EXAMINING STUDENT MENTAL HEALTH AT KWANTLEN POLYTECHNIC UNIVERSITY

by

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April Holland, Master of Psychiatric Nursing, Brandon University
Abstract of Master’s Thesis, Submitted 24 July 2017:
Examining Student Mental Health at Kwantlen Polytechnic University

This study focuses on student mental health at Kwantlen Polytechnic University (KPU) to address concerns by examining the association between optimal mental health and a Mental Wellness and Communications (MWC) course, comparing the mental health of KPU students with the Canadian population, and identifying factors associated with mental health.

Literature and gaps in research related to student mental health are presented. To address concerns about low rates of mental health among students, survey questions were designed to identify how many students were considered to be mentally healthy, how the results compared to national averages, and if there were predictors of student mental health.

The research sample was selected from students enrolled in the Health Foundations (HF) certificate program at KPU. Out of 169 participants, 89 pre-intervention and post-intervention surveys were used for analysis. Results show that HF students have statistically significantly lower rates of mental health compared to the general Canadian population. Age was significantly associated with positive mental health scores, and a supportive university environment was related to mental health. The MWC course seems to have an inverse relationship with percentages of optimal mental health among students, in contrast with findings from the control group.

On the basis of the results of this research, it can be concluded that students are in need of mental health promoting activities. Further investigations are needed into the reasoning for declining rates of mental health among students enrolled in the MWC course. Future larger scale studies focusing on student mental health and associated factors will be beneficial in order to promote emotional, social and psychological well-being among college and university students.

Keywords: student mental health, mental health promotion, dual continuum model of mental health and mental illness, positive mental health, flourishing, undergraduate students, mental health continuum-short form, quantitative research, psychiatric nursing, polytechnic university, Canadian.
Lay Summary

A study was conducted with students from KPU to see what and if any factors impacted mental health and to test how the student sample compared to other Canadians. Results showed the students had lower rates of mental health than national averages. Age and a supportive school setting were also linked with improved mental health. Students who took a Mental Wellness and Communications course were found to have lower percentages of mental health than the students who did not take the course. These findings highlight the importance of enhancing mental health awareness, services and activities for students and can help shape future research that will add to this growing discussion.
Preface

This document is based on research conducted by April L. Holland, who was responsible for reviewing literature, designing the research project, obtaining ethics approval, collecting data, conducting in-depth data analysis and interpretations, and drawing conclusions from research findings.

Data was inputted by a Data Clerk and analyzed by Statisticians at the Center for Health Evaluation and Outcome Sciences (CHEOS).

The thesis committee included Dr. Dean Care, Dr. Jean Nicolson-Church, and Dr. Brian Larson, whose professional guidance and support contributed significantly to this project.

Brandon University Research Ethics Committee: “Examining the Association between Student Flourishing and a Mental Health Course” # 21976.

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## Abbreviations Used

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<th>Full Form</th>
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<tr>
<td>ACHA</td>
<td>American College Health Association</td>
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<tr>
<td>AVED</td>
<td>Ministry of Advanced Education</td>
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<tr>
<td>BPN</td>
<td>Bachelor of Psychiatric Nursing</td>
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<td>BSN</td>
<td>Bachelor of Science in Nursing</td>
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<td>CACUSS</td>
<td>Canadian Association of College &amp; University Student Services</td>
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<td>CASA</td>
<td>Canadian Alliance of Student Association</td>
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<td>CICMH</td>
<td>Centre for Innovation in Campus Mental Health</td>
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<td>CMHA</td>
<td>Canadian Mental Health Association</td>
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<td>HF</td>
<td>Health Foundations</td>
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<td>KPU</td>
<td>Kwantlen Polytechnic University</td>
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<td>MHCC</td>
<td>Mental Health Commission of Canada</td>
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<td>MHC-SF</td>
<td>Mental Health Continuum-Short Form</td>
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<td>MIDUS</td>
<td>Midlife Development in the United States</td>
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<td>MWC</td>
<td>Mental Wellness and Communications</td>
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<td>PMH</td>
<td>Positive Mental Health</td>
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<td>WHO</td>
<td>World Health Organization</td>
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For my grandparents
Chapter One - Introduction

1.1 Introduction to Research

Undergraduate students report that mental health issues, including depression, which is one of the leading causes of student attrition (Calloway, 2007), often result in barriers to their learning (MacKean, 2011). In addition to mental illness, poor student mental health is a national concern (ACHA, 2016; Miller, 2013), and is a significant focus for mental health advocacy groups. Several post-secondary institutions across Canada (Okanagan Charter, 2015; Queens University Commission on Mental Health, 2012; University of Toronto, 2014; University of Victoria, 2013) use mental health frameworks (Healthy Campuses, 2015; Manitoba, 2011; Mental Health Commission of Canada [MHCC], 2012) to underpin strategies that promote student mental health.

In the interest of providing a healthy campus environment for students and employees, Kwantlen Polytechnic University (KPU) is taking part in mental health promoting activities (Kwantlen Polytechnic University [KPU], 2016). Although the official mental health strategy is a work in progress (KPU, 2014), KPU is making a significant effort to provide a supportive environment that promotes student mental health. An example of this includes a Mental Wellness and Communication (MWC) course, which is used as the intervention in this graduate research study.

This thesis disseminates findings from a quantitative research study that focused on student mental health at KPU. This document is sectioned into six chapters; introduction, literature review, methodology, findings, discussion, and conclusion. The introduction includes content identifying research problems, significance of the research, and provides the context for the research project.
This research was based on a non-equivalent pretest posttest control group design with two groups of students from the Health Foundations (HF) certificate program at KPU. A total of 89 pre-intervention and post-intervention surveys were utilized to generate descriptive statistics, comparative results of student mental health with the general Canadian population, and identify predictors of mental health. Research was conducted over one semester (January to April 2017). Research process are discussed in further detail throughout the document.

1.2 Research Problem

The author’s keen interest in student mental health has been a strong foundation throughout the research project. A quantitative research design was utilized to answer the following questions: Is the MWC course associated with flourishing and Positive Mental Health (PMH) scores among students enrolled in HF? Do levels of flourishing and PMH scores among HF students differ from the general Canadian population? What factors appear to predict student mental health?

These questions were developed following an extensive literature review and development of an annotated bibliography that focuses on undergraduate student mental health, mental health promotion, and quantitative research. The author intended to gather and distribute empirical evidence to help guide KPU’s mental health strategy by providing context of student mental health on campus, and by finding effective ways to promote student mental health. The author is able to clearly demonstrate the importance of this research project by identifying gaps in the literature and offering rationale for research focusing on student mental health.

1.3 Significance

The research findings have several implications for students, post-secondary institutions across Canada, the psychiatric nursing profession, and future research projects. Research has
been customarily focused on mental illness and the negative aspects of mental health. There has been very little research concentrating on the positive dimension of mental health among university student populations. This gap in research provides an excellent opportunity to research the positive aspects of mental health among undergraduate students.

Statistical values of mental health among a student sample at KPU were compared with national averages. This provides context to the significant difference between the KPU student sample and the general population. The research addressed questions as to whether or not a mental health course contributes to student mental health. Additionally, questions related to predictive factors contributing to mental health were included in hopes to promote student mental health in the future. All of these elements provide insight into the current status of student mental health at KPU and underline strategies for promoting future mental health activities.

The findings from this study can be utilized by universities across Canada to help underpin mental health strategies and future research studies. Furthermore, this research project contributes additional knowledge to the psychiatric nursing profession by concentrating on the positive aspects of mental health and adding to the growing research concerning mental health promotion. Promoting nursing students’ mental health can help improve the well-being of future nurses, which can help shape their careers.

Benefits of this study include focusing on the positive aspects of mental health; improving awareness of student mental health at KPU; evaluating the association between the MWC course and optimal mental health, producing data which can be used to help create policies and intervention that will enhance student health at KPU; advocating for and investing in student mental health promotion; and providing a Canadian context by adding to a growing body of established research regarding student mental health.
Past research involving student populations in other countries provides motivation to engage in research in Canada. The present study added to the growing body of knowledge by providing empirical evidence of the mental health landscape of a student sample at a multicultural Canadian University. The research provided a Canadian context by using existing Canadian mental health data as a comparator to flourishing among KPU students. Findings from this research provide direction for future research studies.

1.4 Defining Central Terms

It is important to distinguish the differences between mental health and mental illness, since mental health is commonly used to incorrectly describe people with mental illnesses. The terms “mental health” and “mental illness” are used throughout the document. “Mental illness” is used to describe a diagnosis of a mental illness by a medical professional based on the diagnostic criteria found in the Diagnostic Statistical Manual (DSM) IV-R (American Psychological Association [APA], 2000) and/or the DSM V (APA, 2013).

The term “mental health” is defined as more than the mere absence of mental illness; instead, it describes the positive aspects of mental health, in context of psychological, social and emotional wellbeing (Keyes, 2012). Rooted in the Dual Continuum Model, “mental health” is considered to be correlated to, but on a distinctly different axis than mental illness (Keyes, 2012). Since mental health is on a continuum, a person can have a range of mental health from poor mental health (languishing), moderate mental health, to optimal mental health (flourishing). A person’s mental health is dynamic, and can change depending on their functioning. Hedonia and eudaimonia are components of mental health. “Hedonia” describes the emotional wellness component of mental health, whereas “eudaimonia” describes optimal functioning (Low, 2011). These concepts are discussed in further detail in the literature review section.
1.5 Context

This thesis includes discussions of frameworks that will explain mental health in a positive context, describe mental health of the general Canadian population and the Canadian student population, outline strategies used to promote mental health and ways to promote KPU’s mental health strategy. The literature review focuses on research related to theoretical foundations, the Dual Continuum Model of Mental Health, and other current literature, and research questions. This literature review shapes the development of the data of the research presented. The author discusses valid quantitative research methods used to evaluate effectiveness of one of the strategies by examining if there is an association between student mental health and the MWC course. The author compares KPU student and national mental health, and identifies predictors of mental health.
Chapter Two – Literature Review

2.1 Theoretical Foundations

This chapter focuses on identifying current research and gaps in the literature regarding the Dual Continuum Model of Mental Health and Mental Illness (commonly referred to as the “Dual Continuum Model”) and the current mental health status of the Canadian population, students at a national level, and undergraduate students at KPU. The author investigates how mental health is being addressed at national and institution-specific levels and identifies the features of the KPU MWC course. After an extensive literature review, the author utilizes current research and gaps in literature as foundational motivation for the study.

2.2 Dual Continuum Model

The Dual Continuum Model of Mental Health and Illness (Keyes, 2002) is the theoretical framework for this research project. The Dual Continuum Model is based on Ryff’s Model of Psychological Well-being (Ryff, 1989), has been adopted into national Canadian statistical analysis (Gilmour, 2014), has become a topic of interest for research across the world (Diehl, Hay, & Berg, 2011; Fink, 2014; Fledderus, Bohlmeijer, Smit & Westerhof, 2010; Hone, Jarden, Schofield & Duncan, 2014; Keyes, 2005; Keyes, Eisenberg, Perry, Dube, Kroenke & Dhingra, 2012; Keyes & Simoes, 2012; NHS Scotland, 2011; Singh, Bassi, Junnarkar & Negri, 2015) and provided a foundation for mental health strategies across Canada (Healthy Campuses, 2015; Manitoba, 2011; MHCC, 2012). The Dual Continuum Model provided a widely-accepted conceptualization of mental health (Gilmour, 2014; Hatch, Harvey & Maughan, 2010; NHS Scotland, 2011) that focuses on recovery, rather than centering the focus on psychopathology (Low, 2011).
Keyes’ Dual Continuum Model operationalizes positive mental health and mental illness as distinct yet correlated axes along a complete range of mental states that includes affect and functioning on various levels (Keyes, 2005). The model suggests, even though someone may be free of mental illness, he or she might not be living a healthy and productive life. A significant advantage of the dual continuum model is that it accounts for people who have a diagnosed mental illness, yet are still highly functioning, as well as those who have no mental illness but are not effectively functioning. This model provides a realistic conceptualization of mental health compared to unipolar and bipolar models of mental health and illness (Herron & Trent, 2000).

2.2.1 Flourishing, languishing, moderate mental health, and Positive Mental Health (PMH). Keyes (2002) introduces diagnoses along the mental health continuum, including classifications of “flourishing”, “languishing” and “moderate mental health”. For a person to be considered to be “flourishing”, he or she must indicate high positive emotions, social functioning and psychological functioning, whereas “languishing” is represented by experiencing low positive emotions, social functioning and psychological functioning (Keyes, 2003). People who report they are experiencing moderate mental health fall in the middle of the continuum, where their mental health represents neither flourishing nor languishing (Keyes, 2002). This categorical analysis has been implemented across the world and in Canadian studies (Gilmour, 2012).

PMH is indicated as a specific value along a continuous range of possible scores, derived from the Mental Health Continuum – Short Form (MHC-SF) results (Statistics Canada 2013; Statistics Canada, 2014). PMH scores range from 0 to 70, with higher scores indicating higher levels of positive mental health (Statistics Canada, 2014). This method of interpreting the MHC-SF has been confirmed to have high internal consistency ($\alpha = 0.93$ for all groups) and good
retest-reliability \( r = 0.74 \) p-value \(<0.001; \) \( r = 0.77 \) p-value \(<0.001; \) \( r = 0.81 \) p-value 0.01 (Lukat, Margaf, Lutz, van der Veld; Becker, 2016). Using a PMH score is, therefore, a consistent and reliable way to represent a person’s level of mental health by assigning a numerical value along the continuum. A person’s mental health status from the MHC-SF can be also be described with an assigned categorical value, which will be further discussed in the next section.

2.2.2 Mental health continuum – short form. Keyes (2002) developed the Mental Health Continuum – Short Form (MHC-SF) to create a more pragmatic version of the original long-form survey (Keyes, 2009). The MHC-SF has been utilized in national (Gilmour, 2014) and international research focusing on mental health among populations in various cultures (Joshanloo Wissing, Khumalo & Lamers, 2013; Keyes et al., 2012; Keyes, Dhingra & Simoes, 2010; Singh et al., 2015; Westerhof & Keyes, 2010; World Health Organization, 2004). The MHC-SF is a well-documented and widely accepted tool used to measure a person’s level of mental health (Fink, 2014; Hatch, Harvey & Maughan, 2010; Keyes, Wissing & Potgieter, 2008; Lamers, Westerhof, Bohlmeijer, Klooster & Keyes, 2011; Westerhof & Keyes, 2010).

The MHC-SF is supported by the Dual Continuum Model of Mental Health and Mental Illness, with a specific focus on the mental health continuum (Keyes, 2012). There are no questions related to mental illness, allowing researchers to focus on the positive nature of mental health, in contrast to the mental illness continuum (Joshanloo, Wissing, Khumalo & Lamers, 2013; Keyes, 2009). To help identify where the person falls on the mental health continuum, the brief survey questions are concentrated on hedonic (emotional) and eudemonic (social and psychological) well-being (Deci & Ryan, 2008).

The Canadian Community Health Survey (2014) was developed by Statistics Canada and other stakeholders, including the Mental Health Commission of Canada and the Public Health
Agency of Canada, and was established based on goals to provide an inclusive investigation of mental health issues and positive mental health among Canadians (Statistics Canada, 2013). The researchers utilized the derived variable (DV) method to rescale the MHC-SF scores into continuous PMH scores (Statistics Canada, 2014).

2.3 Current Literature

2.3.1 Current mental health status. In any given year, twenty-five percent of Canadians will experience a mental health issue or mental illness; people with the highest rate of mental illness are young adults, with more than twenty-eight percent of young adults aged twenty to twenty-nine experiencing mental illnesses in a given year (Mental Health Commission of Canada [MHCC], 2013). This evidence provides a snapshot of the prevalence of mental illness in Canada, but there is a noticeable gap in data on the prevalence of mental health among Canadians.

A national, cross-sectional study in 2009 demonstrated levels of flourishing were markedly higher than the results of similar studies conducted in other countries (Gilmour, 2014). The study found that 76.9% of Canadians were flourishing, and only 1.5% of the population was languishing. These findings are a marked contrast to other study results show much lower rates of flourishing, ranging from 11.7% to 69.7% among populations in the United States, Netherlands, South Africa, France, and Korea (Gilmour, 2014; Ismail & Salama-Younes, 2011; Keyes, 2006; Keyes et al., 2008; Keyes et al., 2012; Low, 2011; Ross, Friedmann, Bevans & Thomas, 2013; Westerhof & Keyes, 2010).

The exclusion criteria of Gilmour’s 2009 Canadian survey indicated not all sectors were represented in the study.Remarkably, the survey excluded residents of First Nations communities and other Aboriginal settlements, the institutionalized population, and members of
the Canadian Armed Forces (Gilmour, 2014), which might have contributed to the optimistic findings regarding an unusually high rate of flourishing in Canada. In order to obtain a realistic picture of Canadian mental health, future research studies should include representative samples of the entire population being studied. Despite the significant study flaw, the results still provided a useful comparator for mental health scores among undergraduate students at KPU.

2.3.2 Undergraduate student population. There have been several investigations into mental illness among undergraduate students (Canadian Association of College & University Student Services [CACUSS] and Canadian Mental Health Association [CMHA], 2013; Canadian Mental Health Association, 2016; Centre for Innovation in Campus Mental Health, 2015; Conley, Durlak & Dickson, 2013; Conley Durlak & Kirsch, 2015; Jane-Llopis, Barry, Hosman & Patel, 2005; MacKean, 2011; Willinsky, 2015). According to a recent cross-country Canadian survey, 13.5% of the students surveyed considered suicide and 2.1% had attempted suicide in the prior twelve months (American College Health Association [ACHA], 2016). These alarming percentages increased from an earlier iteration of the same study conducted in 2013, in which 9.5% of students considered suicide and 1.3% of students had attempted suicide in the prior twelve months (ACHA, 2012).

A high percentage of students have reported a diagnosis of mental illness within the past year, including anxiety (18.4%), depression (14.7%), and panic attacks (9.3%) (ACHA, 2016). Students indicated academics have been the leading stressor (58.1%) that has been traumatic or very difficult to handle while in school (ACHA, 2016). Additional results show a majority of Canadian students have felt hopeless (59.6%), exhausted – not from physical activity (88.2%), very lonely (66.5%), and overwhelmed (89.5%) (ACHA, 2016). Academic pressure, finances, intimate relationships, sleep difficulties, personal appearance, family problems, other social
relationships, career-related issues, and personal health issues have been described as traumatic and very difficult to handle among Canadian undergraduate students (ACHA, 2016). This can negatively impact a student’s desire to achieve higher academic success, contributing to a negative cycle (Nolan & Ryan, 2008).

Research findings from a national study conducted in the United States demonstrate a substantial prevalence of mental disorders in people enrolled in colleges and universities (Keyes, Eisenberg, Perry, Dube, Kroenke, & Dhingra, 2012). Researchers suggested more studies from other countries are needed to broaden the understanding of mental health (Geist, Larimore, Rawiszer & Al Sager, 2015; Keyes et al., 2012; Singh, Bassi, Junnarkar & Negri, 2015). This recommendation provides additional incentive for studying mental health among a multi-cultural student population at KPU, a Canadian university.

Mental health issues such as anxiety and depression were discussed as the highest concern among students and student service administrators, showing a significant need for mental health support on campuses across Canada (Patterson & Kline, 2008). Although the studies provided important information about mental illness among student populations, the assessment of positive mental health is noticeably missing (Herron & Trent, 2000).

Past studies neglecting to investigate positive mental health point to a longstanding trend of research that is focused on mental illness rather than mental health. Thankfully, there has been a recent international and national change in focus that recognizes the importance of mental health promotion. This provides validation for research examining the association between student mental health and a mental wellness course designed to promote mental health, as well as identifying factors associated with mental health.
Examining a major gap in research related to mental health and mental illness, Bartlett (2014) unambiguously distinguished the difference between tackling mental illness and improving mental health. This is a welcomed distinction, as previous studies indicate people often conceptualize mental illness prevention and mental health promotion as synonymous. In response, several post-secondary institutions became engaged in a pan-Canadian approach to help eliminate the disconnection between national strategies and university mental health strategies (Bartlett, 2014).

2.3.3 KPU student population. Currently, there is no data available on mental illness and/or mental health among students at KPU. Despite the absence of published material, the university has made a commitment to working on a formal mental health strategy (KPU, 2014; KPU, 2015). As a Canadian institution with more than nineteen thousand students enrolled annually (KPU, 2016), KPU is in a strong position to make a positive difference in the lives of thousands of students. KPU is currently using mental health frameworks as exemplars to develop their formal mental health strategy (J. Fee, personal communication, September 20, 2016).

It is essential to access students at post-secondary institutions in order to address mental health among adolescents and young adults (Hunt & Eisenberg, 2010). There have been significant steps to promote student mental health across the KPU campuses, including requiring all newly-enrolled Faculty of Health (FoH) students to complete the MWC course as part of the Health Foundations (HF) curriculum. This certificate program is a foundational year of courses required before specializing in three additional years towards a bachelor’s degree in nursing.

The MWC course is an admirable step in the right direction, as it aligns well with suggested national strategies (MHCC, 2012) to promote mental health among students. This new curriculum was an exceptional medium to gather statistical information on the association
between student mental health and the MWC course. This course and several other mental health promoting activities are discussed in further detail in this document.

2.3.4 Mental health strategies: national frameworks. Mental health promotion is a guiding principle that has helped develop the National Framework and Strategy for Mental Health in Canada (MHCC, 2012), reduce stigma, and promote knowledge development. Since all Canadians can have a role in prioritizing mental health by promoting mental health across the lifespan (MHCC, 2012), it is important to ensure there are frameworks that address this. The status of post-secondary students’ mental health points to the requirement for a systemic initiation of a framework to address mental health issues and concerns. Information from the National Framework and Strategy (MHCC, 2009; MHCC, 2012) promotes student mental health across Canada, as it has underpinned various national research studies and mental health frameworks within schools.

The Mental Health Commission of Canada (MHCC, 2012) published a Mental Health Strategy for Canada that laid out clear plans to help provide respect, dignity, and equal rights to all Canadians, with or without mental illness. The first priority, promoting mental health across the lifespan in homes, schools, and workplaces (MHCC, 2012), can be used to guide future research on undergraduate student mental health. Post-secondary institutions are an appropriate setting to research and promote mental health among students (MacKean, 2011), and many post-secondary institutions are utilizing national frameworks to implement a strategic mental health plan (Okanagan Charter, 2015; Queens University Commission on Mental Health, 2012; University of Toronto, 2014; University of Victoria, 2013).

The CACUSS and CMHA (2013) published a post-secondary student guide included a seven-stage approach, ranging from a larger-scale institutional policy to individualized student
support. The comprehensive framework outlines the need for intervention at three different levels: addressing concerns that affect all students, concerns that affect students who have difficulties coping, and concerns impacting students with mental health issues. This document created dialogue about mental health among undergraduate students and reinforced pilot programs across the country.

“Healthy Minds | Healthy Campuses” is a community of practice in British Columbia that promotes conversations between university students, faculty, and others who are interested in student mental health (S. Joosse, personal communication, September 16, 2016). This program has an in-person component that includes face-to-face meetings, conferences, workshops, and a national summit on student mental health. There is also an online community platform that provides working groups, hot topics, and resources regarding student mental health (S. Joosse, personal communication, September 16, 2016).

Specific applications of mental health promoting programs are based on the five areas of health promotion from the Ottawa Charter of Health Promotion (CMHA, 2008). The KPU mental health policy and MWC course can be compared with this empirically based, systemic approach, in interest of providing a framework and a reference point for future interventions to promote student mental health. KPU has a partnership with Healthy Minds Healthy Campuses and has contributed to a substantial amount of online content.

2.3.6 Mental health strategies: KPU. Although there has been a significant shift towards mental health awareness on a national level (MHCC, 2012), there are still limited research studies focusing on the positive aspects of mental health. Additional global studies are needed to broaden the understanding of the Dual Continuum Model and its implications for promoting positive mental health (Singh, et al., 2015). Proactive services, such as providing
education on mental health and encouraging mental health promoting activities through a course, can help prioritize and take part in reducing this mental health crisis (Flat, 2013).

KPU has an assortment of mental health promoting services for students and faculty members. “Health 101” is an online monthly digest to which every student is auto-subscribed. The content of each publication varies from mental health, cooking, study habits, and information on post-secondary student life (N. Bransford, personal communication, September 14, 2016). The approximate readership is two thousand students per month (N. Bransford, personal communication, September 14, 2016).

The “Healthy University Initiative” has both a “Student Champions Group” and an “Employee Champions Group”. This initiative was derived from the KPU Academic Plan and is financially supported by the administration (J. Fee, personal communication, September 20, 2016). The groups have reportedly laid foundation to move towards finalizing a campus-wide mental health framework (J. Fee, personal communication, September 20, 2016).

The HF certificate is a set of foundational courses prepare students for entry to the second year of a nursing degree program (KPU, 2016). After the HF program, KPU offers nursing students a choice between two degree programs: a Bachelor of Psychiatric Nursing (BPN) program and a Bachelor of Science in Nursing (BSN) program (KPU, 2016). The HF consists of ten required courses that focus on anthropology, human biology, English, personal care labs, health research, health science, psychology, sociology, and the MWC course.

The MWC course content is thorough and provides a curriculum that helps promote student mental health and coping strategies (see Appendix A). The MWC course is based on student-centered learning, student engagement, and group work focused on mental health promoting activities (Blizard & Randeni, 2016). Students engage in on-site and online learning
over a semester, with an emphasis on promoting mental health, communication, emotional intelligence, mindfulness, and mental health literacy (L. Blizard and G. Randeni, personal communication, August, 2016). The MWC course runs for fourteen weeks, in increments of weekly four-hour classes.

Addressing mental health issues during the HF program fosters awareness and engagement in a healthier lifestyle, which could enable students to overcome some of their current stresses, as well as avoid common work-related psychological strains in the future (Montes-Berges & Augusto 2007). Mindfulness activities engage students spiritually in a non-denominational way to provide tools for the enhancement of positive mental health (Tuck & Anderson, 2014). In addition, students can benefit from learning how to promote mental health prior to entering the workforce, helping them to be more effective in their health care roles from the beginning. Furthermore, the public could eventually benefit from the improved awareness of mental health strategies of those who have completed the MWC course.

2.3.7 Factors that predict mental health. Fink (2014) focused on significant factors that predicted student mental health, such a supportive college environment, confidence in academic skills, civic engagement, income, grades, sexual orientation, faith, alcohol and drug use (Fink, 2014) and sense of belonging (Johnson, Soldner, Leonard, Albaraze, Rowan-Kenyon, & Longerbeam, 2007) were meaningful predictors to mental health (Fink, 2014). These factors underpin questions in the pre-intervention and post-intervention surveys used in this study. Results from these questions were used to identify if there were any predictors of mental health, and will be discussed further in this document.
2.4 Research Questions

The existing body of literature revealed gaps in previous research indicate the need to study mental health among an undergraduate student population. This research adds to the literature by engaging in empirically-based dialogue about the following questions: 1) Is the MWC course associated with flourishing and PMH among students enrolled in HF? 2) Do levels of flourishing among HF students differ from the general Canadian population? 3) What factors appear to predict student mental health?
Chapter Three – Methodology

3.1 Introduction to methodology

A quantitative quasi-experimental non-equivalent pretest-posttest design was used to investigate the influence of the MWC course on flourishing and PMH among HF students at KPU. Although experimental studies are the “gold standard” of research, a quasi-experimental design was utilized as it is a well-accepted method, which is often used in nursing-related research due to practicality in real-world situations and adaptability to a broad range of situations (Polit & Beck, 2012). Multiple methods were carefully considered, including experimental designs, basic pretest-posttest design, waitlist design, and other quasi-experimental designs such as the one-group pretest-posttest design (Polit & Beck, 2012).

Selection of a specific design required careful consideration because the participants came from the student population and could not be randomly selected. The non-equivalent pretest posttest design was selected, as it allowed for analysis of both control and intervention groups. This provided a plausible comparator for the data gathered before and after the MWC course intervention. Having the two groups complete a survey before the intervention helped mitigate selection threat to internal validity. This design is an effective way to collect meaningful data among the HF students without impeding student progress.

3.2 Research Hypotheses

The author sought to answer the following questions: 1) Is the MWC course associated with flourishing and PMH among students enrolled in HF? 2) Do HF students’ levels of flourishing differ from the general Canadian population? 3) What factors appear to predict student mental health? These questions were answered after a carefully considered research
study among HF students at KPU. These answers will be discussed in later chapters of this document.

Results were tested against three null hypotheses, the researcher predicted there would be no association between flourishing and PMH and the MWC course, the degree of flourishing and PMH among study participants would not differ from the Canadian population, and there would be no identifiable variables that predict student mental health. The major predicted outcome of this study was that students’ levels of flourishing and PMH would not be associated with participation in the MWC course. This outcome is identified if no significant difference is found in the pre-intervention and post-intervention results of the intervention group when compared to the control group. Statistically significant results will indicate the MWC course is associated with student mental health. Trends in this data will be discussed, at length, in a later chapter of this document.

It was also predicted the HF students would have the same percentage of flourishing and PMH as the general Canadian population. The percentage of students experiencing flourishing, languishing, and moderate mental health was analyzed through descriptive statistics. The baseline data provided enough evidence to reject the null hypothesis, as there was a statistically significant difference between HF students’ mental health and the Canadian population. These results will be discussed in detail later in this document.

It was predicted that the results would indicate that there would be no significant variables associated with mental health scores. Logistic regression was utilized to determine what variables affect the probability of the results (Kellar & Kelvin, 2013). There was not a statistically significant variance among factors and flourishing and PMH. The trends found will be discussed in further detail in the “Results” section of this document.
3.3 Design

Data was collected from participants in January 2017 and April 2017, using a non-equivalent pretest-posttest design. Similar methods of data collection were employed during both sets of surveys. The content of the pre-intervention and post-intervention scripts (see Appendix B & C) and surveys vary slightly in order to reduce the time burden on participants and to collect only applicable data. In all other respects, the methods of data collection are homogenous for both the pre-intervention and post-intervention surveys.

The researcher utilized standardized scripts to ensure each group received the same information. The script included information on the research purpose, identity of the researcher, and the expected duration and nature of participation. The script also included a description of the minimal foreseeable risk, a clear statement to assure that participation in the study was voluntary, and an indication of how confidentiality was going to be maintained. The researcher was then available to answer any questions asked by the students.

The instructor left the classroom during survey completion to ensure participant confidentiality. In order to maintain participant anonymity, the students were asked to stay in the classroom during survey completion and to hand in the survey face-down once finished. Students were allotted approximately twenty minutes of class time to complete the survey.

The students who participated in the study signed a consent form (see Appendix D) that was separate from the survey. This was done to maintain participant anonymity, since the students’ names were on the consent forms. The participants were prompted to develop a coded-ID to help link pre-intervention data with post-intervention date (see Appendix E for the pre-intervention survey and Appendix F for the post-intervention survey). The students were provided with examples of student ID’s as a reminder for the post-intervention survey.
Once all students completed the survey, the principal investigator placed the documents in a sealed envelope and stored the data in a secured, locked cabinet until recorded into the statistical program by a professional Data Clerk. Once inputted into the computer, the surveys were kept in a locked cabinet, and will be destroyed within one year of the data collection. The digital files will be destroyed within two years of study completion.

3.4 Sampling

The participants in the study represented the population of the HF students enrolled in the Spring 2017 semester at KPU, located in Langley, British Columbia. The principal investigator used a convenience sampling technique to organize participants into the appropriate groups. Students had independently selected courses for the semester prior to data collection. Some students enrolled in the Spring 2017 term offering of the MWC course, while others will participate in the course during a subsequent term. This automatically placed participants in either the control group (participants not taking the MWC course during the study) or intervention group (participants who are taking the MWC course during the study).

Inclusion criteria included students who were actively enrolled in the HF program during the Winter 2017 semester, at the KPU Langley campus. The participants in the intervention group were enrolled in the MWC course, which is a mandatory course in the program. The participants in the control group went to university classes as normally scheduled. Exclusion criteria included HF students who have already taken the MWC course in a previous semester.

The principal investigator obtained permission from the instructors, and entered eleven classrooms. The classroom instructor left the room during data collection to protect participants' identities. The participants were contacted and recruited while in class after the principal
investigator read a standardized script. The participants who wanted to participate in the study completed one survey at the beginning of the semester and one survey at the end of the semester.

Participants were asked to develop their own coded ID by using their mother's maiden name initials and their birth month and day (example: Mother: Jane Smith, Birthday: April 24, 1987 = JS0424) in order to link data between baseline and post-intervention surveys. The codes were stripped after the second survey was collected. This extra step was taken to ensure participant anonymity.

The participants were notified via the standardized script and the informed consent form of the slight risk of being identified based on demographic questions. Identifying values with cells smaller than five were eliminated from the results in interest of ethical considerations. The participants were informed that they had the option to not complete the survey at any point during or between data collection, up until the point that the second set of surveys were collected and stripped of the codes. The participants were also made aware the principal investigator will submit a summary of research analysis to the Dean of the FoH, who will make it available to students of the FoH.

3.5 Measurement

3.5.1 Instrument. The participants were asked to complete a survey in person, during scheduled class time at the beginning and the end of the Winter 2017 semester. The survey included the MHC-SF and questions that gathered demographic data and other relevant information related to factors associated with mental health. The MHC-SF was used to measure the level of self-reported mental health before and after the intervention of the MWC course. The demographic data, factors associated with mental health, and the MHC-SF was integrated into a single document. The information gathered was used to compare the control and intervention
groups in order to identify or eliminate potential variables that account for student flourishing and PMH scores.

The MHC-SF is a standardized instrument based on the Dual Continuum Model that is used to assess and categorize flourishing based on three clusters of well-being: emotional, psychological, and social (Keyes, 2009). The instrument focuses on the mental health continuum, and notably does not include questions that pertain to the mental illness continuum. The fourteen items on the MHC-SF are rated on a Likert scale, ranging from “never” to “every day” (Low, 2011). The MHC-SF provides a score that assesses continuous scores of well-being, as well as categorical descriptions of flourishing, languishing, and moderate mental health (Keyes, 2006). PMH scores are determined on a scale from 0 to 70, with 70 indicating the highest level of positive mental health (Statistics Canada, 2014).

To strengthen the validity of the research project, the principal investigator used a well-established, valid and reliable tool to assess mental health among students. Empirical measures have been used to analyze and validate the separate factors of emotional well-being, psychological well-being, social well-being, and mental illness (Lamers et al, 2011). The MHC-SF is confirmed to have excellent internal consistency (> 0.8) with a history of excellent internal consistency (> .80) in Denmark, India, Italy, South Korea, United States and Sweden, (Guo, Tomson, Guo, Li, Keller & Soderqvist, 2015; Keyes et al., 2012; Lamers et al., 2011). The MHC-SF was implemented twice during the study: in the pre-intervention and post-intervention surveys.

The MHC-SF has been substantiated in previous research to produce statistically significant data regarding mental health among different populations. Since the MHC-SF is validated as a useful, valid, theoretically-based instrument with internally-reliable subscales in
several prior research studies from various countries (Konu, & Lintonen, 2006; Westerhof & Keyes, 2010), the principal investigator was confident that adding the MHC-SF to the survey was an empirically-supported method to assess the level of perceived mental health among HF students.

In addition to the MHC-SF, other questions were included in the study to measure variables that might be predictive of flourishing, such as academic success in school, hours spent working outside of school, number of courses taken in one semester, and what program the students are planning to go into after they complete the HF. Other information gathered, such as information about students’ self-perceived level of health and mental illness, was collected to address questions regarding predictors of mental health. The data provided information on the number of students who are classified as flourishing and the mean PMH score, which will be further discussed in this document.

Some questions were eliminated from the second survey to reduce redundancy, while other questions were asked again in order to collect more information on variables that have a potential association with mental health. These questions focused on mental illness, perceived mental health, strategies to promote mental health, and triggers that reduce mental health, providing a snapshot of the mental health status of the students enrolled in the HF and identifying common resources used to cope with the stressors of being an undergraduate student.

3.5.2 Ethical considerations. Prior to beginning the research process, the principal investigator reviewed the Tri-Council Policy Statement (TCPS) and completed the TCPS Course on Research Ethics (Government of Canada, 2016). After delegated reviews, ethical approval was obtained through both the KPU Research Ethics Board and the Brandon University Research
Ethics Committee. The Data Clerk and Statisticians completed the TCPS Course prior to handling any of the data.

Informed consent was obtained and documented in interest of protecting the participants’ rights. In order to preserve anonymity, participants were explicitly instructed not to provide any identifiers on the document, and to, instead, create a personal code. This method is a strategy for restricting access to identifying information that needs to be linked with the post-intervention survey (Polit & Beck, 2012).

Students were informed of the risk of responses being seen by others in the informed consent form. The principal investigator reduced this risk by reading a standardized script that instructed participants to only look at their survey and to hand in the survey face down. The script also mentioned the risk of the participant being identified based on age and gender, depending on the sample size. This risk was mitigated by attempting to recruit as many participants as possible and stripping codes once both surveys were collected.

All print material is secured in a folder inside a locked filing cabinet located in the principal investigator's home office, and the principal investigator is the only person with the key. The hard copy data will be destroyed within one year. All data in the computer will be saved on a password-protected computer, and coded-ID data will be destroyed as soon as both surveys are collected and inputted. The stripped/anonymous data will be deleted within two years.

3.5.3 Intervention. The intervention is the MWC course, which is a required component of the HF at KPU. The content of the course promotes mental health literacy, emotional intelligence, and mental health (Blizard & Randeini, 2016). The three credit MWC course was developed based on student-centered learning and focuses on student engagement and group work concentrated on mental health promoting activities. Each student’s final grade was based
on four online quizzes (20%), a concept paper (20%), learner contribution (15%), a group project (25%), and an individual development plan (10%) and self-evaluation (10%) (see Appendix A). The MWC course is a hybrid course, with online and in-class lessons delivered over fourteen weeks.

The MWC course was developed to improve student mental health and promote mental health literacy among the students, colleagues, and future clients. The content of this course provided an appropriate intervention to compare with the control group findings. Results from students in the intervention and control groups have provided noteworthy data on the mental health of students enrolled in the HF at KPU. All of the baseline and post-intervention data was used to identify predictors of mental health and to compare with national averages of mental health.

3.6 Statistical Analysis

Statistical data was analyzed after baseline data collection and post-intervention data collection. A third-party statistician inputted data and provided basic analysis of the information by using R- version 4 (J. Puyat, personal communication, May 31, 2017; R Core Team, 2017). Pre-intervention and post-intervention change analysis P-values for PMH and stress levels were obtained using t-tests (J. Puyat, personal communication, May 31, 2017). P-values for the pre-post changes in percentages languishing and flourishing were obtained using mixed-effects logistic regression (J. Puyat, personal communication, May 31, 2017). Equality of proportions test was utilized to gather p-values for percentages of flourishing and languishing among the KPU students and Canadian sample (J. Puyat, personal communication, May 31, 2017). P-values for PMH were obtained through t-tests when comparing KPU students and the Canadian sample (J. Puyat, personal communication, May 31, 2017). Multiple linear regression was applied to
obtain a multivariable model for PMH and various factors (J. Puyat, personal communication, May 31, 2017). Multiple logistic regression was utilized to obtain a multivariable model for percentage flourishing and various factors (J. Puyat, personal communication, May 31, 2017).

The analysis focused on using descriptive and inferential statistics to find out the association between the MWC course and flourishing and PMH scores among HF students. The principal investigator described the intervention, identified comparative characteristics of the control and intervention groups, and identified factors that are associated with flourishing and PMH.

The first part of data analysis included gathering information from the pre-intervention survey in both the intervention and control groups. The recommended standardized MHC-SF data analysis methods were utilized to demonstrate the level of mental health among students (Keyes, 2009). A derived variable (DV) was used to calculate the continuous PMH score by using a temporary re-format to rescale and invert the values from the MHC-SF (Statistics Canada, 2014). Participant demographics and current school status was used to augment the descriptive statistical analysis. The pre-intervention MHC-SF scores were gathered and compared to national averages (Gilmour, 2014) as a descriptive measurement and compared with post-intervention scores.

The post-intervention survey provided additional descriptive values, including data on the amount of work hours outside of school, the level of recommendation for other undergraduate students to take the MWC course, confidence in academics, sexual orientation, and faith. The values were calculated through R – version 4 (R Core Team, 2017).

Data analysis was conducted to determine whether there are differences between the MHC-SF scores at the beginning and end of the MWC course. The differences of demographic
data, flourishing percentages, and PMH scores among the pre-intervention control groups and intervention groups were identified. Homogeneity between both pre-intervention groups provided a solid foundation for analysis among pre-intervention and post-intervention groups (Polit & Beck, 2012).
Chapter Four – Data Analysis and Findings

The participants sampled reflected a small representation of KPU students enrolled in the HF certificate program. Although 160 participants responded to the baseline analysis, a sample size of only 123 was used to complete baseline descriptive analysis, and 118 surveys were used to analyze baseline responses for the MHC-SF questions. Surveys were excluded if the participant had already taken the MWC course at the time of the baseline analysis, or due to user error and ambiguous responses to MHC-SF questions.

Useable post-intervention surveys were also reduced due to inconsistent responses and user error. Therefore, 89 out of the 169 surveys collected could be used for the post-intervention analysis and subsequent comparisons between pre-intervention and post-intervention groups. The research results include 11 control group respondents and 78 intervention group respondents. This limited number of surveys has affected the generalizability of the survey results. This chapter discusses findings from baseline descriptive statistics, pre-intervention and post-intervention change, comparisons between the research sample and the Canadian population, and factors associated with flourishing and PMH scores.

4.1 Baseline Descriptive Statistics

While a majority of participants were female (91%), there was more variety in participants’ ages, which ranged from 20 or younger (65.2%), 21 to 29 (20.2%), and to 30 and older (14.6%). Seventy-one percent of students had taken 0 to 1 course related to the program prior to that term, 22.5% had taken 2 to 3 related courses, 16.9% had taken 4 to 5 related courses, 9% had taken 6 to 7 related courses, and 2.2% had taken 8 to 9 related courses. Forty-nine point four percent of the students were taking three course this term, and 36% of the students were taking four courses. Eighty-four point three percent of the students plan to pursue an
undergraduate degree after completing the HF program, whereas 9% plan to obtain a diploma, and 5.6% plan to complete the HF certificate. Fifty-two point eight percent of the students received primarily Bs in previous semesters, 29.2% received primarily As, and 11.2% received primarily Cs.

At baseline, 40.4% of the students reported good understanding and ability to promote their own mental health. Other students reported their understanding and ability to promote their own mental health as very good (23.6%), moderate (32.6%), unknown (2.2%), and poor (1.1%). Forty-four point nine percent of students reported having good mental health, whereas other students reported moderate mental health (31.5%), very good mental health (18%), poor mental health (4.5%), and extremely poor mental health (1.1%). Nine percent of the students reported they had been diagnosed with a mental illness in the past year, and the entire student sample had a mean stress level of 5.5 out of 10 (median 6, SD 2.3, IQR 3).

The baseline survey responses identified the extent of factors that had a negative impact on the participant’s functioning. Students reported academic issues (79.8%), social relationships (62.9%), financial strain (61.8%), family relationships (60.8%), personal health issues (56.2%), intimate relationships (53.9%), and other issues (19.1%) had a mild to severe impact on personal functioning. Figure 4.1 (page 42) shows a further breakdown of each issue into mild, moderate, and severe impact. Academic issue is the leading cause of stress among students, with 79.8% of the students reporting a mild (31.5%) moderate (37.1%), and severe (11.2%) impact on functioning in the past year.
Figure 4.1. Negative Impact of Various Factors on Functioning. detail on percentages of the factors that had a negative impact on student functioning within the past twelve months of the baseline analysis.

At baseline, 91% of the students were aware of KPU counseling services, 53% were aware of Early Alert, 43% were aware of Peer Support Program, 20.4% were aware of Health 101, 15.7% were aware of the First-Year Initiative, and 12.4% were aware of the Healthy University Initiative. Fourteen point six percent of students had utilized KPU counseling services, and 5.6% of students had used Health 101. The other services were utilized by less than
5% of the sample (Healthy University Initiative 4.5%, Peer Support Program 3.4%, First-Year Initiative 2.2%, and Early Alert 2.2%).

4.2 Post-Intervention Descriptive Statistics

At the end of the semester, the intervention group reported a mean score of 2.4 (SD = 1.4) and the control group reported a mean score of 2 (SD = 1.3) on a scale of 1 to 7 (1 = strongly agree, 7 = strongly disagree) determining if the MWC course could be a benefit for other undergraduate students. Fifty-eight point nine percent of the intervention group reported themselves to be in good mental health at the time of the post-intervention survey, and 90.9% of the control group reported themselves to be in good mental health during the time of the post-intervention survey. It is important to note that the student’s self-reported level of mental health differs from the results from the MHC-SF survey.

Ninety-five point nine percent of the students at the time of the post-intervention survey were aware of KPU counseling services, 84.3% were aware of Early Alert, 52.8% were aware of the Peer Support Program, 47.2% were aware of Health 101, 24.7% were aware of the First-Year Initiative, and 23.6% were aware of the Healthy University Initiative. 16.9% of students had utilized KPU counseling services, and 5.6% of students had used Health 101. The other services were utilized by less than 5% of the sample (Healthy University Initiative 2.2%, Peer Support Program 3.4%, First-Year Initiative 2.2%, and Early Alert 2.2%). Figure 4.2 (page 44) displays information on which services students were aware of and utilized at baseline and at the time of the post-intervention survey.
Figure 4.2. Student Awareness and Utilization of KPU Services. These results are based on responses from pre-intervention and post-intervention surveys indicating what percentage of students are aware of services and used services offered by KPU.
4.3 Pre-Intervention and Post-Intervention Changes

Table 4.1 (page 46) illustrates pre-intervention and post-intervention changes between the control and intervention groups. The percentage of students flourishing in the intervention group decreased 11.5% from pre-intervention (55.1%) to post-intervention (43.6%) responses. Conversely, percentage of flourishing in the control group increased 18.2% from pre-intervention (45.5%) to post-intervention (63.6%) responses. The difference in the change between the control group and the intervention group was -29.7% (p-value 0.071). Mean PMH scores decreased in the intervention group by -4.3 from baseline, and mean PMH scores had a slight decrease of -.01 in the control group. The difference in change between the control group and the intervention group was -4.2 (p-value 0.131).

Students’ self-reported mean stress levels (on a scale of 1-10) in both intervention and control groups had increased at the time of the post-intervention survey. Students in the intervention group reported a mean pre-intervention level of 5.7, and a subsequent post-intervention score of 7, with a difference of 1.3. The students in the control group demonstrated a change of 0.2 between pre-intervention and post-intervention results. The difference between the change in the control versus intervention groups is 1.2 (p-value 0.221).

The percentage of students languishing in the intervention group increased from pre-intervention (1.3%) to post-intervention (6.4%) responses. There was no post-intervention change in languishing (0%) for the control group. The difference between the change of control group and the intervention group was 5.1% (p-value 1.000).
### Table 4.1

**Pre-Intervention and Post-Intervention Change**

<table>
<thead>
<tr>
<th></th>
<th>Control Baseline</th>
<th>Control Post-Intervention</th>
<th>Intervention Baseline</th>
<th>Intervention Post-Intervention</th>
<th>Change from Baseline</th>
<th>Difference in Change: Control vs Intervention</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean PMH</td>
<td>49.6</td>
<td>49.5</td>
<td>48.2</td>
<td>43.9</td>
<td>-0.1</td>
<td>-4.2</td>
<td>0.131</td>
</tr>
<tr>
<td>% Languishing</td>
<td>0.0</td>
<td>0.0</td>
<td>1.3</td>
<td>6.4</td>
<td>0.0</td>
<td>5.1</td>
<td>1.000</td>
</tr>
<tr>
<td>% Flourishing</td>
<td>45.5</td>
<td>63.6</td>
<td>55.1</td>
<td>43.6</td>
<td>18.2</td>
<td>-11.5</td>
<td>0.071</td>
</tr>
<tr>
<td>Stress Level (0-10)</td>
<td>5.1</td>
<td>5.3</td>
<td>5.7</td>
<td>7.0</td>
<td>0.2</td>
<td>1.3</td>
<td>0.221</td>
</tr>
</tbody>
</table>

**Note.** Comparing baseline and post-intervention results between control and intervention groups and the difference in change between the two groups.

### 4.4 KPU vs Canadian Population

Table 4.2 describes the differences between the KPU sample and the Canadian sample (CCHS, 2012). Fifty-three point nine percent of KPU HF students were flourishing, and 77.4% of the general Canadian population were flourishing (CCHS, 2012), with a difference of 23.5% between the two groups (p-value <0.001). The mean PMH scores of HF students was 48.4, and the Canadian population scored 54.3, with a difference of -5.9 (p-value <0.001). The percentage of languishing was 1.1% in KPU HF students, and 1.5% in the general Canadian population, with a difference of 0.4% (p-value 0.90).
Table 4.2

*Mean PMH, Flourishing and Languishing: KPU Sample versus Canadian Sample*

<table>
<thead>
<tr>
<th></th>
<th>KPU (at baseline)</th>
<th>General Population (12 and up) (CCHS 2012)</th>
<th>Differences KPU vs general population (&gt;12)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n=89</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean PMH</td>
<td>48.4</td>
<td>54.3</td>
<td>-5.9 **&lt; .001</td>
</tr>
<tr>
<td>% Flourishing</td>
<td>53.9</td>
<td>77.4</td>
<td>-23.5 **&lt; .001</td>
</tr>
<tr>
<td>% Languishing</td>
<td>1.1</td>
<td>1.5</td>
<td>-0.4 0.9</td>
</tr>
</tbody>
</table>

*Note.* Comparisons of mean PMH, percentage flourishing and percentage languishing between the KPU HF student sample at baseline analysis and the general Canadian population (aged 12 and over).

4.5 Factors associated with Flourishing and PMH

Table 4.3 (page 48) demonstrates the variability of factors associated with participants’ percentage of flourishing, accounting for all other factors listed in the table. References are used as a comparator to other categories of each variable. Students aged 30 and over were significantly more likely (8.36 times) to score higher in percentages of flourishing (p-value 0.036), and students aged 20 and under were 3.93 times more likely to score higher in percentages of flourishing compared to the reference group of students aged 21-29 (p-value 0.060). While other factors tested in this model, which were compared with other factors through odds ratio, standard errors, and p-values, included sex, sexual orientation, frequency of alcohol consumption, religiosity, confidence in academic skills, supportive environment, and sense of belonging.
Table 4.3

*Various Factors Associated with Flourishing Percentages*

<table>
<thead>
<tr>
<th>Factors</th>
<th>Odds Ratio</th>
<th>SE</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under 20 (20 and under)</td>
<td>3.93</td>
<td>0.73</td>
<td>0.060</td>
</tr>
<tr>
<td>21 to 29</td>
<td>ref</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>30 and over</td>
<td>8.36</td>
<td>1.01</td>
<td>*0.036</td>
</tr>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>ref</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Female</td>
<td>4.12</td>
<td>0.93</td>
<td>0.129</td>
</tr>
<tr>
<td><strong>Sexual Orientation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heterosexual</td>
<td>ref</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Non-heterosexual</td>
<td>0.71</td>
<td>1.17</td>
<td>0.771</td>
</tr>
<tr>
<td>No response</td>
<td>0.52</td>
<td>0.87</td>
<td>0.449</td>
</tr>
<tr>
<td><strong>Weekly Frequency of Alcohol Consumption</strong></td>
<td>1.00</td>
<td>0.02</td>
<td>0.860</td>
</tr>
<tr>
<td><strong>Religiosity (1-7)</strong></td>
<td>1.01</td>
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<tr>
<td><strong>KPU Supportive Environment (1-7)</strong></td>
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<tr>
<td><strong>Confidence in Academic Skills (1-7)</strong></td>
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<td>0.27</td>
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<tr>
<td><strong>Sense of Belonging (1-7)</strong></td>
<td>0.66</td>
<td>0.25</td>
<td>0.094</td>
</tr>
</tbody>
</table>

*Note.* Odds Ratio is a categorical measure that determines how likely variables are associated with percentages of flourishing. SE = standard error; ref = reference is a comparator with other variables in the same category. Example: reference age group is 21-29 years old is compared with students aged 30 and over, who are 8.36 times more likely to flourish than the reference group.
Table 4.4 (page 49) demonstrates the variability of factors associated with participants’ PMH scores, accounting for all other factors listed in the table. Students reported how they rated the statement “KPU is a supportive environment” on a scale of 1 (strongly agree) to 7 (strongly disagree). When students indicated a stronger supportive university environment, the PMH score increased by 2.36 per point (p-value 0.065). For example, students who strongly agreed with the statement “KPU is a supportive environment” scored 16.52 points higher on PMH scores compared with students who strongly disagreed with the statement. Other factors tested in this model, which were compared with other factors through estimates, standard errors, and p-values, included age, sex, sexual orientation, frequency of alcohol consumption, religiosity, confidence in academic skills, and sense of belonging.

Table 4.4

<table>
<thead>
<tr>
<th>Positive Mental Health (PMH) Scores and Various Factors</th>
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</thead>
<tbody>
<tr>
<td>Factors</td>
</tr>
<tr>
<td><strong>Age</strong></td>
</tr>
<tr>
<td>Under 20 (20 and under)</td>
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<tr>
<td>21 to 29</td>
</tr>
<tr>
<td>30 and over</td>
</tr>
<tr>
<td><strong>Sex</strong></td>
</tr>
<tr>
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</tr>
<tr>
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</tr>
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<td><strong>Frequency of Alcohol Consumption</strong></td>
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<tr>
<td>-0.05</td>
</tr>
<tr>
<td><strong>Religiosity (1-7)</strong></td>
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<tr>
<td><strong>Confidence in Academic Skills (1-7)</strong></td>
</tr>
<tr>
<td><strong>KPU Supportive Environment (1-7)</strong></td>
</tr>
<tr>
<td><strong>Sense of Belonging (1-7)</strong></td>
</tr>
</tbody>
</table>

*Note.* Estimate indicates the magnitude of the difference between variables. SE= standard error; ref = reference is a comparator with other variables in the same category.
4.6 Conclusion

Multiple statistical analysis methods were applied to create results from pre-intervention and post-intervention survey responses. Baseline descriptive data, pre-intervention and post-intervention changes, differences between KPU HF students and the Canadian population, and factors associated with student mental health were discussed in this chapter. Trends and significant findings will be discussed in further detail in the next chapter.
Chapter Five – Discussion

Literature underpins the critical thinking and meaningful discussion of the survey results from the 89 pre-intervention and post-intervention surveys. The intervention group (n = 78) is considerably larger than the control group (n = 11), which impacts the interpretive statistical analysis components of this study. Although the limited number of useable survey results negatively impacted p-values, all results indicate p-values in order to indicate where statistical significance exists. This chapter presents and analysis of relevant trends and statistical significance related to findings, explores implications, and discusses limitations of the research study. Conclusions of the results are discussed in the next chapter.

5.1 Overview

5.1.1. Descriptive analysis findings. Although there was a wording error regarding age on the pre-intervention survey (option for “under 20” not “20 and under”), the assumption was made that the respondents were twenty and under since no one else selected other boxes. The respondents were predominately female (91%). This is not surprising, since a majority of students enrolled in the Spring 2017 HF certificate (85%), BPN program (85%), and BSN program (86%) were female (Olaguer, 2017). Eighty-four point three percent of the respondents are planning to pursue an undergraduate degree, while 9% of the students plan to pursue a diploma, and 5.6% of students plan to finish schooling once completing the certificate.

At baseline, 44.9% of the students in the intervention group and 45.5% of the students in the control group reported having “good” mental health on a self-reported scale ranging from extremely poor to very good mental health. Additionally, 16.7% of students in the intervention group and 27.3% of students in the control group reported to be in “very good mental health”. In total, 61.5% of students in the intervention group and 72.7% of the students in the control group
considered themselves to be in good or very good mental health. These results can be compared to findings from the MHC-SF questionnaire, which indicated that 55.1% of the students in the intervention group and 45.5% of the students in the control group students were considered to be flourishing. Interestingly, among all of the students sampled, 6.4% of the students in the intervention group and 27.2% of the students in the control group who considered themselves to be in good or very good mental health were assessed as not flourishing. This variation in results might be indicative of poor self-awareness and understanding of their own mental health. At baseline, 62.8% of the intervention group and 72.7% of the control group rated their understanding and ability to promote their own mental health as “good” and “very good”.

At the time of the post-intervention survey, 58.9% of students in the intervention group and 90.9% of students in the control group self-reported being in good mental health on a scale of extremely poor to very good mental health. Compared with percentages of students flourishing in the intervention group (43.6%) and control group (63.6%) during the post-intervention survey, 15.3% of the intervention group and 27.3% of the control group considered themselves to be in good mental health were assessed as not flourishing. As the semester progressed, there was a 3.9% increase of students in the intervention reporting good mental health, and a 18.2% increase of the students in the control group reporting good mental health. Future research identifying factors associated with percentages of student flourishing, such as the relationship of self-awareness and understanding of the student’s own mental health, would be useful.

Students reported that they were experiencing stressors that had a mild to severe impact on their functioning. Most students reported the following factors were causing them stress: academic issues (79.8%), social relationship (62.9%), financial strain (61.8%), family
relationships (60.8%), personal health issue (56.2%), and intimate relationship (53.9%). In addition, 19.1% indicated other issues were causing them stress. Findings from the ACHA (2016) study also indicated a sizeable percentage of students were finding the following issues traumatic and difficult to handle: academics (58.1%), finances (40.4%), intimate relationships (33.8%), family problems (32.3%), social relationships (29.8%), personal health issues (27.0%), and other issues (13.6%). The ACHA (2016) results can be compared with the current study, and Figure 5.1 (page 43) demonstrates the comparable results.

Although the questions were worded slightly differently in the ACHA (2016) survey compared to the present study, it is meaningful that in both studies Canadian students report that they are feeling stressed. Both studies indicate academic issues are the leading stressor for students, with a mean score of 68% among both student samples. Financial strain has the second highest mean stressor percentage (51.1%), with other factors scoring percentages between 46.5% (family relationship) and 16.4% (other).

Despite the level of stress, many students did not seem to be aware of the health-promoting activities KPU has to offer. The research results indicate that, over the semester, students were increasingly aware of KPU’s support services. However, even at the end of the semester, less than half of the HF students were aware of the following services: Healthy University Initiative (23.6%), First Year Initiative (24.7%), and Health 101 (47.2%). Utilization of KPU counselling services did not significantly increase over the semester: 14.6% of students reported they utilized KPU counseling services at baseline, and 16.9% utilized counseling services at the end of the semester. The other services were used by a small percentage of students throughout the semester: First Year Initiative (2.2% at baseline to 1.1% post-intervention), Healthy University Initiative (4.5% at baseline to 2.2% post-intervention), Early
Alert (2.2% at baseline and post-intervention), and Health 101 (5.6% at baseline and post-intervention).

Figure 5.1. Stressors Impacting Functioning: HF Students versus Students Across Canada. HF students reported these issues to have a mild to severe negative impact on functioning, which is compared with findings from a national survey (ACHA, 2016).

Percentages of students using counseling services at KPU cannot be compared with the results from this study because data from the KPU counseling department is not disclosed to the public. Seventeen percent of Canadians 15 years or older reported they were in need of mental health care within the past twelve months, and counseling is the most common form of care sought at 12% of the total sample (Statistics Canada, 2013A). An increasing number of students
seeking mental health support is a reality among hundreds of schools across North America. CCMH (2016) reported a dramatic increase of American undergraduate students seeking counseling services for mental health issues, including a 50% increase in appointments reported from the year before. Future investigations could explore the reason(s) behind the increase in help-seeking behaviours. It would be interesting to identify if increased rates of mental illness diagnoses or improved mental health literacy and mental health promotion are the basis for the higher rates of help-seeking behaviours.

Nine percent of the students at the baseline survey reported they have been diagnosed with a mental illness in the last twelve months. This can be compared with results from the Canadian Community Health Survey (CCHS) (2012) findings, where only 5.4% of Canadians met the criteria for a mood disorder, and 2.6% of Canadians met the criteria for generalized anxiety disorder. Other mental health disorders were not included in the CCHS survey. Future studies can utilize similar questions from the CCHS survey to compare specific mental illness among undergraduate students with the general Canadian population.

**5.1.2 Pre-intervention and post-intervention change.** There are meaningful results related to the pre-intervention and post-intervention changes between control and intervention groups. Compared to pre-intervention results, the intervention group at the end of the semester had increased stress levels (1.3) and percentages of languishing (5.1%), as well as decreased percentages of flourishing (-11.5%) and lower mean PMH scores (-4.3). Conversely, the control group had an increased percentage of flourishing (18.2%) at the time of the post-intervention survey.

The number of students flourishing in the control group increased from 45.5% at baseline to 63.6% at the end of the semester. Conversely, the number of students flourishing in the
intervention group decreased from 55.1% at the beginning of the semester to 43.6% during the post-intervention data collection (Figure 5.2, page 56). Surprisingly, students who took the MWC course had lower percentages of flourishing at the end of the semester compared to their colleagues who did not take the course.

![Student Flourishing %: Control vs Intervention Groups](image)

_Figure 5.2. Percentage of Students Flourishing: Control versus Intervention Groups._ Percentage of students flourishing at the beginning and at the end of the term. More students in the control group were flourishing at the end of the semester (63.6%) compared to baseline (45.5%), whereas less students in the intervention group were flourishing at the end of the semester (43.6%) compared to baseline results (55.1%).
This unexpected post-intervention change between the control and intervention groups is demonstrated further in Figure 5.3 (page 57). The students in the control group had increased percentages of flourishing (+18.2%) and students in the intervention had decreased percentages of flourishing (-11.5%). The total difference between the intervention and control groups is 29.7% (p-value 0.071). Although the difference in the change of flourishing between the two groups was approaching significance, the other difference in pre-intervention and post-intervention languishing percentages, PMH scores and stress levels were not. This needs to be taken into account when interpreting results.

![Student Flourishing Percentage Change](image)

**Figure 5.3.** Student Flourishing Percentage Change. Pre-intervention and post-intervention results based on the MHC-SF and subsequent categorical analysis. The difference of the post-intervention change between control and intervention groups is -29.7% (p-value 0.071).

The other results in this section point to a trend at the end of the semester, students in the intervention group had higher stress levels (Figure 5.4, page 58), a higher percentage of languishing (Figure 5.5, page 58), and lower mean PMH scores (Figure 5.6, page 59) than the
control group. This trend ignited curiosity as to what contributed to the substantial changes in the student flourishing in the control group.

Figure 5.4. Mean Stress level in Control and Intervention Groups. Pre-intervention and post-intervention results based on reported stress levels ranging from 1– 10 (10 = extremely stressed). Difference in the change = 1.2 (p value 0.221).

Figure 5.5. Student Languishing Percentage Change. Pre-intervention and post-intervention results based on the MHC-SF. Difference in the change = 5.1% (p value 1.000).
Given the minor difference in the post-intervention change in stress levels between intervention and control groups (p-value 0.221), stress does not appear to be a factor in student flourishing. The MWC course content also does not appear to be a factor in the change of flourishing, as students who took the course indicated the MWC course would be a benefit for other students. On a scale of 1 (strongly agree) to 7 (strongly disagree), the invention group results indicated a mean number of 2.5 (SD = 1.4) that the MWC course would be a benefit for other students.

Since 58.9% of students indicated that they consider themselves to be in good mental health at the end of the term, which varied from MHC-SF results, it would be beneficial to investigate students’ understanding of their own mental health and level of stigma related to mental health issues during pre-intervention and post-intervention surveys. The results could be compared among groups to identify factors related to change in percentage of students flourishing, including potential reduction of stigma and increased rates of self-awareness.

*Figure 5.6. Changes in Mean PMH. Pre-intervention and post-intervention results of PMH scores (0-70). Differences in the change = -4.2 (p value 0.131).*
5.1.3 HF Students versus Canadian Sample. The results from this survey were compared with Canadians aged 12 and over (CCHS, 2012). Although data from Canadians aged 18 to 25 was considered, college or university students were not separately identified, and the general sample and the age-specific samples had similar results. Therefore, no specific age ranges were selected as a comparator to the KPU HF student sample.

The CCHS (2012) study included sophisticated and probabilistic sampling methods to determine the percentage of flourishing (77.4%) and mean PMH scores (54.5) among Canadians sampled. This national survey was used to compare with the HF students’ baseline percentage of flourishing (53.9%) and mean PMH scores (54.4). There was a statistically significant difference in percentage of participants flourishing between the HF student sample and the Canadian sample (-23.5, p-value <0.001) (Figure 5.7, page 50), and a statistically significant difference in mean PMH between the HF student sample and the Canadian sample (-5.9, p-value <0.001) (Figure 5.7, page 60). The HF students had comparable percentages of languishing (1.1%) to the Canadian sample (1.5%), with a small difference of -0.4 (p-value 0.9).

HF students have lower rates of positive mental health compared to the Canadian population, as evidenced by the statistically significant difference of flourishing and mean PMH between the student sample and the CCHS (2012) Canadian sample. Figure 5.8 (page 50) illustrates the difference in mean scores between the Canadian sample (54.5) and HF students (48.4). The study results and previous literature point to the need to promote student mental health in schools across the nation. It would be meaningful to use these results to determine factors associated with flourishing and mean PMH.
Figure 5.7. Flourishing %: Canadian Sample vs HF Student Sample. 77.4% of Canadians flourishing (CCHS, 2012), compared with 53.9% of HF students flourishing.

Figure 5.8. Mean PMH: Canadian Sample vs HF Student Sample. The mean PMH score for Canadians was 54.5 (CCHS, 2012), compared with a mean PMH score of 48.4 for HF students.
5.1.4 Multivariate Model: Factors Associated with PMH. PMH scores were found to be associated with the level of support in KPU’s environment. Students were asked to rate how supportive KPU’s environment is on a scale of 1 (strongly agree) to 10 (strongly disagree). An inverse relationship approaching significance was found between this variable and PMH scores. For every point increased on the scale, the PMH score decreases 2.36 points (SE 1.26, p-value 0.065). For example, students who answered “strongly disagree” scored 12 PMH points lower than students who answered “strongly agree”. This is supported by literature stating that a supportive college environment is a predictor of increased student mental health (Fink, 2014).

The final analysis of the various factors associated with flourishing included an age revision in order to address the skewed and unstable results in the standard error for age categories (J. Puyat, Personal Communication, May 13, 2017). The estimate was used to determine the magnitude of the difference. Students aged 21 to 29 were used as a reference to compare other age ranges, as they had lower PMH scores than other age categories. Accounting for all other variables listed in the model, students who were aged 20 and under scored 5.16 points higher in PMH scores compared to students aged 21 to 29 (SE 3.49, p-value 0.143). In addition, accounting for all other variables listed in the model, students who were aged 30 and over scored 6.07 points higher in PMH compared to students aged 21 to 29 (SE 4.61, p-value 0.192). Future research sampling larger groups could thoroughly analyze if there are any variables significantly associated with mean PMH scores.

5.1.5 Multivariate Model: Factors Associated with Flourishing. Since flourishing is a categorical variable, an odds ratio was calculated to determine if variables were associated with flourishing. This robust form of logistic regression analysis resulted in significant results related to age. Students aged 30 and above had significantly higher odds of flourishing, as they are eight
times more likely to be considered flourishing compared to students who were 21 to 29 years old (SE 1.01, p-value 0.036). The other age category results were approaching significance between groups, as students who were 20 and under were 4 times more likely to be considered flourishing than students who were 21 to 29 years old (SE 0.73, p-value 0.060).

5.2 Implications

Findings from this research project have provided a robust description of student mental health among HF students at KPU. Results such as demographic variables, percentages of students flourishing, major identified stressors, awareness and utilization of KPU supportive services, and rates of mental illness diagnoses can be utilized to help underpin future health promoting activities at KPU. This research study identified meaningful trends through comparison of mental health indicators (flourishing, mean PMH) between intervention and control groups at the beginning and the end of the semester. These trends can be used to help guide future studies and to provide a snapshot of mental health among a student sample at KPU.

The statistically significant differences in flourishing and mean PMH between the KPU sample and the general Canadian population (CCHS, 2012) provided unequivocal evidence that students are in need of supportive strategies to promote mental health. The multivariable model identified that having a supportive university environment can be associated with higher PMH scores. This result is backed up by previous research and will be meaningful for future decision-makers for curriculum and campus-wide activity development. Lower percentages of students aged 21 to 29 had reduced odds of having flourishing mental health compared to the other age categories. Awareness of this higher-risk age can help target future age-specific mental health promoting activities. Future investigations should include larger student samples to help provide a clearer picture of student mental health at KPU.
5.3 Limitations

A major limitation of the study is the small sample size. Although 160 participants responded to the pre-intervention survey, and 169 students participated in the post-intervention survey, user error and partially-filled out surveys led to a sample number of 89, with only 11 participants in the control group. This has significantly impacted the effect size, power, and statistical significance. A post-hoc analysis concluded a deficiency of research participants affected the significance of results. For example, the analysis revealed that there should have been a minimum sample of 88 per group in order to obtain a statistically significant difference (p-value <0.05), a moderate effect size (0.42), and a 0.80 statistical power between control and intervention groups in the average change from baseline PMH scores. Sample size is a significant limitation of this research, given the departure between the suggested sample size, and the actual sample size of the intervention group (n=78) and the control group (n=11).

Another limitation of the study is inconsistent wording in the pre-intervention and post-intervention survey questions. Due to ethical considerations, the principal investigator changed the wording by removing the word “trauma” from the questions asking about student stressors. Since the question was asked differently than in the ACHA (2012) study, direct comparisons cannot be conducted. Another example is the difference in wording between the pre-intervention and post-intervention survey questions about students’ self-perceived mental health. The questions were asked differently, so inferences had to be made in lieu of direct statistical interpretations.
Chapter Six – Conclusion

This study focused on student mental health at KPU by examining the association between optimal mental health and the MWC course, which is a required course in the HF certificate program at KPU that focuses on mental health promotion, mental health literacy, and communication techniques. The study also compared the mental health of KPU students with the Canadian population and evaluated factors potentially associated with mental health. This thesis presented literature and identified gaps in research related to student mental health. Research was thoughtfully designed to identify how many students were considered to be mentally healthy, how the results compared to national averages, and if there were predictors of student mental health. Data collected from the surveys lead to meaningful discussions and interpretations of the results.

The research student sample (n=89) was comprised of students enrolled in the HF certificate program at KPU. Results indicate HF students have statistically significant lower rates of mental health compared to the general Canadian population. Age was also significantly associated with positive mental health scores, and a supportive university environment was related to increased percentages of flourishing. Unexpectedly, the MWC course appeared to have an inverse relationship with percentages of flourishing among students, in contrast with findings from the control group, who developed increased percentages of flourishing by the end of the semester. This result is surprising, given that stress and students’ level of course recommendation did not appear to be a significant factor in percentages of flourishing. In the future, it would be meaningful to investigate other variables that could be associated with student flourishing, including self-awareness, stigma reduction, and mental health literacy.
A major limitation of this study is the small sample size due to user error and inconsistencies in reporting. Although up to 169 students completed surveys, only 53% of surveys were utilized towards findings from this study. Another limitation of the study is inconsistent and missing questions between the pre-intervention and post-intervention surveys. Designing a more consistent and user-friendly survey would be beneficial for future research.

On the basis of the results of this research, it can be concluded that students are in need of mental health promoting education services and activities. Further investigations into the reason for declining rates of mental health among students enrolled in the MWC course would be beneficial. Future larger scale studies focusing on student mental health and associated factors will be beneficial to promote emotional, social and psychological well-being among college and university students.

This study has contributed to the psychiatric nursing profession by engaging in research focused on the positive aspects of mental health, providing a Canadian context to undergraduate student mental health, and participating in scholarship activities that can be used to improve formal mental health promoting strategies within KPU. Publishing results in the ‘Health 101’ newsletter will provide students with a snapshot of student mental health at KPU. Disseminating findings to KPU administrators can shape policies, underline curriculum development, and can be a catalyst for future research projects. Publishing findings from this study will add to the growing body of knowledge of undergraduate mental health in Canada.
References


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https://doi.org/10.1108/17465729200000014


https://doi.org/10.1016/j.jadohealth.2009.08.008


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http://strategy.mentalhealthcommission.ca/


http://www.mentalhealthcommission.ca/sites/default/files/MHCC_AnnualReport2014_ENG_web_0.pdf


Appendix A: Mental Wellness and Communications Course Outline

Department Name: Health
Course Acronym and Number: HEAL 1100
Former Acronym and Number: 
Credits: 3
Descriptive Title: Mental Wellness and Communication

Calendar Description:
Students will explore relevant concepts to promote mental health and wellness from personal, interpersonal, organizational and cultural perspectives. They will discuss adaptive coping related to stress, emotions, and life circumstances for enhanced mental health, motivation and learning. Students will also learn and apply basic therapeutic communication skills essential for healthy personal and professional relationships.

Required for the following credentials:
Bachelor of Psychiatric Nursing, Bachelor of Science in Nursing, Health Foundation Certificate

Prerequisites:

Corequisites:

Transferable? Transferable: (Years 1 and 2) Refer to the BCCAT Transfer Guide
Insert institutions and transfer information below:

Implementation Date: 1-Sep-2016  To
be Reviewed Date: 1-Sep-2021
Discontinued Date:
Learning Objectives/Outcomes:
A student who successfully completes the course will have reliably demonstrated the ability to:

1. Describe dimensions and factors of mental health and well-being
2. Examine relevant theoretical frameworks for mental health and well-being
3. Differentiate actual and perceived barriers to mental health and well-being
4. Appreciate effective management of stress, emotions and life circumstances impacting motivation and successful achievement of learning outcomes
5. Develop strategies toward enhancing continued mental health and well-being
6. Describe major factors which facilitate effective interpersonal communication
7. Apply effective basic communication skills
8. Contrast and compare cultural practices, including aboriginal, related to communication
9. Differentiate therapeutic and professional communication
10. Communicate effectively, orally and in writing
11. Articulate individual world view, personal beliefs and values in relation to family, community and culture

Content:
Content will include, but is not restricted to, the following:

Context of Mental Health and Wellness:
1. Dimensions of mental health and wellness in post-secondary environments
2. Philosophical underpinnings in mental health and well-being

Theoretical Concepts:
3. Biological and psychological
4. Socio-cultural-spiritual
5. Mindfulness
6. Basic communication skills
7. Verbal and non-verbal communication Mental Health Factors:
8. Neurobiological factors (brain signaling, neuroplasticity and neurogenesis, physiological changes, and mental illness)

Barriers and Challenges:
1. Cultural, religious, legal and socioeconomic impact on stereotyping, prejudice and discriminations
   Impact of traditional power structures
   Accessibility and sustainability
9. Basic organizational health

Adaptive and Maladaptive Coping:
10. Resilience

11. KPU and community resources
12. Stress, emotions and defense mechanisms
13. Stress and emotional management

14. Maladaptive coping associated with unhealthy behaviours e.g. addictions

Outcomes for Success:
15. Personal development planning
16. Problem solving and evidence based decision making
17. Planning self-care for continued mental health and well-being
18. Emotional intelligence

Strategies for Improved Mental Health and Wellness:
19. Self-awareness/mindfulness and effective learning strategies
20. Teamwork and communication

21. Communication in personal and professional relationships

Health Promotion:
22. Cross cultural health and healing practices
23. Time and fiscal management

24. Nutrition, sleep and exercise

Cross cultural communication practices:
25. Cultural practices
26. Respect and cultural relativism
27. Pillars of aboriginal learning

28. Spiritual practice

Feminist Communication:
Introduction to feminist communication

-----------------------------------

Learning Activities:

Activities may include, but are not restricted to, the following
Assessment Methods:

Grading system used:
Letter Grade

Assessment plans comply with Kwantlen policy and may resemble the following:

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Methods for Prior Learning Assessment:

The following PLA methods will be used:

1. Challenge exam
2. Standardized test
3. Product / Portfolio
4. Demonstration
   - Interview
5. Worksite assessment
6. Self-assessment
7. External evaluation
8. Participating in individual and group projects
Teaching Modes:

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1. May be offered in approved 3-hour blocks

Learning Resources:

Required Textbooks, Lab or Shop Manuals, Equipment, etc., such as:


Recommended Textbooks, Lab or Shop Manuals, Equipment, etc., such as:

**Epstein, M (latest edition)** *Thoughts without a thinker.* New York: Basic Books  

Bibliography Attached? (for suggested library acquisitions)  
No

Bibliography

Do library resources in this area need more development?  
No

This course outline complies with the relevant Kwantlen policies. It follows the guidelines set out in the Kwantlen Course Outline Manual. Department or program learning objectives/outcomes and essential skills that have been identified in this course outline can be reasonably achieved through this course.

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<thead>
<tr>
<th>Course Developer(s):</th>
<th>Leann Ring</th>
<th>Signed Date:</th>
<th>20-Nov-2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department Chair:</td>
<td>Leann Ring</td>
<td>Signed Date:</td>
<td>20-Nov-2015</td>
</tr>
<tr>
<td>Divisional/Associate Dean:</td>
<td>Jean Nicolson-Church</td>
<td>Signed Date:</td>
<td>20-Nov-2015</td>
</tr>
<tr>
<td>Senate Vice Chair:</td>
<td>Jennifer Au</td>
<td>Signed Date:</td>
<td>15-Dec-2015</td>
</tr>
</tbody>
</table>
Appendix B: Pre-Intervention Standardized Script

Hello, my name is April Holland. I am a Master of Psychiatric Nursing student at Brandon University. As part of my graduate research, I am asking you to participate in a survey at the beginning and at the end of this semester that will provide a snapshot of mental health among students at KPU. The only responsibilities of being a research participant for this study is to complete two brief in-class surveys and attend classes as usual.

The purpose of this research project is to find out whether coursework in this term is associated with student wellness. The information will be used to make decisions about future course offerings.

Your instructor will be out of the room during the survey, which means that he or she will have no idea whether or not you have participated, and there will be no impact on your education if you choose to not complete the survey.

Do not start the survey until the instructor is out of the classroom, and please provide your classmates with respect and privacy by not looking at their surveys. When you complete the survey, please hand in the signed consent page and survey to me, face-down. If you need any emotional support, you can contact free counseling services at KPU located in the “Main Building” on this campus, or visit www.kpu.ca/counseling. This contact information is located on the informed consent form.

You can contact me at HOLLANA57@BRANDONU.CA or my faculty supervisor, Dean Care at CARED@BRANDONU.CA if you have any questions or concerns.

Please feel free to contact Brandon University Research Ethics Committee (BUREC) for questions relating to ethics (204-727-9712; burec@brandonu.ca). (The information is on the board at the front of the room).

Do you have any questions before I hand out the surveys?
Appendix C: Post-Intervention Standardized Script

Hello, my name is April Holland, and I introduced myself as a graduate student at the beginning of the semester when I handed out a survey to this class. I am here to ask you to participate in the second and final part of the survey today. I am also asking those of you who did not take the first survey to please participate as well. The surveys will help provide a snapshot of mental health among Faculty of Health students at KPU.

Your instructor will be out of the room during the survey, which means that he or she will have no idea whether or not you have participated, and there will be no impact on your education if you choose to not complete the survey.

Please use the chart on the front of the survey to help remind you of your coded ID from the last survey, and make sure to enter the SAME coded ID as you did last time. This is so I can link your responses today with your responses from the beginning of the semester. For those of you who are new to the survey, please use your mother’s initials and your birth MONTH and birth DAY – for example: If your mother’s name is Jane Smith, and your birthday is April 25, 1987, your ID would be JS-0425.

Do not start the survey until the instructor is out of the classroom, and please provide your classmates with respect and privacy by not looking at their surveys. When you are completed with the survey, please hand in the signed consent page and survey to me, face-down. If you need any emotional support, you can contact free counseling services at KPU located in the “Main Building” on this campus, or visit www.kpu.ca/counseling. This contact information is located on the informed consent form.

You can contact me at HOLLANA57@BRANDONU.CA or my faculty supervisor, Dean care at CARED@BRANDONU.CA if you have any questions or concerns.

Please feel free to contact Brandon University Research Ethics Committee (BUREC) for questions relating to ethics burec@brandounu.ca; (204-727-9712), or KPU Research Ethics Board at research@kpu.ca (The information is on the poster at the front of the room).

Do you have any questions before I hand out the surveys?
Appendix D: Informed Consent Form

Title of the study: Examining the association between student flourishing and a mental health course

Principal Investigator: April Holland
Student, Master of Psychiatric Nursing Program
Brandon University
Contract Instructor, Bachelor of Psychiatric Nursing Program
Kwantlen Polytechnic University
hollana57@brandonu.ca

Thesis Advisor: Dr. Dean Care
Dean of Faculty of Health Studies
Professor, Master of Psychiatric Nursing Program
Brandon University
cared@brandonu.ca
(204) 727-7456

Invitation to Participate: You are invited to participate in a research study conducted by April Holland. This research study consists of completing two brief surveys, one at the beginning and one at the end of the semester. This first survey is five pages and should take approximately ten minutes to complete. In order to keep your responses anonymous, you will create your own ID based on the criteria listed on your survey. This ID should remain the same for both surveys, and will be changed to an unidentifiable ID once both surveys are collected. Please make sure that you do not include your name or student number.

Purpose of the Study: The purpose of this research project is to find out whether the course work in this term is associated with student wellness. The information will be used to make decisions about future course offerings.

Participation: Please be aware that participation in this survey is completely voluntary. You may choose not to participate in this survey, and you can decline to do the survey by not completing or partially completing the survey. Once the survey is submitted, you will be giving consent to use your data in the research project. By consenting and completing the survey, you have not waived any rights to legal recourse in the event of research-related harm.

If you wish to participate in this study, please complete this consent form and the survey. You do not have to answer any questions that you do not want to answer. Please hand the into the researcher at the front of the classroom (face down) whether or not you have completed the survey. You have the right to withdraw from the study leading up to once the second survey is submitted, and the data will be destroyed and taken out of the study. After the second survey is collected, the researcher will strip the ID from the data, and you will no longer be able to withdraw.
from the study. Your instructor will be out of the room during the survey, and there will be no impact to your education should you choose not to participate.

**Benefits of the Study:** Focusing on the positive aspects of mental health; improving awareness of student mental health at KPU; building research to help create policies and interventions to enhance student mental health; advocating for and investing in student mental health promotion; and providing a Canadian context by adding to a growing body of established research regarding student mental health across the world.

**Risks:** This research project is deemed as “minimal risk”, which means that there is no foreseeable harm that might come to you by completing the survey. If you need any emotional support, you can contact free counseling services at KPU located in the “Main Building” on this campus, or visit [www.kpu.ca/counseling](http://www.kpu.ca/counseling). The researcher will provide you with new information that might impact your continued willingness to participate if applicable.

**Confidentiality and Anonymity:** The information that you will share will remain strictly confidential and will be used solely for the purposes of this research. The only people who will have access to the research data are April Holland (Principle Investigator), Dean Care (Thesis advisor), and two research assistants who have no affiliation with Kwantlen Polytechnic University. Your answers to questions may be used in presentations and publications but you will not be directly identified. There is a minimal risk that you could be identified based on questions about your age and gender; this risk will be reduced if there is a high number of participants, as well as by using a third party to input the data. Because you are completing the questionnaires in class, it is possible that others may see your responses.

**Data:** The surveys will be kept in a locked filing cabinet in the home office of the Principle Investigator for a period of one year at which time they will be destroyed. The data will be stored on a locked and password-protected computer owned by the Principle Investigator, and will be destroyed within two years.

**Study Results:** Research findings will be available to the participants and other students enrolled in the Faculty of Health via communication with the Dean. A summary of the findings might be available in the “Health 101” online subscription.

If you have any questions or require more information about the study, you may contact the researcher or her supervisor. If you have any questions with regards to the ethical conduct of this study, you may contact the Brandon University Research Ethics Committee (BUREC) (204-727-9712; burec@brandonu.ca) and/or Kwantlen Polytechnic University Research Ethics Board (KPUREB) (research@kpu.ca).

Please keep this for your records & thank you for your time and consideration.
The elements of the research have been explained to me, and I have had the opportunity to ask questions about the research project. I understand that my participation in this study is voluntary and that no one will be able to identify if I have or have not participated. I understand that I can withdraw from this study by not completing the survey. I am agreeing to participate and give informed consent to use my data for the research project.

Signature
________________________
Name
________________________
Date
________________________

**Please hand this page in with your survey**
Appendix E: Pre-Intervention Survey

In order to maintain anonymity, please use the following coded ID on your form. For your ID, please use your mother's initials and your month/day (MM/DD) of birth. For example, if your mother's name is Jane Smith and you were born April 4, 1987, your ID would be JS-0404. You will be asked to remember the same ID for the next survey at the end of the semester.

Please enter your ID in the space provided below
ID: ___________-_________
  Initials - MM/DD

1) What is your age group? (please check one)
   ○ Under 20
   ○ 21-24
   ○ 25-29
   ○ 30-34
   ○ 35 and Above

2) Please indicate your gender: (please check one)
   ○ Male
   ○ Female
   ○ Specify ______________

3) How many “Health Foundational Year” courses have you completed prior to January 2017? (please check one)
   ○ 0-1
   ○ 2-3
   ○ 4-5
   ○ 6-7
   ○ 8-9

4) How many courses are you taking this semester? (please check one)
   ○ 1
   ○ 2
   ○ 3
   ○ 4
   ○ 5
   ○ 6 and more

5) Please indicate which courses you completed last semester: (please check all that apply)
   □ “Introduction to Health Science”
   □ “Introduction to Health Research”
   □ “Mental Wellness and Communication”
   □ “Personal Care Skills: Lab 1”

6) Please indicate which courses you are taking this semester: (please check all that apply)
“Introduction to Health Science”
“Introduction to Health Research”
“Mental Wellness and Communication”
“Personal Care Skills: Lab 1”

7) Immediately after you complete the “Health Foundations” program, what type of education do you plan on pursuing? (please check one)
- Certificate
- Diploma
- Undergraduate degree
- None

8) How would you rate your understanding and ability to promote your own mental health? (please check one)
- Extremely poor understanding and ability
- Poor understanding and ability
- Moderate understanding and ability
- Good understanding and ability
- Very good understanding and ability
- Unknown

9) What grade range best represents your grades from last term? (please check one)
- A’s
- B’s
- C’s
- D’s
- F’s
- Not applicable

10) Please check off the box if you are aware of and/or used the services listed below: (please check all that apply)

<table>
<thead>
<tr>
<th>Service</th>
<th>I am aware of this service</th>
<th>I have used this service in the past year</th>
</tr>
</thead>
<tbody>
<tr>
<td>KPU counseling services</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Health 101</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Healthy University Initiative</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>First-Year Initiative</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Early Alert</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Peer Support Program</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

11) How would you rate your current stress level from 0 – 10? (please check one) “0” indicates no stress, and “10” indicates extreme stress.
12) Would you describe your mental health as: *(please check one)*
- Extremely poor mental health
- Poor mental health
- Moderate mental health
- Good mental health
- Very good mental health
- Unknown

13) Have you been diagnosed with a mental illness in the past 12 months? *(please check one)*
- Yes
- No
- I don’t know
- Prefer not to say

14) Within the past 12 months, to what extent have these factors had a negative impact on your functioning? *(please check one answer per section)*

<table>
<thead>
<tr>
<th></th>
<th>Not at all</th>
<th>Mild impact</th>
<th>Moderate impact</th>
<th>Severe impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic issues</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Family relationships</td>
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<tr>
<td>Social relationships</td>
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<tr>
<td>Intimate relationships</td>
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<tr>
<td>Financial strain</td>
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<tr>
<td>Personal health issues</td>
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<tr>
<td>Sleep difficulties</td>
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<tr>
<td>Other</td>
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</tbody>
</table>
15) Please place a check mark in the box that best represents how often you have experienced or felt the following:

<table>
<thead>
<tr>
<th>DURING THE PAST MONTH, HOW OFTEN DID YOU FEEL...</th>
<th>NEVER</th>
<th>ONCE OR TWICE</th>
<th>ABOUT ONCE A WEEK</th>
<th>2 OR 3 TIMES A WEEK</th>
<th>ALMOST EVERY DAY</th>
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</tr>
</thead>
<tbody>
<tr>
<td>1. happy</td>
<td></td>
<td></td>
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<tr>
<td>2. interested in life</td>
<td></td>
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<tr>
<td>3. satisfied with life</td>
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<tr>
<td>4. that you had something important to contribute to society</td>
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<tr>
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<td>7. that people are basically good</td>
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<td>8. that the way our society works made sense to you</td>
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<td>10. good at managing the responsibilities of your daily life</td>
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Appendix F: Post-Intervention Survey

In order to maintain anonymity, please use a coded ID on your survey. For your ID, please use your mother's initials and your month/day (MM/DD) of birth. For example, if your mother's name is Jane Smith and you were born April 4, 1987, your ID would be JS-0404.

1) How many courses are you completing this semester? (please check one)
   ○ 1
   ○ 2
   ○ 3
   ○ 4
   ○ 5
   ○ 6 and more
   ○ None

2) Please indicate which courses you are completing this semester: (please check all that apply)
   □ “Introduction to Health Science”
   □ “Introduction to Health Research”
   □ “Mental Wellness and Communication”
   □ “Personal Care Skills: Lab 1”

3) On average, how many hours per week did you work at a job this semester? (please fill in the blank)
   I worked approximately _______________ hours a week this semester.

4) This semester, have you had any additional training outside of the “Health Foundations Year” that has taught you how to enhance your own mental health? (please check one)
   ○ Yes
   ○ No
   ○ I don’t know

5) On average, how many hours per week did you volunteer and/or engage in un-paid civic activities this semester? (please fill in the blank)
   I volunteered and/or engaged in un-paid civic activities approximately _______________ hours a week this semester.

6) What grade range best represents your cumulative grades this term? (please check one)
   ○ A’s
   ○ B’s
7) Please check off the box if you are aware of and/or used the services listed below: (please check all that apply)

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</table>

8) How would you rate your current stress level from 0 – 10? (please check one) “0” indicates no stress, and “10” indicates extreme stress

<table>
<thead>
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<th>1</th>
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<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
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<th>8</th>
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</tr>
</tbody>
</table>

9) What best describes your sexual orientation?
   - Homosexual
   - Bisexual
   - Heterosexual
   - Specify ______________
   - Prefer not to say

10) On average, how many times do you drink alcoholic beverages per week? (please fill in the blank)
    This semester I consumed approximately ______________ alcoholic beverages per week.

11) Do you consider yourself to be in good mental health? (please check one)
    - Yes
    - No
    - I don't know
12) How would you rate your agreement with the following sentences? (please check one for each sentence) “1” indicates strongly agree, and “7” indicates strongly disagree

<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I consider myself to be faithful/religious</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>KPU is a supportive environment</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>I am confident in my academic skills</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>I feel a sense of belonging in my everyday life</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>The “Mental Health &amp; Communications” course would be of benefit for other undergraduate students</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>I have a mental illness that has a negative effect on my functioning in school</td>
<td>1</td>
<td>7</td>
</tr>
</tbody>
</table>

13) Have you been diagnosed with a mental illness in the past 12 months? (please check one)
   - Yes
   - No
   - I don't know
   - Prefer not to say
14) Please place a check mark in the box that best represents how often you have experienced or felt the following:

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