	http://sass.uottawa.ca	New Beginnings for SASS: Annual Report 2016/2017
University of Saskatchewan	https://www.usask.ca/	Wellness Strategy: An Integrated Approach for Students, Faculty, and Staff
University of Toronto	http://mentalhealth.utoronto.ca/	Report of the Provostial Advisory Committee on Student Mental Health Student Health and Well-being at the University of Toronto
University of Victoria	http://www.uvic.ca/	Student Mental Health Strategy
Western University	http://www.uwo.ca/	Western's Student Mental Health and Wellness Strategic Plan