

**Exploring reluctancy towards help-seeking at school among youth in the COMPASS study**

by

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## **AUTHOR'S DECLARATION**

I hereby declare that I am the sole author of this thesis. This is a true copy of my thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

## ABSTRACT

**Background:** Despite the high prevalence of mental health problems that emerge during adolescence, it has been observed that young people are among the least likely to seek help. Considering that many adolescents spend most of their weekday waking hours at school, the school system has the potential to support positive mental health behaviours in students.

**Objectives:** The goal of this thesis was to identify the student and school characteristics associated with a reluctance towards help-seeking for mental health concerns at school. Specifically, the objectives of this study were to: (1) estimate the proportion of students reporting reluctance towards help-seeking at school; (2) identify the student and school characteristics associated with reporting reluctance towards help-seeking at school; and (3) examine whether social support moderates the relationships between the availability of school mental health professionals and services and help-seeking reluctance.

**Methods:** Data from the 2018-2019 wave of the COMPASS study was examined. In total, 47,290 Grade 9 to 12 students attending 116 schools were included in the final analyses. GEE models were used to assess the student and school characteristics associated with attitudes towards help-seeking for mental health concerns at school.

**Results:** Over half (58%) of students reported being reluctant towards help-seeking at school. Schools in a rural/small urban area had students reporting reluctance towards help-seeking at a lower odds than medium/large urban schools ( $aOR = 0.85$ , 95%  $CI = 0.79, 0.93$ ). When compared to schools in an area where the median household income was between \$50,000-75,000, schools with a median income between \$75,000-100,000 were at greater odds of students reporting reluctance towards help-seeking ( $aOR = 1.20$ , 95%  $CI = 1.01, 1.43$ ). Students who reported poorer mental health as indicated by self-rated mental health ( $aOR = 1.76$ , 95%  $CI = 1.65, 1.87$ ), emotion regulation ( $aOR = 1.08$ , 95%  $CI = 1.07, 1.09$ ), and flourishing ( $aOR = 0.96$ , 95%  $CI = 0.96, 0.97$ ), family ( $aOR = 2.31$ , 95%  $CI = 2.16, 2.47$ ), and peer support ( $aOR = 1.20$ , 95%  $CI = 1.13, 1.31$ ), and school connectedness ( $aOR = 0.93$ , 95%  $CI = 0.92, 0.93$ ) were at greater odds of being reluctant towards help-seeking at school than students who reported more favourable scores on these variables. The non-significant relationships between the availability of mental health professionals and services with help-seeking attitudes were not modified by social support.

**Conclusion:** Many students reported being reluctant towards help-seeking at school. Few school and many student characteristics were associated with help-seeking attitudes at school among youth. This research provides important direction for future help-seeking efforts and research. It is vital for researchers to examine how school mental health strategies can be used to promote an acceptance towards seeking help for mental health concerns among youth.

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## LIST OF ABBREVIATIONS

|         |  |
|---------|--|
| COMPASS | Cannabis, Obesity, Mental health, Physical activity, Alcohol, Smoking, Sedentary Behaviour |
| Cq      | COMPASS Questionnaire  |
| SPP     | School Policies and Practices Questionnaire  |
| MH      | Mental Health  |
| GEE     | Generalized Estimation Equation  |
| GLMM    | Generalized Linear Mixed Model   |
| ICC     | Intraclass Coefficient   |
| M       | Mean   |
| SD      | Standard Deviation   |
| SE      | Standard Error   |
| OR      | Odds Ratio   |
| aOR     | Adjusted Odds Ratio  |
| CI      | Confidence Interval  |

## 1.0. Introduction

In any given year, it is estimated that approximately 10-20% of adolescents are affected by mental illnesses (3), and many more struggle with non-clinical mental health problems (4-5). Despite the high prevalence of mental health problems that emerge during adolescence, it has been observed that young people are among the least likely to seek help (6). In 2013, The Mental Health Commission of Canada reported that only 1 in 5 Canadian youth who required mental health assistance received the care they needed (3). Given that the mental health needs of many youths are not being met, ensuring that youth can access the appropriate mental health resources to meet their needs, is imperative.

Based on the public health framework, schools are considered an ideal place to promote positive mental health behaviours, such as help-seeking (7). Considering that youth spend much of their waking hours at school, trained high school staff are well-placed to provide initial assistance to youth regarding their mental health (8-9). Unfortunately, schools often focus on providing direct services to a limited number of students who are deemed to be high risk (10). Although well-intentioned, resource constraints (i.e., staff, time, money) can result in this approach being unlikely to yield meaningful changes to the mental health of youth at the population level (11). Indeed, longitudinal evidence suggests that the prevalence of mental illnesses among youth is not decreasing (12). To change the trajectory of youth mental health trends, a stronger emphasis on population health is necessary in mental health efforts.

In the past two decades, there has been a substantial shift from a predominantly clinical approach to one that incorporates goals aligning with public health priorities (13). From a public health perspective, institutions are encouraged to provide a continuum of services to address the various mental health needs of youth (13). The School Mental Health Ontario (14) and other stepped-care models emphasize the importance of considering multiple levels of interventions to meet the needs of youth (universal mental health promotion, targeted prevention interventions, and specialized treatment; 1-14). Additionally, the Determinants of Health Model (2) highlights that a holistic approach should be taken to addressing the health needs of youth. Specifically, this model highlights the influence of broader environments on the health and well-being of youth, including the family and school systems.

Therefore, this thesis will examine the student and school characteristics associated with attitudes towards help-seeking for mental health concerns among youth. Specifically, the potential influence of the school environment on help-seeking attitudes will be examined while considering the influence of psychological and social well-being on youth. By exploring these relationships in a large sample of youth, this research may yield findings that are suitable to guide research that examines school mental health strategies that aim to foster positive help-seeking attitudes among youth.

## **2.0. Background**

### **2.1. Youth Mental Health and Help-Seeking**

Globally, the burden of mental illnesses accounts for approximately one-third of the burden of illnesses among young people (15). Given that approximately 70% of future adult mental illnesses emerge during adolescence (16), prevention and early intervention efforts should target youth populations. Despite the recognized importance of addressing mental health in youth populations, a significant barrier to prevention and early detection efforts are the high levels of reluctancy towards help-seeking among youth (6). A systematic review by Gulliver and colleagues concluded that stigma, embarrassment, poor mental health literacy, and a preference for self-reliance are some of the top barriers towards help-seeking among youth (17). Addressing the barriers associated with help-seeking is critical because untreated mental health problems are associated with poor vocational achievements, problematic interpersonal and family relationships, reduced life expectancies due to related medical conditions (e.g., diabetes, coronary heart disease), and suicide (18-21). Considering the importance of the adolescence period in the development of lifelong behaviours, prevention and early detection has the potential to advert chronic mental health challenges that persist into adulthood.

### **2.2. A Population-Based Approach**

In the past two decades, there has been a shift from a clinical approach towards one that incorporates goals that align with public health priorities. Instead of focusing exclusively on diagnosing and treating mental disorders, many institutions are recognizing the importance of prevention and early detection. Because prevention efforts have the potential to avert the onset of clinically significant mental health concerns, prevention efforts can aid in reducing the burden of mental illnesses (13, 22-24). As such, activities such as surveillance, prevention, and early detection are being increasingly utilized by health and education institutions in mental health promotion efforts (13).

The School Mental Health Ontario three-tiered model is an example of a population-based approach towards addressing mental health in the school context (Appendix A; 1). This model emphasizes the importance of coordinating with the community to incorporate a variety of strategies to address a continuum of mental health needs (1). According to the three-tier model, the interventions at schools can be broadly categorized into three categories: (i) universal mental health promotion, (ii) targeted prevention, and (iii) intensive interventions (1). While universal mental health promotion is aimed at supporting mental health in the general student population, targeted preventions are aimed at supporting a smaller body of students who are deemed a priority population (1). In spite of prevention efforts, some students will develop serious mental health problems which warrant the use of intensive interventions (1). An example of intensive interventions at school are the designated services available on-site at school for students to access trained mental health professionals who can deliver specialized assessments and treatments (1). The model concludes that school mental health approaches should invest heavily in universal mental health promotion, some targeted prevention, and few intensive interventions.

It is important to remember that all three tiers are equally important, as each of the three tiers of interventions are meant to address different mental health needs. Using approaches in multiple tiers alongside each other can confer significant advantages to addressing complex health issues among youth (25). One reason for blending approaches, especially universal (i.e., whole-school approaches) and targeted interventions, is that schools will be able to enhance mental health resiliency among all students while also addressing specific barriers relevant to a sub-group of youth who may benefit from additional assistance (25). To develop such interventions, it is necessary to first isolate the characteristics of schools and students who may benefit from more focused intervention (25).

### **2.3. A Determinants of Health Model**

It is important to examine both individual and structural determinants of health to understand help-seeking attitudes (26). Therefore, the Determinants of Health Model was used to guide the present study (Appendix A; 2). Greenwood's Determinants of Health Model presents a framework that can be used to conceptualize the interrelationships between individual indicators of health and collective well-being. The model presents a way of thinking about young people's health within the context of broader networks (2). Specifically, this model highlights the importance of considering factors located in multiple spheres that may influence the health and well-being of youth (2). In this model, the influence of individual, family, community, societal systems, and structural enablers are considered important in understanding the health and well-being of youth (2). The school environment is recognized as a system that is crucial in supporting the health and well-being of youth (2). Despite the recognized importance of the school environment, there is limited research on help-seeking attitudes of youth in the school context. Therefore, it is crucial to explore the influence of schools on the help-seeking attitudes of youth.

According to the Determinants of Health Model (2016), indicators of psychological well-being are considered important individual determinants of health (2). The general consensus in the literature is that youth who experience poor mental health are less likely to seek help than youth who report good mental health (27, 6). It has been demonstrated that psychological variables, such as psychological distress (27), symptoms of depression (27), low emotional competence (6), and suicidal ideation (28) are associated with greater reluctance towards help-seeking. It is particularly important to assess the relationship between emotion regulation competency and help-seeking attitudes because socio-emotional learning interventions can be used to improve coping strategies and foster positive mental health behaviours (29-31). Indicators of positive psychological well-being, such as flourishing, are also important to consider in the context of help-seeking because research has demonstrated that the experience of positive mental health may confer protective effects against mental illnesses and risky behaviours (32-33). However, it is also important to consider the influence of sociodemographic characteristics that may also be implicated in the help-seeking attitudes of youth. Namely, sociodemographic indicators, such as gender and race/ethnicity, have demonstrated to be associated with help-seeking (27, 34). It has been frequently observed that boys are less likely to seek help than girls (27). In addition, youth who identify with a minority ethnic group are less likely to receive treatment for mental health problems (34). Thus, these established indicators of

health must be considered when examining the influence of broader systems on the help-seeking attitudes of youth.

Perceptions of social support have a profound influence on many aspects of health and well-being (35-37). It has been observed that youth who are well integrated into social networks are significantly less likely to experience emotional problems than youth who have few friends or feel isolated (38). A sense of connectedness to other people is believed to foster a healthy sense of belonging, self-efficacy, self-regard, and confidence (38) that could be associated with positive help-seeking behaviours. Additionally, youth's sense of belonging with respect to their school community may influence their views towards seeking help from members of their school community. However, the research on social support and help-seeking is conflicting, with some research suggesting that adolescents with more close friends are less likely to seek help from formal supports (39); while other research suggests that social support is positively associated with acceptance towards help-seeking (38). Although the research in this domain is still developing, it is hypothesized that youth who feel supported by their school community may have more confidence in confiding to members of their school community during times of crisis (38). Therefore, social support from family and peer networks and a sense of belonging at school are important factors to examine in the context of help-seeking among youth.

The school system is also considered an important determinant of health for many youth (7). Considering that schools have unparalleled contact to youth, schools are an ideal setting to reach those who have not been previously identified and/or treated for a mental health problem (40-41). Because many schools offer free mental health resources on-site, the practical barriers associated with accessing community-based treatments are often mitigated (e.g., time, travel, cost; 42-43). However, school mental health interventions should be informed by research and evidence (44), especially research that identifies priority student populations and school communities that could benefit from implementing additional mental health strategies (44). Therefore, population research that examines the relationship between the school environment and help-seeking attitudes is needed to better understand how schools can support the mental health needs of youth (45).

## **2.4. Research and Evidence Gaps**

Despite the abundance of mental health resources at school (46-49), a major barrier to supporting the mental health needs of youth are high levels of resistance towards help-seeking among youth. Currently, it is not clear the direction schools should take in order to foster an acceptance towards help-seeking at school among youth (50). To the author's knowledge, the characteristics of youth and schools who may benefit from interventions aimed at enhancing help-seeking have not been clearly identified. It is therefore important to examine the student populations and school communities that are at greater odds of having students who are reluctant to seek help for mental health concerns. This task is crucial given the continuing budgetary constraints that many schools and health systems face. Taking actions to explore how schools can support youth in obtaining mental health support can help maximize the potential benefits of providing mental health resources at school.

### 3.0. Study Aims & Objectives

#### 3.1. Addressing the Research and Evidence Gaps

Given the paucity of population-based evidence to support current school-based mental health strategies, an examination of how school mental health characteristics are associated with students' attitudes towards help-seeking for mental health concerns at school is needed. Addressing this research gap can provide direction for future research that aims to inform school mental health strategies that are suitable for a given school context and student profile. As such, the primary objective of this project was to explore the relationships between school mental health characteristics and students' attitudes towards help-seeking for mental health concerns at school.

#### 3.2. Research Questions and Hypotheses

The proposed research questions were:

1. What proportion of youth report reluctance towards help-seeking at school? What are the primary reasons youth report as deterrents towards help-seeking?
2. Which student and school characteristics are associated with reporting reluctance towards help-seeking?
3. Do the relationships between school mental health services, professionals, and help-seeking differ depending on the level of students' peer or family support?

The hypotheses corresponding to the research questions were:

1. More than half of youth will report at least one reason they would be deterred from seeking help for mental health concerns from an adult at school and the most frequently reported deterrents will suggest reasons related to social disapproval, self-reliance, and lack of confidence in the adults at school being able to help.
2. The student characteristics associated with being reluctant towards help-seeking will include gender, grade, race/ethnicity, self-rated mental health, school connectedness, family support, and peer support. The availability of mental health professionals and services will not be significantly associated with reluctance towards help-seeking at school.
3. The level of peer support will moderate the relationships between school mental health professionals and help-seeking attitudes.

## 4.0. Methods

### 4.1 Study Design

#### 4.1.1. Data Sources

Data from the 2018-2019 wave of the COMPASS survey (Year 7; Y<sub>7</sub>) was examined. The COMPASS study is a 9-year prospective cohort study (2012-2021) that uses a systems approach to assess how changes in the school environment (policies, programs, build environment) and provincial, territorial, and national policies are associated with changes in youth health behaviours over time (51). Data from this cohort contains information from secondary school students located in Ontario, Alberta, British Columbia, and Quebec. Student-level data was collected using paper-and-pencil questionnaires (Cq) and was linked with data from the COMPASS School Policies and Practice Questionnaire (SPP). In addition, data from 2017-2018 (Year 6, Y<sub>6</sub>) was linked to compute past prevalence estimates. Only students attending schools during both Y<sub>6</sub> and Y<sub>7</sub> were included in the final analyses. In 2017-2018, data were collected from 122 schools and 66,434 students. Whereas, in 2018-2019, data were collected from 136 schools and 74,501 students. The sections below will explain the COMPASS questionnaire and the COMPASS School Policies and Practices Questionnaire in further detail.

### 4.2. Study Materials

#### 4.2.1. COMPASS Student Questionnaires

The student-level data was collected using the COMPASS questionnaire (Cq). The Cq is a 16-page paper booklet that collects information relevant to public health concerns pertaining to obesity, healthy eating, physical activity, sedentary behaviours, substance use, mental health, bullying, academic achievement, sleep, and demographic characteristics (52). The items on this questionnaire were selected because they are used in other national health surveillance tools to allow comparison to representative samples, have demonstrated validity and reliability in youth populations (51), and are suitable for large school-based longitudinal studies. That is, the student-level questionnaire was designed to be short (completed in one 30-40 minute class period) and inexpensive (machine-readable; 42) to be appropriate for a large school-based longitudinal study. Please refer to Appendix C for a copy of the Cq.

#### 4.2.2. School Policies and Practices Questionnaire

The COMPASS School Policies and Practices Questionnaire (SPP) is an online survey that is completed by a school contact that is most knowledgeable about the health programs and policies offered at the school (e.g., school administrator, student success teacher, guidance counsellor; 51). The SPP collects information on the presence (or absence) of program, policies, resources, and facilities that could be related to the health behaviours of students measured in the Cq (51). The mental health component of the SPP (MHpp) was designed to specifically collect data on the school program, policies, and resources that can be used to evaluate how changes in these policies over time may impact student's mental health (53). Before data collection, a link to

the survey was emailed to the school contact. The school contact was encouraged to consult with other staff to complete the survey and was followed up by a COMPASS staff to clarify any missing and/or uninterpretable responses. Please refer to Appendix D for a copy of the SPP.

#### *4.2.3. Census Data*

Data from the most recent National Household Survey (2016; 54) was used to gather additional contextual factors regarding the school environment and neighbourhood. Specifically, data on population density (i.e., urbanicity) and schools' area median household income were extracted from the survey based on school postal codes and included in the analyses.

### **4.3. Sample and Procedures**

#### *4.3.1. School Sampling*

The COMPASS study utilizes a convenience sample of Canadian secondary schools. The COMPASS schools were purposefully sampled by contacting school boards (51). Only schools that permitted the active-information passive consent parental permission study protocol were recruited to participate in the COMPASS study. As such, the COMPASS study is not provincially or nationally representative.

#### *4.3.2. Ethics*

The COMPASS study was approved by the University of Waterloo Office of Research Ethics, all school boards, and individual schools that participated in the survey. An active-informed passive-consent protocol was used to reduce the burden associated with active consent procedures, such as low response rates and biased sociodemographic characteristics of the participating students while providing an extra layer of confidentiality (55). Following, all students attending the participating schools were eligible to participate given that (i) the student's parents or guardians did not inform the COMPASS recruitment coordinator that they did not want their child to participate and (ii) the student agreed to participate (51). Students were informed they could decline participation or withdraw their consent to participate at any time.

#### *4.3.3. Survey Protocols*

Between the period of October 2018 and June 2019 teachers administered the COMPASS questionnaire during a designated class period that was requested by schools. Teachers were provided with detailed instructions to implement the survey to ensure consistency, protect student confidentiality, and make certain that the process was relatively uncomplicated for teachers. Students were given approximately 35 to 40 minutes to complete the survey. During each data collection period, a trained data collector was present to answer any questions and/or concerns raised by students and/or staff and collect information on the built environment of the COMPASS study that is not relevant to this current research (51). Each participating school received a \$250 honorarium, a customized school feedback report (i.e., School Health Profile),



and access to a COMPASS Knowledge Broker. For additional details on the COMPASS study protocol, information is available on the COMPASS study website.

#### **4.4. Measures**

This section will provide an overview of the measures that were used as the explanatory and dependent variables to answer each objective. The operational definitions used for many of the variables are consistent with those used in previous national surveys.

##### *4.4.1. Dependent Variables*

Consistent with measures used in the Health Behaviour of School-Aged Children (56), Ontario Student Drug Use Health Survey (57), and School Mental Health Survey (58; 53) the COMPASS study measure used to assess student attitudes towards help-seeking within the school environment asked students to report, “If you had concerns regarding your mental health, are there any reasons why you would not talk to an adult at school (e.g., a school social worker, child and youth worker, counsellor, psychologist, nurse, teacher, or other staff person)?”. Response options were ‘I would have no problems talking to an adult at school about my mental health’, ‘Worried about what others would think of me (e.g., I’d be too embarrassed)’, ‘Prefer to handle problems myself’, ‘Do not think these people would be able to help’, ‘Would not know who to approach’, and ‘There is no one I feel comfortable talking to’. A binary variable was derived by categorizing students into either ‘Reluctant’ if they endorse one or more deterrent towards help-seeking. If the student did not select having any deterrents to help-seeking at school they would be considered as ‘Not reluctant’. In addition, each of the six response options reflecting a deterrent towards help-seeking was used to create a categorical help-seeking variable for additional investigation into the primary deterrents endorsed by students.

##### *4.4.2. Explanatory Variables*

###### *4.4.2.1. School Variables*

###### *School Mental Health Variables*

###### *Past prevalence*

An indicator of the past prevalence of students who report poor mental health at a school was created to gauge the extent to which poor student mental health is an issue for schools. By summing the number of students who rated their mental health as fair or poor on the previous year’s Cq survey (2017-2018) and dividing it by the number of students who completed the survey, each school was assigned a value representing the past prevalence of students who rated their mental health as poor from students participating in the COMPASS study in the previous year. Data from the previous wave, rather than the present wave, were used to prevent errors related to ecological fallacy that could occur when inferences about the nature of individuals are derived from aggregate data from the group in which individuals belong to (59). For sample size

and descriptive statistics for the 2017-2018 wave, please refer to the research by Holligan et al. (60).

### *Mental health priority*

To acknowledge that schools have many competing health priorities— some of which may be based on the needs of their students— whether ranking mental health as a high priority was significantly associated with help-seeking among students was examined. Administrators were asked to “Please rank these school/health-related issues in terms of importance to your school: (Rank items from 1 to 10 where 1 = highest priority and 10 = lowest priority)”. Using this variable, a continuous variable was created to reflect where schools ranked mental health on the list of priorities. The scores ranged from 1 to 10. After, the continuous variable was used to create a binary variable to reflect whether mental health was a high priority. Based on the distribution of the data, mental health was considered a ‘High’ priority when schools had scores between 1 and 3 and ‘Low’ when scores were between 4 and 10.

### *Mental health professionals*

As an indicator of the availability of mental health professionals at schools, the SPP asked administrators to “Please indicate the availability of the following mental health professionals at your school (Select all availability options that apply)”. The SPP lists the following professionals: ‘Child and Youth Worker’, ‘Counsellor’, ‘Social Worker’, ‘Psychologist’, ‘Mental Health Nurse’, and ‘Other (please list)’ and asked administrators to indicate the availability of each staff according to whether they were ‘On-call’, ‘On-site full-time’, or ‘Regularly scheduled \_\_ hours/month’. For the analyses, only mental health professionals that were full-time or regularly scheduled for  $\geq 3$  times/week or  $\geq 16$  hours/week were considered available. This threshold was selected in an attempt to restrict the variable from categorizing mental health professionals as available if they were potentially not scheduled regularly enough to be in the awareness and/or of assistance to many students. First, a binary variable was created for each of the six mental health professionals that indicated whether the mental health professional was available full-time (Yes = 1, No = 0). Following, responses for the schools that indicated they had a mental health professional regularly scheduled was reviewed. If the mental health professional met the weekly criteria mentioned above, the mental health professional was considered available (Yes = 1, No = 0). The scores for each of the mental health professionals were summed to create a variable ranging from 0 to 6, with 0 indicating that none of the mental health professionals was available on-site full-time/regularly scheduled and 6 indicating that all the specified mental health professionals were available on-site full-time/regularly scheduled. Based on the range of responses to this item, a categorical variable with three levels was computed (0 = None/low, 1-2 = Medium, 3-6 = High).

### *Mental health services*

As an indicator of the mental health services provided at schools, administrators were asked “Are any of the following mental health services available on-site at your school? (Check all that apply)”. The services that administrators were asked about were ‘Assessments for emotional or behavioural problems (including behavioural observation, psychosocial assessment

and observational checklists), 'Diagnostic assessment (comprehensive psychological evaluation)', 'Behavioural management consultation with teachers, students, or families', 'Case management, including monitoring and coordination of services', 'Referral to specialized programs or services for emotional or behavioural problems or disorders', 'Crisis intervention (e.g., response to traumatic events, including disasters, serious injury/death of a member of the school community)', 'Individual counselling/therapy', 'Substance abuse counselling', and 'Family support services in school setting (e.g., child/family advocacy, counselling)'. For this thesis, only individual, group, and family therapy was considered when creating the mental health service variable. All other services were not examined in this study in an effort to focus on broader sets of services available to youth. The items were recoded to create a variable suitable to categorize schools into a binary variable indicating the availability of mental health services available on-site. For each of the three mental health services, responses that indicate that the mental health service is available was recoded to 1, otherwise, the item was recoded to 0. The three items were summed to provide scores ranging from 0 to 3. Scores ranging from 0 to 1 was considered low whereas 2-3 was considered high in the availability of mental health services.

#### *General school characteristics*

In addition to school mental health factors, general school characteristics were also included in the models, including indicators representing student enrollment, and school area population density (i.e., urbanicity) and median household income. Student enrollment for the 2018-2019 school year was categorized into three categories: 0 to 500 (small), 501 to 1000 (medium), and 1001 to 1500 (large) students. Additionally, data were extracted from the census survey to represent the population density of the school site. The 2016 census survey defined small population centres as having a population between 1,000 and 29,999, medium population centres as having population of between 30,000 and 99,999, and large population centres as having a population over 100,000 (61). According to the new definition of the population centre and rural area classification system (61) all areas outside population centres were considered rural areas (61). For the purpose of this study, this indicator was collapsed into two categories. Schools located in rural or small population centres were considered 'Rural/small urban' and schools located in medium or large population centres were considered 'Medium/large urban'. Lastly, estimates of a school's area median household income was categorized into four categories: \$25,000-50,000; \$50,000-75,000; \$75,000-100,000; >\$100,000.

#### *4.4.2.2. Student Variables*

##### *Self-rated mental health*

Measures of self-rated mental health are often used as an indicator of higher-level global mental health. The item used in the Cq is consistent with the indicator used in the Canadian Community Health Survey (CCHS; 62) and the Ontario Student Drug Use and Health Survey (OSDUH; 53). As an indicator of students' perception of their global mental health, respondents were asked: "In general, how would you rate your mental health?". The possible categorical responses include 'Excellent', 'Very good', 'Good', 'Fair', and 'Poor'. Mental health ratings of excellent, very good, or good were considered 'Good' whereas ratings of fair or poor were considered 'Poor'.

### *Emotion regulation*

To assess youth's socio-emotional skills, six items from the Difficulties in Emotional Regulation Scale (DERS; 63) were used. One item from each of the DERS six subscales was included, based on previous factor analysis in nonclinical adolescent populations (53). Students were asked to indicate how often they had experiences that refer to difficulties with emotional clarity, emotional awareness, emotional acceptance, goal-directed behaviours, emotional regulation strategies, and impulse control (53). Specifically, students were asked, "Over the last 2 weeks, how often have you been bothered by the following problems?:". The statements were: 'I have difficulty making sense out of my feelings' (emotional clarity), 'I pay attention to how I feel' (emotional awareness), 'When I'm upset, I have difficulties concentrating' (goal-directed behaviours), 'When I'm upset, I believe there is nothing I can do to make myself feel better' (emotional regulation strategies), 'When I'm upset, I lose control over my behaviour' (impulse control), 'When I'm upset, I feel ashamed for feeling that way' (non-acceptance of emotional response). A 5-point Likert scale was provided for each item (i.e., almost never=1, sometimes=2, almost half the time=3, most of the time=4, almost always=5). For the analyses, a derived continuous variable was used as an indicator of emotion regulation. The scores ranged from 1 to 30, with lower scores indicating lower socio-emotional skills while higher scores indicating higher socio-emotional skills. This scale demonstrated acceptable internal consistency among students in this study ( $\alpha = .77$ ).

### *Flourishing*

The Flourishing Scale (64) was used to assess for the presence of self-rated positive psychological well-being. The items on this scale refer to aspects of psychological and social well-being, such as life satisfaction, optimism, perceived competence, and relationships (63). On the Cq, students were asked: "How much do you agree or disagree with the following statements?". The statements for this scale were: 'I lead a purposeful and meaningful life', 'My social relationships are supportive and rewarding', 'I am engaged and interested in my daily activities', 'I actively contribute to the happiness and well-being of others', 'I am competent and capable in the activities that are important to me', 'I am a good person and live a good life', 'I am optimistic about my future', 'People respect me', and 'I generally recover from setbacks quickly'. Similar to the previous scale, a 5-point Likert scale was provided for each item (i.e., strongly agree = 5, agree=4, neither agree nor disagree=3, disagree=2, strongly disagree=1). A continuous variable was derived by summing the items on this scale. Scores ranged from 1 to 45, with higher scores indicating higher psychological well-being. This scale demonstrated excellent internal consistency among students in this study ( $\alpha = .90$ ).

### *Family and peer support*

As for indicators of perceived family and peer support, two items from the Multidimensional Scale of Perceived Social Support (MSPSS; 65) were examined. Students were asked to indicate the extent to which they agree/disagree that they can talk about their problems with their family and friends on a 5-point scale (i.e., strongly agree, agree, neither agree or disagree, disagree, strongly disagree). Students who endorse (1) either strongly agree or agree

were categorized as agreeing with the statement; (2) either strongly disagree or disagree were categorized as disagreeing with the statements, and students who endorse neither agree or disagree were considered neutral/ambivalent. Using these items, two separate variables were created to reflect students' self-perceived family and peer support. Each variable was defined by three levels of support: 'High', 'Neutral/ambivalent', and 'Low'.

### *School connectedness*

To examine the potential relationship between youth's sense of belonging within their school community on help-seeking, a measure of students' perception of their sense of belonging, satisfaction, and safety at their school was examined. To reflect this concept a 6-item scale regarding school connectedness was used. The item for this scale was selected from the School Connectedness Scale (66). Students were asked to indicate how strongly they agree or disagree with the following items: 'I feel close to people at my school', 'I feel I am part of my school', 'I am happy to be at my school', 'I feel the teachers at my school treat me fairly', 'I feel safe in my school', and 'Getting good grades is important to me'. Students have the option to indicate how strongly they identify with each item using a 4-point Likert scale (i.e., strongly agree=4, agree=3, disagree=2, strongly disagree=1). The scores for each item were summed and recoded into a continuous variable ranging from 1 to 24. For this derived variable, lower scores indicated that the student feels disconnected from their school community whereas higher scores indicated that the student feels closely connected with their school community. This scale demonstrated good internal consistency among students in this study ( $\alpha = .82$ ).

### *Bullying Victimization*

As an indicator of whether students are being bullied by their peers, the Cq uses a modified version of the bullying measure used in the Ontario Student Drug Use and Health Survey (53; 67). The modified version used in the Cq asks students "In the last 30 days, in what ways were you bullied by other students? (Mark all that apply)". The possible response options include 'I have not been bullied in the last 30 days', 'Physical attacks (e.g., getting beaten up, pushed, or kicked)', 'Verbal attacks (e.g., being teased, threatened, or having rumours spread about you)', 'Cyber-attacks (e.g., being sent mean text messages or having rumours spread about you on the internet)', and 'Had someone steal from you or damage your things'. Students who indicated that they have not been bullied in the past 30 days were classified as 'Not bullied' and students who selected any of the other options were classified as being 'Bullied'.

### *Demographic Variables*

The sociodemographic characteristics which were included in the model are grade (9, 10, 11, 12), gender (boys, girls), race/ethnicity (White, Black, Asian, Aboriginal, Latin American/Hispanic, and Other), and weekly spending money (\$0, \$1 to \$5, \$6 to \$10, \$11 to \$20, \$21 to \$40, \$41 to \$100, more than \$100, I do not know). Race/ethnicity was recoded into collapsed categories of White, Black, Asian, and Other (Aboriginal, Latin American/Hispanic, Other, Mixed) and weekly spending money was collapsed into categories of \$0, \$1 to \$20, \$21 to \$100, more than \$100, and I don't know.

## 4.5 Data Analyses

All data management and analyses were conducted using SAS. The models tested are visually depicted in Appendix B.

### 4.5.1. Exploratory Data Analyses: Descriptive Analyses

To determine the distributional nature of the explanatory and dependent variables, PROC FREQ and PROC UNIVARIATE were used to assess the categorical and continuous variables respectively. Using PROC FREQ, PROC CORR, PROC ANOVA, and PROC LOGISTIC, cross-tabulation, correlation, analysis of variance, and multiple logistic regression analyses were conducted to determine whether a relationship may exist between the explanatory and dependent variables. Chi-square estimates were used to assess whether there may be a potentially significant relationship between the variables. The results from the exploratory data analyses guided the direction of future analyses.

### 4.5.2. Research Question 1: Frequency Analyses

PROC FREQ was used to determine the proportion of students who are reluctant towards help-seeking at school. By calculating the percentage of students who endorsed any reluctance towards help-seeking at school, an estimate of the proportion of students who are reluctant towards help-seeking was computed. Frequency analyses were conducted on each of the items that composed the help-seeking variable. By examining the percentage values calculated for the responses to each of the items, the percentage of students who selected each of the six response options as potential deterrents towards help-seeking at school was identified.

### 4.5.3. Research Question 2: Generalized Equation Estimation Analyses

Given the nested nature of the data (students clustered in schools), generalized linear mixed modelling (GLMM) was used to identify any inherent correlation between students given their school clusters. Using PROC GLIMMIX the intraclass coefficient (ICC) was calculated to identify whether an adequate variance existed between schools for the binary dependent variable. An ICC greater than 2% was considered the threshold to examine the potential influence of the school environment on help-seeking attitudes.

The formula used to calculate the ICC was as follows:  $\widehat{ICC} = \rho = \frac{\hat{\sigma}_{b_0}^2}{\hat{\sigma}_{b_0}^2 + \sigma^2/3}$ .

Where,

$\hat{\sigma}_{b_0}^2$  is the covariance parameter estimate, and

$\pi$  is 3.14159265359.

When it was deemed necessary to adjust for the clustered effects among schools in the inferential models, PROC GENMOD was chosen to create generalized equation estimation (GEE) models that adjust for clustering among schools. In total, 3 models were tested for this research question (Model I, II, III). Model I, tested a null model with none of the explanatory variables entered. Model II was a crude model that tested for the relationships between school

characteristics and help-seeking. In Model III, the student variables were entered into the model to derived adjusted estimates for the school and student characteristics.

#### *4.5.4. Research Question 3: Cross-Level Interaction Analyses*

To assess for the presence of an interaction effect between the student and school variables, a fourth model (Model IV) was tested. Again, PROC GENMOD was used to test a model using GEE modelling. In Model IV, the following interaction terms were tested: peer support \* mental health professionals, peer support \* mental health services, family support \* mental health professionals, family support \* mental health services.

## 5.0. Results

### 5.1 Study Sample Participant Characteristics

#### 5.1.1. Preliminary Univariate Analyses

##### *Participant Characteristics*

The present study examines data from 47,290 students who participated in Year 7 of the COMPASS study. Most students in the sample identified as White (66%) and the proportion of students were boys (51%) and girls (49%) were approximately equal. Twenty-five percent of students reported receiving \$21-100 a week and 56% attended schools located in Ontario.

As shown in Table 1, most students reported good mental health (76%). Fifty-eight percent of students were identified as having high family support and 77% reported high peer support. More than half of the students reported reluctance towards help-seeking (58%). Cross-tabular analyses revealed that compared to boys (49%), girls (65%) were more likely to be reluctant towards help-seeking. Additionally, girls were more likely to rate their mental health as poor (30%) than boys (17%).

**Table 1.** Demographic and psychosocial characteristics of students participating in Year 6 and 7 (2017-2018, 2018-2019) of the COMPASS Study in Canada ( $N=47,290$ ).

| Variable                | Total $N$ (%) | Males $N$ (%) | Females $N$ (%) | $X^2$         |
|-------------------------|---------------|---------------|-----------------|---------------|
| <b>Province</b>         |               |               |                 |               |
| Ontario ( <i>ref.</i> ) | 26,539 (56%)  | 13,041 (57%)  | 13,498 (56%)    | 26,441.03 *** |
| Alberta                 | 2,955 (6%)    | 1,445 (6%)    | 1,150 (6%)      |               |
| British Columbia        | 8,520 (18%)   | 4,260 (19%)   | 4,260 (17%)     |               |
| Quebec                  | 9,276 (20%)   | 4,249 (18%)   | 5,027 (21%)     |               |
| <b>Gender</b>           |               |               |                 |               |
| Boys ( <i>ref.</i> )    | 22,995 (49%)  | -             | -               | 35.74 ***     |
| Girls                   | 24,295 (51%)  | -             | -               |               |
| <b>Grade</b>            |               |               |                 |               |
| 9 ( <i>ref.</i> )       | 12,684 (26%)  | 6,147 (27%)   | 6,537 (27%)     | 1,416.59 ***  |
| 10                      | 13,484 (29%)  | 6,461 (28%)   | 7,023 (29%)     |               |
| 11                      | 12,804 (27%)  | 6,237 (27%)   | 6,567 (27%)     |               |
| 12                      | 8,318 (18%)   | 4,150 (18%)   | 4,168 (17%)     |               |
| <b>Race/ethnicity</b>   |               |               |                 |               |
| White ( <i>ref.</i> )   | 31,157 (66%)  | 15,022 (65%)  | 16,135 (66%)    | 44,219.61 *** |
| Black                   | 1,583 (3%)    | 891 (4%)      | 692 (3%)        |               |
| Asian                   | 6,101 (13%)   | 2,969 (13%)   | 3,132 (13%)     |               |
| Other                   | 8,449 (18%)   | 4,113 (18%)   | 4,336 (18%)     |               |
| <b>Spending money</b>   |               |               |                 |               |
| \$0                     | 7,297 (16%)   | 3,866 (17%)   | 3,431 (14%)     | 2,238.54 ***  |
| \$1-20 ( <i>ref.</i> )  | 11,156 (24%)  | 5,257 (23%)   | 5,799 (24%)     |               |
| \$21-100                | 11,964 (25%)  | 5,339 (23%)   | 6,624 (27%)     |               |



|                               |                |                |                |               |
|-------------------------------|----------------|----------------|----------------|---------------|
| >\$100                        | 10,057 (21%)   | 5,363 (23%)    | 4,694 (19%)    |               |
| I don't know                  | 6,816 (14%)    | 3,070 (14%)    | 3,746 (16%)    |               |
| Self-rated MH                 |                |                |                |               |
| Poor                          | 11,162 (24%)   | 3,806 (17%)    | 7,356 (30%)    | 13,180.40 *** |
| Good ( <i>ref.</i> )          | 36,128 (76%)   | 19,189 (83%)   | 16,939 (70%)   |               |
| Emotion regulation            |                |                |                |               |
| Mean ( <i>SD</i> )            | 14.257 (4.767) | 13.311 (4.336) | 15.152 (4.980) | -             |
| Flourishing                   |                |                |                |               |
| Mean ( <i>SD</i> )            | 31.760 (5.684) | 32.148 (5.627) | 31.393 (5.713) | -             |
| Family support                |                |                |                |               |
| Low                           | 10,317 (22%)   | 4,416 (19%)    | 5,901 (24%)    | 12,810.51 *** |
| Neutral/ambivalent            | 9,614 (20%)    | 4,594 (20%)    | 5,020 (21%)    |               |
| High ( <i>ref.</i> )          | 27,359 (58%)   | 13,985 (61%)   | 13,374 (55%)   |               |
| Peer Support                  |                |                |                |               |
| Low                           | 4,419 (9%)     | 2,238 (10%)    | 2,181 (9%)     | 38,167.63 *** |
| Neutral/ambivalent            | 7,142 (15%)    | 3,668 (16%)    | 3,474 (14%)    |               |
| High ( <i>ref.</i> )          | 35,729 (76%)   | 17,089 (74%)   | 18,640 (77%)   |               |
| School connectedness          |                |                |                |               |
| Mean ( <i>SD</i> )            | 18.219 (0.641) | 18.430 (3.430) | 18.019 (3.237) | -             |
| Bullying                      |                |                |                |               |
| Not bullied ( <i>ref.</i> )   | 40,089 (85%)   | 19,690 (86%)   | 20,399 (84%)   | 22,872.08 *** |
| Bullied                       | 7,201 (15%)    | 3,305 (14%)    | 3,896 (16%)    |               |
| Help-seeking                  |                |                |                |               |
| Not reluctant ( <i>ref.</i> ) | 20,091 (42%)   | 11,700 (51%)   | 8,391 (35%)    | 1,068.38 ***  |
| Reluctant                     | 27,199 (58%)   | 11,295 (49%)   | 15,904 (65%)   |               |

Notes: MH = Mental Health. \* =  $p < .05$ , \*\* =  $p < .01$ , \*\*\* =  $p < .001$ .  $X^2$  = Chi-square estimate for the primary variable.

### School Characteristics

In total, data were available from 116 schools (as shown in Table 2). Many schools had 0-500 students (50%) or 500-1000 students (44%) enrolled in the previous year. There was an approximately equal number of rural/small urban (56%) and medium/large urban (43%) schools. The majority of school areas had a median household income in the range of \$50,000-75,000 (59%). Eighty-four percent of schools identified mental health as a high priority. A substantial number of schools reported a medium level of mental health professionals availability (63%) and a low level of mental health service availability (69%).

**Table 2.** School characteristics of the schools participating in Year 6 and 7 (2017-2018, 2018-2019) of the COMPASS Study in Canada ( $N = 116$ ).

| Variable                 | Total $N$ (%) |
|--------------------------|---------------|
| Enrolment                |               |
| 0-500                    | 58 (50%)      |
| 500-1000 ( <i>ref.</i> ) | 51 (44%)      |
| 1000-1500                | 7 (6%)        |

|                                     |              |
|-------------------------------------|--------------|
| Urbanicity                          |              |
| Rural/small urban                   | 65 (56%)     |
| Medium/large urban( <i>ref.</i> )   | 51 (44%)     |
| School area median household income |              |
| \$25,000-50,000                     | 14 (12%)     |
| \$50,000-75,000 ( <i>ref.</i> )     | 69 (60%)     |
| \$75,000-100,000                    | 28 (24%)     |
| >\$100,000                          | 5 (4%)       |
| Past prevalence of poor MH          |              |
| Mean (SD)                           | 22.32 (8.16) |
| MH as a school priority             |              |
| Low                                 | 19 (16%)     |
| High ( <i>ref.</i> )                | 96 (84%)     |
| MH professionals                    |              |
| None                                | 28 (24%)     |
| Medium                              | 73 (63%)     |
| High ( <i>ref.</i> )                | 15 (13%)     |
| MH services                         |              |
| Low                                 | 80 (69%)     |
| High ( <i>ref.</i> )                | 36 (31%)     |

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Notes: MH = Mental Health.

### 5.1.2. Preliminary Bivariate Analyses

Table 3 presents the results of the tabular analyses that examined the frequency and proportion of students endorsing a reluctance towards help-seeking by student characteristics. It appears that students attending schools in Quebec (48%) had the smallest proportion of students who endorse any reluctance towards help-seeking. Students who were girls (65%) endorsed significantly more reluctance towards help-seeking compared to boys (49%) students ( $X^2 = 1,291.25, p < .0001$ ). Students who reported an 'Other' (61%) and Asian (61%) race/ethnicity had the greatest proportions of students who were reluctant towards help-seeking compared to students who identified as Black (57%) or White (56%). Students in Grade 9 (55%) were least likely to be reluctant towards help-seeking, especially when compared to students in Grade 12 (60%). Students who reported receiving \$0 for spending money (61%) reported more reluctance towards help-seeking than students who reported receiving \$21-100 (56%) of weekly spending money. Additionally, students who were identified as having poor mental health (84%) endorsed significantly more reluctance towards help-seeking than students who reported good mental health (49%;  $X^2 = 4,285.18, p < .0001$ ). Students who were identified as having low family (80%) and peer (75%) support were more likely to report having reluctance towards help-seeking than students reporting high family (45%) and peer (53%) support. Lastly, students who reported being bullied were significantly more likely to report being reluctant towards help-seeking (71%), than students who did not report being bullied (55%;  $X^2 = 646.91, p < .0001$ ).

**Table 3.** Preliminary bivariate statistics for the relationship between student characteristics and help-seeking ( $N=47,290$ ).

| Variable                    | Not Reluctant $N$ (%) | Reluctant $N$ (%) | $X^2$        |
|-----------------------------|-----------------------|-------------------|--------------|
| <b>Province</b>             |                       |                   |              |
| Ontario ( <i>ref.</i> )     | 10,884 (41%)          | 15,655 (59%)      | 447.16 ***   |
| Alberta                     | 1,097 (37%)           | 1,858 (63%)       |              |
| British Columbia            | 3,294 (39%)           | 5,226 (61%)       |              |
| Quebec                      | 4,816 (52%)           | 4,460 (48%)       |              |
| <b>Gender</b>               |                       |                   |              |
| Boys ( <i>ref.</i> )        | 11,700 (51%)          | 11,295 (49%)      | 1,291.25 *** |
| Girls                       | 8,391 (35%)           | 15,904 (65%)      |              |
| <b>Grade</b>                |                       |                   |              |
| 9 ( <i>ref.</i> )           | 5,766 (45%)           | 6,918 (55%)       | 85.99 ***    |
| 10                          | 5,772 (43%)           | 7,712 (57%)       |              |
| 11                          | 5,265 (41%)           | 7,539 (59%)       |              |
| 12                          | 3,288 (40%)           | 5,030 (60%)       |              |
| <b>Race/ethnicity</b>       |                       |                   |              |
| White ( <i>ref.</i> )       | 13,651 (44%)          | 17,506 (56%)      | 75.59 ***    |
| Black                       | 824 (43%)             | 1,083 (57%)       |              |
| Asian                       | 2,687 (39%)           | 4,121 (61%)       |              |
| Other                       | 2,929 (39%)           | 4,489 (61%)       |              |
| <b>Spending money</b>       |                       |                   |              |
| \$0                         | 2,812 (39%)           | 4,485 (61%)       | 81.87 ***    |
| \$1-20 ( <i>ref.</i> )      | 4,603 (41%)           | 6,553 (59%)       |              |
| \$21-100                    | 5,271 (44%)           | 6,693 (56%)       |              |
| >\$100                      | 4,361 (43%)           | 5,696 (57%)       |              |
| I don't know                | 3,044 (45%)           | 3,772 (55%)       |              |
| <b>Self-rated MH</b>        |                       |                   |              |
| Poor                        | 1,754 (16%)           | 9,408 (84%)       | 4,285.18 *** |
| Good ( <i>ref.</i> )        | 18,337 (51%)          | 17,791 (49%)      |              |
| <b>Family support</b>       |                       |                   |              |
| Low                         | 2,016 (20%)           | 8,301 (80%)       | 4,295.40 *** |
| Neutral/<br>ambivalent      | 3,111 (32%)           | 6,503 (68%)       |              |
| High ( <i>ref.</i> )        | 14,964 (55%)          | 12,395 (45%)      |              |
| <b>Peer Support</b>         |                       |                   |              |
| Low                         | 1,083 (25%)           | 3,336 (75%)       | 1,092.00 *** |
| Neutral/<br>ambivalent      | 2,360 (33%)           | 4,782 (67%)       |              |
| High ( <i>ref.</i> )        | 16,648 (47%)          | 19,081 (53%)      |              |
| <b>Bullying</b>             |                       |                   |              |
| Not bullied ( <i>ref.</i> ) | 18,014 (45%)          | 22,075 (55%)      | 646.91 ***   |
| Bullied                     | 2,077 (29%)           | 5,124 (71%)       |              |

Notes: MH = Mental Health. \* =  $p < .05$ , \*\* =  $p < .01$ , \*\*\* =  $p < .001$ .  $X^2$  = Chi-square estimate.

Table 4 presents the results of the tabular analyses that examined the frequency and proportion of students by school factors and help-seeking attitudes. It appears that schools with higher enrollment (55%) had significantly fewer students who reported reluctance towards help-seeking compared to students who attended schools with a lower enrollment (58%;  $X^2 = 4,285.18, p = .0008$ ). Students attending rural or small urban schools reported significantly less reluctance towards help-seeking (55%), compared to students attending medium or large urban schools (58%;  $X^2 = 44.65, p < .0001$ ). Additionally, schools where the school area median household income was above \$100,000 (65%), had more students who reported reluctance towards help-seeking than schools where the median income was between \$50,000-\$75,000 (56%). With respect to school mental health variables, schools where mental health was a high priority (58%), had significantly more students who reported reluctance towards help-seeking at school than schools where mental health was a low priority (51%;  $X^2 = 106.92, p < .0001$ ). In addition, a significantly greater proportion of students attending schools where the availability of mental health professionals (59%) was low endorsed more reluctance towards help-seeking than students attending schools where the availability of mental health professionals was high (52%).

**Table 4.** Preliminary bivariate statistics for the relationship between schools characteristics and help-seeking.

| Variable                                   | Not reluctant <i>N</i> (%) | Reluctant <i>N</i> (%) | $X^2$      |
|--|----------------------------|------------------------|------------|
| <b>Enrolment</b>                           |                            |                        |            |
| 0-500                                      | 5,714 (42%)                | 7,7781 (58%)           | 14.17 ***  |
| 500-1000 ( <i>ref.</i> )                   | 11,757 (42%)               | 16,182 (58%)           |            |
| 1000-1500                                  | 2,620 (45%)                | 3,236 (55%)            |            |
| <b>Urbanicity<sup>1</sup></b>              |                            |                        |            |
| Rural/small urban                          | 6,230 (45%)                | 7,664 (55%)            | 44.65 **   |
| Medium/large urban ( <i>ref.</i> )         | 13,861 (41%)               | 19,535 (59%)           |            |
| <b>School area household median income</b> |                            |                        |            |
| \$25,000-50,000                            | 2,439 (43%)                | 3,240 (57%)            | 87.06 ***  |
| \$50,000-75,000 ( <i>ref.</i> )            | 11,787 (44%)               | 15,175 (56%)           |            |
| \$75,000-100,000                           | 5,058 (41%)                | 7,257 (59%)            |            |
| >\$100,000                                 | 807 (35%)                  | 1,527 (65%)            |            |
| <b>MH as a school priority</b>             |                            |                        |            |
| Low  | 2,717 (49%)                | 2,836 (51%)            | 106.92 *** |
| High ( <i>ref.</i> )                       | 17,374 (42%)               | 24,363 (58%)           |            |
| <b>MH professionals</b>                    |                            |                        |            |
| None                                       | 5,141 (41%)                | 7,534 (59%)            | 84.22 ***  |
| Medium                                     | 12,477 (42%)               | 16,989 (58%)           |            |
| High ( <i>ref.</i> )                       | 2,473 (48%)                | 2,676 (52%)            |            |
| <b>MH services</b>                         |                            |                        |            |
| Low  | 14,538 (42%)               | 19,850 (58%)           | 2.24       |
| High ( <i>ref.</i> )                       | 5,553 (43%)                | 7,349 (57%)            |            |

Notes: MH= Mental Health. \* =  $p < .05$ , \*\* =  $p < .01$ , \*\*\* =  $p < .001$ .  $X^2$  = Chi-square estimate.

Appendix E presents the results of the multivariable logistic regression analyses that examined the preliminary associations between the student characteristics, school factors, and reluctance towards help-seeking at school. The results of these two regression analyses mirror the tabular analyses, indicating that numerous student and school characteristics were potentially associated with help-seeking. Given the results of the exploratory data analyses, GEE modelling was pursued to test for the significance of student and school characteristics with respect to help-seeking, while adjusting for the clustered nature of the student and school variables.

## 5.2. Research Question 1

### 5.2.1. Proportion and reasons students are reluctant towards help-seeking

The results of the analyses used to examine the proportion of students who are reluctant towards help-seeking and the reasons for their reluctance is presented in Table 5. In total, 42% of students reported having no reasons to be reluctant towards help-seeking at school while 58% indicated at least one reason for being reluctant. Additional frequency analyses revealed that the most commonly reported reasons students indicated they were reluctant towards help-seeking at school was because they prefer to handle problems by themselves (34%). Many students were also worried about what others would think (22%) and lack trust in confiding with the adults at their school (21%). An equal proportion of students indicated that their belief that people would not be able to help them (18%) and having no one they feel comfortable talking to (18%) as reasons for not wanting to speak to an adult at their school about their mental health. Not knowing who to approach was the least commonly reported reason for being reluctant towards help-seeking at school (13%).

**Table 5.** Descriptive statistics of the proportion and the reasons students are reluctant towards help-seeking ( $N=47,290$ ).

| Response   | <i>N</i> (%) |
|--|--------------|
| I would have no problem talking to an adult at school about my mental health | 20,091 (42%) |
| Worried about what others would think of me (e.g., I'd be too embarrassed)   | 10,197 (22%) |
| Lack of trust in these people – word would get out                           | 9,987 (21%)  |
| Prefer to handle problems myself   | 16,086 (34%) |
| Do not think these people would be able to help me                           | 8,355 (18%)  |
| Would not know who to approach   | 6,092 (13%)  |
| There's no one I feel comfortable talking to                                 | 8,669 (18%)  |

## 5.3. Research Question 2

### 5.3.1. Model variance between schools and reluctance towards help-seeking

GLMM was used to calculate the variance between schools in the binary help-seeking variable. The intraclass correlation estimate indicated that there was a variance between schools that needed to be considered in subsequent models (ICC = 2.4%). This suggests that only 2.4% of the variance in students reporting reluctance towards seeking help at their school is a function of the characteristics of the school she/he attends. Thus, GEE was used to examine the relationship between student characteristics and school factors. The results from the GEE models are shown in Table 6.

### 5.3.2. School characteristics associated with reluctance towards help-seeking

#### *General school characteristics*

In Model II, when the association between the school characteristics were examined prior to adjusting for student characteristics, urbanicity and school area median household income were significantly associated with help-seeking attitudes. In this model, students attending schools in rural or small urban schools had lower odds of reporting reluctance than students attending medium or large urban schools ( $OR = 0.87$ , 95%  $CI = 0.81, 0.94$ ). In addition, students attending schools where the school area median household income exceeded \$100,000 had lower odds of being reluctant towards help-seeking than students attending schools where the school area median household income was between \$50,000-75,000 ( $OR = 1.03$ , 95%  $CI = 1.02, 1.04$ ).

Before adjusting for student characteristics, mental health priority was the only school mental health variable that was significantly associated with help-seeking. The results from Model II suggest that students attending schools where the past prevalence of poor mental health was higher were at greater odds of being reluctant towards help-seeking than students attending schools where the past prevalence of poor mental health was lower ( $OR = 1.03$ , 95%  $CI = 1.02, 1.04$ ). When the model was adjusted to account for student characteristics in Model III, none of the school mental health characteristics was found to be significantly associated with help-seeking. Additionally, the adjusted model revealed that urbanicity and school area median household income were the only school variable significantly associated with help-seeking. Specifically, students attending schools that were classified as being located in rural or small urban areas had lower odds of endorsing reluctance towards help-seeking than students attending medium or large urban schools ( $aOR = 0.85$ , 95%  $CI = 0.79, 0.93$ ). Similar to the results of the unadjusted model, students attending schools where the school area median household income exceeded \$100,000 had lower odds of being reluctant towards help-seeking than students attending schools where the school area median household income was between \$50-75,000 ( $aOR = 1.20$ , 95%  $CI = 1.01, 1.43$ ).

### 5.3.3. Student characteristics associated with reluctance towards help-seeking

#### *Demographic characteristics*

The results from Model III identified that gender, grade, race/ethnicity, spending money, and province were significantly associated with help-seeking among youth in the study. Specifically, the odds of reporting reluctance towards help-seeking were higher for girls when compared to boys ( $aOR = 1.70$ ,  $95\% CI = 1.63, 1.78$ ). Compared to students in Grade 9, students in Grade 11 were at greater odds of being reluctant towards help-seeking ( $aOR = 1.09$ ,  $95\% CI = 1.03, 1.15$ ). Students who identified as Black, Asian, or Other had a lower odds of endorsing reluctance towards help-seeking compared to students who identified as White ( $aOR_{Black} = 0.87$ ,  $95\% CI_{Black} = 0.79, 0.97$ ;  $aOR_{Asian} = 0.86$ ,  $95\% CI_{Asian} = 0.77, 0.96$ ,  $aOR_{Other} = 0.93$ ,  $95\% CI_{Other} = 0.99, 0.99$ ). Lastly, students who reported that they were unsure about how much they were given for weekly spending had lower odds of endorsing reluctance compared to students who reported receiving \$1-20 weekly ( $aOR = 0.88$ ,  $95\% CI = 0.88, 0.98$ ).

### *Psychosocial characteristics*

Based on the results of Model III, self-rated mental health, emotion regulation, and flourishing demonstrated to be significantly associated with help-seeking. Students who rated their mental health as poor were at greater odds of endorsing reluctance towards help-seeking than their peers who endorse good mental health ( $aOR = 1.76$ ,  $95\% CI = 1.65, 1.87$ ). Every one unit increase on the emotion regulation scale was associated with a greater odds of being reluctant towards help-seeking ( $aOR = 1.08$ ,  $95\% CI = 1.07, 1.09$ ). Conversely, every one unit increase on the flourishing scale was associated with a lower odds of being reluctant towards help-seeking ( $aOR = 0.96$ ,  $95\% CI = 0.96, 0.97$ ).

The findings from Model III also suggest that self-reported family support, peer support, school connectedness, and bullying were significantly associated with help-seeking. When compared to students who reported high family support, students who were neutral/ambivalent towards their family support were at greater odds of being reluctant towards help-seeking ( $aOR = 1.74$ ,  $95\% CI = 1.65, 1.84$ ), and students who reported low family support were at even greater odds of being reluctant towards help-seeking ( $aOR = 2.31$ ,  $95\% CI = 2.16, 2.47$ ). Similarly, students who reported neutral/ambivalent or low peer support had a greater odds of reporting reluctance towards help-seeking ( $aOR_{Neutral/Ambivalent} = 1.21$ ,  $95\% CI_{Neutral/Ambivalent} = 1.13, 1.31$ );  $aOR_{Low} = 1.20$ ,  $95\% CI_{Low} = 1.13, 1.30$ ). Higher scores on the school connectedness scale were associated with a lower odds of being reluctant towards help-seeking ( $aOR = 0.93$ ,  $95\% CI = 0.92, 0.93$ ) and students who were bullied had greater odds of reporting being reluctant towards help-seeking than students who were not bullied ( $aOR = 1.17$ ,  $95\% CI = 1.09, 1.26$ ).

## **5.4. Research Question 3**

### *5.4.1. Interactions between student and school characteristics associated with reluctance towards help-seeking*

In Model IV, interaction terms were added to the model (refer to Table 6). The results from this model suggested that the interaction terms were not significantly associated with help-seeking.

**Table 6.** Adjusted estimates for endorsing reluctance towards help-seeking using generalized equation estimation models.

| Variable  | Model I               | Model II             | Model III            | Model IV             |
|---|-----------------------|----------------------|----------------------|----------------------|
| Intercept                                       | 1.31 (1.24, 1.38) *** | 0.70 (0.60, 0.82)    | 3.21 (2.20, 4.69)    | 3.34 (2.27, 4.90)*** |
| Enrolment                                       |                       |                      |                      |                      |
| 0-500   |                       | 1.00 (0.93, 1.08)    | 0.96 (0.89, 1.03)    | 0.96 (0.89, 1.03)    |
| 500-1000 ( <i>ref.</i> )                        |                       | -                    | -                    | -                    |
| 1000-1500                                       |                       | 1.05 (0.96, 1.15)    | 0.99 (0.88, 1.12)    | 0.99 (0.88, 1.12)    |
| Urbanicity                                      |                       |                      |                      |                      |
| Rural/small urban                               |                       | 0.87 (0.81, 0.94)**  | 0.85 (0.79, 0.93)**  | 0.86 (0.79, 0.93)**  |
| Medium/large urban ( <i>ref.</i> )              |                       | -                    | -                    | -                    |
| School area median household income             |                       |                      |                      |                      |
| \$25,000-50,000                                 |                       | 1.13 (0.99, 1.29)    | 1.16 (1.03, 1.30)    | 1.16 (1.03, 1.30)    |
| \$50,000-75,000 ( <i>ref.</i> )                 |                       | -                    | -                    | -                    |
| \$75,000-100,000                                |                       | 1.03 (0.95, 1.12)    | 0.99 (0.91, 1.09)    | 1.00 (0.91, 1.09)    |
| >\$100,000                                      |                       | 1.35 (1.19, 1.53)*** | 1.20 (1.01, 1.43) *  | 1.20 (1.00, 1.43)    |
| Past prevalence of poor MH as a school priority |                       | 1.03 (1.02, 1.04)*** | 1.01 (1.00, 1.01)    | 1.00 (1.00, 1.01)    |
| Low   |                       | 0.96 (0.88, 1.06)    | 0.96 (0.86, 1.06)    | 0.96 (0.86, 1.06)    |
| High ( <i>ref.</i> )                            |                       | -                    | -                    | -                    |
| MH professionals                                |                       |                      |                      |                      |
| Low   |                       | 0.99 (0.89, 1.10)    | 1.02 (0.90, 1.16)    | 0.98 (0.85, 1.13)    |
| Medium  |                       | 0.94 (0.87, 1.03)    | 1.03 (0.92, 1.15)    | 1.01 (0.89, 1.14)    |
| High ( <i>ref.</i> )                            |                       | -                    | -                    | -                    |
| MH services                                     |                       |                      |                      |                      |
| Low   |                       | 1.03 (1.02, 1.04)    | 0.97 (0.90, 1.06)    | 1.04 (0.88, 1.05)    |
| High ( <i>ref.</i> )                            |                       | -                    | -                    | -                    |
| Gender  |                       |                      |                      |                      |
| Boys ( <i>ref.</i> )                            |                       | -                    | -                    | -                    |
| Girls   |                       |                      | 1.70 (1.63, 1.78)*** | 1.70 (1.63, 1.78)*** |
| Grade   |                       |                      |                      |                      |
| 9 ( <i>ref.</i> )                               |                       |                      | -                    | -                    |



|                             |                      |                      |
|-----------------------------|----------------------|----------------------|
| 10                          | 1.03 (0.97, 1.09)    | 1.03 (0.97, 1.09)    |
| 11                          | 1.09 (1.03, 1.15)**  | 1.09 (1.03, 1.15)**  |
| 12                          | 1.04 (0.97, 1.12)    | 1.04 (0.97, 1.12)    |
| Race/ethnicity              |                      |                      |
| White ( <i>ref.</i> )       | -                    | -                    |
| Black                       | 0.87 (0.79, 0.97)**  | 0.86 (0.77, 0.97) ** |
| Asian                       | 0.86 (0.77, 0.97)**  | 0.87 (0.79, 0.97)**  |
| Other                       | 0.93 (0.88, 0.99)**  | 0.93 (0.88, 0.99)    |
| Spending money              |                      |                      |
| \$0                         | 1.00 (0.93, 1.08)    | 1.01 (0.94, 1.08)    |
| \$1-20 ( <i>ref.</i> )      | -                    | -                    |
| \$21-100                    | 0.97 (0.91, 1.02)    | 0.95 (0.90, 1.00)    |
| >\$100                      | 0.88 (0.91, 1.03)    | 0.97 (0.91, 1.03)    |
| I don't know                | 0.88 (0.88, 0.98)*   | 0.93 (0.88, 0.98)    |
| Self-rated MH               |                      |                      |
| Poor                        | 1.76 (1.65, 1.87)*** | 1.75 (1.65, 1.86)*** |
| Good ( <i>ref.</i> )        | -                    | -                    |
| Emotion regulation          | 1.08 (1.07, 1.09)*** | 1.08 (1.07, 1.09)*** |
| Flourishing                 | 0.96 (0.96, 0.97)*** | 0.96 (0.96, 0.97)*** |
| Family support              |                      |                      |
| Low                         | 2.31 (2.16, 2.47)*** | 1.94 (1.65, 2.29)*** |
| Neutral/ambivalent          | 1.74 (1.65, 1.84)*** | 1.66 (1.41, 1.95)*** |
| High ( <i>ref.</i> )        | -                    | -                    |
| Peer Support                |                      |                      |
| Low                         | 1.20 (1.10, 1.30)*** | 1.31 (1.07, 1.60)**  |
| Neutral/ambivalent          | 1.21 (1.13, 1.31)*** | 1.09 (0.92, 1.28)    |
| High ( <i>ref.</i> )        | -                    | -                    |
| School connectedness        | 0.93 (0.92, 0.93)*** | 0.93 (0.92, 0.93)*** |
| Bullying                    |                      |                      |
| Not bullied ( <i>ref.</i> ) | -                    | -                    |
| Bullied                     | 1.17 (1.26, 1.26)*** | 1.17 (1.09, 1.26)*** |
| Peer support * MH services  |                      |                      |
| Low, low                    |                      | 0.84 (0.68, 1.05)    |

|   |                   |
|---|-------------------|
| Moderate, low<br>Peer support * MH<br>professionals | 1.13 (0.99, 1.29) |
| Low, low  | 1.03 (0.79, 1.33) |
| Low, medium   | 1.03 (0.82, 1.28) |
| Moderate, low                                       | 1.05 (0.85, 1.30) |
| Moderate, medium                                    | 1.02 (0.85, 1.22) |
| Family support * MH<br>services                     |                   |
| Low, low  | 1.13 (0.99, 1.29) |
| Moderate, low                                       | 0.99 (0.98, 1.11) |
| Family support * MH<br>professionals                |                   |
| Low, low  | 1.18 (0.97, 1.43) |
| Low, medium   | 1.09 (0.91, 1.31) |
| Moderate, low                                       | 1.07 (0.90, 1.27) |
| Moderate, medium                                    | 1.05 (0.90, 1.22) |

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*Notes:* All models adjust for Province. MH = Mental Health. For interactions, “Moderate” = Neutral/Ambivalent. OR and 95% CI reported for all estimates. \* =  $p < .05$ , \*\* =  $p < .01$ , \*\*\* =  $p < .001$ .

## 6.0. Discussion

Given the limited population-based research examining help-seeking attitudes among youth, research examining the student and school factors associated with a reluctance towards help-seeking is necessary to inform mental health promotion efforts. This study was the first to examine student and school predictors of student who report being reluctant towards help-seeking at school for mental health concerns in a large sample of Canadian youth. The findings revealed that more than half of students were reluctant to seek help from an adult at school if they had mental health concerns. Students who rated their mental health as poor mental health were at greater odds of being reluctant towards help-seeking at school when compared to students who reported having good mental health. In addition, students who reported having low social support were at greater odds of being reluctant towards help-seeking at school when compared to students who endorse high levels of social support. Although some school characteristics were significantly associated with help-seeking prior to adjusting for student characteristics, the present study did not find evidence to support that school mental health characteristics were significantly associated with help-seeking attitudes. Consistent with the findings of previous research, results from the present study emphasize the importance of promoting positive help-seeking attitudes among youth at school in mental health promotion efforts.

### 6.1. Proportion and deterrents for reluctance towards help-seeking

#### *6.1.1. Proportion of students that are reluctant towards help-seeking at school*

Previous research suggests that reluctance towards help-seeking is very common. In the present study, more than half of the students reported reluctance towards help-seeking at school. Fifty-eight percent of students reported having at least one reason deterring them from talking to an adult at their school about their mental health. This finding was not surprising given that research has demonstrated that reluctance towards help-seeking is frequently endorsed among young people (17). However, unlike the percentages reported by studies examining help-seeking in context of mental disorders (18-34%; 17, 68-70), the percentage of students endorsing reluctance towards help-seeking in this study was higher. For example, in a study examining help-seeking attitudes in a large sample of German adolescents, approximately 23% of students with a diagnosable mood or anxiety disorder endorsed being reluctant towards help-seeking (69). It is evident that many youth, with or without a diagnosable mental health condition, are reluctant towards help-seeking. To the best of the author's knowledge, this is one of the first studies to explore reluctance towards help-seeking at school among a large population sample of adolescents in Canada. Considering the frequency in which students endorsed feeling reluctant to seek help for mental health concerns at school, further population-based research is needed to better understand how schools can intervene to promote positive help-seeking behaviours among students.

#### *6.1.2. Commonly reported deterrents towards help-seeking at school*

The deterrent most frequently endorsed by youth who are reluctant towards help-seeking in this study was a preference for self-reliance. Thirty-eight percent of youth agreed that they would prefer to handle problems themselves, rather than speaking to an adult at their school about their mental health. This is consistent with previous research findings that indicated that a preference for self-reliance is very common among adolescents and can prevent youth from feeling comfortable with seeking external assistance for their mental health (17). For example, a study conducted in the United States (2004) identified that many high school students at serious risk of depression, substance use disorders, and suicidality held the belief that people should not require external help when dealing with personal mental health problems (71). In addition to a preference for self-reliance, many youth in this study were concerned with disapproval from their peers if they learned that they sought help. Specifically, 22% of students reported that other's perception about them prevents them from feeling comfortable with speaking to an adult at their school about their mental health. In addition, many students are not comfortable with speaking to an adult at their school about their mental health because they lacked trust in them (21%). This aligns with previous research that suggests concerns regarding confidentiality is a particular barrier to help-seeking in the school setting (72). In a study by Sheffield et al. (2004), compared to seeking help from psychologists, psychiatrists, or family doctors, concerns regarding confidentiality were a greater deterrent to seeking help from a school counsellor (72). These findings mirror previous research and highlight key deterrents that need to be addressed in school-based help-seeking interventions.

## **6.2. Student characteristics associated with reluctance towards help-seeking**

### *6.2.1. Indicators of psychological well-being and help-seeking attitudes*

The help-seeking literature identifies several potential individual characteristics associated with attitudes towards help-seeking. In the present study, students who reported poor mental health, as inferred from self-rated mental health, emotion regulation, and flourishing, were at a significantly higher odds of being reluctant towards help-seeking at school. These findings provide support for the body of literature that suggests adolescents with poor mental health are less willing to seek help for their mental health than adolescents who report good mental health (26, 6). One study examining the psychological correlates of help-seeking among children and adolescents in the United States found that students who reported greater symptoms of depression had more negative attitudes about help-seeking than students with fewer symptoms of depression (27). While another study identified that adolescents and young adults who feel emotionally competent to express their emotions are more inclined to seek help for mental health problems compared to young people with low emotional competence (6). Although these findings are not surprising, they are concerning because they suggest that students who are in the greatest need of assistance for their mental health are among the least likely to seek help. Hence, a priority in targeted school-based interventions should be students at risk or experiencing mental health concerns.

### *6.2.2. Indicators of social well-being and help-seeking attitudes*

In this study, students who scored lower on indicators of social well-being were at lower odds of being reluctant towards help-seeking compared to students who scored higher. Both

family and peer support were negatively associated with being reluctant towards help-seeking. Although previous research suggests social support is associated with positive mental health (38), the relationship between social support and help-seeking is conflicting (6). As previously mentioned, there is research to suggest that youth with stronger peer support networks are less likely to be comfortable with seeking external assistance from adults and professional supports (6). The findings from the present study align with the body of research that suggests being integrated into a strong social network has a positive influence not only on mental health but also the help-seeking attitudes of youth (38). The school connectedness findings mirror the social support findings because they also suggest that students who feel a low sense of belonging at school are at greater odds of being uncomfortable with speaking about their mental health at school. Together, these results speak to the significant influence perceptions of family, peer, and school connectedness have on help-seeking. This highlights that youth with poor social support, especially at school, should be considered a priority population in school-based help-seeking interventions.

### *6.2.3. Demographic characteristics and help-seeking attitudes*

The present study found that demographic characteristics, such as gender and race/ethnicity, were significantly associated with help-seeking attitudes. Contrary to previous research, girls were more reluctant towards help-seeking than boys. Previous research has consistently demonstrated that girls are more willing to engage in help-seeking behaviours than boys (73), and it has been proposed that sociocultural masculine norms of self-reliance and restrictive emotionality (74) contribute to greater resistance towards help-seeking in boys (75). The contrary results for this variable may be due to gender differences in willingness to self-report negative mental health-related experiences between boys and girls. In addition, the finding that students who identified with a Black, Asian, or Other race/ethnicity were less reluctant towards help-seeking than White students was unexpected. Previous research indicates that compared to students who are White, students of colour experience more perceived stigma and other systemic barriers that contribute to lower rates of help-seeking and service utilization for mental health concerns (76-77). Considering the significance of gender and race/ethnicity on health, further research is needed to clarify these discrepancies by examining incongruencies between their relationships with different measures of help-seeking attitudes and/or behaviours and testing for the presence of moderators.

## **6.3. School characteristics associated with reluctance towards help-seeking**

### *6.3.1. General school characteristics and help-seeking attitudes*

In this study, a select few general health characteristics of the school environment were associated with help-seeking attitudes. Students attending rural or small urban schools were at greater odds of being reluctant towards help-seeking at school than students attending medium or large urban schools. This findings are contrary to the literature that demonstrates the high rate of reluctance towards help-seeking in rural populations (17, 73, 78-79). A study by Boyd (2007) identified that concerns of social visibility, lack of anonymity, a culture of self-reliance, and stigma are key deterrents towards help-seeking among youth living in rural communities (78). Given that this study only examines attitudes towards help-seeking in the school environment,

lower rates of reluctance may have been reported by students living in rural areas due to less practical barriers (e.g., distance) associated with accessing mental health resources at school compared to accessing mental health resources in the communities. Further research in this domain is needed to clarify the reasons for the contrary results observed for the relationship between urbanicity and help-seeking attitudes in this study.

### *6.3.2. School mental health variables and help-seeking attitudes*

The present study did not reveal any significant findings for the associations between any of the school mental health variables and help-seeking attitudes. This may be due to various reasons, including a truly insignificant relationship between school mental health context and help-seeking attitudes. However, it could also be due to variations in implementation. Program evaluation research demonstrates that when done well, school mental health services have the potential to satisfy the needs of students, family, and school stakeholders (80-81). However, it was not possible to evaluate the manner in which these initiatives were implemented. Additionally, the non-significant results between the availability of mental health professionals and services and help-seeking attitudes may have been due to a generally high rate of reluctance towards help-seeking impacting many students. Despite that some school boards are taking the initiative to increase the availability of mental health professionals and services, the various deterrents towards help-seeking may influence how comfortable youth feel about using school mental health resources. Addressing the deterrents towards help-seeking may help maximize the benefits of offering on-site mental health professionals and services at school. More work should be done to determine how schools can foster an acceptance towards help-seeking among students, especially priority student groups, in mental health promotion efforts.

## **6.4. Interactions between student and school characteristics associated with reluctance towards help-seeking**

None of the interactions examined in this study were significant. This suggests that the non-significant associations observed were not due to the potentially moderating influence of family and peer support. Given the research that suggests youth with strong social support may confide in family and friends instead of professional supports for mental health concerns (6), it was necessary to test for the presence of interactions between social support and mental health professionals and services on students' help-seeking attitudes. The results demonstrate that regardless of the level of support youth endorse receiving from their family and friends, the associations between mental health professionals and services and help-seeking attitudes remained insignificant. Therefore, it is appropriate to conclude that the insignificant associations between the availability of mental health professionals and services with help-seeking were not due to variations in social support.

## **6.5. Strengths and Limitations**

### *6.5.1. Strengths*

The design of this study has many strengths. First, this study used a population survey to examine the help-seeking attitudes of youth attending schools across the country. To date, the

large majority of research on help-seeking attitudes among youth populations have been conducted in clinical populations, and the use of clinical populations does not permit examination of help-seeking in the general youth population. It is important to examine help-seeking attitudes in the general youth population because it captures students who have not been previously identified as having a mental disorder and can provide direction for preventative measures. Additionally, the generalizability of findings from a majority of research in this field is restricted by a limited school sample size. By examining school mental health variables that do not reference specific interventions, it was possible to assess for the potential influence of school mental health characteristics on help-seeking attitudes in a large number of schools. Lastly, the hierarchical nature of the data analyses accounted for the clustering of student and school characteristics which, to the author's knowledge, has not been done in context of help-seeking attitudes among Canadian youth populations.

### *6.5.2. Limitations*

Despite the strengths of the present study, there are limitations to consider. First, it is important to note that the variable used to examine attitudes towards help-seeking was posed in a hypothetical manner. The phrasing of this variable necessitates consideration when interpreting the findings as representing students' current experiences and attitudes towards help-seeking. Notwithstanding this consideration, this variable can help gain insight into the preventative measures that schools can take to reduce reluctance towards help-seeking.

Also, the indicator of help-seeking hesitancy was not extensive as there are many other potential deterrents (e.g., practical constraints, negative past experiences) that were not captured in this measure (72). As a result, the proportion of students who endorsed being reluctant towards help-seeking could have been underestimated. However, the aim of this study was not to obtain a nationally representative prevalence estimate, but rather to gain insight into the frequency in which students endorse being reluctant towards help-seeking for mental health concerns at school.

Additionally, the indicators used to assess school mental health did not account for the inherent variability in implementation. Similar to other population studies, rigorous details on implementation are difficult to obtain in population surveys that collect information on numerous health programs, policies, and interventions offered at schools. Strategies to increase the amount of detail collected from population surveys without significantly increasing the burden on school contacts completing these surveys are needed to enhance school-based mental health evaluation research.

Furthermore, the complete-case technique employed in this study must be taken into consideration. Only data from students with complete responses to all the variables included in the models were included in the analyses, therefore, the precision of the estimates could have been influenced by response bias. The omission of students who did not feel comfortable responding to some of the questions could have introduced biases and influenced the direction of the results. Similarly, the self-report format of the Cq and SPP introduces the influence of self-report biases, such as social desirability and recall bias. It is possible that students misreported information on the surveys due to the sensitive nature of the mental health measures. However,

the effect of response and social desirability biases was mitigated by the active information and passive consent procedure of the COMPASS study that ensured students of their anonymity before completing the survey.

Lastly, due to the cross-sectional data analysis design, it is not possible to infer the direction and temporality of the relationships observed. Schools who observe poor mental health and low help-seeking rates among their students may have been motivated to put measures in place at schools to help combat these issues. The past prevalence estimate was included in the models to assess for the potential effect of baseline mental health issues among students on the relationships between school mental health characteristics and help-seeking attitudes. Given the prospective cohort design of the COMPASS study, issues related to temporality and causality can be mitigated in future research by employing longitudinal analyses to examine the impact of school mental health characteristics on help-seeking attitudes of students.

## **6.6. Implications**

### *6.6.1. Implications for Research*

#### *6.6.1.1. Determinants of Health Model*

Greenwood's Determinants of Health Model (2) highlights the importance of considering both individual and systemic indicators on the health and well-being of youth. As such, the models tested in the present study examined the associations between the school system and individual indicators of well-being on the help-seeking attitudes of youth. The findings provided partial support for this framework in the context of understanding help-seeking attitudes among youth. The findings suggested an association between psychosocial well-being and help-seeking attitudes. However, there was limited evidence to support the influence of the school environment on help-seeking attitudes. Although there was evidence that some general school health factors were significantly associated with help-seeking attitudes, this study did not reveal strong evidence to support that school mental health characteristics were associated with help-seeking attitudes among youth. Prior to adjusting for student characteristics, a higher prevalence of self-rated poor mental health among students in the previous year was significantly associated with greater reluctance towards help-seeking. After adjusting for student characteristics, these variables were no longer significantly associated with attitudes towards help-seeking. When the student characteristics were introduced into the model, some of the variance previously explained by the past prevalence variable could have been absorbed by the self-rated mental health variable, which would explain why the past prevalence variable was no longer significant.

#### *6.6.1.2. Moderation Analyses*

The findings did not reveal evidence to support that help-seeking attitudes was explained by the presence of an interaction between indicators of social support and the availability of school mental health professionals and services. A potential reason for the absence of significant interaction effects may have been explained by the inclusion of multiple moderating effects in one model. An alternative approach to testing for interaction effects could have been to test models that only include one moderator. Given that the potential for other indicators to moderate



the relationships between school mental health variables and help-seeking, future research should continue to explore these relationships to better understand how moderators may influence help-seeking attitudes. Although examining other potential moderators was beyond the scope of the present study, future research could explore the moderating effect of social support on other variables, such as gender and race/ethnicity. Exploring these moderators may help clarify the contrary findings observed in this study and improve our understanding of how schools can foster positive help-seeking attitudes among youth.

### *6.6.1.3. Evaluating School Mental Health*

Advancements are needed in evaluating school mental health characteristics. Specifically, additional consideration needs to be taken to increase the level of details collected on school health surveys without significantly increasing the burden on administrators completing the survey. Additional detail would allow for researchers to account for variability in the implementation of school mental health strategies across schools. For example, a question that could be added to the COMPASS survey is one that asks schools to identify the number of individuals who were reached by a specific intervention and the duration (e.g., hours, days, weeks) of the intervention. Including questions of this nature could help improve the examination of mental health strategies taking place across schools and provide important contextual information that can enhance future analyses.

### *6.6.2. Implications for Practice*

#### *6.6.2.1. School Mental Health: Universal Approaches*

The significant variability between schools in students' response to the help-seeking indicator suggests variables at the school level are important to consider in mental health promotion efforts. Although the adjusted model identified that none of the school mental health characteristics were significantly associated with help-seeking, the results of the unadjusted model provide evidence that the school system should not be ignored. The models tested identified several school variables, such as urbanicity, school area median household income, and past prevalence of poor mental health, that were significant prior to adjusting for student characteristics. Therefore, it is likely that the school environment is related to help-seeking attitudes that are beyond the scope of the present study. The role of the school environment in help-seeking deserves to be further examined because even relatively small differences at the population level may represent significant implications to public health (82). Considering the breadth of reach of universal, or whole-school approaches, interventions that seek to foster positive attitudes towards help-seeking among a large body of students, could be helpful.

Schools looking to address help-seeking at schools using a universal approach should consider addressing issues related to help-seeking identified in this study. As such, implementing interventions that seek to reduce help-seeking deterrents related to a preference for self-reliance, social disapproval, and confidentiality could be helpful. These deterrents could be interpreted to signify issues related to stigma that prevent youth from feeling comfortable when addressing mental health concerns (83; 17). Therefore, interventions aimed at stigma reduction should be considered when attempting to modify help-seeking attitudes.

One possible intervention that has demonstrated empirically to be positively associated with modifying students' stigmatizing beliefs about mental illnesses in the school setting, is contact-based education (84). Contact-based education operates under the theory that strategies that aim to incorporate education and contact, such as correcting myths and sharing personal stories of lived experience with mental illnesses, can reduce public stigma towards individuals with mental illnesses (85). In a review of contact-based education used in youth, the authors reported that contact-based education was successful in improving stereotypical views about people with mental illnesses (84). Hence, contact-based education should be considered as a viable option for schools wishing to reduce public and self-stigmatizing beliefs that contribute to resistance towards help-seeking.

Alternatively, providing socio-emotional learning opportunities could be a strategy to promote positive help-seeking attitudes among students. A literature review into universal school-based mental health promotion programs suggests that providing students with coping strategies can increase positive help-seeking behaviours (86). For example, in a study by King et al. (2011), following the implementation of a program that focused on teaching students adaptive ways of coping, students were more likely to seek help by approaching a friend, family member, or professional when they were feeling suicidal or depressed (87). Although research in this domain is still evolving, socio-emotional learning provides a promising direction for schools interested in using a universal approach to promote a range of positive mental health outcomes among a large range of students (31).

#### *6.6.2.2. School Mental Health: Targeted Approaches*

The student characteristics identified to be significantly associated with help-seeking could be used to guide the selection of targeted interventions aimed at addressing help-seeking in priority populations. In this study, numerous student characteristics were found to be associated with more reluctance towards help-seeking, including sociodemographic and psychosocial characteristics. By tailoring universal interventions, schools can potentially reach groups of students facing specific barriers (25). For example, since the findings suggest students experiencing poor mental health or are poorly integrated into social networks are at greater odds of being reluctant towards help-seeking, interventions can be tailored to address the specific barriers that are deterring these youth from seeking help at school. By using targeted approaches alongside universal approaches, schools may be able to promote positive help-seeking attitudes among the general student population while also addressing the unique conditions contributing to disproportionately higher rates of reluctance among sub-groups of students.

### **6.7. Conclusions**

Fostering positive mental health among youth is of recognized importance. However, high levels of resistance towards help-seeking among youth remains a significant barrier to meeting the mental health needs of youth. In corroboration with previous research, the findings from the present study provide direction that could be used to inform future research on school mental health promotion efforts. By identifying the school and student characteristics associated

with help-seeking attitudes, the findings from this study provide promising direction for future school mental health promotion efforts and research.

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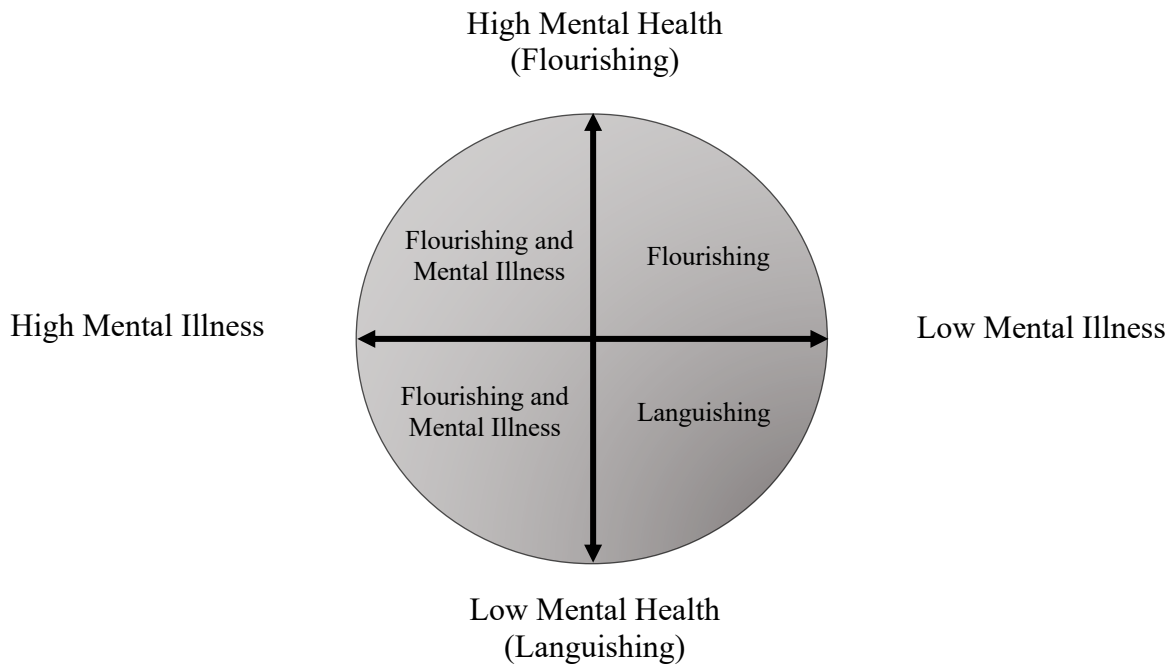


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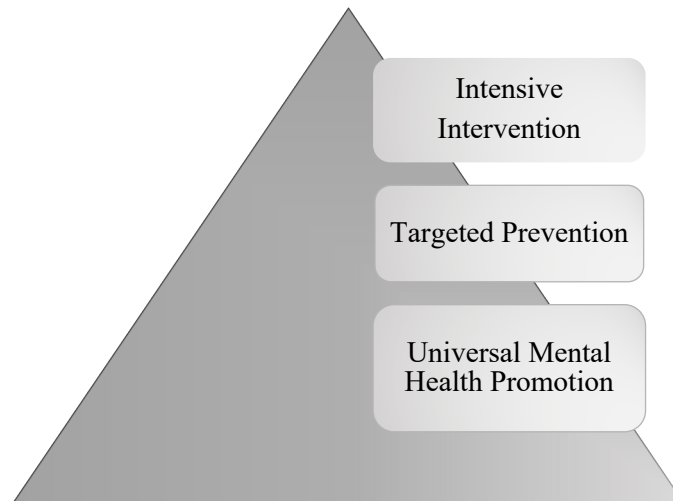
**APPENDICES**  
**APPENDIX A— Theoretical Framework Models**

**Figure 1: Mental Health Continuum Model (1).**



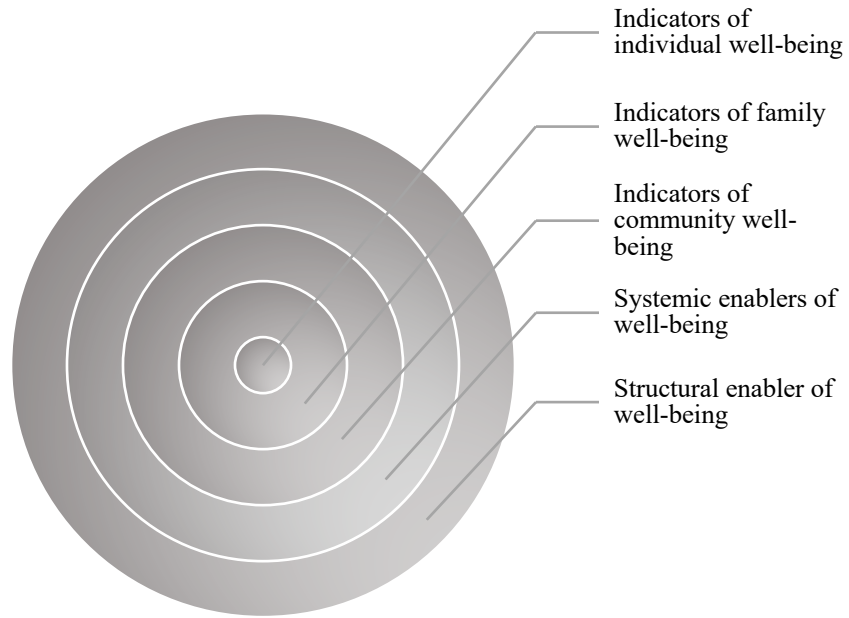
Adapted: Keyes, C.L.M. 2002. The mental health continuum: from languishing to flourishing

**Figure 2: School Mental Health Ontario Model (1).**



Adapted: Ontario Ministry of Education. 2015. The tiered approach.

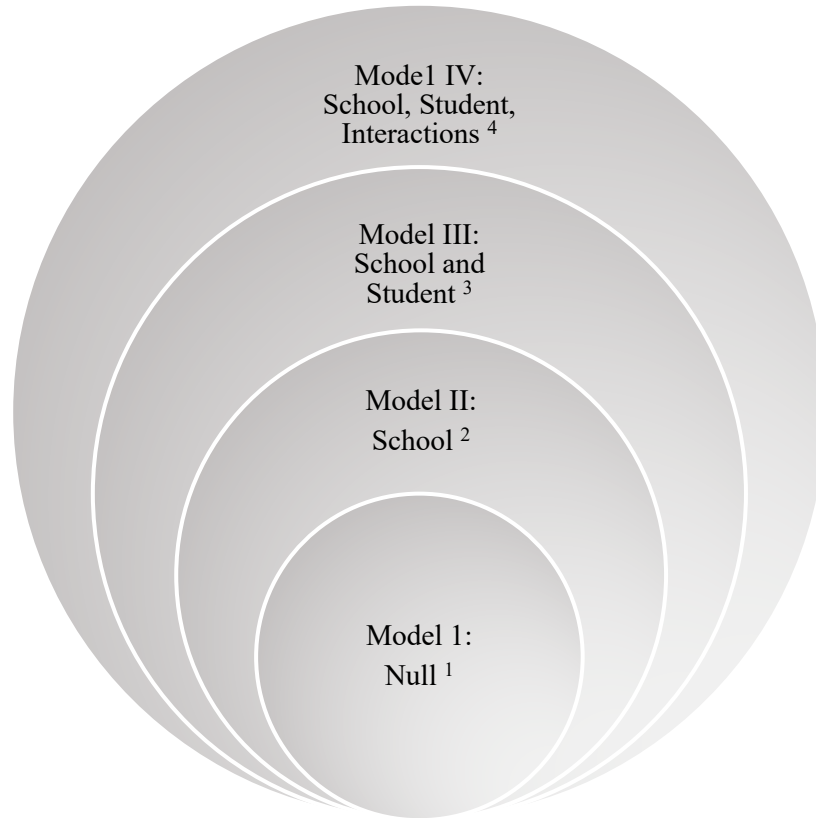
**Figure 3: Determinants of Health Model (2).**



Adapted: Greenwood. 2016. Determinants of health model.

## APPENDIX B— Statistical Models

**Figure 4.** Hierarchical Regression Model



<sup>1</sup> Model does not contain any explanatory variables

<sup>2</sup> Model contains school variables only

<sup>3</sup> Model contains both school and student variables

<sup>4</sup> Model contains school, student, and interaction terms

APPENDIX C— COMPASS Study Questionnaire (Cq)



- This is NOT a test. All of your answers will be kept confidential. No one, not even your parents or teachers, will ever know what you answered. So, please be honest when you answer the questions.
- Mark only one option per question unless the instructions tell you to do something else.
- Choose the option that is the closest to what you think/feel is true for you.



Please, use a pencil to complete this questionnaire



Please mark all your answers with full, dark marks like this:



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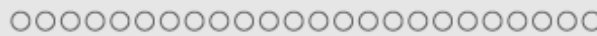


Please read each sentence below carefully. Write the correct letter, number, or word on the line and then fill in the corresponding circle.

Note: These five questions are only used to link data from one year to the next. They cannot be used to identify participants. Only University of Waterloo researchers have access to the responses, and they never have access to student names or other information. All responses are strictly confidential.

| The first letter of your middle name (if you have more than one middle name use your first middle name; if you don't have a middle name use "Z" ): _____ | The name of the month in which you were born: _____   | The last letter of your full last name: _____   | The second letter of your full first name: _____  | The first initial of your mother's first name (think about the mother you see the most): _____                                  |
|--|---|---|---|---|
| (A) (J) (B)<br>(B) (K) (T)<br>(C) (L) (U)<br>(D) (M) (V)<br>(E) (N) (W)<br>(F) (O) (X)<br>(G) (P) (Y)<br>(H) (Q) (Z)<br>(I) (R)                          | (1) January<br>(2) February<br>(3) March<br>(4) April<br>(5) May<br>(6) June<br>(7) July<br>(8) August<br>(9) September<br>(10) October<br>(11) November<br>(12) December | (A) (J) (B)<br>(B) (K) (T)<br>(C) (L) (U)<br>(D) (M) (V)<br>(E) (N) (W)<br>(F) (O) (X)<br>(G) (P) (Y)<br>(H) (Q) (Z)<br>(I) (R) | (A) (J) (B)<br>(B) (K) (T)<br>(C) (L) (U)<br>(D) (M) (V)<br>(E) (N) (W)<br>(F) (O) (X)<br>(G) (P) (Y)<br>(H) (Q) (Z)<br>(I) (R) | (A) (J) (B)<br>(B) (K) (T)<br>(C) (L) (U)<br>(D) (M) (V)<br>(E) (N) (W)<br>(F) (O) (X)<br>(G) (P) (Y)<br>(H) (Q) (Z)<br>(I) (R) |

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## About You

### 1. What grade are you in?

- Grade 9
- Grade 10
- Grade 11
- Grade 12

#### Quebec students only

- Secondary I
- Secondary II
- Secondary III
- Secondary IV
- Secondary V
- Other

### 2. How old are you today?

- 12 years or younger
- 13 years
- 14 years
- 15 years
- 16 years
- 17 years
- 18 years
- 19 years or older

### 3. Are you female or male?

- Female
- Male

### 4. How would you describe yourself? (Mark all that apply)

- White
- Black
- Asian
- Aboriginal (First Nations, Métis, Inuit)
- Latin American/Hispanic
- Other

### 5. About how much money do you usually get each week to spend on yourself or to save?

(Remember to include all money from allowances and jobs like baby-sitting, delivering papers, etc.)

- Zero
- \$1 to \$5
- \$6 to \$10
- \$11 to \$20
- \$21 to \$40
- \$41 to \$100
- More than \$100
- I do not know how much money I get each week





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**10. How do you describe your weight?**

- Very underweight
- Slightly underweight
- About the right weight
- Slightly overweight
- Very overweight

**11. Which of the following are you trying to do about your weight?**

- Lose weight
- Gain weight
- Stay the same weight
- I am not trying to do anything about my weight

**12. How much time per day do you usually spend doing the following activities?**

For example: If you spend about 3 hours watching TV each day, you will need to fill in the 3 hour circle, and the 0 minute circle as shown below:

|   |              |   |   |   |   |   |   |   |   |   |                |    |    |    |
|---|--------------|---|---|---|---|---|---|---|---|---|----------------|----|----|----|
| a) Watching/streaming TV shows or movies                      | 0            | 1 | 2 | ● | 4 | 5 | 6 | 7 | 8 | 9 | 0              | 15 | 30 | 45 |
|   | <b>Hours</b> |   |   |   |   |   |   |   |   |   | <b>Minutes</b> |    |    |    |
| a) Watching/streaming TV shows or movies                      | 0            | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0              | 15 | 30 | 45 |
| b) Playing video/computer games                               | 0            | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0              | 15 | 30 | 45 |
| c) Doing homework   | 0            | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0              | 15 | 30 | 45 |
| d) Talking on the phone                                       | 0            | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0              | 15 | 30 | 45 |
| e) Surfing the internet                                       | 0            | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0              | 15 | 30 | 45 |
| f) Texting, messaging, emailing (note: 50 texts = 30 minutes) | 0            | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0              | 15 | 30 | 45 |
| g) Sleeping   | 0            | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0              | 15 | 30 | 45 |

**13. In the last 30 days, did you gamble online for money?**

- Yes
- No



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**17. Your closest friends are the friends you like to spend the most time with. How many of your closest friends are physically active?**

- None
- 1 friend
- 2 friends
- 3 friends
- 4 friends
- 5 or more friends

**18. Are you taking a physical education class at school this year?**

- Yes, I am taking one this term
- Yes, I will be taking one or have taken one this school year, but not this term.
- No, I am not taking a physical education class at school this year

**19. Do you participate in before-school, noon hour, or after-school physical activities organized by your school? (e.g., intramurals, non-competitive clubs)**

- Yes
- No
- None offered at my school

**20. Do you participate in competitive school sports teams that compete against other schools? (e.g., junior varsity or varsity sports)**

- Yes
- No
- None offered at my school

**21. Do you participate in league or team sports outside of school?**

- Yes
- No
- There are none available where I live

**22. On how many days in the last 7 days did you do exercises to strengthen or tone your muscles? (e.g., push-ups, sit-ups, or weight-training)**

- 0 days
- 1 day
- 2 days
- 3 days
- 4 days
- 5 days
- 6 days
- 7 days



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26. **YESTERDAY, from the time you woke up until the time you went to bed, how many servings of meats and alternatives did you have?** One 'Food Guide' serving of meat and alternatives includes cooked fish, chicken, beef, pork, or game meat, eggs, nuts or seeds, peanut butter or nut butters, legumes (beans), and tofu.

- None
- 1 serving
- 2 servings
- 3 servings
- 4 servings
- 5 or more servings

**Canada's Food Guide Serving Sizes of Meats and Alternatives**



27. **YESTERDAY, from the time you woke up until the time you went to bed, how many servings of vegetables and fruits did you have?** One 'Food Guide' serving of vegetables and fruit includes pieces of fresh vegetable or fruit, salad or raw leafy greens, cooked leafy green vegetables, dried or canned or frozen fruit, and 100% fruit or vegetable juice.

- None
- 1 serving
- 2 servings
- 3 servings
- 4 servings
- 5 servings
- 6 servings
- 7 servings
- 8 servings
- 9 or more servings

**Canada's Food Guide Serving Sizes of Vegetables and Fruits**



28. **YESTERDAY, from the time you woke up until the time you went to bed, how many servings of milk and alternatives did you have?** One 'Food Guide' serving of milk or milk alternatives includes milk, fortified soy beverage, reconstituted powdered milk, canned (evaporated) milk, yogurt or kefir (another type of cultured milk product), and cheese.

- None
- 1 serving
- 2 servings
- 3 servings
- 4 servings
- 5 servings
- 6 or more servings

**Canada's Food Guide Serving Sizes of Milk and Alternatives**



29. **YESTERDAY, from the time you woke up until the time you went to bed, how many servings of grain products did you have?** One 'Food Guide' serving of grain products includes bread, bagels, flatbread such as tortilla, pita, cooked rice or pasta, and cold cereal.

- None
- 1 serving
- 2 servings
- 3 servings
- 4 servings
- 5 servings
- 6 servings
- 7 servings
- 8 servings
- 9 or more servings

**Canada's Food Guide Serving Sizes of Grain Products**



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## Your Experience with Smoking

30. Have you ever tried cigarette smoking, even just a few puffs?

- Yes
- No

31. Do you think in the future you might try smoking cigarettes?

- Definitely yes
- Probably yes
- Probably not
- Definitely not

32. If one of your best friends were to offer you a cigarette, would you smoke it?

- Definitely yes
- Probably yes
- Probably not
- Definitely not

33. At any time during the next year do you think you will smoke a cigarette?

- Definitely yes
- Probably yes
- Probably not
- Definitely not

34. Have you ever smoked 100 or more whole cigarettes in your life?

- Yes
- No

35. On how many of the last 30 days did you smoke one or more cigarettes?

- None
- 1 day
- 2 to 3 days
- 4 to 5 days
- 6 to 10 days
- 11 to 20 days
- 21 to 29 days
- 30 days (*every day*)

36. Your closest friends are the friends you like to spend the most time with. How many of your closest friends smoke cigarettes?

- None
- 1 friend
- 2 friends
- 3 friends
- 4 friends
- 5 or more friends

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## Alcohol and Drug Use

Please remember that we will keep your answers **completely confidential**.

**A DRINK** means: 1 regular sized bottle, can, or draft of beer; 1 glass of wine; 1 bottle of cooler; 1 shot of liquor (rum, whisky, etc); or 1 mixed drink (1 shot of liquor with pop, juice, energy drink).

42. In the last 12 months, how often did you have a drink of alcohol that was more than just a sip?

- I have never drunk alcohol
- I did not drink alcohol in the last 12 months
- I have only had a sip of alcohol
- Less than once a month
- Once a month
- 2 or 3 times a month
- Once a week
- 2 or 3 times a week
- 4 to 6 times a week
- Every day

43. How old were you when you first had a drink of alcohol that was more than just a sip?

- I have never drunk alcohol
- I have only had a sip of alcohol
- I do not know
  
- 8 years or younger
- 9 years
- 10 years
- 11 years
- 12 years
- 13 years
- 14 years
- 15 years
- 16 years
- 17 years
- 18 years or older

44. In the last 12 months, how often did you have 5 drinks of alcohol or more on one occasion?

- I have never done this
- I did not have 5 or more drinks on one occasion in the last 12 months
- Less than once a month
- Once a month
- 2 to 3 times a month
- Once a week
- 2 to 5 times a week
- Daily or almost daily

45. In the last 12 months, have you had alcohol mixed or pre-mixed with an energy drink (such as Red Bull, Rock Star, Monster, or another brand)?

- I have never done this
- I did not do this in the last 12 months
- Yes
- I do not know

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46. In the **last 12 months**, how often did you use marijuana or cannabis? (a joint, pot, weed, hash)

- I have never used marijuana
- I have used marijuana but not in the last 12 months
- Less than once a month
- Once a month
- 2 or 3 times a month
- Once a week
- 2 or 3 times a week
- 4 to 6 times a week
- Every day

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47. If you have used marijuana or cannabis in the **last 12 months**, how did you use it? (Mark all that apply)

- I have used it by smoking it (e.g., in a joint, a pipe, a bong)
- I have used it by vaping it
- I have used it by eating or drinking it (e.g., in brownies, cookies, candies, tea)
- I have not used marijuana or cannabis in the last 12 months

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48. How old were you when you first used marijuana or cannabis?

- I have never used marijuana
- I do not know
- 8 years or younger
- 9 years
- 10 years
- 11 years
- 12 years
- 13 years
- 14 years
- 15 years
- 16 years
- 17 years
- 18 years or older

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49. Do you think it would be difficult or easy for you to get marijuana if you wanted some?

- Difficult
- Easy
- I do not know

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50. Have you used or tried any of the following medications TO GET HIGH?

|   | No, I have never done this | Yes, I have done this in the last 12 months | Yes, I have done this, but NOT in the last 12 months |
|---|----------------------------|---|--|
| a) Oxycodone (oxy, OC, APO, OxyContin®, percs, roxies, OxyNEO®)     | <input type="radio"/>      | <input type="radio"/>                       | <input type="radio"/>                                |
| b) Fentanyl (china white, synthetic heroin, china girl)             | <input type="radio"/>      | <input type="radio"/>                       | <input type="radio"/>                                |
| c) Other prescription pain relievers (codeine, morphine, Tylenol 3) | <input type="radio"/>      | <input type="radio"/>                       | <input type="radio"/>                                |

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51. Do you think it would be difficult or easy to get pain relievers (Oxycodone, Fentanyl, codeine, etc.) if you wanted some?

- Difficult
- Easy
- I do not know

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# Mental Health

52. How much do you agree or disagree with the following statements?

|   | Strongly agree        | Agree                 | Neither agree nor disagree | Disagree              | Strongly disagree     |
|---|-----------------------|-----------------------|----------------------------|-----------------------|-----------------------|
| a) I have a happy home life                     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| b) My parents/guardians expect too much of me   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| c) I can talk about my problems with my family  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| d) I can talk about my problems with my friends | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |

53. How much do you agree or disagree with the following statements?

|  | Strongly agree        | Agree                 | Neither agree nor disagree | Disagree              | Strongly disagree     |
|--|-----------------------|-----------------------|----------------------------|-----------------------|-----------------------|
| a) I lead a purposeful and meaningful life                               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| b) My social relationships are supportive and rewarding                  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| c) I am engaged and interested in my daily activities                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| d) I actively contribute to the happiness and well-being of others       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| e) I am competent and capable in the activities that are important to me | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| f) I am a good person and live a good life                               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| g) I am optimistic about my future                                       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| h) People respect me   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| i) I generally recover from setbacks quickly                             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |

54. Choose the answer that best describes how you feel.

|   | True                  | Mostly true           | Sometimes true, sometimes false | Mostly false          | False                 |
|---|-----------------------|-----------------------|---------------------------------|-----------------------|-----------------------|
| a) In general, I like the way I am      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>           | <input type="radio"/> | <input type="radio"/> |
| b) Overall, I have a lot to be proud of | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>           | <input type="radio"/> | <input type="radio"/> |
| c) A lot of things about me are good    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>           | <input type="radio"/> | <input type="radio"/> |
| d) When I do something, I do it well    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>           | <input type="radio"/> | <input type="radio"/> |
| e) I like the way I look                | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>           | <input type="radio"/> | <input type="radio"/> |

55. If you had concerns regarding your mental health, are there any reasons why you would not talk to an adult at school (e.g., a school social worker, child and youth worker, counsellor, psychologist, nurse, teacher, or other staff person)? (Mark all that apply)

- I would have no problem talking to an adult at school about my mental health
- Worried about what others would think of me (e.g., I'd be too embarrassed)
- Lack of trust in these people - word would get out
- Prefer to handle problems myself
- Do not think these people would be able to help
- Would not know who to approach
- There is no one I feel comfortable talking to



# Your School and You

**60. How strongly do you agree or disagree with each of the following statements?**

|   | Strongly agree        | Agree                 | Disagree              | Strongly disagree     |
|---|-----------------------|-----------------------|-----------------------|-----------------------|
| a) I feel close to people at my school              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| b) I feel I am part of my school                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| c) I am happy to be at my school                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| d) I feel the teachers at my school treat me fairly | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| e) I feel safe in my school                         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| f) Getting good grades is important to me           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**61. In the last 30 days, in what ways were you bullied by other students? (Mark all that apply)**

- I have not been bullied in the last 30 days
- Physical attacks (e.g., getting beaten up, pushed, or kicked)
- Verbal attacks (e.g., getting teased, threatened, or having rumours spread about you)
- Cyber-attacks (e.g., being sent mean text messages or having rumours spread about you on the internet)
- Had someone steal from you or damage your things

**62. In the last 30 days, how often have you been bullied by other students?**

- I have not been bullied by other students in the last 30 days
- Less than once a week
- About once a week
- 2 or 3 times a week
- Daily or almost daily

**63. In the last 30 days, in what ways did you bully other students? (Mark all that apply)**

- I did not bully other students in the last 30 days
- Physical attacks (e.g., beat up, pushed, or kicked them)
- Verbal attacks (e.g., teased, threatened, or spread rumours about them)
- Cyber-attacks (e.g., sent mean text messages or spread rumours about them on the internet)
- Stole from them or damaged their things

**64. In the last 30 days, how often have you taken part in bullying other students?**

- I did not bully other students in the last 30 days
- Less than once a week
- About once a week
- 2 or 3 times a week
- Daily or almost daily

**65. How supportive is your school of the following?**

|   | Very supportive       | Supportive            | Unsupportive          | Very unsupportive     |
|---|-----------------------|-----------------------|-----------------------|-----------------------|
| a) Making sure there are opportunities for students to be physically active     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| b) Making sure students have access to healthy foods and drinks                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| c) Making sure no one is bullied at school                                      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| d) Giving students the support they need to resist or quit tobacco              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| e) Giving students the support they need to resist or quit drugs and/or alcohol | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |





## APPENDIX D—School Policies and Practice Questionnaire (SPP)

### Mental Health Questions

**51. Please rank the following areas of primary concern related to your students' mental health:**

*(Rank items from 1 to 8 where 1 = highest priority, 8 = lowest priority)*

- Attention problems \_\_\_\_\_
- Disruptive behavioural issues \_\_\_\_\_
- Depressed mood \_\_\_\_\_
- Anxiety symptoms \_\_\_\_\_
- Disordered eating \_\_\_\_\_
- Self-harm and/or suicidality \_\_\_\_\_
- Trauma \_\_\_\_\_
- Substance use \_\_\_\_\_

**52. During the past 12 months, how many staff have received the following training related to mental health?**

|  | All or most           | Some (e.g., 1-5)      | None                  |
|--|-----------------------|-----------------------|-----------------------|
| a. Mental health awareness/literacy (e.g., basic information, key warning signs)           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| b. Providing mental health support (e.g., mental health first aid, Supporting Minds, etc.) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| c. Suicide prevention  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| d. Other (please specify)  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

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**54. Are any of the following mental health services available on-site at your school? (Check all that apply)**

- Assessment for emotional or behavioural problems (including behavioural observation, psychosocial assessment and observation checklists)
- Diagnostic assessment (comprehensive psychological evaluation)
- Behavioural management consultation with teachers, students, or families
- Case management, including monitoring and coordination of services
- Referral to specialized programs or services for emotional or behavioural problems or disorders
- Crisis intervention (e.g., response to traumatic events, including disasters, serious injury/death of a member of the school community)
- Individual counselling/therapy
- Group counselling/therapy
- Substance abuse counselling
- Family support services in school setting (e.g., child/family advocacy, counselling)

**55. What are your general practices for routine referral to and coordination with community-based mental health organizations or providers? (Check all that apply)**

- Staff make passive referrals (e.g., give brochures, lists and contact information of providers or organizations)
- Staff make active referrals (e.g., staff complete form with family, make calls or appointments, assist with transportation)
- Staff follow-up with student/family (e.g., calls to ensure appointment kept, assess satisfaction with referral, need for follow-up)
- Staff follow-up with provider (via phone, e-mail, mail)
- Staff host or attend team meetings with community providers
- Staff do not make referrals

**56. During the past 12 months, what role did your local Public Health Unit (PHU) play when working with your school on improving mental health for students? (Check all that apply)**

- No contact with local Public Health Unit
- Provided information/resources/programs (e.g., posters, toolkits)
- Solved problems jointly
- Developed/implemented program activities jointly

**57. Other than classes/curriculum, does your school offer any programs to promote mental health? (e.g., stigma reduction, suicide prevention, peer support, stress management strategies, mental health literacy)**

- Yes



## APPENDIX E— Exploratory Multiple Regression Modelling

**Table 7.** Bivariate Exploratory Data Analyses: Chi square estimates for the relationship between student characteristics and endorsing reluctance towards help-seeking using multiple regression modelling.

| Variable                 | <i>df</i> | $X^2$   | <i>p</i> |
|--------------------------|-----------|---------|----------|
| Province                 | 3         | 189.02  | <.001    |
| Gender                   | 1         | 628.93  | <.001    |
| Grade                    | 3         | 9.29    | 0.03     |
| Race/ethnicity           | 3         | 10.18   | .002     |
| Spending money           | 4         | 10.66   | .03      |
| Self-rated mental health | 1         | 279.71  | <.001    |
| Emotion regulation       | 1         | 711.448 | <.001    |
| Flourishing              | 1         | 187.96  | <.001    |
| Family support           | 2         | 897.62  | <.001    |
| Peer support             | 2         | 47.72   | <.001    |
| School connectedness     | 1         | 363.60  | <.001    |
| Bullying                 | 1         | 21.65   | <.001    |

*Notes:* *df* = degrees of freedom.  $X^2$  = Chi-square estimate.

**Table 8.** Bivariate Exploratory Data Analyses: Chi square estimates for the relationship between school characteristics and endorsing reluctance towards help-seeking using multiple regression modelling.

| Variable                            | <i>df</i> | $X^2$  | <i>p</i> |
|-------------------------------------|-----------|--------|----------|
| Enrollment                          | 2         | 1.67   | .433     |
| Urbanicity                          | 1         | 27.96  | <.001    |
| School area median household income | 3         | 56.09  | <.001    |
| Past prevalence of poor MH          | 1         | 321.38 | <.001    |
| MH as a school priority             | 1         | 1.89   | .169     |
| MH professionals                    | 1         | 0.00   | .955     |
| MH services                         | 1         | 1.68   | 0.195    |

*Notes:* *df* = degrees of freedom.  $X^2$  = Chi-square estimate.