What role does resilience play in university students' mental health service use?

by
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AUTHOR'S DECLARATION

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

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ABSTRACT

Background and Objectives: Globally, rates of individuals experiencing mental health disorders are increasing, with an estimated 450 million people affected with studies showing that about half of the Canadian population will have or have had a mental health illness by the age of 40. Many mental health disorders present earlier in life and it has been shown that early identification of mental health disorders, along with effective treatment would increase the possibility of positive outcomes immediately and in later life. With more university and college students presenting with mental health disorders of increasing severity, there is a need to investigate different means of dealing with mental health disorders. Resilience has been shown to promote good mental wellbeing in individuals however what is not known is what role it plays in the presentation or ability to manage some mental health disorders. This led to the study inquiry to understand the role played by resilience in university students' mental health service use.

Method: This study had a qualitative research design because of the fairly unknown nature of the research phenomenon. I purposively sampled nineteen participants from two sample frames: students who had used mental health services in the past 12 months and those who had not used the services. Face to face interviews were conducted using a semi structured interview guide. Interviews were audio recorded, transcribed and entered into the Nvivo qualitative data software. Study data were distilled into codes and thematically analysed into key themes to respond to the research objectives.

Results: The findings identified certain features of resilience and how they might affect students' use or non-use of campus mental health services: (1) students who are resilient as a result of group-focussed self-adjustment strategies were more likely to use campus mental health services while students who engaged in individualised self adjustment strategies were likely not to use mental health services; (2) students who are resilient as a result of early childhood adversity were more likely to use campus mental health services, while those students who experienced adversity during their late teenage years were most likely not to use campus mental health services; (3) students who are resilient from having had emotional support early in their life were more likely to use mental health services than those who had emotional support later in life; (4)

students who become resilient as a result of trying to attain internal or pressures were more likely to use campus mental health services than those who had to face external pressures. Additionally, the study validated other studies that point to resilience developing from adversity.

Conclusion: The findings of this study provided more information on the possible role of resilience on the use or non-use of campus mental health services by students. Its findings indicate that resilience is not a defining factor for whether or not university students use mental health services on campus. Rather resilience is a separate and singular variable that influences a student's use of mental health service use based on their personal characteristics and their life course. Further investigations may include understanding how resilience fluctuates throughout the time spent in the university; using quantitative methods to investigate the extent to which resilience characteristics indicate use or non-use of mental health services by university students; and understanding if the availability of an older emotionally supportive person improved mental health and resilience irrespective of service use or not.

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Dedication

To my greatest confidante and cheerleader, Mrs. Echeme Uma Ike.

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CHAPTER 1 Introduction and Literature Review

Introduction

Globally, rates of individuals experiencing mental health disorders are increasing, with an estimated 450 million people affected (WHO 2006). Mental health disorder, as defined by ICD-10 (International Classification of Diseases - 10th Revision) is a collection of disorders namely, depressive disorders, generalised anxiety disorder, panic disorder, phobias, obsessive compulsive disorder, and mixed anxiety-depression disorder (Roberts et al. 2018). Combined, these disorders present with symptoms ranging from loss of motivation and energy, changed sleep patterns, extreme mood swings, disturbances in thoughts or perception, or overwhelming obsessions or fears. About half of the Canadian population will have or have had a mental health illness by the age of 40 (CMHA, 2012). Statistics Canada (2012) reports that 12.6% of Canadians met the criteria for a mood disorder (including depression and bipolar disorder) during their lifetime, while 8.7% met the criteria for a generalized anxiety disorder during their lifetime.

Canadian health system and mental health services

The Canada's publicly funded health system ensures that people have access to health care based on need and not on the ability to pay. Also known as 'Medicare', it is a tripartite social contract in service of accessible, affordable, high-quality care for all residents of Canada (Martin, Miller, Quesnel-Vallée, Caron, Vissandjée & Marchildon, 2018). Services within the Canada's health system are funded at three levels: hospital, diagnostic, and physician services are covered by the general tax revenue; outpatients prescription drugs, home care, and institutional long-term care are funded through a mix of public and private insurance coverage and out-of-pocket payments; and lastly, dental care, outpatient physiotherapy and routine vision care for adults, are wholly funded privately.

Despite the external accolades received by the Canadian health system, almost 4.8 million Canadians over 15 years have experienced a mental health need in the past 12 months (Statistics

Canada, 2017). However, more than 1 million Canadians felt their mental health issue was partly unmet, approximately 600,000 felt it was unmet. This might be influencing the 78% of Canadians aged between 16 and 64 who are having informal consultations with family, friends, internet, helplines and other platforms. (Statistics Canada, 2012). Psychotherapy had long been found to be particularly beneficial to patients with problems of social adjustment and interpersonal relations, such as youths or young adults like university students (Klerman, Dimascio, Weissman, Prusoff & Paykel, 2006). But more recent study has shown that psychotherapy, in combination with medications have better outcomes especially for even more severe, recurrent disorders such as depressions (Thase et al., 1997). Yet, the general perception is that patients and people at risk are unable to get enough psychotherapy to help their illnesses. In addition, issues such as long wait lists and limited funding are some other factors plaguing the Canadian mental healthcare system.

Since many mental health disorders present earlier in life, the world health organisation has been advocating for the implementation of mental health promotion/prevention in schools (WHO, 1996). This view was reiterated by the Waddel and Shepherd (2002) study, that stated that interventions leading to early identification of mental health disorders, along with effective treatment would increase the possibility of immediate positive outcomes and in later life. Also in support of this viewpoint, the 'Advancing mental health strategy for Canada' developed by the mental health commission of Canada, highlighted decades of research evidence on the appreciable return on investment in programs that focused on the development of healthy mental health, building resiliency and addressing high risk factors in the earlier years of individuals (MHCC, 2017). According to the strategy, evidences recommend that young people are best reached at home, school or in post-secondary institutions through broad-based programs that promote mental health for all. It also recommended that these programs be complemented with targeted prevention initiatives for those at highest risk due to factors such as poverty, having a parent with a mental illness or substance abuse problem, or family violence. It can be inferred that making the Canadian health system put more resources at prevention and early detection of mental health disorders would improve people's immediate quality of life and can reduce the demand for extensive mental health services later in life.

University students and mental health

More than 2 million of the Canadian population are enrolled as students in public universities and colleges, with about 26 percent of them being 15 – 19 years old and 41 percent of them being between the ages of 20 - 24 years (Statistics Canada, 2012). Along with the increasing number of student enrollments has been a reported increase in the number of students accessing on-campus health services in general and mental health services in particular. This is in addition to reports of students presenting with more severe mental health issues. Prevalence data from six Ontario post-secondary institutions (ACHA-NCHA II student survey, 2009) show that 4 out of every 10 students have a psychiatric condition and approximately more than half of students indicated they felt overwhelmed by anxiety. The study further reported that 36 percent felt so depressed that it was hard for them to function in school. The University of Waterloo, the site of the present study, released an Executive summary (2016 ACHA-NCHA II student survey) reporting that within the last 12 months, students were negatively impacted by the following: Anxiety: 32.0 %, Depression: 21.6 %, Homesickness: 6.1 %, Sleep difficulties: 29.3 %, and Stress: 43.4 %.

Kitzrow (2009) reported that newly enrolled students in American higher institutions were presenting more mental health damages than those of previous years. Her report states that 84% of counseling centers expressed concerned about the number of students with severe psychological problems in their records. Though most of the available data are from the United States of America, the situation being reported there is not expected to be very different from the situation in Canada. Other studies have shown that the number of students presenting with serious mental health problems has been linked, among other variables, to an increased willingness by students to seek help for their mental health symptoms or due to the growing reduction in the stigma attached to mental health issues (Eisenberg et al., 2011; Roberts, 2018; Blanco, 2008).

Mental health risk factors among students

Mental health problems cut across every population however among university students, it is considered a critical health problem for many reasons. Firstly, the typical university age range of 18 – 24 years coincide with the age range of the onset of many mental health problems (Kessler et al., 2007). Their review of the World Health Organization Mental Health Surveys showed that almost half of all lifetime mental disorders in most studies manifests by the mid-teens and three-fourths by the mid-20s. As a result, it is pertinent to reach this population at this critical stage of life. Besides, other studies suggest that early intervention and treatment can likely reduce the severity and/or the persistence of the initial or primary disorder, and even prevent secondary disorders (Mowbray et al., 2006). The student population is an important cohort for the research study into mental health service use and resilience because of their youthfulness and the peculiar factors that apply to them, which are different from the general population. Studies have shown that university and college students generally experience similar higher education-related stress, which can be categorized into academic, financial, personal and social stressors. They are enumerated below:

Financial stressors

Statistics Canada (2018) reports that Canadian university tuition fees have jumped an average of 3.1 per cent to an estimated $6838 for undergraduate programs for the 2017-2018 academic year. Average tuition increased to $6,571 from $6,375 in the 2016-2017 school year, with the cost depending on the program of choice. For graduate students, the average tuition is $7,086, a 2.4 per cent increase from the previous year, when it was $6,784. Furthermore, tuition for international undergraduate students rose by 6.3 per cent to $25,180 in the last year, and for international graduate students, there was a 5.4 per cent increase to $16,252. This rising college tuition, in addition to other hidden costs such as costs of books, personal clothing, cell phones, and accommodation, are considered as financial indebtedness by students. Research has shown a negative correlation between financial indebtedness and students' mental health; students with higher financial indebtedness tended to present with worse mental health outcomes (Cooke, Markham, Audin, & Bradley, 2006). Their study on students' mental health, using the

General Population version of the Clinical Outcomes in Routine (GP-CORE), showed that students with higher financial indebtedness or concerns reported feeling more tense, anxious or nervous. These students found it more difficult getting to sleep or staying asleep, than the students with low financial concerns. Their higher GP-CORE scores indicated that their perception of their financial indebtedness was negatively impacting on them (Cooke et al., 2006). Additional studies stated that it is plausible that financial indebtedness contributes to the development of mental health problems, and may mediate the relationships between poverty, low income, and mental disorder (Fitch, Hamilton, Bassett, & Davey, 2011). To reduce their feeling of financial indebtedness, some students work outside of the campus, but studies have shown that this action further limits their learning opportunity, which negatively impacts on their academic grades and can exacerbate mental instability (Mowbray, 2006).

Familial stressors

Unmet academic expectations are another source of anxiety capable of impacting the mental health of students. Studies have documented that parents, regardless of their backgrounds, have high expectations of their children, even though many are not equipped to adequately support the actualisation of these expectations (Christenson 1992; Epstein 1986). The latent pressure of striving to attain such expectations remains with many youths as they transition into young adulthood in the university (Leung et al., 2011). As a result, many youths worry about achieving and maintaining high grades in every course; choosing a major that will be prestigious enough within family social circles while being economically profitable. A study by Saw, Berenbaum, and Okazaki, (2013) of 836 Asian-American and 856 White American university students in the United States, revealed that both groups experience anxiety over living up to parental expectations and their personal standards for qualifying for a particular career. Though conducted in another North American country, this observation will not be a majorly different situation in Canada.

Social stressors

University students, like the general population are social by nature and have the fundamental need and desire to maintain positive social relationships with others and from the

environment (Slavich, O'Donovan, Epel & Kemeny, 2010). However, when there is a disruption or a threat of disruption of the social relationship, they experience social stress. Naturally, social stress can arise from the micro-environment such as family ties, low self confidence or esteem, negative body image; and from the macro-environment such as hierarchical societal structure, expectations from a romantical significant other or the need to have and maintain a significant other. For students, those social stressors are combined with the stress of leaving home for the first time, being new in the university environment and trying to conform to its norms, struggling with body image and esteem issues, and at the same time, developing and maintaining friendships among other stressors. Furthermore, the diversity existing in campuses as a result of the different people in residence and attendance, has been shown as capable of affecting the mental health of newly enrolled students even though some other students might view it as a positive phenomenon (Leung et al., 2011).

Mental health service platforms available to students

Canadian universities and colleges offer a plethora of health-related services – including mental health services – to their population using health professionals and trained student volunteers. Mental health service platforms available to students can be categorised as clinical services or non-clinical services. Clinical services are those treatment services that can be provided through specialised healthcare services or primary care. They include services like psychiatric consultation, medication management and mental health therapy. The non-clinical services relate to providing resource information, education, screening, and support until appropriate referrals can be made to primary care or formalized health care services. It is noted that non-clinical services are also therapeutic. The non-clinical services support activities not only promote good mental health, it helps to prevent mental health concerns. They include prevention and early intervention services, and de-escalation initiatives with linkages to appropriate health services when and if necessary. The non-clinical or the 'informal' mental health service platforms speak to the broader social determinants of mental health, unlike the clinical services platforms which is considered more reactive.

The University of Waterloo, site of the present study provides integrated healthcare programs and services to encourage an environment conducive for positive health and wellbeing of students, faculty and staff. Working through the Campus wellness centre, the university uses different service delivery platforms to provide mental health services and support to its student population. These clinical and non-clinical health service platforms which directly or indirectly support student's mental health include:

Health services: This unit offers student medical clinic, family health clinic and travel clinic. Their comprehensive medical services include primary mental health care, nutrition counselling, immunizations and allergy care, pregnancy testing, birth control dispensary, and STI testing. This unit works on a booked or walk-in medical appointment basis to ensure that students' overall health and wellbeing are maintained at most times. The family health clinic provides comprehensive care for students with families or dependents. Lastly, the travel clinic provides before and after travels care. The staff comprises physicians, nurse practitioners, psychiatrists and is the home of clinical services on campus. Services are accessed during workhours with provision for after-hours services.

Counselling services: Operates on walk-in and booked appointment basis from a building at close proximity to campus health services location. Their services include online and in-person workshops and seminars on coping skills, alleviating anxiety, and programs on mindfulness meditation, prevention of depression relapse, and the body project. Equally important, is their group therapy programs on cognitive behavioural therapy for anxiety and depression and graduate stress management. The staff includes 22 full-time equivalent counsellors and 2-3 intake specialists to assess students' mental health status and schedule appropriate consultations.

Health promotion services: This unit has 40 public health educators as staff. Their services are based on the upstream sector of the school healthcare system. They engage in mental health trainings for students, faculty and staff, maintain information blogs and webpages, and organise awareness/information booths during campus events. They also part take in health promotion and mental health committees on campus, besides conducting advocacy for the development

and amendment of policies that impact on the health of students, faculty and staff of the university.

Student success office: This is a unit whose services indirectly impact the mental health of the student population. The unit is operated by professionals and trained student volunteers to improve the academic, economical and psychological output of students. They have peer support groups and mentorship groups for marginalised, racialized groups, international students, and some academic departments. In addition, the student success office runs language classes for non-English speaking students, and seminars on immigration laws and post graduation work applications.

AccessAbility services: This unit supports students with visible or invisible disabilities, illnesses, or conditions. The term 'disability' covers a broad range and degree of conditions that can be permanent, temporary, episodic, and suspected, including chronic conditions, disabling illness, as well as those that presents as physical, emotional, and psychological effects of trauma (e.g., sexual violence). This unit provides accommodation support which includes transitioning to campus, course syllabus modification, accessible housing and transportation, medical leave, learning strategies, and alternative format for testing and examination.

Other service delivery platforms operated by trained student-volunteers to cater to the mental wellbeing of their peers include peer group programs such as the UW MATES, GLOW centre for the LGBTQ community, Women's Centre, Sexual violence centre, Human rights centre among others. Off-campus mental health services are also available to the university student population and they include:

Here 24/7 Crisis Services: This organisation acts as the first point of call for people in mental health crisis. They are also a link for people to access addiction, mental health and crisis services which are provided by 12 agencies across the Waterloo Wellington region. Their services include intake, assessment, referral, crisis, waitlist and appointment bookings.

Good2Talk post-secondary student helpline: This is a free, confidential and anonymous helpline for post-secondary students in Ontario, Canada. Callers are provided professional counselling,

information and referrals for mental health, addictions and well-being on and off campus or the opportunity to speak anonymously with a professional counsellor.

Mental service use among students

In spite of the availability of different mental health service platforms in universities and colleges, such as those mentioned above, studies document that a large portion of university students are not receiving treatment for their mental health disorders. University students are not likely to use or seek mental health help because of a variety of factors. Firstly, is the lack of perceived need by students who think that stress and low-level mental health are common with higher education environments. The Mojtabai, Olfson, and Mechanic (2002), study on perceived need and help-seeking behaviour among university students, revealed that the number of study students who perceived a need for mental health services but did not act on this need, were indistinguishable from those who sought care with regards the nature and severity of psychopathology. Further, their study showed that participants with no mental health disorder diagnosis were less likely to perceive a need for mental health services than those who had a diagnosis (10% Vs 32%). Findings from this study were compared with the Ontario Health Survey as the two studies had similarities in their methods and after controlling for perceived need, most of the between-countries variations in service use disappeared (Mojtabai et al., 2002). Therefore, it can be inferred that Ontario students also, may be in need for mental health services, but are not using help from campus mental health services, while other students may be using these services because of signs or symptoms they may be experiencing.

Another study which reiterated the Madtabai et al., (2002) findings but went further, was the Eisenberg, Golberstein, and Gollust (2007) study which documented that many students are either unfamiliar with or are unaware of the variety of mental health service options available to them while on campus. This affects the likelihood of them using such services. The study also found that the belief in the efficacy of medication and therapy, and in the rate of full recovery from mental health disorders, was low among students. Lastly, the study showed that Asian, Hispanic, black

and Pacific Islands students were less likely to seek help, while older students were more likely to seek out help (Madtabai et al., 2002 & Eisenberg et al., 2007).

Growing up in a poor family has been found to play a role in students' use of mental health services, while financial circumstance or cost of treatment were found not to be major factors considered by students when seeking to use mental health services. The Eisenberg.et al, 2007 study reports that though most colleges and universities provide one form of health insurance or the other, many of the American students reported not knowing weather they had coverage for mental health visits in the campus or surrounding community (54%) or thought the insurance did not cover (13%) such services. Also, they worried that their parents will discover if they sought such help using their insurance, and this made them hesitant to using mental health services (Eisenberg.et al, 2007). Likewise, considering that most Canadian students have one form of health insurance or the other, it can be inferred that cost of treatment would not be a major factor determining their use of mental health service use, though they might prefer to keep private, their use of such services.

Lastly, the Eisenberg, Hunt, Speer and Zivi (2011) study, further provided some of the deliberate reasons given by the American students for not accessing mental health services. They included: 'No need,' 'Prefer to deal with issues on my own,' 'Stress is normal,' 'Get a lot of support from other sources,' and 'Don't have enough time'. These suggest that most students do not perceive mental health service use as being urgent enough to compete with other, more tangible priorities such as coursework and social activities. However, emotional or mental support from a non-professional/clinical were reported by over 80% of the study participants. These non-professionals included friends, family, religious counsellors or other religious contacts. This is expected to be similar for Canadian university students.

Gap in service use studies specific to university student mental health

From the study of health service use over the years, a sociological model was developed to account for factors that could influence a person's use of healthcare services. The Andersen behavioural model of service utilization was developed and has been used to investigate service

use for health conditions including HIV treatment, maternal healthcare and more recently, depression (Andersen, 1995). Each component of the model was conceived as either contributing independently to predicting service use, or as explaining the service use. Thus, the model provides a framework that proposes that a person's health service use is influenced by

A) Predisposing factors which influence a person's disposition to seek help when needed. They include the following:
    I. Demographic variables such as age and gender which are biological imperatives suggesting the likelihood that people will need health service
    II. Social structure which are variables that establishes the status of a person in the community, their ability to command resources to deal with the health problems, and how healthy or unhealthy their physical environment is likely to be
    III. Health beliefs such as attitudes, values, and knowledge that people have about health and health services in general. In turn, these influence their perceptions of need and use of health services
B) Structural or enabling factors are those which facilitate or hinder service use such as financial situation, health insurance and social support.
C) Need for care which are the objective measures and subjective perceptions of one's health needs

It should be noted that the Andersen model initially suggested that people's use of health service is primarily a function of their predisposition, enabling/hindering recourses and their need for care. However, questions as to if the model is appropriate in predicting service use or to explain service use led to different phases of expansions to the model to accommodate hitherto overlooked concepts as raised by different researchers. One of the issues raised was on health beliefs as a predictor of perceived need and use of health services. It was advocated that researchers should not relate general health beliefs to global measures of health service need and a summary measure of all health services received in a given time. Rather, a better and stronger relationship can be determined when the beliefs about a particular disease are examined, the need for healthcare services associated with the disease measured, and the services received to deal with that disease are observed and noted (Andersen, 1995).

In addition, the concept of access to heath services also led to an expansion of the model. For this expansion phase, researchers suggested the incorporation of potential access, realised access, equitable access and inequitable access into the existing model. However, the latest expansion phase of the model considered the incorporation of the concept of population health outcome as perceived by the population and evaluated by health professionals. This phase of expansion was to portray the multiple influences on health service use on health status, while including feedback loops that shows that health outcomes are inextricably linked to predisposing factors, perceived need for services and health behaviour (Andersen, 1995).

The Andersen behavioral model is being used globally to investigate issues on health service use in relation to different health conditions, however a recent review focussed on global studies that investigated factors associated with healthservice use for common mental disorders for the adult population. In the systematic review, Roberts (2018) reported that the highest number of studies meeting their strict inclusion criteria, were conducted to investigate any association between socio-demographic factors (or predisposing factors according to the Andersen model) and treatment seeking for common mental disorders. Similarly, many other studies investigated the association between comorbidity, symptom severity, and profile (referred to as 'need for care' in the model) and treatment seeking for common mental disorders. Fewer of the studies that met the review's inclusion criteria investigated enabling factors such as insurance, household wealth and social support (Roberts, 2018).

The paucity in studies investigating the existence of any association between psychological factors (such as belief, attitudes and resilience) and health service use has remained. This viewpoint had also been echoed in the Eisenberg et al., (2007) study on help-seeking and access to mental health care in university populations, which recommended that there should be more studies to investigate the beliefs and attitudes that seem to hinder students' access to mental health services, despite the removal of financial barriers. And though this study was conducted in the United States, these same findings are not likely to be very different in Canada despite public healthcare. This is because the same barriers noted by their participants are common among similar student populations which in summary are skepticism of treatment efficacy, and a general lack of perceived urgency about their mental wellbeing.

According to the study, 56% of its student-participants reported saying, “I prefer to deal with issues on my own”, 33.2% said, “I get support from other sources”, 47.3% of them said, “stress is normal in college/graduate school”, while 26.4% of them said, “the problem will get better by itself”.

The study findings above consolidated Andersen’s acknowledgement that despite the validity and reliability of his model across different countries, there existed some gaps in the body of knowledge that relate to psychological factors. His 1995 paper stated that psychological characteristics and genetic factors were good candidates meriting inclusion into his model because it would allow the addition of variables such as mental health issues, beliefs, cognitive impairment and autonomy into the model (Andersen, 1995).

Arising from the above, it can be inferred that, even with student health insurance coverage in the United States, and with Medicare in Canada, and with the same prevailing university-oriented stressors, there are three categories of students to look at when focusing on health service use:

- Students who have mental health issues and make use of on-campus services;
- Students who do not have need for such services and consequently do not seek out services; and
- Students who need mental health services but do not use them

This study seeks to understand the role that resilience (classified under psychological factors in the Andersen model) plays in mental health service use among college and university students.

Concept of resilience

Although higher education-related stressors and personal troubles can cause enough stress in younger and recently enrolled college or university students to initiate some emotional and mental issues, there are students who are weathering them and thriving while living on campus. In ordinary parlance, this ability to adapt to or to ‘bounce back’ from any adverse effects of stress to live productive lives has been called resilience.

Resilience has been defined differently by different researchers in line with findings from their studies. From their study in development psychology, Masten et al., (1990) defined resilience as 'the process of, capacity for, or outcome of successful adaptation despite challenging or threatening circumstances.' From the findings of his study on adult trauma and bereavement, Bonnano (2005) defined resilience as 'an individual's capacity to resist maladaptation in the face of risky experiences and to maintain a stable equilibrium'. Based on his work in psychiatry, Rutter (1999) defined resilience 'as overcoming stress or adversity with a focus on relative resistance to psychosocial risk experiences'. However, the operational definition of resilience in this study is that which was proposed by Sanderson and Brewer (2017) who stated that, 'resilience is the capacity of students to adapt and grow in response to adverse events that may occur either at university, during their career, or in life in general.'

In the face of numerous stressors, some students are able to devise methods to adapt to life on campus without seeking formal medical attention. Another subset of the university population will be able to thrive with the assistance of psychotherapy, medications or other forms of mental healthcare. Yet, another subset of students will not seek out medical attention even if it will alleviate their symptoms. This present study will seek to understand how resilience plays out in the actions of the first two groups of students who are able to adapt to life on campus.

Resilience as a trait or process

Just as different researchers theorise different definitions of resilience, there are two separate perspectives of the presentation of resilience in humans; either as a trait or as a process. One school of thought has referred to resilience as a trait, a personality factor, or individual attribute defined as a personal strength/vulnerability; implying that one is either born resilient or not. Studies on resilience as a trait have identified a collection of physical and psychological characteristics said to be routinely seen in resilient individuals. These include: positive temperamental factors, social responsiveness, higher than average intelligence, autonomy, good peer relationship; positive self-esteem, and absence of health problems (Jacelon, 1997). However, some researchers have contended against this attribution of personality traits to

resilience because it implies that a person who does not have those attributes will fail at life (Windle, 2010).

Another school of thought refers to resilience as a dynamic process that can be acquired or built up over time. It views resilience as a two-step cyclical process, whereby there is an inoculation effect from experiencing a major life event. This will have a protecting/adapting effect in future (Rutter, 1987; Garmezy, 1993; Fine, 1991; and Jackson, 2007). In addition, the Rutter (1985) study on the protective factors and resistance to psychiatric disorder, reported that resilience does not equate to avoiding stressful situation, rather it is being able to face such situations and in a way that allow for self-confidence and social competence.

Ward et al., (2011) asserted that a person is not necessarily born resilient, neither does resilience remain at a stable level throughout their lifetime. They suggested that resilience can be built (or eroded) in unpredictable ways. In other words, resilience can be seen as a storehouse of tools and strategies which a person can build up by facing difficulties and will result in the development of coping mechanisms that will be helpful in future adverse situations. They suggest that resilience exists in varying intensities across different domains of an individual's life, for example, being resilient in managing a chronic health situation, does not imply resiliency in other areas of life. Resilience in an individual, is dynamic and varies according to the individual's personal and emotional development and according to their interaction with their environment (Ward et al. 2011). Ungar (2004) had argued years back, that every study on resilience must consider the individual's internal psychological make-up together with their external environmental and social factors. He recommended that the most effective approach to achieve this, was to hear directly from study participants in order to understand the meanings that they gave to their life experiences and consequently how they perceived their own level of resilience.

Juxtaposing the above perspectives, this study approached resilience as an ongoing process that university students have been developing prior to their enrollment in school, and which they have continued developing after they started attending the university. Their resilience is that storehouse of behaviors and actions that they are continuously building up and from

where they continuously deploy different strategies in order to adapt to the stressors they are facing while on campus.

Risks and protective factors as necessary resilience components

Gill Windle's 2011 review of resilience studies showed that researchers have identified certain 'protective factors', also known as assets or resources, that are crucial to an individual's resilience. These protective factors are those things which, through their dynamic interplay, facilitate an individual's capacity to positively respond to and to alter or reduce the effects of adversity (Windle, 2011). The review surmised that those experiences which enable successful adaptation to adversity, can also inspire more confidence to overcome future challenges or setbacks. These resilience protective factors have been identified across three levels of functioning (Windle, 2011) namely:

1. Individual level (e.g. psychological, neurobiological)
2. Social (e.g. family cohesion, parental support)
3. Community/society (e.g. support systems generated through social and political capital, institutional and economic factors.

All personal level factors are commonly referred to as 'assets' while the external factors are known as 'resource'. These assets and resources can be further be broken down to include social policy, neighborhood and social context, family and household, individual development, self motivation, attitude, behaviour, family support & cohesion, employment, education, welfare and health.

On the other hand, resilience risks are those biological, environmental and psychosocial hazards that increase the possibility for a maladaptive outcome in the aftermath of adversity (Werner, 1995). They include history of medical problems, stressful life events, inconsistent or disorganized parenting style, limited pro-social and activities, and poor peer relationships (see Table 1). A systematic review conducted by Murray (2003) recommended that studies investigating resilience risk variables among students in particular, should focus on their characteristics, and their experiences within the contexts of families, schools, neighborhoods and

communities. However, the study cautions that risk factors are reliable in predicting negative outcomes only to an extent, because of the unpredictable interplay of the different factors.

Table 1: Risk factors and their contexts (Murray, 2003)

Context	Risk factors
Individual	Gender
	Race
	History of medical problems
	Stressful life events
	Emotional problems
	Low IQ
	Low school attendance
Family	Low socioeconomic status
	History of mental illness
	Inconsistent, disorganized parenting style
School	Few opportunities for involvement in school activities
	Poor quality of instruction
	Unsafe school environment
	School dropout
	Poor peer relationships

Community	Few viable employment options & opportunities
	Few opportunities for pro-social activities
	High levels of crime, violence and poverty
	Few opportunities for meaningful relationships

This present study sought to identify from participants' personal recollections, the resilience risks and protective factors at play in their life. This need led to the development of the interview guide with semi structured questions that would bring to light information about these variables. Therefore, the guide contained questions seeking information on family-life context, early childhood experiences, stressful life events and self efficacy, among others. It was assumed that the information so obtained would shed light on their mental health status, how their resilience was developed, and has been in use in their lives before and after enrollment into the university.

Resilience additive and subtractive strategies

Resilience or the capacity to adapt to an adversity can be said to present in two distinct ways; either a negative or positive action. Studies have shown that resilient people consciously or unconsciously, take up new behaviours and activities or drop certain old behaviours and activities in order to adapt to adverse life experiences. Ward et al., (2011) refer to these two manifestations of behaviours and actions as 'resilience additive and subtractive strategies.' Their study reported that in response to adversity, resilient people performed a life change (also called biographical reinvention) by using either of/both the resilience additive and subtractive strategies. The Ward et al., (2011) study on smoking cessation brought to light, the fact that people who successfully stopped smoking had either let go of some actions, traits, or experiences, or had to adopt new ones. Some others adopted new sets of behaviors while dropping others at the same time. Furthermore, Wilson et al., (2017) conducted another study which reiterated that people who are said to be resilient, have at some point in their lives,

adopted some resilience additive or subtractive strategies. They investigated the link between the management of type 2 diabetes and resilience and were able to isolate resilience additive and subtractive strategies in the lives of the participants who were able to successfully manage their type 2 diabetes. Wilson et al., (2017) stated that resilience additive and subtractive strategies are implemented when there is a successful interaction between the individual's internal assets (such as self motivation, self efficacy) with their external resources (such as community ties, social support).

Consequently, the interview guide for this present research study was developed to also extract information that would shed light on any resilience additive or subtractive strategies that the participants have implemented in their effort to adapt to stress of university life. This included questions asking about participants reaction to a significant adverse event, and their emotional outlet in the time of adversity.

Resilience as a cyclical phenomenon

This present research study acknowledges that resilience is a cyclical phenomenon. The first step is the start of a new negative or adverse event in the life of an individual, which results in the disruption of their life routine. The second step is the reintegration or the re-invention of their homeostatic state to the original level or even a higher level of functioning (Jacelon, 1997). All these occur when the individual uses any available means (protective factors and additive/subtractive strategies) to ameliorate the negative effects of the adverse situation. For university students, the start of higher education away from home and with its attendant stressors, may present as an adverse or disruptive event in their normal/routine life course. As a result, they will react to this disruption in either of these two ways; some will successfully adapt to the disruption to their life and bounce back to adapt to life in a university campus on their own. Others may not be as successful at bouncing back to adapt to university life on their own and would require external support in the form of mental health support services. What is unknown, is the role that resilience plays in their use or non-use of campus mental health services in order to adapt to university life. It may be that engaging with services demonstrates a level of

resilience, or alternatively that not engaging with services and instead finding other mechanisms for coping is a better indicator of resilience.

Research rationale: resilience and mental health service use

Throughout the duration of their stay in school, students are faced with similar stressors, yet they respond differently to the need for, and the use of mental health services while on campus. This has led to the research question, "**What role does resilience play in university students' mental health service use?**" The study objectives were to:

1) Quantify students' resilience levels
2) Understand the factors influencing mental health service use by the university students, with a specific focus on the role of resilience

The operational definition of resilience in this study states that resilience is the capacity of students to adapt and grow in response to adverse events that may occur at the university, during their career, or in life in general (Sanderson & Brewer, 2017). Individual resilience status is the result of risks or protective factors. The protective factors are those variables which facilitate the capacity of an individual to respond positively to alter or reduce the effects of adversity (Windle, 2011). Resilience risks are the biological, environmental and psychosocial variables that lead to a maladaptive outcome after an adversity (Werner, 1995). In this study, the level of participants' resilience will be quantified using the Connor-Davidson scale and it was noted that the resulting resilience scores were to be considered very subjective. The Connor-Davidson scale would give an indication of resilience levels across the sample while the semi structured interview guide will give more context as to why each participant scored a particular score on the resilience scale. The Andersen behavioural model of health service use would guide the prompting of questions to provide information that may shed knowledge on the reasons for the mental health service use or non-use by the participants.

Young and newly enrolled university students resume school with unique individual mental health and resilience status resulting from prior life experiences. This study has been

designed to gather information on any adverse event in the lives of participants, their individual responses and how they were/are able to cope. This will give a better understanding of their present mental health and resilience status as they face the challenge of university life.

On enrollment and faced with the varying levels of disruption to their life routine by the university stressors, they would seek ways to adapt to it. To capture this information, this study will seek to identify and understand any resilience additive and subtractive strategies that the students may have consciously or unconsciously deployed to mitigate their unique adversity. Lastly, the study assumed that prior experiences which enabled students' successful adaptation to previous adversities could also inspire in them, the confidence to overcome other challenges thereby further improving their self efficacy.

It is expected that the knowledge gathered from this study would shed light on how resilience influences students' decisions to use or not use mental health services on campus. It would also provide information that may support an improvement of or a diversification of existing on-campus mental health initiatives or provide recommendations for new ones.

CHAPTER 2 STUDY DESIGN

Methodological approach

This research study was exploratory because of the limited knowledge surrounding how resilience impacts the use or non-use of mental health services among university students. This study adopted the qualitative method in order to explore the experiences, perceptions and observations of study participants because past studies have indicated that qualitative methods are best suited for studies in which the research phenomenon is not well understood (Creswell, 2014). Further, this study is based on the constructivist-interpretivist paradigm, which is of the view that a person's reality is constructed in their mind and is not an externally singular entity. According to the constructivist-interpretivist paradigm, a person's reality is subjective and influenced by the context of situation namely; the person's experience and perceptions, the social environment, and the interaction between the person and the researcher (Mackenzie & Knipe 2006). In his paper, Ponterotto (2005) suggests that the meaning of a person's reality is usually obscured from others but may be brought to light through deep reflection, which can be stimulated by an interactive researcher-participant dialogue. This view also aligns with Creswell (2014), who posits that people make sense of their world based on their own historical and social experiences and perspectives, and the meaning they attach to them. Further, the constructivist-interpretivist paradigm also points out that, just like there are multiple meanings of a phenomenon in the minds of people who experience it, there are also multiple interpretations of the data (multiple realities). As such, the constructionist researcher neither attempts to unearth one single "truth" from the realities of participants, nor tries to achieve outside verification of his or her analysis (Ponterotto, 2005). Consequently, efforts were made to identify and report all study findings and trends without elevating a specific one.

Like the general population, university students make subjective meanings of their experiences. Their day to day actions and decisions are influenced by the interplay of different things including their personal characteristics, historical background, lived environment and the people around them. Using the constructionist-interpretivist paradigm, this study sought to uncover the meaning of their lived experiences, understand its influence on their resilience level

and on their use or non-use of campus mental health services. It was the view of the researcher that the contextual meaning of resilience and its influence on students' use of mental health services would be uncovered through interactive researcher-participant dialogue. In other words, this researcher and her participants were to jointly create (co-construct) meanings of the research variables from their interactive dialogue. This was achieved with the use of a semi-structured interview guide which contained open ended questions that would allow getting as much information as would be volunteered by the participants, while guiding the dialogue along a particular desired focus.

With regards to the axiology of the study, a constructivist–interpretivist paradigm maintains that a researcher's values and lived experience cannot be separated from the research process (Ponterott, 2005). Due to the interactive relationship between the researcher and participants, this researcher acknowledged having undergone some of the participants' lived experiences. However, instead of seeing it as a bias, these personal experiences were used by the researcher to enhance the rapport and dialogue with the participants during the interviews. The researcher's empathy was deployed to elicit participants' recall of personal experiences. The researcher maintained a study field note which contained a reflective journal that documented her perceptions of the interview sessions and the impact of those sessions on her critical thinking.

Theoretical Framework

Thematic analysis was used to analyse the study data to identify themes across the data set and use them to address the research question and objectives. The aim of using thematic analysis was to go beyond summarising the data to interpreting it and making sense of it. The thematic approach is useful for theorising and finding common patterns across reports from research participants (Riessman, 2005). It permits the researcher to combine meanings behind participants' accounts within their particular context (Joffe & Yardley, 2004). Although the study is based on the constructionist-interpretivist paradigm which supports the emergence of the meaning of the research phenomenon from the study data, the study also incorporated an a priori framework in the analysis. This was to understand how the emerging study data

matched/aligned with the established study domains such as the Andersen behavioural model for health service utilisation, and the Ward's resilience additive and subtractive strategies. Using the a priori framework will help to authenticate some results and bring to light any new data that may be worth further investigation.

Study generalisability

Generalisability describes the extent to which the findings of a study of a specific phenomenon, within a certain population, and within a certain context, can be applied to settings other than that in which they were originally tested (Polit & Beck, 2010). It is a difficult task to achieve in many qualitative method studies because the goal of most qualitative studies is to provide a rich, contextualized understanding of the human experience which is linked to specific and not generalised contexts. To counter this, Ploit and Beck (2010) recommended that researchers strive for generalisability by incorporating into their study, the Firestone models of generalisability namely: statistical generalisability, analytic generalisability and transferability.

Statistical generalisability can take place when researchers ensure that their study sample is representative of their target population. They use probability (random) methods of sampling, so as to give every member of the population an equal chance to be included in the study with a determinable probability of selection. Analytic generalisability occurs when researchers develop conceptualizations of human experiences through in-depth scrutiny of the field data then go ahead to identify evidence that supports those concepts. To do this, they have to distinguish between the experiences that are relevant to all or most of their participants, in contrast to those experiences that are unique to particular participants. Then, through their analysis, together with the use of relevant confirmatory strategies (that would confirm the credibility of their conclusions), they can arrive at inductive generalizations regarding their research phenomenon. Transferability or case-to-case translation can occur when researchers provide as much detail as possible to enable their audience make inferences about extrapolating their study findings to other settings. The contextual details of the focal study given by researchers should be such that their audience can determine that the level of similarity of contexts in a new study is enough to support the transferability of the findings from the focal study into the new study.

For this study, only the last two Firestone models could be applied. Statistical generalisability could not be applied to this present qualitative study because it would have required a randomised sampling method. Two important conditions should be present to be able to conduct a standard randomised sampling (Marshall, 1996) and they are: (1) the research phenomenon should be normally distributed within the target population, and there is no documented evidence that resilience are normally distributed in any population; (2) the characteristics of the research phenomenon for the population is known. Since these conditions can not be met in the present study, the Firestone first model of generalisability could not be applied to this study. Consequently, applying the analytic generalisability model, I worked to differentiate the information that were unique to individual participants, from the information that were common to most of the study participants. This was done during the development of the codes and themes from the interview data. Furthermore, in line with the transferability model, I tried to include descriptive details of the participants' lived experiences and their contextual interpretations in the study findings. This was to allow future audiences of this research findings to have enough information to make inferences about extrapolating the findings to other settings as recommended by Polit & Beck (2010).

Ethics

This study received ethics clearance from the Waterloo Research Ethics Board on May 17, 2018 (ORE #40771). Data collection commenced after ethics clearance was received and was done in compliance with the approved protocols for research involving human participants, and with standards for research processes and documentation.

I received written individual consent from every participant to quote them in the thesis and any other reports that might arise from this study, and to have their information audio recorded. All participants were provided with information on the purpose of the study, their role, how confidentiality would be handled, a reminder that participation was fully voluntary, and that they could withdraw for any reason, and at any time. My contact information, as well as that of

my supervisor were provided to participants in case they had any further questions or concerns about their participation in the study.

The interview data were collected with no personal identifiers, and they were securely stored in a password protected computer system accessible only to Dr. Samantha Meyer and me. Participants were identified using pseudo-names in the transcriptions. Additionally, all direct identifiers that pointed to specific departments on campus, residence, etc. were replaced with generic ones in the transcripts. The removal of any identifying information ensured there were no inadvertent breach of confidentiality.

Study sampling

Sampling in qualitative research is concerned with richness of information, which implies that correct or appropriate study sample sizes should be considered by depth of data rather than frequency of data. As a result, study samples should consist of participants who are information-rich and can best represent the research topic (O'reilly & Parker, 2013). For this study, students were purposively sampled to get as many perspectives and opinions of the study topic as possible within the constraints of the study. The study used two sampling frames namely: 19 -21-year-old students who had accessed campus mental health services in the past 12 months, and those who have not used such services. There was no investigation on if students who self-reported not to have used mental health services, were actually in need of such services. Also, there were no questions to know the specific mental health issues the students are facing (for either service or non services users) as these personal and sensitive information were not relevant to the research objectives. To prevent an oversampling of a particular group of students, two distinct recruitment posters (Appendix 1 & 2) were made and circulated across the campus, inviting students to participate in the study.

University of Waterloo students between the ages of 19 to 21 were recruited. Students in their 2nd and 3rd year of academic programs were purposively sampled because they had spent some time within the university environment and had experienced and understood the different stressors peculiar to higher education, unlike 1st year undergraduates. In addition, being

returning students ensured that they were in the process of devising or are already implementing practices or actions for adapting to the stressors of campus life. Their program level also ensured that they knew about, have used or had the opportunity to use any of the mental health service platforms on campus.

Sample size

This study design had proposed a sample size between 15 -19 participants with the expectation that a thematic saturation point will be reached within this proposed range. Thematic saturation point is reached when no new information emerges after interviewing new participants, implying that data from the new interviews do not produce a change in the coding developed during analysis (Morse, 1995; O'reilly & Parker, 2013). The study sample size was chosen based on earlier literatures which gave the following recommendations about sample sizes: 5–25 participants for phenomenological studies; at least six to eight participants for homogenous populations; and 15 as the smallest acceptable sample size in qualitative research (Guest, Bunce, & Johnson, 2006). Therefore, for this study, the proposed sample size was based on the criteria given by Morse (2000); Sandelwoski (1995); and Guest, Bunce, & Johnson (2006).

By the completion of the data collection process, this study had recruited 19 participants with ten of them having used mental health services in the past 12 months, and 9 of them had not used mental health services. The study inclusion and exclusion criteria narrowed the chances for getting wide deviations in age and program levels, so the study sample was fairly similar. Though the total number of recruited participants (19) is a small fraction of the total student population (estimated 34,000), the qualitative nature of this study permits the recruited number because they were purposively sampled. Furthermore, the study focus was not on the generalizability of its findings but on the richness in the knowledge that was to emerge to show how resilience influenced undergraduate students to use or not use mental health services while on campus.

Recruitment

Recruitment posters (Appendix 1 & 2) were posted campus-wide, and recruitment done in person, by email and through snowballing. Though the recruitment posters went up

immediately ethics approval was given, it was a slow recruitment process. At first, a few students sent in email inquiries about the study to which the researcher followed up immediately. However, these first set of students backed out after the researcher's follow up. They cited not being on campus as reasons for not following through with their interest. The researcher had to resolve to snowball recruitment by asking the first few participants who were interviewed to invite their friends to be screened for eligibility into the study. Table 2 shows the distribution of the students who were recruited from the two sampling frames.

On making contact with the researcher, the Letter of information (Appendix 3) was either emailed to them or was given to them in person. Clarifications were given to those who had questions after reading through the Letter of information. Thereafter the screening questionnaire (Appendix 4) was administered to those who wanted to go ahead with the study after understanding what the study sought to achieve. Successful students were immediately informed of their admittance into the study. Study participants were recruited from different departments across the university. Once the information from ten students who had accessed mental health services, and another nine participants who had not accessed mental health services, were analysed and no new information-type were identified, the recruitment process was stopped, and recruitment posters taken down.

Table 2: Distribution of study sample

	Mental health services (Study A)	No mental health services (Study B)
Number	10	9
Mean age	19.8	19.3
Sex	Male = 2 Female = 8	Male = 4 Female =5
Program level	2nd year = 5 3rd year = 5	2nd = 6 3rd year = 3

Data collection process

Interested students who contacted the researcher were immediately given the letter of information (Appendix 3) which stated the specifics of the study. This was done to ensure that they did not think the study was a call to informal counselling sessions since the recruitment posters made mention of resilience and wanting to know how students coped mentally while living on campus. After reading the information letter, students who had questions were given answers and other clarifications. Only two of the nineteen sampled students required clarification which ranged from if the audio recording of their responses during the interview sessions will be used in addition to the transcripts, to if their names will be mentioned in articles or reports. They were assured that the audio recordings will not be used in any form of reporting and that their identities will remain confidential. After their agreement to go ahead with the study, the interview was conducted immediately for the students who felt the timing was convenient but for others, a mutually convenient date and time was agreed for the interview.

Prior to the start of this study, arrangements were made to mitigate situations where participants became distressed during the interview session. These arrangements entailed stopping the interview immediately and allowing them to regain some control of their emotions. Then, after the time-lapse, asking the participant if they wanted to continue with the interview or would rather speak with someone from university mental health services. The university mental health services had been contacted earlier with regards this study and the researcher had been assured that students referred by her would be attended to as soon as possible. However, there was no incident requiring a stoppage of the interview or requiring a referral to the university mental health services throughout the interview sessions.

Every participant was interviewed separately to ensure their privacy was protected and to provide a conducive atmosphere for recounting personal experiences. At the start of every interview session, each participant was given a consent form (Appendix 5) to read and sign, thereafter they were given $20 for the time they would spend. They were all asked to sign off, acknowledging receipt of the money before the start of the interview. The interview guide had the preamble script to remind every participant that their participation was voluntary; they could

skip questions they were not comfortable answering; and they could end the interview without any consequence (Appendix 6). All but two of the interviews were held on campus in an open but quiet location to ensure easy accessibility for both participant and researcher. These two interviews were held at the visitors' lounge of one of the students' residences. Each interview location had copies of the Information cards for the University of Waterloo counselling services, the Connor-Davidson scale and a digital recording device since every interview session was audio recorded. The interview sessions lasted an average of 50 minutes, and each participant was appreciated verbally and with the Appreciation letter (Appendix 7).

One of the participants was a physically challenged student. The disability was not apparent to the researcher at the onset because the contact was made by email however, on the day of the interview, accommodations had to be made. The accommodations included agreeing with the participant that the researcher will read the interview questions aloud, have the participant type their responses on their laptop, then have the researcher read their responses aloud into the digital recorder. The consent form and the incentive receipt form were also read aloud to this participant; their consent nod and acknowledgment of receiving the $20 incentive were also typed onto their laptop. At the end of the interview session, their responses were emailed to the researcher. This recruitment and accommodations further improved the inclusiveness of the study sample.

Data collection tools

Data were collected on the university campus, which was appropriate as the context of the study was based on student life on campus. At the start of the process, a screening questionnaire was administered to each student. The questionnaire was to confirm that they met with the inclusion criteria. Thereafter, each participant's resilience status was assessed using the Connor-Davidson Resilience Scale (CD-RISC). The CD-RISC 25 questionnaire was selected over other measures because it has been validated for populations similar to this study sample - young adults. The CD-RISC is a 25-item scale that measures the ability to "thrive in the face of adversity" (Campbell-Sills & Stein, 2007). Participants rated items on a 5-point Likert scale from 0 (not at all

true) to 4 (true nearly all of the time). Total possible scores on the CD-RISC 25 range from 1–100 with higher scores reflecting greater resilience. With all CD-RISC scales, the higher resilience score signifies a higher or better resilience state. According to the developers of the scale, the median resilience score for the general population of north American or developed countries, is 87. However, they cautioned that when using this scale for certain at-risk population such as children, students and military personnel, researchers would generally get a median resilience score that is lower than 87. For this study, the median resilience score was found to be 69 with the other quartile values as given in Table 3; which shows that 25% of the study population had resilience scores less than 65, while 75 % of the study sample had resilience scores above 70.

Table 3: Grouping of study participants' resilience scores

Study resilience score scale (CD-RISC-25)	
Sample median	69
Q1	0 – 65
Q2	66 – 69
Q3	70 – 73
Q4	73 – 89

The study design had stipulated that the resilience scale will be administered to participants by the researcher. However, after administering it to the first participant, the researcher realised that having the participants tick off their answers on the scale by themselves made for better time management of the data collection process. This reduced the time spent from the estimated 7 minutes to an average of 3 minutes. Finally, the interview guide was used to obtain participants' life experiences and the interpretations they gave to these experiences in their own words.

Reflections on data collection

In the course of this research study, my mother passed away. The experience of the sudden death of a family member, with the feeling of being alone and far away from home

during the period, impacted on me greatly. However, the experience made me more empathic while interacting with the research participants. Though I did not disclose my experiences directly with the participants, my words, tone and non-verbal cues while the participants recounted their experiences seemed to help in establishing better communication and might have prompted the revelation of personal information.

Furthermore, I kept a field journal to record my observations of participants' interactions and non-verbal cues. The journal entries were particularly useful in cases where participants were giving emotional details while trying to appear stoic. My initial interpretations of information obtained during the sessions were also documented in the journal. The entries in the field journal were considered during the transcription and analysis of the interview data. The first interview had a more formal tone, but subsequent ones had a more relaxed tone. This might be due to it being the first interview of the research study. Also, ensuring that the interview venue remained private might have improved the interview atmosphere since it provided privacy and confidentiality to the participants.

Interview process

The one-one interview process was conducted using an interview guide having semi-structured questions. This method has been recommended for use to broaden the scope of understanding of a phenomenon being studied because researchers could press for more detailed and insightful answers besides exploring any emerging topic (Alshenqeeti 2014). Thus, the semi-structured interview method was chosen over others because it could provide richer contexts and facilitate a more detailed picture of the phenomenon being investigated, than other methods such as the focus group discussions. While focus groups may yield similar information by allowing a greater number of participants, they can unintentionally hinder the expression of personal experiences, which this study specifically encouraged through the confidential atmosphere of the one-one interviews. Furthermore, the focus group method is known to help participants communicate with each other to generate or consolidate a standpoint as they share

and refine their own perspectives and priorities (Kitzinger, 1994). This was not required in this study rather, personal experiences, perspectives and opinions were required.

This study interview guide (Appendix 6) included questions such as: What has been the most significant event in your life? Can you describe/name any mental or emotional health service platforms on campus? The interview guide helped to focus the discussion and prompted information from the study domains namely: resilience risks and protective factors; health service utilisation factors, and additive and subtractive strategies. These domains have been found to be important when investigating resilience (Sanderson & Brewer, 2017; Rutter, 1999; and Masten et al., 1990), resilience factors (Windle, 2011; Murray, 2003 and Werner, 1995) and students' mental health (Eisenberg et al., 2011; Cooke et al., 2006; and Fitch et al., 2011). The interview questions focused on participants' life experiences before enrollment, their life while on campus and any changes that may have occurred in their life routine and what led to those changes. The interview sessions comprised open-ended questions, probes, and follow-up questions designed to understand and delve deeper into the participant's experiences and their perspectives of their life. Empathic listening, sensitivity and collegial rapport were deployed by this researcher to ensure that each participant felt comfortable enough to express their personal thoughts and feelings (Salazar, Crosby, & DiClemente, 2015). Furthermore, any appearance of being too "academic" or "assertive" were actively avoided, and conscious efforts were made by this researcher to maintain objectivity and avoid imposing personal meanings and assumptions.

The interviews were conducted in researcher's office space, departmental lounge and other communal spaces. The data collection was planned to be iterative. Iterative data collection is a systematic, and recursive process which starts off with the initial data collection (interview), adjustment being made to the questions if found necessary, followed by further data collection with yet more cycles of evaluation and adjustment, as needed. This iterative nature of the interview process is in agreement with the Srivastava, & Hopwood (2009) study, which proposed that revisiting the data as additional questions emerge or new connections are discovered, were essential to deepening the understanding of a research phenomenon. In this study, there were no major amendments required of the interview guide. The tone of asking the questions was made very informal to put the participants at ease and produce opportunities for them to ask for

clarifications before answering, where necessary. Lastly, participants were asked to contact the researcher or her supervisor with enquiries if they had any after their interview session.

At the end of each interview, participants were told that they could access the thesis from University of Waterloo library UWSpace webpage and when the thesis would become available. For participants who indicated wanting to have an abstract of the study emailed to them after the thesis is formally approved, the researcher got their email address with the intention of sending them the abstract.

Coding and description of interview data

After reading and re-reading the interview transcriptions and the field notes, the data were then coded part-deductively and part-inductively before being thematically analysed. Deductive coding was used in the development of codes from the information that had been identified from study literature such as family life, financial pressure, and academic experiences. The inductive coding was used to develop codes from patterns observed from the raw interview data such as emotional outlets, opinion of counselling services and personal push. The codes and themes were developed to help in answering the research study goal and objectives. Table 4 below gives the codes and their descriptions.

Table 4: Codes and their description

Theme	Codes developed	Description
	Family life**	Context of family situations.
	Early life experiences**	Changes in early life situation that can impact on mental wellbeing and resilience
	Familial pressure**	Subtle or overt pressure to achieve or maintain difficult academic or career standards. Pressure can be from family or persons respected by family.

These	Financial pressure**	An awareness of limited funds at hand and perceived indebtedness that impact on mental wellbeing and resilience.
	Significant event**	An adverse event that triggered the resilience cyclic steps of disruption and reorganisation. Events could be recent or in the past.
	Significant personalities	Influencers whose presence might have impacted on mental health and resilience. They may be family, close friends or a mentor.
Self adjustment strategies	Personal push	A decisive action taken as a result of an adversity or during an adversity
	Emotional outlet	Actions or activities embarked on during an adverse situation
	Desired recreational platforms	Activities/clubs absent on campus but desired as a means of easing stress level
	Campus life experiences**	Relationships, network, etc.
	Academic experiences**	Academic course load, grades, etc.
**		Deductive codes

The personal background theme detailed the narrated experiences that were derived from early childhood events, interpersonal relationships within family members and the lived environment of participants' families. This theme captured the meaning that each participant gave to their experiences, their efforts to mitigate the adverse effects and how these events may have impacted on their mental health and their resilience. Details of this theme could have happened prior to their enrollment into university, or after they joined the university. This theme included the early life experiences, familial pressure and other codes (Table 4). The self adjustment strategies theme was a compilation that showed how participants deployed the

resilience additive and subtractive strategies in order to adapt to their adverse reality. This theme also tried to make meaning of how these strategies impacted on participants' use or non-use of campus mental health services. It also documented how participants perceived their mental wellbeing in relation to their academic and social experiences while on campus. In all, both themes sought to interpret all the interview data according to the study domains and how their presence could impact participants' use or non-use of mental health services while on campus.

Data analysis

Thematic analysis is known to facilitate the interpretation and reporting of research participants' experiences, reality and meanings in such a way that the answers to a research question can evolve from the data (Braun & Clarke, 2006). This method entails the identification and recording of observed patterns that were relevant to the phenomenon of interest and to answering the study topic. For this study, I used the thematic analytical method in an iterative manner because I had to review the interview data repeatedly to identify the patterns and codes since they were not all explicit. This aligned with the Srivastava and Hopwood (2009) study that asserts that, qualitative research patterns and themes become more apparent from the entire data as the researcher goes over the data repeatedly. They opined that a researcher's in-depth knowledge of the subject matter allows for the unveiling and interpretation of obscure data/information.

Consequently, this study thematic analysis started with reading and re-reading the data to achieve a deep understanding before commencing the analysis. I kept a field journal in which documented entries for each participant's recruitment process, the interview ambiance, and the participant's non-verbal cues, if any. My initial subjective interpretations of the interview sessions were also documented to add insights during the data analysis. Furthermore, there were discussion sessions on the emerging patterns and contents of the field notes with my supervisor, Dr Samantha Meyer. The discussions were conducted with a view to lay to rest doubts around suspected emerging patterns, while confirming observed patterns. Throughout the study, I strove to be methodical and ethical by keeping to standard record-keeping and documentation

processes. As much as it was possible, I ensured that my personal experience of some of the adversity recounted by participants was used positively during the data collection and when analysing the interview data (Austin & Sutton, 2014).

CHAPTER 3 FINDINGS

Nineteen participants were interviewed for the study: there were 10 students in the study arm A of students who had used campus mental health services while nine students were in the study arm B, which was the group of students who had not used campus mental health services in the past 12 months. Of the ten participants in study arm A, some of them were still having sessions at the counselling centre, with one of them being on medication while also seeing an off-campus professional. The median resilience score for this arm of the study was 70. Their average age was 19.7 years with eight of them being females. The study arm B of nine students who had not used mental health services in the last 12 months, had their average age as 19.3 years. Five of them were females and the rest were males. Using the Connor-Davidson resilience scale, their median resilience score was 69. Table 5 details the data collected for each study participant.

Table 5: Characteristics and resilience scores of study participants

Pseudonym	Age	Gender	Resilience status	Study arm	Year of study
John	19	M	66	B	2nd year
Steve	20	M	87	B	2nd year
Richard	20	M	69	B	2nd year
George	20	M	53	B	3rd year
Melissa	19	F	66	B	2nd year
Grace	19	F	72	B	2nd year
Jessica	20	F	71	B	3rd year
Constance	19	F	52	B	3rd year
Vivian	18	F	72	B	2nd year
Nicole	19	F	73	A	2nd year
Michelle	20	F	73	A	3rd year
Joy	19	F	74	A	2nd year
Debbie	20	F	89	A	2nd year

Shaun	20	M	67	A	3rd year
Abby	20	F	60	A	3rd year
Rose	20	F	59	A	3rd year
Monica	19	F	65	A	2nd year
Phoebe	20	F	67	A	3rd year
Mark	20	M	86	A	2nd year

**Higher scores indicate better resilience in participants

Data interpretation

There were two central themes arsing from the thematic analysis of the study data: personal background and self adjustment strategies. The themes depicted participants' view of their life history and how they have been impacted as a result. Also, the themes reflected participants' perception of the challenges of their daily campus life and their personalised strategies to adapting with them, some of which included seeking support from mental health services. The study data were reviewed against the study domains namely: resilience additive and subtractive strategies, perceived mental health/wellbeing and resilience

Personal background

Family dynamics and socio-economic status were identified as affecting participants' mental health and subsequently their resilience and likelihood of using campus mental health services. Data showed that some participants experienced negative changes in the socio-economic status of their family, or changes in the family relationships while they were children. Other participants' families were experiencing hardships as they were in the university, while some were currently going through deteriorating family relationships. This study found that these changes in the family dynamics and socio-economic status were impacting on the participants differently.

As teenagers: Some participants in the study arm A spoke to how the change in the family socio-economic status affected them as teenagers. It led them into assuming more adult responsibilities such as getting a part-time job in order to help with the family upkeep; taking up more household chores; catering to younger siblings, one of who developed social anxiety

disorder; and taking up the slack to help a parent who was always away from home working jobs. Their individual accounts showed how these stressors impacted their mental health and likely prompted them to seeking support from campus mental health services.

> *We had a pretty luxurious lifestyle. I would go to school, like a very good school. When I'd come back home, I never did my laundry or anything, I never cooked. We had people doing that for us so, I never did that in my life. […] and it was a huge shift in terms of losing all your safety nets all at once and just falling down, kind of thing. […] as soon as I could, I was supporting my family. I was making meals for everyone. I basically had to grow up. And my brother developed some social anxiety. My mum doing a minimum wage job to support a family. That kind of stuff would also always stress me out a lot. Compared to my life before, that was a huge shift for me. (Abby, Female, r = 60)*

> *[My] first year wasn't that good because home life was really hard. Financially everything is still bad, unless I win the lottery or something like that. Also, the things I would hear….it was just a lot of pressure and stress coming from every single person. Like my mom went to the hospital again…because she felt bad for me or whatever, like with the stress and pills and stuff. But…I'm a person that makes jokes about every single thing. That's why it did hit me hard, but it was just…like I'm still alive. (Joy, Female, r = 74)*

As children: Similarly, there were other students who came from families that had experienced a negative change in socio-economic status, but these students did not report using campus mental health services. The study noted that the reported periods of economic downturn were usually when they were very young. One of them experienced the loss of a parent in addition to the economic downturn. She recounted the following:

> *My dad passed away when I was six. It was a sudden death and it was due to violence. After that happens to you, there is a huge loss of innocence. I had to mature quicker than most kids. That moment stuck with me so hard because I*

can still remember everything […] then we moved because just going back to that house wasn't really an option for us and it changed my life. My mom had to work a full-time job to try to support me. I had to do it all alone. I had to get home by myself, heat up my lunch, make sure my homework gets done on time. It was like, 'well my mom's not home so I have to do everything by myself'. (Grace, Female, r = 72).

The participant above self reported never to have used campus mental health services. She reported experiencing other adversities while in the university but still does not use campus mental health services.

The participant below recalled the breakdown of relationship with his sibling and how it affected his life growing up. These are his words:

Growing up, we're completely two different people. I saw the stress he [brother] caused my parents and I grew up trying to not be like him. If he wanted to hit me, he'd hit me, and I'd just deal with it. Then he beat me up pretty badly in grade seven and from then on, I just stopped talking to him. So, it was just me alone. Later on, we tried having a positive relationship for like three months, but it went crashing down. I tried but I think I'm glad to be able to say that I don't hate him anymore. I'm very much at peace with it now." (Steve, Male, r = 87)

These participants exemplified students who experienced emotional and financial adversity as children and how they were affected later on in life. It was also noted that they reported not to use campus mental health services.

Internal and external academic expectations: The study data indicated that internal or external academic expectations may indicate the use or non-use of campus mental health services by students. The internal academic expectations refer to self-imposed academic standards that students have of themselves, while the external academic expectations are usually from family, friends or mentors. When these are expectations tare not met, impact on students' mental health

while on campus. Participants in both study arms recalled their feelings on getting grades lower than expected, their struggles and efforts to maintain or improve them.

Internal expectations: Some participants in study arm A recalled the extent to which their first few academic grades impacted their mental health. For them, the shock from getting grades lower than their expectations or what they had been used to having in high school, with the resulting feeling of disappointment was difficult to accept. They viewed getting grades that were below their self-imposed expectations as a personal adversity and started trying out different things to improve the grades. Some of them started to alienate themselves from friends who they thought were in a better academic standing, while others cut back on their usual social activities, but all of them increased their study times. When it became apparent that their efforts were not yielding their expected results, it started to affect their mental health the more, so they sought help from campus mental health services. Some of the struggles recounted are as given below:

> *First of all, I was never used to those grades. I had always seen my grades in 90s but when I came here, all my grades went to 60s and 70s and this started affecting me a lot. Because of this, I reduced all my connections with people because I just wanted to focus on academics. All these things affected me a lot emotionally and I just went into this depression because of my marks, because I was always a scholar and I've never seen these marks before in my life. Then, I actually had to go to Health services here, because it used to get too much (Monica, Female; r = 65).*

> *I think what was causing the most stress in my life was my academic career in first year. My grades were low, I failed pretty much every class. I tried really hard to study. I've been a hard worker, and I've been earning good grades, but nothing really prepares you for university, like ever. It was beyond me, beyond my friends, it was beyond my parents. I needed like professional help, because I was in a really dark place. (Debbie, Female; r = 89)*

External expectations: In contrast, there were other participants - in study arm B - who also reported struggling to fulfil academic expectations of university. They had taken different actions to improve their struggling grades, with some of them going as far as changing their course of study besides increasing their study hours. However, the study noted that these participants mostly talked about the difficulties in fulfilling the academic expectations of their parents and family members, and not their own expectations. Their experiences include:

> *My parents weren't really okay with what I wanted to do because I wanted to actually go into drama and stuff from the beginning when I came here but because it's arts, so it's looked down on. That's why I was really pushed into engineering even though I hated math, I can't do math. So, to find a middle ground and something that I actually liked…[I left the department] and right now I'm in Arts. (Joy, Female, r = 74)*

> *My dad completed his MBA and my mom too […] So that's a pushing factor for my sister and I and my other sister to do really well academically. […] but within the family, like regarding my cousin, there's always a competition I would say, and my parents too would want their child to be at the same level. And my cousins mostly, they would go into medicine and I'm not going to do that, I can't even see blood. I had to pick another option that pays well too, so that's why I say [chose] actuarial science. [First term] was a very difficult term and second year was my hardest year ever because then the courses just got more difficult. I would say my support was mostly from my close roommate and talking to my parents, but other than that I did not really reach out. (Jessica, Female, r =71)*

Almost all the study participants experienced stressful times when they were confronted with grades lower than what they used to have in high school or were introduced to courses they had never taken on high school. These periods were viewed as times of adversity and they took different actions/measures to improve their grades, including getting support from campus mental health services.

Timing of adversity: The time or stage of life of experiencing an adversity seemed to influence the use or non-use of mental health services by university students. In addition, the acceptance of a confidant at the time of an adversity, also seemed to have an effect on participants' mental health, their resilience and later, whether or not they sought to use mental health services on campus.

Some participants from study arm B recounted passing through difficult times such as bullying in school (Steve Male, r = 87), and emigrating alone (John, Male r = 66) as their most trying adversity. For the participants mentioned above, the person providing emotional support were their mother and a religious mentor/friend. This study noted that the adversities they recalled all happened in their late teen years and their account suggested that they were able to overcome and adapt to their situations because of the emotional support they got from the aforementioned people. According to them, that after passing through these experiences, they felt very resilient. Also, these participants mentioned not using campus mental health services.

> *"I talked with my mum. When this thing happened, I talked to my mum a lot and she would tell me these people are just bullies. She kept telling me you are not bad, you are not wrong. She really helped […] because I felt I was a terrible person. She really helped a lot and those few friends. So just having people to talk to throughout the day really helped. (Steve, Male, r = 87)*

> *There are some people that I knew that whenever I was really stressed, [they] were there. He doesn't live here now, his name is Bumi and he owns a pizza business. Bumi is the one person who whenever I really needed advice about anything, I would talk to him. (John, Male, r = 66)*

Some other participants in the study arm A reported experiencing adversity much earlier in life and for a longer period of time. They could readily name the emotional support confidant that helped them, such as participant Mark below who has a congenital disability. It was noted that they were in the group of students who used campus mental health services.

> *Depending on the issue, I let my mom in. My mom is a nurse. She and I have different world views so sometimes those don't always agree with each other. But I go to counselling services [on campus] and they have been very helpful. I'm a deep guy and a counsellor really hit me hard about [my] confidence. We definitely resonated more than any of my friends. They were so helpful in giving me confidence to ask someone out. She said no but now I feel like I can do anything (Mark, Male, r = 86)*

Virtually all the participants acknowledged the occurrence of a memorable or long-standing adversity and could readily identify close persons who offered them emotional support during that time. Though they were all similar in age, and had similar resilience scores, the timing and duration of their reported adversity seemed to influence their use or non-use of campus mental health services

Self adjustment strategies

This study showed that many of the participants who established group-focussed self adjustment strategies as a way to adapt to their adversity were more likely to have used campus mental health services while dealing with their adversity. This was in contrast to those participants who developed individualised self-adjustment strategies and were found not to have used campus mental health services at all. Data from the interviews highlighted different actions and activities that participants engaged in as they tried to adapt to their adverse changing reality in the university. These actions and activities, which have been categorised as self adjustment strategies could either be group or individual focussed.

Group-focussed strategies: Among the group who have used campus mental health services, were participants who recalled engaging in activities with other people as a means of adapting to their adversities. These activities included those demanding physical exertion and were either done as a group, as recounted by the participants below:

I am very into fitness because I feel like it helped me cope with my ... I don't know, stress and anxiety and depression and other things like that. So, I went to the gym a lot. I went to the gym every day for an hour, but in between classes or after work. And I was playing basketball by myself. So just like shooting some hoops running around, throwing some layups and stuff like that. (Abby, Female, r=60)

So, coming into school from home, I used to have problems with the actual education part, rather than the people in school. I did Taekwondo and jiu jitsu, all the mixed martial art stuffs, but mostly focused in taekwondo. I used to teach and coach other students and stuff. (Joy, Female, r = 74)

Some other participants reported more leisurely self-adjustment strategies but which brought them in contact with new people; people who could likely help them get a more positive outlook to whatever they were experiencing. The participant below recounted the following:

Being able to talk to [dance partners] somebody like that, is great help. These new people energize me. It has a calming effect on me because I don't have to think about what's bothering me or even if I had something bothering me, I can sort of tell them, 'you know, this happened the other day, what do you think?' But mostly, it's calming, it's relaxing, it's also sports because it is moving….so that is good too. (Shaun, Male, r = 67)

The study noted that many of the participants who had engaged in self adjustment strategies that were group-based, such as getting a gymnasium membership or being part of a dance studio or coaching a taekwondo class reported to having used the campus mental health services within the past 12 months.

<u>Individual-focussed strategies:</u> In contrast, participants who have not used campus mental health services recounted also starting new self-adjustment strategies as a means of adapting to different circumstances. However, the study noted that these self-adjustment strategies were

usually individualised and had to be carried out by the participant alone. They recalled the following:

> *When I'm really stressed, like whether it's like school, whether it's money, whether it's girls, whether it's relationship or anything I just run. I just run and it seems like when am just running, I'm running away from those problems. It feels like it goes behind me and I'm just trying to run away from those issues and I just run, and run, and run. And when I come back, I'll be tired but at least, I've done something beneficial rather than do something like go sit and watch TV. And that really helps me. (John, Male, r = 66)*

Participants like John above, adopted a self adjustment strategy that was individual-based - running - rather than group based. Also, he reported to never using mental health services. Another such individual-based self adjustment strategy reported by a participant who had never used campus mental health services was journaling and having a 'Happiness jar' into which he had to write and drop a piece of paper on which he wrote about what went well in the day. His words:

> *I remembered I was happy in grade nine and ten and I was like, I have the capability, so I should be able to [be happy]. So, I did two things, I had this happiness jar and I started journaling. Basically, for my journal, I just write things, how my day went, how my interactions with people went. And then, I started this happiness jar. And what transpired from that…something which I didn't think would ever happen. Basically, it came from me sharing my feelings and writing down things I've never said out loud […] to figuring out trends of sadness and what to avoid. And from my happiness jar…just to encourage myself. (Steve, Male, r = 87)*

CHAPTER 4 Discussion and Conclusion

Discussion

There have been numerous studies on the factors that influence health service use, using the Andersen behavioural model for health service utilisation (Andersen 1995). The model has brought to light the fact that the predisposing factor - including demographics, social structure, beliefs and resilience - was one of the three universal factors that determines people's need for and the use of health services, including mental health services. Despite numerous studies since the development of the model, there is still insufficient knowledge to effectively show how, out of all the predisposing factors, resilience influences mental health service use by the general population. The broad subject of resilience is actively investigated among different populations such as people childhood trauma survivors and war veterans (Garmezy, 1993; King et.al., 1998; Harvey, 2007) but there has not been much knowledge emerging on how it affects service use among university students in particular. This present study sought to explore the role played by resilience in the mental health service use or non-use by university students by assuming that a person is not necessarily born with a particular level of resilience, but that it can be built upon or eroded as the person goes through different experiences in their life course.

Results of this study re-affirmed some of the domains of resilience established in earlier studies. In line with the resilience theory of disruption and reinvention (Jaceelon, 1996), the study data suggests that participants developed resilience as a result reinventing themselves after experiencing some adversities in childhood, as adolescents, or during their time as newly enrolled university students. This researcher and her participants were able to identify and discuss events considered as adversity or biographical disruption (which led to periods of self adjustment and reinvention). These included the loss of a parent, a significant other, failure at school, social isolation, and bullying to mention a few. The interview data suggested that these adversities led to the development of their resilience irrespective of if they were mental health service users and non-users. However, the data did shed light on the nature of resilience in university students based on what led to its development.

In addition, the study noted that the type of resilience strategy adopted by participants seemed to be a better indicator of their likelihood of using mental health services or not. Group-focussed resilience strategies seemed to indicate the likelihood of using mental health services while individual-based resilience strategies seemed to favor non-use of mental health services on campus. It is possible that the familiarity of interacting with people in group-focussed activities made such participants more favourably inclined to discussing their issues with professionals at campus mental health services. This is unlike those participants whose resilience strategy were individual-focussed; they were intent on resolving their issues by themselves and would only seek support when they could not continue.

This study noted that the timing of experiencing adversity not only resulted in participants becoming resilient, it also seemed to affect whether they used mental health services or not. The interview data suggest that participants who had experienced adversity much earlier in their childhood reported using mental health services while in the university. On the other hand, participants whose adversity occurred during their late teenage years mostly reported to not using campus mental health services. Findings from this study suggest that resilience developed as a result of experiencing and overcoming adversity early in childhood may have led to them thinking that they can overcome subsequent adversities with any resources available to them, one of which can be the campus mental health services. In contrast, participants whose resilience developed as a result of experiencing adversity as young adults or while in the university were more likely to not seek out mental health services on campus immediately. In the face of adversity, these participants' resilience is activated thereby prompting them to try to resolve their issues on their own first. The observations above are in line with resilience domains of protective factors (Windle, 2011), that suggest that individuals are able to adapt to their situations using their connectedness to family, friends (for service non-users) and to external resources (campus mental health service platforms for service users).

The study noted that the acceptance of the presence of an emotionally supportive person in times of adversity was found to improve the mental health (as interpreted in the interviews, and not objectively via measures – an area of future research) and resilience of all the participants, irrespective of their use or not, of mental health services. However, the

establishment of such relationships earlier in childhood seemed to make the participants more likely to seek external emotional and mental support instead of struggling to overcome the adversity on their own. In their 2013 study, Peterson & Yates stated that the development of such positive emotional relationships earlier in childhood contribute to resilient adaptation by promoting resources, such as self-esteem, self-efficacy and coping capacities. These in turn provide opportunities for positive adaptation, such as when a mentor exposes a young child to positive outlets for expression, connection through new interests, art or sport or confronting situations calmly and logically. Their study further stated that, this early relational attachment could promote adaptive neurobiological, behavioural, and cognitive organization in early childhood that the individual could deploy in later life (Peterson & Yates, 2013). Data from this study suggest that the presence of an emotional support person earlier in life may have made participants favourably disposed and willing to seek mental health support while on campus. It could be that these participants who had such support in early childhood, were more comfortable discussing their issues with other/older supportive persons (or staff at the campus mental health services), because they have had such experiences in childhood. This is unlike the participants who were experiencing adversity while newly enrolled in the university. These participants reported not using campus mental health services; data from them reported them wanting to resolve their issues on their own and would go to campus mental health services only when it was very necessary.

Further, this study data suggest that participants who were struggling to attain some self-imposed academic standards were more likely to access mental health services on campus unlike their counterparts who had to fulfil the academic expectations from external sources such as their families or mentors. It is possible that the achievement of high self-imposed academic standards is of greater priority among participants because it comes with self validation. As a result, these participants sought to maintain a healthy mental wellbeing by any means possible (including getting support from campus mental health services) in order to achieve those self-imposed standards. This observation is in line with the Giddens' stand on the idea of the "self" as being a reflexive project which is constantly being worked on in order to present ones' identity as coherent (Giddens, 1991). The participants with high self-imposed expectations seemed to

have the mindset that they should not 'slip up' from their imposed standard but must maintain or keep improving themselves. They seemed to be very hard on themselves and were willing to seek out help from of mental health services if necessary. In contrast, many of the participants who only had to live up to the expectations of family or mentors reported not using campus mental health services. Their interview data suggests that these participants believed that their families or their mentors would come around to understanding their challenges and will accommodate of any academic lapses that they (participants) might have. It was noted that almost all the study participants who had struggled with their academics in their first or second year in university had similar resilience scores; the difference being their use or non-use of mental health services. This suggests that the level of resilience is not a good indicator for the use or non-use of mental health services by university students. Rather, the properties or features of their resilience (arising from self or externally imposed pressures) might indicate the likelihood of their use or non-use of such services while on campus.

Lastly, the data also validated the concept of resilience additive and subtractive strategies as given by Ward et al., (2011). Additive strategies are those new behaviour or actions taken by individuals in order to have a different and positive outlook during an adversity. While subtractive strategies occur when individuals give up some behaviour or actions, or remove themselves from certain people, situations or places, in order to adapt or cope with an adverse situation in their life. This study identified participants' additive strategies as ranging from joining a gymnasium, joining a dance studio to journaling and having a 'happiness jar'. In some cases, reaching out to campus mental health services was the identified additive strategy. Similarly, identified subtractive strategies implemented by study participants to adapt to their adversity included: cessation of emotional eating; reduction in some social activities; and formally taking time off from academics. It was noted that participants in both study arms displayed additive or subtractive strategies, had similar resilience scores but some reported to using campus mental health services while others did not. This suggests that the presence of resilience additive and subtractive strategies was a good indicator of resilience but a bad indicator of the use or non-use of campus mental health services. Also, this study identified cases where the additive strategy occurred at the same time as the subtractive strategy, for instance in the case of a participant's

turn to regular gym attendance while breaking the habit of emotional eating. The effect of this phenomenon was not investigated as it was not a study objective

Conclusion

This study sought to understand the role played by resilience in the mental health service use of university students. Its findings indicate that resilience is not a defining factor for whether or not university students use mental health services on campus. Rather resilience is a separate and singular variable that influences a student's use of mental health service use based on their personal characteristics and their life course.

The abundant research studies on resilience in different populations, alongside other studies investigating the barriers and enablers of health service use have shown that all individuals – and students - are constantly trying to maintain their quality of life by using internal and external resources to manipulate their resilience to adapt to their changing reality. On one hand, resilience helps university students to adapt to adverse situations on campus by improving their self efficacy and prompting them to try to resolve their issues on their own. This can lead to the delay in or prevent the uptake of mental health services. On the other hand, resilience may activate the self preservation instinct in students that will make them seek health from campus mental health services instead of trying (and sometimes failing) to solve adverse situations on their own. It seemed that their personal characteristics, how their resilience was built and how long it has been in place, are better indicators of service use.

Although understanding the effectiveness of the different mental health services on campus was beyond the scope of this research study, it is worth stating that all the study participants agreed on the effectiveness of mental health services for acute mental health issues but suggested longer-termed treatment solutions and more innovative non-clinical service platforms. Furthermore, it is recommended that the internal *Thrive Week* be conducted more than once in a year. The *Thrive week* is a week-long series of events focused on building positive mental health for the university students, faculty and staff. *Thrive* aims at increasing mental

health literacy, building healthy self care habits and fostering a supportive and inclusive community.

This study was exploratory in nature because the research question is a relatively unknown aspect of resilience field. It also tried to bring up leads for further investigations such as understanding how resilience fluctuates throughout the time spent in the university; using quantitative methods to investigate the extent to which the resilience characteristics indicate use or non-use of mental health services by university students; and understanding if the presence of an older emotionally supportive person improved mental health and resilience irrespective of service use or not.

Study quality

As with all research studies, there is a need to ensure that the findings of this study are communicated in unambiguous ways that will be easily understood by the relevant stakeholders of this study. This is closely followed by the need to ensure that the findings are disseminated in formats that can be implemented by other parties. Lastly, is the need to ensure that all the processes of this study can be easily replicated. These were achieved by adhering to research ethical standards for the synthesis of existing knowledge, the development of the study inquiry, the documentation of the research process for replication and/or further investigations. To arrive at the research question, I investigated existing literature on the different domains of resilience and health service use. My focus was on the finding out gaps in the current body of knowledge of how the variable (resilience) could influence mental health service use but with a focus on newly enrolled and/or young university students. The synthesis of the identified limitations in the reviewed literature on resilience among the general population and on the factors that influenced health service use, led to the development of this study research question. Every step of this study was documented with strict adherence all that were approved by the university Ethics committee. Furthermore, I remain available for future two-way discussions of my findings and exchange of ideas with relevant stakeholders and audiences including external researchers through conferences, internal university researchers, officers of the campus mental health

services unit, the campus wellness centre staff, interested fellow graduate students, and students who are interested in this subject.

I recommend that future research studies of this nature should emphasise the inclusion into their study design, de-briefing sessions for the research team members. These debriefing sessions will be to cater to the wellbeing of team members after being in constant interaction with participants recounting personal experiences which might be traumatic to them and the researchers. The debriefing session will also ensure that the researcher does not over or under-emphasize a point, forget to analyse a negative case scenario, or miss a rival legitimate hypothesis.

Throughout the data collection stage of this research, I deployed empathic listening and questioning methods and, in a few instances mentioned that I understood what they were not directly saying because I had passed through similar experiences. As a result, there were instances where I needed to debrief and talk about my feelings with my peers and supervisor in order to regain my emotional balance and maintain my objectivity. During these debriefing sessions, I described what led to the situation I wanted to talk about and how I responded; and the ensuing group discussion would be around how to enhance better communications with participants, and ways to de-stress and refresh myself for the next interview session. In all, the debriefing sessions helped in my initial analysis of the data collected during each interview session. These periods of reflexivity and debriefing helped me in staying focussed and objective during the data collection and analysis stages. It also ensured that all the codes developed were considered equally important.

In addition, this study uncovered some probable characteristics of resilience and how they were likely influencing university students' use or non-use of campus mental health services. I recommend further research using quantitative methods to investigate the extent to which these resilience characteristics indicate use or non-use of mental health services by university students while on campus. In addition, there should be investigation into understanding how resilience fluctuates throughout the time spent in the university.

Strengths and Limitations

Research on resilience among university students – with the view of improving on it - is very relevant in the light of the continuous increase in student enrollment with its attendant increase in the volume of students presenting with different mental health disorders. The qualitative design of this study allowed for an exploratory investigation on possible ways that resilience may be influencing the use mental health service among this critical population. The small nature of the study led to depth and richness of the information gathered from participants. The rich information collected brought to light the probable characteristics of resilience based on timing of adversity, duration of adversity and presence of an influencer during adversity, and how these probable characteristics can be an indicator of service use or not.

However, time and resource constraints restricted the scope and sample size of this study. The data collected and analyzed may not be generalizable to every university population in Canada because the study only aims to understand the experiences and mental health use of recently enrolled university students as against the wider university population. Also, the sample might not be representative of the Waterloo undergraduate population in terms of ethnicity, socioeconomic status and other indices. Furthermore, the scope of the study did not demarcate between severity of stressors and responses of the students.

Otherwise, extracting more information from the study participants, interviewing staff of counseling services and possibly conducting another form of observant study of the university health services, counseling services and the health promotion department could have yielded more information to answer the research question. Lastly, the need for confidentiality and the fact that I am not a licensed mental health professional hampered the collection of different types of information that could better shed the light on the efficacy of the existing initiatives and the effectiveness different service platforms in the university.

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APPENDIX 1: RECRUITMENT LETTER – STUDY A

School of Public health and health systems

PARTICIPANTS NEEDED FOR
research on the role played by resilience on students' need and use of mental health services

Resilience is the capacity of students to adapt and grow in response to adverse events that may occur at university, or in life generally.

You are in 2nd or 3rd year in University of waterloo

You are between 19 – 21 years old

You have USED campus counselling services at least once in 12 months?

The study needs you!

Participants will be questioned about their academic and non-academic experiences, and how they are coping with life on campus.

Your participation would involve one 60 minutes interview session

In appreciation for your time, you will receive
$20

For more information about this study, or to volunteer for this study

please quote **STUDY A** and contact:

Nnenna Ike
School of Public Health and Health Systems at
Email: nauike@uwaterloo.ca or LNH 2708

This study has been reviewed by, and received ethics clearance through a University of Waterloo Research Ethics Committee.

APPENDIX 2:

RECRUITMENT LETTER – STUDY B

School of Public health and health systems

PARTICIPANTS NEEDED FOR
research on the role played by resilience on students' need and use of mental health services

Resilience is the capacity of students to adapt and grow in response to adverse events that may occur at university, or in life generally.

You are in 2nd or 3rd year in University of waterloo

You are between 19 – 21 years old

You have NOT USED campus counselling services at least once in 12 months?

The study needs you!

Participants will be questioned about their academic and non-academic experiences, and how they are coping with life on campus.

Your participation would involve one 60 minutes interview session

In appreciation for your time, you will receive
$20

For more information about this study, or to volunteer for this study

please quote **STUDY A** and contact:

Nnenna Ike
School of Public Health and Health Systems at
Email: nauike@uwaterloo.ca or LNH 2708

This study has been reviewed by, and received ethics clearance through a University of Waterloo Research Ethics Committee.

APPENDIX 3: LETTER OF INFORMATION

University of Waterloo

Date

Dear student:

This letter is an invitation to consider participating in a research study I am conducting as part of my master's degree in the School of Public Health and Health Systems at the University of Waterloo under the supervision of Dr. Samantha Meyer. I would like to provide you with more information about this project and what your involvement would entail if you decide to take part.

Mental health is one of the very common chronic illnesses in Canada. Studies are increasingly pointing out that young people are more at risk of developing some form of mental health disorder than any other age group. University students are known to face many stressors while in school, some of them including a heavy academic workload, and financial constraints. In light of this, there have been efforts at improving the quality and volume of mental heath service outlets on campuses. However, studies have shown that these services are not being maximally used by students. Some students may readily access these services while others do not, and this may be due to the level of their resilience. For this study, resilience is the capacity of students to adapt to adverse events that may occur at university, or in life generally. The purpose of this study, therefore, is to understand the role of resilience in the university students' mental health service need and use.

This study seeks to understand how students' resilience as a result of their life experiences before and since their enrollment into the university affects their need for and use of mental health services while on campus. Therefore, I am collecting data from students who have accessed mental health services and those who have not. Since you have been a student of the university for some time and are familiar with the peculiar stressors and available services, you are best suited to speak to the research issues as a study participant.

Participation in this study is voluntary. It will involve an interview of approximately 60 minutes in length, to take place in a mutually agreed upon location. With your permission, the interview will be audio recorded to facilitate collection of information, and later transcribed for analysis. The sum of $20 will be given to you for the time spent during the interview. The amount received is taxable. It is your responsibility to report this amount for income tax purposes. Your identity will be confidential. Your name will not appear in any thesis or report resulting from this study, however, with your permission, anonymous quotations may be used. Data collected during this

study will be retained for at least seven (7) years in a password protected computer in my supervisor's lab; with only my supervisor and I having access to them.

During the interview, some of questions you will be asked, include:
1) Describe to me your academic experiences since you resumed school at Waterloo.
2) What non-academic challenges have you faced since you resumed school in Waterloo?
3) What has been the most significant event in your life?
4) Have you needed help for any emotional or mental problems such as feeling anxious, nervous, sad, or blue? What did you do in that situation?

There is a minimal risk that some participants may find recalling past experiences or events to be upsetting. If you require support, you can access campus counselling and health services. You may decline to answer any of the interview questions if you so wish. Further, you may decide to withdraw from this study at any time without any negative consequences by advising me.

This study has been reviewed and received ethics clearance through a University of Waterloo Research Ethics Committee (ORE# 40771). If you have questions for the Committee contact the Office of Research Ethics, at 1-519-888-4567 ext. 36005 or ore-ceo@uwaterloo.ca.

For all other questions or if you would like additional information to assist you in reaching a decision about participation, please contact me by email at nauike@uwaterloo.ca. You can also contact my supervisor, Dr. Samantha Meyer at 519-888-4567 ext. 39187 or email at Samantha.meyer@uwaterloo.ca.

I hope that the results of my study will be of benefit to the university student body, university health services department and other higher education institutions not directly involved in the study, as well as to the broader research community. This study will be disseminated on the UWspace, seminars, conferences and journal articles and an abstract of its findings can be emailed to you on request.

I very much look forward to speaking with you and thank you in advance for your assistance in this project.

Yours Sincerely,

Nnenna Ike
Student Investigator

APPENDIX 4: SCREENING QUESTIONAIRE

SCREENING QUESTIONNAIRE

Research topic: **What role does resilience play in University students' mental health service need and use?**

Instruction: Tick/Answer as appropriate

1. Are you an undergraduate of the University of Waterloo?

Yes No

2. What was your age on your last birthday?

_____

3. What is your programme level?

1st year 2nd year 3rd year 4th year

Thank you for your interest in participating in this study. Kindly note that this study is designed for a fixed number of participants. As a result, admission of participants into the study will stop when the number has been attained, even though you might have met all the inclusion criteria.

APPENDIX 5: CONSENT FORM

CONSENT FORM

By signing this consent form, you are not waiving your legal rights or releasing the investigator or involved institution from their legal and professional responsibilities.

I have read the information presented in the information letter about a research study being conducted by **Nnenna Ike** of the **School of Public Health and Health Systems** at the University of Waterloo. I have had the opportunity to ask any questions related to this study, to receive satisfactory answers to my questions, and any additional details I wanted.

I am aware that I have the option of allowing my interview to be audio recorded to ensure an accurate recording of my responses.

I am also aware that excerpts from the interview may be included in the thesis and/or publications to come from this research, with the understanding that the quotations will be anonymous.

I was informed that I may withdraw my consent at any time without penalty by advising the researcher.

This study has been reviewed and received ethics clearance through a University of Waterloo Research Ethics Committee (ORE# 40771). If you have questions for the Committee contact the Office of Research Ethics, at 1-519-888-4567 ext. 36005 or ore-ceo@uwaterloo.ca.

For all other questions contact:

Dr. Samantha Meyer: Samantha.meyer@uwaterloo.ca

Nnenna Ike: nauike@uwaterloo.ca

With full knowledge of all foregoing, I agree, of my own free will, to participate in this study.

☐YES ☐NO

I agree to have my interview audio recorded.

☐YES ☐NO

I agree to the use of anonymous quotations in any thesis or publication that comes of this research.

☐YES ☐NO

Participant Name: _____ (Please print)

Participant Signature: _____

Witness Name: _____ (Please print)

Witness Signature: _____

Date: _____

APPENDIX 6: INTERVIEW GUIDE

INTERVIEW GUIDE

Thank you for your participation in this study to understand the role played by resilience on university students' mental health service need and use. Resilience is the capacity of students to adapt and grow in response to adverse events that may occur at university, or in life generally. Please note that your participation is voluntary. During this study, we may discuss how you have coped during some negative times in your life. If any of the questions make you uncomfortable and you wish to skip them, please let me know and I will move on.

- What is your program level?

Concept	Interview question(s)	Rationale for interview question
Family background	1) Tell me about your family structure and their location of residence for the past few years?	Understanding the family dynamics prior to and while at the university will bring insight to the history and sources of stress in the life of participants. Other information to be retrieved include parental expectations (if any), which literature has shown to impact students' mental health. Researcher will also get information of perceived financial indebtedness; which previous studies have pointed to be sources of stress that can impact on the mental health state of university students.
	2) How is the Waterloo region different from your previous location? Tell me about your life in _____before becoming a student of University of Waterloo?	
	3) How did you spend your time in high school? What was your dream profession in high school and what did your family think about your plan?	
	4) How is your university education being funded? Describe the scholarship program you are on (if any)? What things do you do to supplement your finances while in school?	

Academic life	1) Describe to me your academic experiences since you resumed school at Waterloo. What non-academic challenges have you faced since your resumption. Probe for thoughts on academic workload, perceived financial indebtedness, and other difficulties.	These questions will highlight the types of stressors faced while at the university - personal, parental, financial, academic and social - some of which might not be recognised by participants. Also, questions will uncover their knowledge of the available mental health service platforms, their preferred one, and their perceived need for such services. In addition, the questions will uncover, the different ways participants are using to cope with university stressors. Questions will also uncover if the actions/activities mentioned have any impact on their use/need for the mental health services.
	2) In the past one year, have you been overwhelmed by your workload in school that you almost/missed a class or submission deadline? How did it happened and how was it resolved?	
	3) What aspects of campus life do you enjoy? Probe for extra-curricular activities/clubs they are involved in.	
	4) What are the service/recreational clubs you wish University of Waterloo had? Why?	
	5) Can you list/describe the health service platforms on campus? How did you get to know about them? Which ones are your preference?	
	6) In the past one year, do you think you have needed any emotional or mental support when feeling anxious, nervous, sad, or blue? What did you do in that situation?	
Life experiences/Resilience factors	1) What has been the most significant event in your life? Probe for details. How did it affect you/affecting you?	As stated in the literature, resilient people undertake additive and subtractive resilience strategies (consciously or not) to adapt to adversity. These questions will bring to light actions or

	2) Which people featured prominently during that event/ played a significant part in how you handled the event?	activities undertaken by participants as a result of their resilience status.

APPENDIX 7: APPRECIATION LETTER

University of Waterloo

Date

Dear (student name),

I would like to thank you for your participation in this study entitled **What role does resilience play in mental health service use by university students?** As a reminder, the purpose of this study is to understand the role of resilience in university students' mental health service need and use. The study also seeks to understand the preferred service outlet and the rationale.

The data collected during interviews may contribute to improving the provision of mental health services in university campuses and provide more information on how students try to adapt to university life.

This study has been reviewed and received ethics clearance through a University of Waterloo Research Ethics Committee (ORE 040743). If you have questions for the Committee contact the Office of Research Ethics, at 1-519-888-4567 ext. 36005 or ore-ceo@uwaterloo.ca.

Please remember that your identity as a study participant will be confidential. Once all the data are collected and analyzed for this project, I plan on sharing this information with the research community through the UWSpace, seminars, conferences, presentations, and journal articles. If you are interested in receiving more information regarding the results of this study, or would like a summary of the results, please provide your email address, and when the study is completed, anticipated by September 2019, I will send you the information. In the meantime, if you have further questions about the study, please do not hesitate to contact my supervisor or I using the contacts below.

Dr. Samantha Meyer
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University of Waterloo
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Nnenna Ike
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On campus resources	24/7 Resources
Counselling services 519-888-4567. ext. 32655	UW Police 519-888-4567.ext.22222

Health services 519-888-4567	Good2Talk post-secondary student helpline 1-866-925-5454
AccessAbility services 519-888-4567. ext. 35082	Here 24/7 Crisis Services 1-844-437-2347