

RUNNING HEAD: Religion/Spirituality throughout the lifespan: promoting mental health

**THE PROTECTIVE EFFECT OF RELIGION/SPIRITUALITY ON MENTAL HEALTH
AND MENTAL ILLNESS ACROSS THE ADULT LIFESPAN**

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Abstract

Objective. Increasing positive mental health and decreasing mental illness is considered a major priority. Theories of aging suggest that older adults turn towards religion and spirituality (R/S), in efforts of increasing meaning and purpose in life, and assisting in coping with life's adversities. The role of R/S was examined in experiencing positive mental health and psychological distress in adulthood. It was hypothesized that these relationships will be most salient in older Canadian adults (≥ 65 years old). **Methods.** The data used for this study was derived from the 2012 Canadian Community Health Survey–Mental health component (CCHS-MH), a national population health study. R/S was measured by asking participants how important R/S was in their daily lives and if they drew strength from R/S, where greater importance reflected high R/S. Participants with positive mental health were categorized as flourishers. Established cut-offs were used to categorize levels of psychological distress as moderate-high versus low. Multiple logistic regression models adjusted for known covariates were conducted in order to examine the effect of R/S on positive mental health and psychological distress ($n=20,019$). Due to the complex survey design of the CCHS-MH, survey weights were employed. **Results.** There was a significant R/S by age interaction for flourishing status ($p<.01$). High R/S was associated with increased odds of flourishing across all age groups ($p<.001$), an effect that was strongest among older adults (65+ years). There was no association between R/S and psychological distress ($p=0.24$). **Conclusion.** The findings confirm that R/S plays a role in positive mental health across the adult lifespan and that attending to diverse R/S beliefs and practices may assist in supporting the growing aging population.

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Introduction

Promoting mental health and reducing mental illness has been identified as a global health priority (United Nations, 2018; World Health Organization, 2018). In Canada, mental illness affects many people. It is estimated that one in five Canadians will experience symptoms of mental illness at one point throughout their lifespan (Center for Addictions and Mental Health, 2012). Mental illness is a major cause of disability in Canada, and estimates suggest that it accounts for \$6 billion in lost productivity per year (Smetanin et al., 2011; Mental Health Commission of Canada, 2016).

The most prevalent forms of mental illness in Canada are depression and anxiety (Public Health Agency of Canada, 2015). Mental illness can be understood as significant changes in cognition, emotion regulation, and behavior, which may be caused by underlying psychological, biological, and developmental dysfunctions (American Psychiatric Association, 2013). Mental illness also involves clinically significant disturbances in social, occupational, and daily life activities (American Psychiatric Association, 2013).

Mental health can be operationalized as a positive state of wellbeing, where one is able to cope with everyday life stressors and make positive contributions to society (Canadian Mental Health Association, 2009; World Health Organization, 2014). It follows that positive mental health is characterized by a cluster of positive symptoms related to the subjective experience of an individual, such as their lived experiences of positive feelings (i.e., emotional wellbeing) and positive functioning (i.e., psychological wellbeing and social wellbeing) (Keyes, 2002a, p. 298). As it is important to promote positive mental health, valuable resources such as religion and spirituality may be important to examine.

The effects of religion and spirituality on mental health and mental illness have been a growing interest in the literature within the last 20 years (Dein, 2014). Evidence suggests that religion and spirituality is positively associated with wellbeing (Lifshitz, Nimrod, & Bachner, 2018), hope, optimism, increased life satisfaction, perceived social and emotional support, a healthy lifestyle, bringing a sense of meaning to one's life, and developing self-esteem (Dein, 2006; Dein, 2018).

As mental illness is one of the major causes of disability worldwide and affects many Canadians, promoting mental health and decreasing mental illness is imperative to the wellbeing of Canadians. While this thesis will outline a variety of factors that help increase positive mental health and decrease symptoms of mental illness, with a specific focus on the role of religion and spirituality.

Mental Health and Mental Illness

Mental health is characterized by one's positive perception of their experienced wellbeing (Keyes, 2002a). Keyes (2002a), proposed a dual-continua model of mental health and mental illness to showcase that mental health and mental illness are two distinct yet related dimensions of the human psychological experience. The dual-continua model suggests that a person may experience high positive mental health while experiencing no signs of mental illness (i.e., *flourishers*), while others may experience poor mental health while concurrently living with symptoms of mental illness (i.e., *languishers*) (Keyes, 2002a).

Flourishing individuals exhibit high levels of wellbeing, positive emotions (e.g., happiness, sense of life satisfaction, peacefulness), and positive functioning (e.g., trusting relationships, satisfaction with oneself, feeling of belonging to a community, feeling of life being useful towards the community) (Keyes, 2002a; Keyes, 2002b). Throughout this thesis,

individuals experiencing positive mental health are referred to as *flourishers*. The two terms, positive mental health and flourishing will be used interchangeably throughout the text.

Keyes (2002a) categorizes persons who are experiencing positive mental health as happy with themselves, experiencing happy relationships, and overall satisfied with their lives. Flourishing status has also been shown to be positively associated with good physical health. In a large population health study, individuals who were flourishing were less likely to report experiences of chronic pain, physical limitations, trouble sleeping, mental illness, or adverse childhood experiences (Baiden & Fuller-Thomson, 2016).

Similarly, Schotanus-Dijkstra and colleagues (2016) examined the relationship between personality traits and flourishing. Persons who were flourishing showed higher levels of extraversion and conscientiousness and lower levels of neuroticism. Flourishers were also more likely to experience increased social support and experienced more positive events throughout their lifespan (Schotanus-Dijkstra et al., 2016).

Recent data based on the Canadian Community Health Survey-Mental Health component (2012) (CCHS – Mental Health), highlight that 76.9% of Canadian adults are flourishing, 21.6% were experiencing moderate mental health, and only 1.5% of the population were categorized as languishing (Gilmour, 2014). Within the study, there were various predictors that increased the chances of experiencing positive mental health. Examples of such predictors included having a partner/being married, higher level of education, living in a rural environment, being physically healthy, and relying on religion and/or spiritual resources when in need.

Based on recent research studies with data drawn from large population health studies such as CCHS-MH (2012), it can be inferred that the majority of the Canadian population is flourishing. However, there is a small percentage of individuals who are experiencing symptoms

consistent with languishing. Languishing individuals may experience feelings of emptiness, stagnation, lower life satisfaction and wellbeing (Keyes, 2002b). Persons who are experiencing low levels of mental illness and poor mental health will be referred to as *languishing*. While the dimensions of mental health and mental illness are qualitatively distinct, they also intersect with one another, as illustrated in Figure 1.

Figure 1. Keyes' Dual-Continua Model as adapted from Keyes (2014)

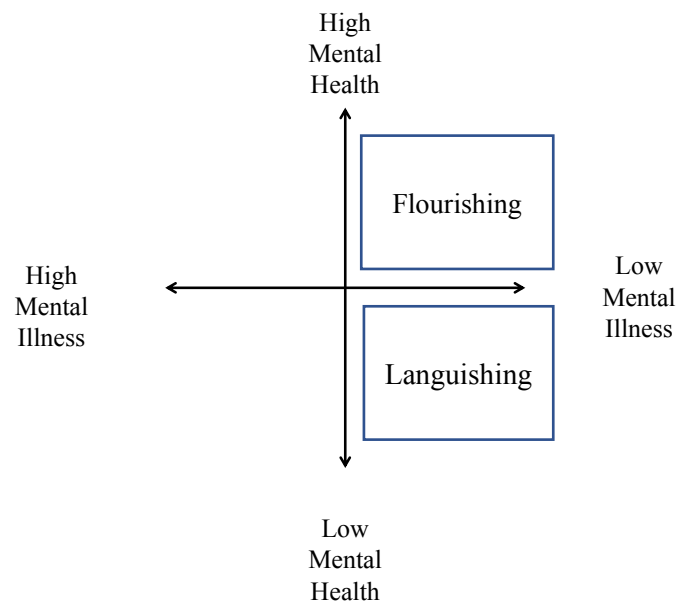


Figure 1 shows that the presence of mental health does not imply the absence of mental illness, and the presence of mental illness does not automatically imply that one is living without symptoms related to mental health (Keyes, 2014). Therefore, flourishing is the presence of high symptoms of mental health and low symptoms of mental illness, whereas languishing is consistent with one's experience of low symptoms of mental health and low symptoms of mental illness (Keyes, 2014). This project will examine individuals who are flourishing and those living

with symptoms of mental illness, rather than languishing as defined by Keyes (2002a, 2002b, 2014) as languishing does not fully capture the symptomology of an individual experience psychological distress or mental illness.

The MacArthur Foundation Midlife survey in the United States examined the prevalence of mental illness and mental health based on the presence and absence of flourishing and languishing. The sample consisted of 3,032 adults with ages ranging from 25 to 74 years (Keyes, 2002b; Keyes, 2005). Ultimately, the study sought to measure mental illness and various elements related to mental health, such as, emotional wellbeing, psychological wellbeing, and psychological functioning and impairment.

Keyes (2005) showed that the participants were six times more likely to show symptoms consistent to major depression if they were classified as languishing in comparison to those exhibiting high positive mental health. In addition, the results suggest that positive mental health differed according to sociodemographic variables. Specifically, languishing was most prevalent among adults aged 25 to 54 years, women, participants with lower levels of education, and participants who reported being single, divorced, or widowed (Keyes, 2002b; Keyes, 2005). Flourishing was most prevalent in older male adults, with ages ranging from 45 years to 74 years, who had received more than 16 years of education, and who were married. Keyes' findings are consistent with previous literature surrounding flourishing and languishing throughout the adult lifespan.

Keyes' Dual-Continua model of mental health has been applied to a variety of settings and populations. For example, Peter (2018), examined the prevalence of mental illness and mental health within the lesbian, gay, and bisexual (LGB) communities, and how it may differ from heterosexual participants. Heterosexual participants were more likely to report symptoms

consistent with flourishing when compared to LGB participants (Peter, 2018). Regardless of sexual orientation, both groups were less likely to flourish if they had previously experienced symptoms related to mental illness within the last year. When accounting for gender, female participants were less likely to be categorized as flourishing if they had lived with mental illness, an association that was strongest among lesbian and bisexual women (Peter, 2018). Languishing and mental illness are related, but not synonymous, concepts. As illustrated in Figure 1, persons who are considered languishing may experience higher or lower degrees of mental illness.

Mental illness plays a debilitating role in the lives of some Canadian adults. According to the American Psychiatric Association (2015), mental illness can often be associated with feelings of distress and/or issues pertaining to daily life functioning (i.e., going to work, attending school, spending time with friends and family, etc.). Examples of mental illness can include, but are not limited to, depression, bipolar disorder, anxiety disorders, schizophrenia, neurocognitive disorders, and substance use. (World Health Organization, 2017). For the purposes of this thesis, the mental illnesses included in the study were: anxiety (i.e., Generalized Anxiety Disorder), depression (i.e., Major Depression; Major Depressive Episode), bipolar disorder (i.e., including manic and depressive symptoms), and substance use (i.e., alcohol and other substances).

As this thesis explores various mental illnesses, it is important to outline the symptomology associated with each disorder. Generalized anxiety disorder (GAD) is characterized by excessive worrying and fear pertaining to a future event (Anxiety and Depression Association of America, 2018). Individuals who live with GAD often experience difficulty controlling their worry, which affects their daily functioning (Anxiety and Depression Association of America, 2018). In order to receive a diagnosis of GAD, an individual is required to experience three or more symptoms, occurring for a period of three or more days, for most of

the day than not, for more than six months, as outlined by the DSM-5 (American Psychiatric Association, 2013). Examples of symptoms experienced by individuals living with GAD are as follows: “difficulty controlling the worry”, “restlessness or feeling keyed up or on edge”, “difficulty concentrating or mind going blank”, “muscle tension”, etc. (American Psychiatric Association, 2013, p.222).

According to the World Health Organization (WHO) (2017), depression is considered the leading cause of disability worldwide. Depression is often described as the loss of pleasure in one’s life, feelings of sadness, trouble concentrating, disturbed sleeping patterns, low self-esteem, and disturbed appetite (WHO, 2017). The Diagnostic and Statistical Manual of Mental Disorders V (DSM-5) outlines several diagnostic criteria, including: “depressed mood for most of the day, nearly every day, as indicated by either subjective report (e.g., feels sad, empty, hopeless), or observation made by others (e.g., appears tearful)”, “insomnia or hypersomnia nearly every day”, and/or “fatigue or loss of energy every day” (American Psychiatric Association, 2013).

Bipolar disorder is characterized by the cycling between manic episodes (i.e., periods of elevated mood) and depressive symptoms, which are separated by periods of normality (American Psychiatric Association, 2013). Worldwide, bipolar affects 60 million individuals. Certain diagnostic criteria outlined in the DSM-5 (American Psychiatry Association, 2013) are: “inflated self-esteem or grandiosity”, “decreased need for sleep”, “feelings of worthlessness or excessive or inappropriate guilt (which may be delusional) nearly every day, not merely self-reproach or guilt about being sick”, and/or “diminished ability to think or concentrate, or indecisiveness, nearly every day (either by subjective account or as observed by others)” (American Psychiatric Association, 2013).

The American Psychiatric Association (2013), outlines ten classes of drugs that encompass a substance-related and addictive disorder. Some of the drugs outlined in the DSM-5 are: alcohol, inhalants, opioids, sedatives, hypnotics, stimulants, and tobacco. For an individual to meet the diagnostic criteria of a substance-related disorder, an impairment in cognitive, behavioral, and physiological responses ought to be present, with the individual continuing to consume the drug despite drug-related problems (American Psychiatric Association, 2013). For example, diagnostic criteria for alcohol-related disorders are: “alcohol is often taken in larger amounts or over a longer period than it was intended”, “craving, or a strong desire or urge to use alcohol”, and/or “alcohol use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by alcohol” (American Psychiatric Association, 2013). In order to receive a diagnosis of alcohol-related disorder, one ought to experience “a pattern of significant impairment or distress accompanied by at least two symptoms occurring over a period of 12 months” (American Psychiatric Association, 2013, p.490).

Data drawn from the CCHS-MH (2012) have highlighted that roughly 10% of the Canadian population aged 15 and older reported living with symptoms consistent with at least one mental illness (Statistics Canada, 2015). On average, 6 million Canadians reported experiencing issues related to substance abuse, 3.5 million Canadians met the diagnostic criteria for mood disorders (i.e., major depressive disorder), 3.2 million Canadian adults were living with symptoms consistent with a diagnosis of depression, and 2.4 million adults were living with generalized anxiety disorder (Statistics Canada, 2015).

When accounting for age and gender differences, younger adults appeared to be at increased odds for living with a mood disorder (i.e., depression) (Statistics Canada, 2015). Older

adults aged 65 years and over were seen to experience the lowest rates of depressive symptoms, whereas younger adults aged 15 years to 24 years were most likely to experience depression.

Also, females were at increased odds of experiencing depression, compared to male participants.

Correlates of mental health and mental illness

The literature shows numerous correlates of mental illness and mental health throughout the adult lifespan, including, but not limited to, income, education, and relationship status (Dilmanghani, 2018). Fuller-Thomson, Agbeyaka, LaFond, and Bern-Klug (2016), were interested in examining the association between symptoms of depression and complete mental health in a sample of 20,955 Canadian adults. Fuller-Thomson and colleagues (2016), described complete mental health as the absence of mental illness and the presence of positive mental health. This definition is distinct from the concept of flourishing, which does not necessarily exclude mental illness.

The authors were interested in examining the factors that were associated with experiencing complete mental health after a diagnosis of depression. The data were drawn from the CCHS-MH (2012), a national population health study. The sample consisted of adults with ages ranging from 15 years old to older adults aged 80 years and over. In examining the association between previous symptoms of depression and achieving complete mental health, the researchers also controlled for confounding variables, such as socioeconomic status, physical and mental health conditions, social support, childhood experiences, and religious and/or spiritual belief (Fuller-Thomson et al., 2016). The authors found that 39% of the participants who had never lived with symptoms of depression had achieved complete mental health. The participants who had lived with symptoms of depression were five times less likely to experience complete mental health compared to their counterparts (Fuller-Thomson et al., 2016). Complete mental

health was mostly associated with being female, older adulthood, higher income, perceived good health, and religious and/or spiritual belief (Fuller-Thomson et al., 2016).

Similar results were reported in a study published by Baiden and Fuller-Thomson (2016), which examined complete mental health among individuals who reported previous suicidal ideation. Data were also drawn from the CCHS-MH (2012). The study included 2,844 Canadian adults. For the purposes of their study, Baiden and Fuller-Thomson (2016) categorized participants who had not experienced suicidal ideation or had not met the diagnostic criteria for another mental illness within the last year as having complete mental health. The researchers also accounted for various potential covariates, such as, gender, sex, age, socioeconomic status, race, physical and mental health, chronic pain, sleep disturbances, education, childhood experiences, and religious/spiritual coping.

Of the participants, only 38% of the participants who had previously experienced suicidal ideation had later achieved complete mental health. The individuals who had never experienced any suicidal thoughts or symptoms related to mental illness were considered to be five times more likely to experience symptoms related to flourishing in the absence of mental illness (Baiden & Fuller-Thomson, 2016). After accounting for the covariates, being white, being female, having a high income, being married and/or having a confidant, and being an older adult, resulted in higher odds of experiencing complete mental health. When further examining the interaction between age and gender, females over the age of 60 years old were twice as likely to experience complete mental health, when compared to their counterparts (Baiden & Fuller-Thomson, 2016). The participants who experienced symptoms consistent with a state of complete mental health were less likely to have experienced chronic pain or physical limitations, sleep disturbances, had not met diagnostic criteria for any mental illnesses, and had not

experienced childhood adversities. Participants who were seen to draw strength from religious and/or spiritual resources and used religion and/or spirituality as a coping mechanism in face of adversities, were also more likely to experience complete mental health, compared to the participants who did not use the same belief system or coping mechanisms (Baiden & Fuller-Thomson, 2016).

It is important to note differences in findings outlined by previous research regarding variables that contribute to positive mental health. Specifically, recent research has pointed to females being at increased odds of experiencing positive mental health (Baiden & Fuller-Thomson, 2016; Fuller-Thomson et al., 2016), whereas past studies have pointed towards the increased likelihood of men experiencing positive mental health (Keyes, 2002a; Keyes, 2002b). A more consistent finding, however, is that older adults appear to be at increased odds of experiencing symptoms related to positive mental health. An important predictor of positive mental health, and the focus of this thesis, appears to be religion and/or spirituality. The following section will outline current definitions of religion and spirituality, places of departure and commonalities, and will further examine the literature surrounding the promoting effects of religion and/or spirituality in relation to positive mental health and its decreasing effect on symptoms of mental illness.

Religion and Spirituality

The importance of religion and spirituality (R/S) to both psychology and mental health was evident in the early writings of psychological scholars. For example, Freud and James (Freud 1902; Freud 1913/1919; Freud, 1927/1961; as seen in Soenke, Landau, & Greenberg, 2013) had proposed that religion may act as a buffer in face of anxiety (Pargament, et al., 2013; Soenke, Landau, & Greenberg, 2013). Further scholars have outlined the importance of religious

communities in helping one connect to others and in bringing people together in times of need (Durkheim, 1915; as seen in Pargament et al., 2013).

While recent research refers to the concepts of R/S interchangeably (e.g., Koenig, 2009; Koenig, 2012), there are various differences between the two concepts that are noteworthy. Pargament and colleagues (2013), define spirituality as the search for meaning, the belief in a higher power, and finding happiness and joy in everyday life. Koenig, King, and Carson (2012), further describe spirituality as the connection with the transcendent, which may be found within an organized religion, or within the self. Spirituality may be considered the continuous search for and connection with the divine, a higher power, the supernatural, or mystical forces (Koenig et al., 2012). Spirituality is considered an individualistic concept when compared to religion, as it is oriented towards the self and is considered less observable (Koenig et al., 2001).

Alternatively, religion is referred to as a formal process, where one is involved within the community, following behaviours and rules consistent to their particular religious faith practices (Koenig et al., 2001). Compared to spirituality, the behaviours which are exhibited are much easier to measure and to observe (Koenig et al., 2001).

Qualitative research conducted by Gall, Malette, and Guirguis-Younger (2011), identified 13 themes regarding the definitions of R/S within a sample of 234 individuals coming from various nationalities. The participants consisted of 75 Canadians (43 French Canadian and 32 English Canadian), 131 Americans, 14 of European descent, and 14 participants of other nationalities (Gall et al., 2011). The participants were asked to identify the importance of R/S in their lives based on a five-point Likert scale, with responses ranging from “*not at all*” to “*very religious or spiritual*”, followed by a question regarding their “sense of self”, as either “*spiritual*

or religious”, “spiritual but not religious”, “religious but not spiritual”, or “neither spiritual nor religious” (Gall et al., 2011, p.162).

The respondents were further invited to explore their understanding of R/S, while also answering two open ended questions provided by the authors; *“If it applies, briefly describe one event in your life where spirituality (as you defined it) helped you to cope. How did it help you cope?”* and secondly, *“If it applies, briefly describe one event in your life where spirituality (as you defined it) interfered with or hindered your ability to cope. How did it interfere with or hinder your ability to cope?”* (Gall et al., 2011, p.162).

This study uncovered seven themes that belonged to the definition of spirituality and six that belonged to the definition of religion. Out of the definition of spirituality, the following themes emerged: core self, life perspective, relationship with God or a higher power, connection with mystery, connection with the world, and R/S as meaningless. For instance, the respondents viewed spirituality as a journey of self-reflection, an element that is present within the core self of a person, a guide that helps one live according to their values, a personal and intimate relationship with a higher power, a mystical force, the universe, and other human beings, the connection with religious belief, and the intention that one puts forward when they engage in religious behaviours, while others saw spirituality as meaningless or negative (Gall et al., 2011).

It is important to note that the authors make distinction between religion and religiousness, where religiousness reflects the different angles of religion (i.e., religious affiliation, organization, participation in religious practices, etc.) (Gall et al., 2011, p. 170). Therefore, regarding the definition of religion, the themes of religion as belief in God or a higher power, life perspective, pathway to spirituality, religiousness as negative, and extrinsic value were identified (Gall et al., 2011). The participants identified religion as being associated with

traditional religious behaviours, laws and rules, such as praying, engaging in rituals, and attending and participating in places of worship. Regarding the belief in God or a higher power, the respondents appeared to connect the belief in God with the active participation in religious rituals, as the connection was seen to be enhanced by prayer or attending religious ceremonies (Gall et al., 2011). Religion was also described as being a concept discovered within the family system and as the desire to follow specific rituals in efforts of belonging to a particular group (Gall et al., 2011).

Religion was also seen as being helpful in providing one with an ethical and moral guide and helping the participants live according to their religious codes. Some participants viewed religion as a manifestation of spirituality, in which spirituality is expressed through the help of religious behaviours (Gall et al., 2011). Religion had been described as negative, where some respondents reported feeling trapped and blinded by their religious belief (Gall et al., 2011, p.173). Even though R/S will be used as a single concept during the entirety of this thesis, the two concepts are distinct and pose different attributes. More importantly, the literature shows that persons have attributed different characteristics and meanings to religion and spirituality, which may influence how one uses them to cope with life stressors, while also potentially influencing their promoting affect in relation to mental health and decreasing mental illness.

Gall and Guirguis-Younger (2013), reviewed the literature in efforts of detailing the role of R/S coping in relation to physical and psychological health. Regarding psychological health, religious and spiritual coping was seen to enhance positive mental health, posttraumatic growth, and overall quality of life, and decrease symptoms of mental illness, such as depression, anxiety and posttraumatic stress, as well as decrease one's perception of stress (Gall & Guirguis-Younger, 2013). In terms of physical health, R/S coping was associated with higher perceived

health, lower complications after cardiac surgery, and lower mortality rates (Gall & Guirguis-Younger, 2013).

A systematic review of the literature on R/S conducted by Moberg (2005), also identified the important role of R/S in relation to wellbeing, stress, psychological distress, and death anxiety. Individuals who experienced increased self-esteem, life satisfaction, and optimism reported using either R/S in deriving meaning in life (Kraus, 2003; as seen in Moberg, 2005). Further research examining the effects of R/S in individuals living with dementia and terminal illnesses found that the individuals who were relying on their faith experienced greater mental health, experienced improved quality of life, decreased symptoms of depression, and developed a close connection with their preferred deity from which they derived meaning (Moberg, 2005). For instance, in a sample of hospitalized older men, religious coping and religious behaviours were seen to decrease depressive symptoms and increase overall positive mental health (Koenig et al., 1992; as seen in Moberg, 2005).

Given that positive R/S coping helped decrease symptoms of mental illness, the literature points towards R/S as being a salient predictor of mental health. Based on data retrieved from CCHS-MH (2012), Dilmanghani (2018) examined the association between religion, spirituality, and mental health within the Canadian population. The researcher divided the population into three groups based on their religious affiliation: high religiosity, average religiosity, and secularized (Dilmanghani, 2018). Specific to the high religiosity group, the participants reported a sense of belonging to their community and contribution toward their society compared to the secularized group. A sense of society improving for them, regarding challenges as a means for self-improvement, a sense of direction or meaning in life, and an increased ability to persevere after a negative life event, were also reported by the high religiosity group (Dilmanghani, 2018).

Regarding mental health, both the high religiosity and secularized groups reported experiencing symptoms of positive mental health.

While R/S are distinct constructs, it is difficult to tease apart the separate effects of both constructs without using tools to specifically capture either religion or spirituality. Given this consideration, many researchers have opted to refer to the terms interchangeably (e.g., Koenig, 2009; Koenig, 2012). For the purposes of this thesis, and in line with previous research on this topic, the terms *religion and spirituality* (R/S) will be used interchangeably (Koenig, 2009; Koenig, 2012).

R/S have been associated with promoting positive mental health outcomes throughout the adult lifespan (Bailly et al., 2018). The literature, however, points towards the particular importance it has in the lives of older adults (Damianakis & Marziali, 2012; Wink, Dillon, & Larsen, 2015). The available literature suggests that aging is a salient determinant of mental health (Fuller-Thomson et al., 2016) and that the importance of R/S increases over the course of the adult lifespan (Koenig & Cohen, 2006; Wink & Dillon, 2002). Some authors suggest that one may turn towards R/S in efforts to seek support in coping with certain life stressors which occur in older age, such as chronic illness, loss of family and friends, existential issues and financial issues (Koenig, 2006).

Religion and Spirituality throughout the adult lifespan

In efforts of understanding the course of R/S throughout the lifespan, Bailly, Martinet, Ferrand, Agli, Giraudeau, Gana, and Roussiau (2018), examined how spirituality increases and decreases over a five-year period and how gender differences may play a role in one's experience of spirituality in their life, perceived social support, and flexibility. Interestingly, the authors found no significant indication of spirituality increasing or decreasing over the course of

the lifespan. Previous research points towards various age groups in which an increase of spirituality can be observed, such as 50 years to 60 years and 60 years to 70 years (Wink & Dillon, 2002).

When accounting for gender differences, Bailly and colleagues (2018) found that older female participants were found to be more spiritual when compared to older males. Female participants were also seen to be more spiritual throughout the entirety of the aging process (Bailly et al., 2018). Higher spirituality was experienced by the participants who were religious and spiritual, when compared to the older adults who had no religious belief (Bailly et al., 2018). Perceived increased social support and flexibility were also seen to be associated with an increased sense of spirituality (Bailly et al., 2018). The findings of Bailly and colleagues (2018), are noteworthy as they point towards the potential link between experiencing connection, through social support, and being more flexible in the face of change through the promoting effects of R/S. This connection therefore, may help older adults experience increased wellbeing in light of difficulties associated with the aging process (Bailly et al., 2018).

Wink and Dillon (2002) were also interested in further exploring the influence of age, gender, personality, and cognition on the development of spirituality throughout the adult lifespan. The data were drawn from a longitudinal study originating from the Institute of Human Development, at the University of California. The respondents were categorized by year of birth, with the oldest adults being born in the 1920s and the youngest being born in the 1950s (Wink & Dillon, 2002). To explore the course of spirituality throughout the adult lifespan, the participants were interviewed at four different times throughout their adult years (Wink & Dillon, 2002).

At time 1, the authors separated the sample into two subgroups based on younger and older adults. They asked younger adults questions pertaining to their religious beliefs, attitudes,

and rituals, whereas they asked older adults questions regarding the importance of religion in their lives, religious community and church attendance, and about their belief in God or a higher power (Wink & Dillon, 2002). During time 2, all the participants were merged into one sample and asked questions about the afterlife, their belief in God, and place of worship attendance (Wink & Dillon, 2002). At time 3, the participants were given the opportunity to answer questions pertaining to church attendance, their involvement in religious activities, hobbies, interests, and other activities (Wink & Dillon, 2002). At time 4, the participants were asked detailed questions about religion and for the first time in the study, questions about spirituality were introduced, such as meditative practices and particular spiritual readings they derive meaning from (Wink & Dillon, 2002).

Wink and Dillon (2002) observed that age and gender had a significant effect on spirituality. Females and males were shown to have increased spirituality as they aged, however, male participants appeared to show increased spirituality from early adulthood to middle adulthood, whereas female participants showed increased spirituality from middle adulthood to older adults. Females were seen to experience more spiritual growth later in adulthood, compared to males (Wink & Dillon, 2002). The members of the older adult group were seen to experience more spiritual growth throughout the lifespan, when compared to the members of the younger adult group (Wink & Dillon, 2002).

When examining cognitive commitment, gender differences were also present. For instance, females who were considered spiritual during older adulthood valued intellect and independence, were self-aware and introspective, were considered verbally fluent, and had a wide variety of interests (Wink & Dillon, 2002).

In terms of negative life events and its association with spirituality throughout the adult lifespan, female participants were seen to experience increased spirituality in old age, if they had experienced a negative life event in their 30s or 40s (Wink & Dillon, 2002). Significant examples of negative life events included: historical conflict with a spouse, conflict with parents, previously attending psychotherapy, and experiencing financial difficulties (Wink & Dillon, 2002).

An Australian qualitative study conducted by Shaw, Gullifer, and Wood (2016), used narrative interviews to further examine the role that R/S play in one's life as they age. The sample consisted of eight older adults, with ages ranging from 65 years to 87 years. The authors were interested in developing an understanding of the participants' definition of R/S, the role of R/S in their lives, and if R/S had changed throughout the course of their lifespan (Shaw et al., 2016).

The study yielded three noteworthy themes: older adults' definition of R/S, the participants' spiritual journey, and the perception towards the aging process. R/S was seen to be important in the lives of the participants as it helped them overcome life's adversities, increased hope, and helped the participants feel supported in times of need (Shaw et al., 2016).

Regarding the participants' definitions of R/S, religion and spirituality were separated into two definitions. Spirituality was seen as being a part of one's self, whereas religion was seen as believing and adhering to religious values, as well as attending religious services. For example, one participant reported that religion can be changed as you adhere to a set of beliefs, however, spirituality cannot due to its intrinsic value and sense of being (Shaw et al., 2016). The differences between R/S were also observed throughout the course of the adult lifespan. For instance, the participants reported that religion was important during the early years of life, as

they leaned towards their preferred religion's values and doctrines, and attended religious services. As the participants aged, however, they noticed that spirituality took precedence in the face of the formal religious beliefs they once held (Shaw et al., 2016).

A common theme surrounding most participants was that as they aged, they appeared to experience "spiritual enlightenment" due to aging related experiences (e.g., retirement) (Shaw et al., 2016, p.320). Lastly, the participants were more accepting of their death, experienced an increase in overall life satisfaction, and experienced aging as being pleasant (Shaw et al., 2016).

Throughout the literature, it can be inferred that R/S appears to increase or change throughout the adult lifespan, being most important within the older adulthood population. While it holds a promoting effect of overall wellbeing and may help increase life satisfaction and connection with the self, others, and a higher being, it is important to further explore how R/S promotes older adults' positive mental health.

Religion and Spirituality and Positive Mental Health

R/S appears to be a positive determinant of life satisfaction and overall wellbeing in older adulthood. Recent research conducted by Colishaw, Niele, Teshuva, Browning, and Kendig (2013), examined the mediating effects of R/S on life satisfaction based on the role of social support and Antonosky's Sense of Coherence model (SOC). The SOC refers to the ability one has to perceive life events as comprehensible, manageable, and meaningful (Surtees, Wainwright, & Khaw, 2006).

The data were collected over a period of 10 years as part of the Melbourne Longitudinal Studies on Healthy Ageing Programme. With a final sample consisting of 324 older adults, the authors measured the participants' spiritual belief, perceived social support, life satisfaction, and SOC. Over a period of four years, social support was positively associated with increased life

satisfaction, whereas spirituality was positively correlated with social support, meaning making, and the perception of stressful events in a positive light. Older adults' discovered meaning was also associated with an increased perception of quality of life (Cowlshaw et al., 2013).

Lifshitz, Nimrod, and Bachner (2018) were also interested in gaining a better understanding of the relationship between R/S and wellbeing in a sample of 306 individuals aged 50 years and over residing in Israel. To do so, the authors examined positive and negative subjective wellbeing through Fisher's multiple elements of spirituality (2010) framework. For the purposes of this study, the authors measured spirituality through the "Spiritual Health and Life-Orientation Measure" (SHALOM) (Lifshitz et al., 2018). The SHALOM questionnaire assessed the participants' experiences based on four domains: personal (e.g., identity), communal (e.g., forgiveness towards others), environmental (e.g., connection with nature), and transcendental (e.g., closeness with God) (Lifshitz et al., 2018, p.3).

Subjective wellbeing was assessed by using measures for depression and life satisfaction. Lifshitz and colleagues (2018), further accounted for various covariates, such as, sex, age, marital status, education, income, and being a survivor of the holocaust. Regarding the four domains of spirituality measured by SHALOM, only personal spirituality was found to be positively associated with one's subjective wellbeing. Self-reported health, personal spirituality, transcendental, and communal spirituality were all seen to help decrease symptoms of depression and increase subjective wellbeing (Lifshitz et al., 2018). When accounting for age differences, increased personal and communal spirituality were seen to be significantly associated with younger adults, those with a higher education and income, those with more children, those who were not survivors of the holocaust, and those reporting better physical health (Lifshitz et al., 2018).

R/S helped older adults experience increased feelings related to positive mental health, by helping one experience increased subjective wellbeing, life satisfaction, and social support. As older adults are more prone to experiencing certain life changing neurodegenerative diseases, such as dementia, which may decrease positive mental health, it is important to note the literature around aging with disease and how R/S may play a positive role in one's experience.

A systematic review conducted by Agli, Bailly, and Ferrand (2015) examined 11 research articles to highlight the protective role of R/S in regards to cognitive functioning, quality of life, and coping in individuals living with dementia. Out of the 11 articles selected for analysis, six were longitudinal studies, four included cross-sectional data, and one was a longitudinal and cross-sectional study. Regarding the methodology, three studies included quantitative methods, six were qualitative, and two studies were mixed-methods (Agli et al., 2015).

A number of important results were identified by the authors. Out of the 11 articles analyzed, three articles examined the protective effect of R/S on cognitive decline. The literature points towards the positive effect that R/S have on individuals who are living with symptoms of neurodegenerative diseases and cognitive impairments (Agli et al., 2015). Religious belief and spirituality were seen to be positively associated with slower cognitive decline in patients diagnosed with Alzheimer's, as well as a lower risk of cognitive impairment (Coin et al., 2010, as seen in Agli et al., 2015). The positive relationship between cognitive decline and R/S was also observed by Kaufman and colleagues (2007), who observed that as spiritual and religious practices increased, cognitive impairments declined (as cited in Agli et al., 2015).

R/S also appeared to positively influence one's quality of life. Individuals who were more religious or spiritual, were more likely to be accepting of their diagnosis of dementia, by experiencing more hope, and staying connected with others (Beuscher & Grando, 2009, as cited

in Agli et al., 2015). For individuals experiencing early onset of Alzheimer's, faith, religious behaviours, such as prayer, the connection to a sacred place, and perceived support from family members, provided them with an increased ability to cope with their disease (Beuscher & Grando, 2009, as cited in Agli et al., 2015).

Katsuno (2003) found that personal spirituality was an important factor in coping with dementia, as it provided enhanced quality of life. The author identified six categories that appeared to help increase wellbeing: beliefs, support from a preferred deity, purpose in life, personal and public practices, and changes due to dementia (as cited in Agli et al., 2015). During a three-month follow-up, individuals who were a part of a religious community also experienced significantly less symptoms of depression, compared to the respondents who did not attend any religious services (MacKinlay, 2012, as cited in Agli et al., 2015). These findings are consistent with theories previously proposed by Durkheim (1915), where he emphasizes the importance of religious communities in uniting people (as cited in Pargament et al., 2013).

Quality of life is an important factor in one's experience of positive mental health and R/S appeared as being a mitigating factor in face of the unique challenges some older adults experience. As the literature has pointed towards the promoting effects of R/S throughout older adulthood, it is important to explore how R/S may help decrease symptoms of mental illness within this population.

Religion and Spirituality and Mental Illness

R/S also appear to be predictors of decreased mental illness symptoms in older adulthood. A clinically informed qualitative study of older adults recovering from depression showed that participants who were admitted to a psychiatric hospital discovered new world views and ways of living, which often involved acceptance of the self and a heightened sense of spirituality

(Tanaka, 2018). Older adults found that experiencing emotional support, having trusting relationships, experiencing kindness from others, and feeling accepted within their community, were elements that helped them through the process of recovery. R/S was seen to help the participants develop a connection to the universe, experience hope and an acceptance of the self, deeper insight and awareness, and find inner-strength (Tanaka, 2018).

Baetz, Bowen, Jones, and Koru-Sengul (2006), examined the relationship between the frequency of spiritual worship and the importance of spiritual values in relation to mental illness. Furthermore, Baetz and colleagues (2006) were interested in identifying coping with current or past mental illness, based on the frequency of religious worship and spiritual values. In examining the trajectory of religious worship and mental illness throughout the adult lifespan, the authors observed an inverse relationship between religious worship and mental illness, such that as religious worship increased, the odds of experiencing symptoms related to mental illness decreased (Baetz et al., 2006). The respondents who reported having a previous diagnosis of mental illness also reported frequently attending religious worship and experienced fewer symptoms of mental illness, compared to the participants who were not involved within a religious community (Baetz et al., 2006).

Specific to this study and in disagreement with previous literature on R/S and mental illness, spirituality values were seen to be inversely associated with symptoms of mental illness. In particular, as one relied and lived according to their spiritual values, symptoms of mental illness increased (Baetz et al., 2006). Baetz and colleagues (2006), hypothesize that the negative association between spiritual values and mental illness may be attributed to the fact that symptoms of mental illness can intensify the search for and connection with a higher being or living a more meaningful life.

Regarding the perception of negative events experienced throughout the lifespan and in particular during older adulthood, research showed that R/S appeared to act as a protective factor. A study which looked at the experiences of Lesbian, Gay, Bisexual, and Transgender (LGBT) older adults, noted that the participants who held spiritual beliefs experienced a sense of belonging, were more likely to be involved with their community, and experienced less symptoms of depression, when compared to the participants who were not spiritual (Yarns, Abrams, Meeks, & Sewell, 2016). Further research suggests that practicing various spiritual techniques such as, meditation, prayer, and spending time in nature, were positively correlated to experiencing less symptoms of depression (Fow, 2010; Will, Dillon, & Larsen, 2015).

Overall, the literature surrounding R/S, positive mental health, and mental illness, points towards the positive effects that R/S have in promoting positive mental health and decreasing symptoms of mental illness. As this relationship is mostly salient within the older adult population, a review of particular theories of aging is important. Theories of aging can help inform the potential linking factors between one's R/S experience and belief and its relationship towards mental health and mental illness.

Theories of Aging

Statistics Canada (2010) reported that 1.4 million older adults aged 65 years and over were living in Canada. Due to the rapid aging of the Canadian population, it is important to understand their particular needs in order to improve positive mental health and decrease symptoms of mental illness. Theoretical frameworks of aging may help inform our understanding of the aging process. There are many theoretical perspectives that have influenced our current view of aging. Theories of aging pertinent to this project will be discussed below.

Erik Erikson's Psychosocial stages.

Erik Erikson's (1982) Psychosocial theory of development proposes that as one ages, they move towards the stage of integrity vs. despair, in which the older adult often searches for acceptance of their current life stage and their impending death. Once the acceptance of the proximity of death occurs, older adults are said to have reached a concept labelled by Erikson (1963) as ego integrity (as cited in Brown & Lewis, 2003). During the integrity vs. despair stage, an individual devotes more time towards personal growth, self-reflection and spirituality, while facing issues related to the aging process (Erikson, 1982). Erikson (1982) proposes that if an individual does not attain peace and acceptance of their impending death, they may live with regret and dissatisfaction, which in return may cause distress and angst (Erikson, 1982). This may explain why the literature points to R/S playing a more important role among older adults, who are often in the midst of experiencing these existential concerns. R/S may help individuals overcome fears related to the aging process by emphasizing aspects of life that go beyond the physical. Thus, R/S can serve to mitigate the potentially negative aspects of the aging process.

The Model for Successful Aging.

Rowe and Khan (1998), developed a model for successful aging. In order for aging to qualify as being successful, older adults ought to be in "avoidance of disease and disability" (Crowther, Parker, Achenbaum, Larimore, & Koenig, 2002, p. 615). Recent studies have suggested that social and cognitive wellbeing, as well as one's spirituality, are important factors to be considered alongside physical wellbeing in efforts of having a holistic understanding of the aging process (Thomas, Sancho, Galiana, & Oliver, 2016).

Tesch-Romer and Wahl (2017) further proposed that Rowe and Khan's (1998) initial model of aging does not account for the evolving needs of the aging population due to increased life expectancy among older adults and the possibility of living longer with disabilities and

disease. As such, they described seven criteria that may help conceptualize successful aging, including awareness and accommodation of care needs (Tesch-Romer & Wahl, 2017). For instance, individuals ought to expand their understanding of the aging process, encompassing concepts such as living well and aging with certain disabilities (Tesch-Romer & Wahl, 2017).

According to the authors, the aging process ought to be viewed as part of a continuum of life, where the ends of the spectrum would be considered aging well and aging with needs. Most importantly, they note that it is important to foster independent living, as it ensures that older adults experience autonomy, which in return was seen to increase overall life satisfaction (Tesch-Romer & Wahl, 2017). Rowe and Khan's (1998) model of successful aging may point towards the importance of including one's R/S belief in better understanding the evolving needs of older adults. As one is living with care needs and disability, R/S is an important factor to be taken into consideration in promoting overall wellbeing among older adults. R/S can potentially help one develop awareness towards their new needs and work towards accepting them, as similarly outlined by Erikson (1963), in the stage of integrity vs. despair.

The Socioemotional Selectivity Theory.

The socioemotional selectivity theory (Carstensen, 1987), introduces a theoretical model of aging which notes that older adults have the tendency to devote their attention towards meaningful relationships (as seen in Carstensen, Fung, & Charles, 2003). Older adults, therefore, report having fewer relationships when compared to younger or middle-aged adults. The relationships formed are perceived as being stronger, bringing increased social support and comfort. As one ages, one also becomes more selective with their relationships and life goals. For instance, older adults are more likely to pursue goals that are immediate and that increase meaning in their lives (Shaw, Gullifer, & Wood, 2016). They are more aware of experiencing

positive emotions and desire making their lives meaningful (Carstensen, et al., 2003). In the search for increasing meaning, older adults often shift from pursuing external goals (i.e., career), towards pursuing internal goals, such as spending more time with family and friends (Dalby, 2006). Carstensen's (1987), theory may also help explain some reasons behind R/S increasing as one ages. Older adults are seen to have the tendency of increasing meaning in life throughout prioritizing important relationships and achieving attainable goals, and therefore, R/S may help one lead a more meaningful life, while also helping older adults live a life with more symptoms pertaining to positive mental health (as cited in Shaw et al., 2016).

Theory of Gerotranscendence

Theories of aging also point towards the adoption of a transcendent view during later life stages (Tornstam, 1997; Dalby, 2006). According to Tornstam's (1989) theory of gerotranscendence, as individuals age, they shift their focus towards internal peace and solitude, in efforts of experiencing a state of calmness and inner strength (Tornstam, 1989). Therefore, older adults choose to disengage from activities and relationships that are not meaningful, in attempts to increase internal peace. During this process of shifting one's focus towards a more meaningful life, one can attain a state of calmness (Shaw et al., 2016).

Tornstam (1989) further describes three dimensions that one may fluctuate between throughout adulthood; the cosmic level, the level of self, and the level of social and personal relationships. During the cosmic level an individual becomes aware of their identification in relation to nature and time. The level of the self refers to the ability of an individual to discover their sense of self and who they are in relation to others. During the level of social and personal relationships, one discovers that the importance of relationships changes throughout the aging process (Shaw et al., 2016). The Theory of gerotranscendence can also help inform about the

shift an older adult may make in the midst of the final stages of life. During this shift, older individuals are searching for a deeper and more personal connection with the self, others, and a higher being. This shift can be considered as having R/S components, and previous literature shows that connection with others and/or a higher power helps increase positive mental health (Shaw et al., 2016).

Theory of selection, optimization, and compensation

Lastly, Baltes (1995), developed the theory of selection, optimization, and compensation. According to Baltes, as one ages they become more aware of their own limitations. The awareness gained helps older adults choose activities and goals that are attainable, in efforts of maximizing life satisfaction and overall wellbeing (Shaw et al., 2016). For instance, as one ages, they may not be able to perform certain tasks due to physical disabilities. To maximize meaning in life, they would choose to select a new goal or adjust the existing goal. Similar to the socioemotional selectivity theory developed by Carstensen (1987), the theory of selection, optimization, and compensation points towards the shift made in older adulthood, such that older adults tend to engage in activities that increase meaning and overall wellbeing in life. As such, an increase in R/S makes sense within this age group, as they attempt to form various connections, either personal or within another realm.

Purpose of thesis

The available literature suggests that aging is a salient determinant of mental health (Fuller-Thomson, Agbeyaka, LaFond, & Bern-Klug, 2016) and that the importance of R/S increases over the course of the adult lifespan (Koenig & Cohen, 2006; Wink & Dillon, 2002). The Model for Successful Aging, the Socioemotional Theory, the Theory of Gerotranscendence, and the Theory of Selection, Optimization, and Compensation, portrays the common theme of

the importance of spirituality, meaning, and connection during the last stages of life. Some authors suggest that one may turn towards R/S in efforts to seek support in coping with certain life stressors which occur in older age, such as chronic illness, loss of family and friends, existential issues and financial issues (Koenig, 2006).

The available literature points towards the importance of R/S throughout the adult lifespan. This particular relationship is mostly salient among older adults. R/S was seen to have promoting effects in relationship to positive mental health, while it also decreased symptoms of mental illness. Various theories of aging also point towards an internal shift that one experiences, where individuals are left searching for more meaningful relationships, engage in attainable activities and goals, and become more aware of their particular aging needs. The literature attests that R/S is a salient predictor of mental health and mental illness throughout the adult lifespan. Research also notes that as individuals rely on their R/S belief, they are at increased odds of experiencing increased symptoms of mental health and overall wellbeing in life, and decreased symptoms of mental illness. However, previous research has failed to examine R/S in relation to mental health and mental illness in the same sample. Similarly, evidence suggests that R/S may have a differential effect on mental health and mental illness depending on one's age or life stage.

The purpose of the following project was to examine the effects of R/S on mental illness and mental health in a sample of Canadian adults. Consistent with previous evidence on R/S and mental health, it was expected that individuals who report drawing strength from R/S beliefs, would have a higher prevalence of experiencing positive mental health and lower prevalence of experiencing mental illness. It is also hypothesized that the mental health promoting effects of R/S would be predominant among older Canadian adults (65 years and over).

Methods

Study population

Data from this study was drawn from the 2012 Canadian Community Health Survey-Mental Health Component (CCHS-MH), a national cross-sectional population health study conducted by Statistics Canada. The CCHS-MH utilizes a complex sampling strategy with unequal selection probability which permits computation of estimates that are representative of the Canadian population, increasing the generalizability of study results, when survey weights which consider the CCHS-MH design effect are used. Survey weights were applied to all analyses presented here.

The CCHS-MH samples persons living within the ten provinces of Canada, surveyed during a period of twelve months beginning in January 2012. Various groups were excluded from the sample, such as: indigenous persons living on reserves, full-time members of the Armed Forces, and individuals residing in institutional settings (e.g., prisons, long-term care), groups that represent around 3% of the entire Canadian population (Statistics Canada, 2018). The full sampling strategy is described elsewhere (see Statistics Canada, 2018).

Data was accessed using the CCHS-MH Public Use Microdata file (PUMF), a publicly available dataset. Trained interviewers collected participant information through the use of Computer Assisted Personal Interviewing (CAPI) and Computer Assisted Telephone Interviewing (CATI). This study was approved by the Saint Paul University Research Ethics Board (REB). The sample for this study included respondents aged 25 years and older (n=25,113).

The respondent level response rate was 86.3%, and after removal of missing data, the final analysis consisted of 20,019 participants.

Covariates

Age

Participants were initially asked to report their chronological age. To maintain participants' anonymity, the PUMF contains age groups based on five-year increments (e.g., 25-29). Given the interest in R/S, mental health, and mental illness across the adult lifespan, participants were initially grouped based on the five-year increments as originally outlined by Statistics Canada. This was done in efforts of showcasing the trajectory of R/S and the prevalence of mental health and mental illness within the study sample. For analysis purposes, the sample was later grouped into three age categories: 25 to 44 years, 45 to 64 years, and 65 years and above. Similar age categories have been used in previous research using the CCHS-MH (e.g., Gilmour, 2014).

Sex/gender

In the survey, the participants were asked to indicate their sex as male or female. Due to the inability to determine if participants reported based on their sex (i.e., biological attributes), or gender (i.e., socially constructed roles, behaviors, expressions, and identities), this project will refer to these responses as *sex/gender*.

Other covariates

Household income was measured by asking participants to report their total household income from all sources, using the following categories: "<20k", "20-39k", "40-59k", "60-79k", and "over 80k". Participants' education was coded as: "<secondary school grad", "secondary school grad", "some secondary school", and "post-second grad" and marital/relationship status was collected as: "single/separated/divorced", "widowed", or "married and common law". Chronic pain was assessed through an item asking participants about the extent to which pain

prevents daily activities, with options of: “no pain or discomfort”, “pain prevents no or few activities”, and “pain prevents most activities”.

Close relationships were captured by asking participants whether their relationships provided them with a sense of emotional security and well-being (yes/no); responses ranged from “strongly agree” to “strongly disagree”. Lifetime prevalence of negative mental health/substance abuse was assessed by asking whether participants had ever been diagnosed with a mental health condition by a health professional (yes/no).

Predictor

Strength from R/S beliefs

In order to measure one’s R/S belief and the importance of R/S in one’s life, participants were asked: “*In general, how important are religious or spiritual beliefs in your daily life?*”, and “*To what extent do your religious or spiritual beliefs give you strength to face everyday difficulties?*”. Response options for the first question ranged from “very important”, “somewhat important”, “not very important”, to “not at all important”. The participants who responded “very important” and “somewhat important” were categorized as high R/S, whereas “not very important” and “not at all important” were participants who were ranked low R/S. Response options for the second questions were ranging from: “a lot”, “some”, “a little” to “not at all”. Participants who responded “a lot” or “some” to this item were considered to have high R/S, whereas participants who responded “little” and “not at all” and were categorized as low R/S.

To identify the relationship between the two items, a correlation of the items with one another was conducted. The correlation showed a statistically significant positive association ($r=.85, p<.001$), suggesting that both items are measuring a similar construct. Given the interests in the effect of R/S as a source of strength and its relationship to positive mental health and

mental illness outcomes, the second item was retained in the multivariate analyses and henceforth refer to this item as *R/S*.

Outcomes

Positive mental health

In order to assess positive mental health, the Mental Health Continuum-Short Form (MHC-SF) was administered (Keyes, 2009). The MHC-SF consists of 14 items: three of the items measure emotional well-being and 11 of the items measure positive functioning (Keyes, 2009). The MHC-SF has been shown to have high internal validity, high internal reliability, and moderate test-retest reliability (Lamers, Westerhof, Bohlmeijer, Klooster, & Keyes, 2011).

An example of a question administered to measure emotional well-being is “In the past month, how often did you feel happy?”. An example of a question used to measure positive functioning is “In the past month, how often did you feel good at managing the responsibilities of your daily life? For each item, response options ranged from, “0-never”, “1-once or twice”, “2-about once a week”, “3-about 2 or 3 times a week”, “4-almost every day”, and “5-every day”. Participants were classified as flourishing if they experienced at least one out of three emotional well-being symptoms and six out of 11 positive functioning symptoms, “every day” or “almost every day” in the past month. Languishers were those who experienced one out of three emotional well-being symptoms, and six out of 11 positive functioning symptoms, “never” or “once or twice” in the past month. Participants’ who were neither classified as flourishing or languishing were characterized as having moderate mental health. For the purposes of this project, we computed a dichotomous variable to compare flourishers (i.e., flourishing mental health) and non-flourishers (i.e., moderate mental health and languishing).

Psychological distress.

For the purposes of this project, mental illness was categorized as psychological distress. Kessler's Psychological Distress Scale (K6) is a six-item measure used to assess symptoms related to Major Depressive Disorder (MDD), and Generalized Anxiety Disorder (GAD), based on the 15 diagnostic domains outlined by the DSM-III-R (Kessler et al., 2002). The K6 has shown construct validity across gender and over a twelve- year time period (Drapeau, Beaulieu-Prevost, Marchand, Boyer, Preville, & Kairouz, 2010) and has been validated in a large community sample (Khan, Chien, & Burton, 2014). Scale items include: "During the past month, how much did these feelings usually interfere with your life or activities?" and "During the past month, that is, from now to yesterday, about how often did you feel sad or depressed?". The response options ranged from: "4-all of the time", "3-most of the time", "2-some of the time", "1-a little of the time", to "0-none of the time". Items were summed in order to obtain a total score which ranges from 0 to 24, where higher scores represent a higher degree of psychological distress. Total distress scores of >13 indicated severe distress while scores within the range of 5 indicated moderate psychological distress, and scores <5 represented low distress as per Prochaska, Sung, Max, Shi, and Ong (2012). For the purposes of this study, we collapsed the moderate and severe scores in order to represent participants' scores of above 5 (i.e., indicative of psychological distress).

Statistical analysis.

Differences in sociodemographic characteristics by the primary study outcome of positive mental health were explored using age-stratified chi-square (χ^2) tests of independence.

In order to examine whether the effect of R/S on mental health depends on age (i.e., presence of effect modification), an age x R/S interaction was entered into the logistic regression models. Where statistically significant log-likelihood tests ($p < 0.05$) provided evidence for effect

modification, logistic regression models were stratified by age group. Where there was no evidence of effect modification, non-significant interaction terms were removed from the models prior to interpretation. The variance accounted for in each model was estimated with Nagelkerke R^2 . Data were analysed using SAS 9.4 (SAS Institute, Inc., Cary, NC) for Microsoft Windows.

Results

Preliminary findings

Figures 2 to 5 showcase noteworthy preliminary findings, such as R/S providing strength in times of need, the importance of R/S, and the prevalence of the participants who were flourishing and experiencing psychological distress, throughout the adult lifespan. The four figures are based on the initial five-year incremental age groupings created by Statistics Canada within the PUMF.

Figure 2 shows the proportion of participants who responded “a lot” or “some” to the question pertaining to R/S providing them with strength when in need. R/S appeared to increase throughout the adult lifespan, with higher percentage of older adults relying on R/S when in need. Across the adult lifespan, a greater proportion of women were found to rely on R/S in comparison to men. Among female participants between the ages of 25-29 years, 50% of participants were found to rely on R/S whereas among female participants 80 years and above, 82.2% of participants were found to rely on R/S. Among male participants between the ages of 25-29, 40% of participants were found to rely on R/S whereas among male participants 80 years and above, 65% of the participants were found to rely on R/S.

Figure 2. The percentage of participants who responded “a lot” or “some” to religion/spirituality as giving them strength by age and sex/gender.

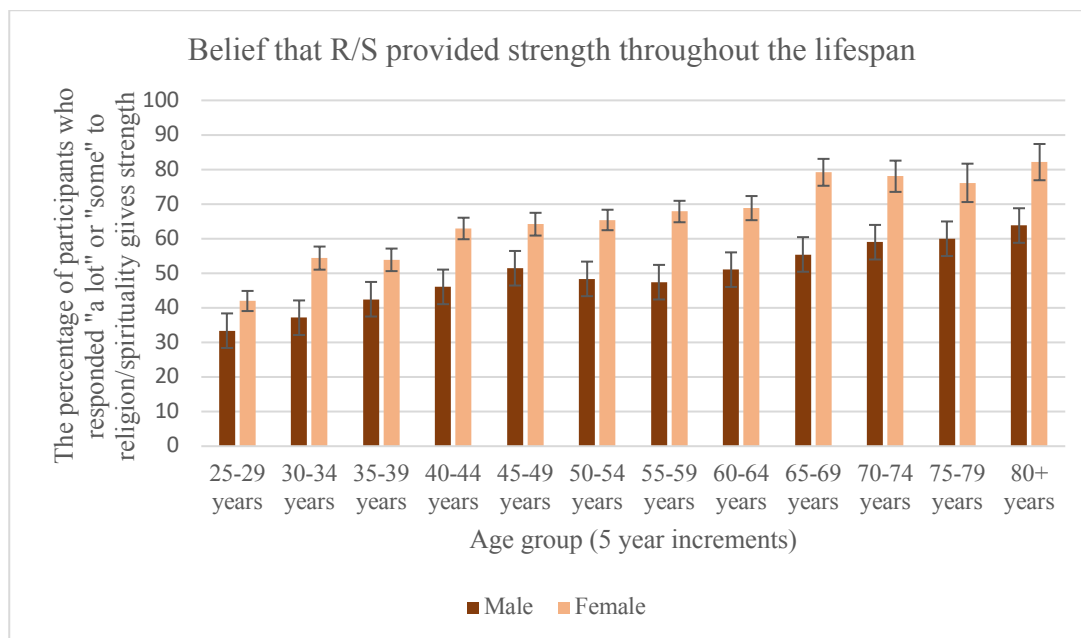
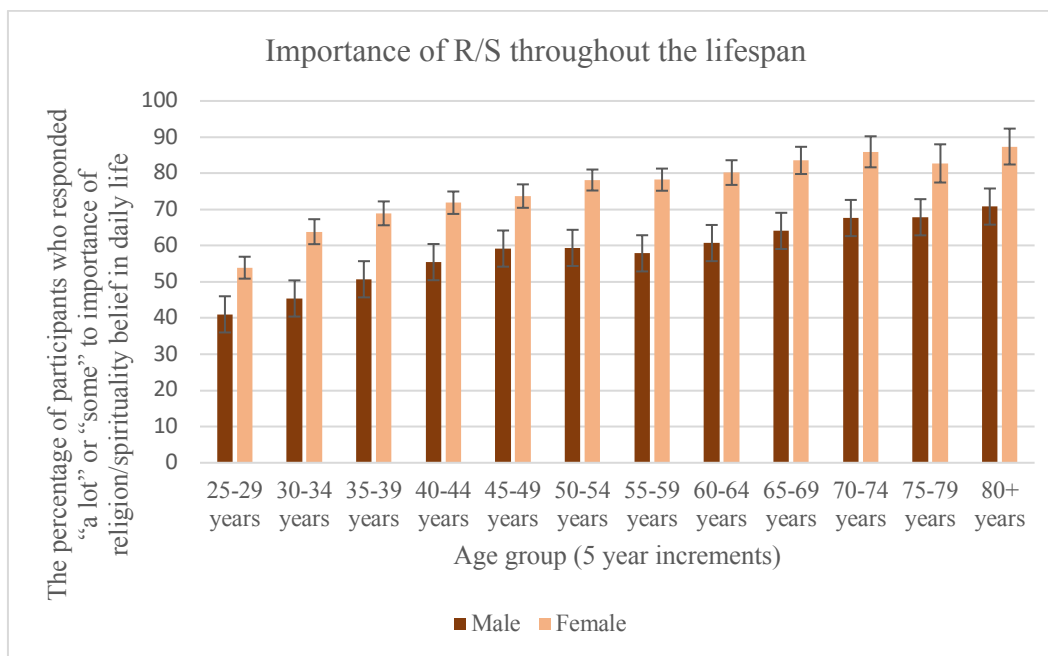


Figure 3 tracks the importance of R/S throughout the adult lifespan. Similar results can be observed as in Figure 2, where the importance of R/S increased throughout the adult lifespan, with higher importance of R/S was seen within older adults and among female participants. As mentioned, the two questions in Figure 2 and 3 were correlated to showcase that they are the same construct; the question pertaining to R/S as a source of strength was retained in the multivariate analyses.

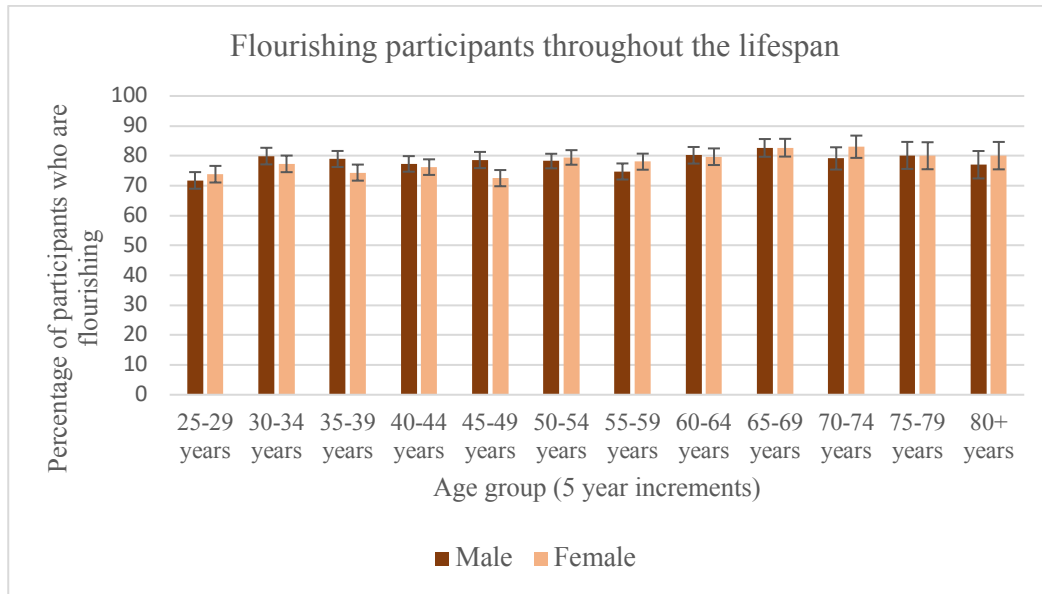
The preliminary findings presented in Figures 2 and 3 demonstrate that the two questions assessing R/S portray similar results; R/S increasing with age and providing more support in older adults' lives.

Figure 3. The percentage of participants who responded “a lot” or “some” to importance of religion/spirituality belief in daily life stratified by age and sex/gender



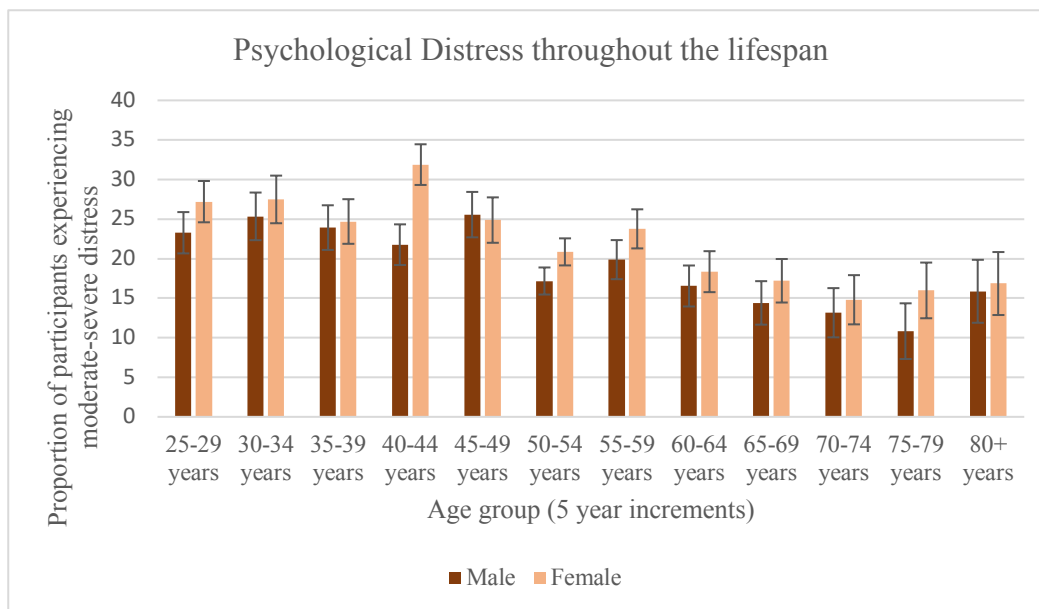
In Figure 4, the presence of flourishing throughout the adult lifespan is portrayed. It can be observed that Canadian adults are experiencing similar levels of flourishing throughout the lifespan, however, slightly increased flourishing can be observed within the older adults’ age categories (65 years and older).

Figure 4. The percentage of participants who are flourishing stratified by age group



The last figure, Figure 5, showcases the percentage of Canadian participants who were experiencing moderate to severe psychological distress, stratified by age groups. The results show that as one ages, the presence of psychological distress decreases. As such, older adults are seen to experience the least amount of psychological distress throughout the adult lifespan.

Figure 5. The percentage of participants who were categorized as experiencing moderate to severe psychological distress stratified by age group



The preliminary results presented by the figures below are in accordance with previous literature on R/S, flourishing, and psychological distress throughout the adult lifespan. The following section will further showcase Table 1 which includes a detailed description of the sample characteristics.

Sample characteristics

Table 1 shows a detailed description of the sample and the various variables included in this project. As shown in Table 1, 51.3% respondents were women and 48.7% were men. Seventy-eight percent of participants were white and 21.7% were visible minorities. Fifty-six percent of the participants reported high R/S. Seventy-eight percent of the respondents were flourishing and 21.7% experienced high or moderate psychological distress.

Across all groups, flourishers were more likely to report higher income ($p < .01$), have close relationships ($p < .001$), were less likely to experience pain ($p < .001$), and were less likely to have been diagnosed with a mental illness/substance abuse at some point throughout their lifespan ($p < .001$). Flourishing was also more likely to report high R/S ($p < .001$). Interestingly, among younger adults (i.e., 25-44 years old) and middle-aged adults (i.e., 45-64 years old), flourishers were more likely to report higher education and higher household income ($p < .001$ and $p < .001$, respectively). However, among older adults, there were no differences between flourishers and non-flourishers in terms of education and household income ($p < .001$ and $p < .001$), respectively

Population weighted characteristics of respondents with and without positive mental health (PMH) by age (Unweighted n=20,019): Canadian Community

Health Survey - Mental Health Component (2012)

	Sample %	25-44 years (N=6,677)			45-64 years (N=7,678)			≥65 years (N=5,664)		
		% with Flourishing	% without Flourishing	<i>p</i>	% with Flourishing	% without Flourishing	<i>p</i>	% with Flourishing	% without Flourishing	<i>p</i>
Sex				0.22**			0.59			0.25
Male	48.74%	50.27%	48.59%		49.43%	48.69%		44.99%	47.39%	
Female	51.26%	49.73%	51.41%		50.57%	51.31%		55.01%	52.61%	
Household Income				<.001* **			<.001 ***			0.02* *
<\$20,000	3.98%	2.44%	5.24%		3.06%	8.14%		4.94%	6.53%	
\$20,000 - \$39,999	12.00%	8.25%	11.50%		7.31%	12.11%		24.41%	28.63%	
\$40,000 - \$59,999	18.41%	14.29%	18.52%		15.75%	17.72%		29.07%	28.83%	
\$60,000 - \$79,999	17.62%	17.19%	18.34%		17.05%	18.14%		18.85%	17.46%	
\$80,000 +	48.00%	57.83%	46.41%		56.83%	43.88%		22.72%	18.55%	
Education				<.001* **			0.02* *			0.16
<Secondary school graduation	14.99%	7.11%	9.88%		12.43%	14.69%		32.97%	35.17%	
Secondary school graduation	14.90%	13.25%	14.74%		15.77%	17.35%		15.14%	14.00%	
Some post-secondary	4.85%	5.04%	6.06%		5.06%	4.78%		3.43%	4.82%	
Post-secondary graduation	65.26%	74.60%	69.32%		66.74%	63.18%		48.45%	46.01%	

Marital status				<.001** *			<.001***			<.001***
Married/common-law	70.00%	70.15%	59.00%		76.67%	68.81%		66.60%	57.91%	
Widowed	5.58%	0.11%	0.22%		2.49%	2.27%		22.01%	25.66%	
Single/separated/divorced	24.42%	29.74%	40.785.5%		20.84%	28.92%		11.39%	16.43%	
Close relationships				<.001** *			<.001***			<.001***
No	3.04%	1.05%	7.62%		1.08%	10.54%		1.68%	11.28%	
Yes	96.96%	98.95%	92.38%		98.92%	89.46%		98.32%	88.72%	
Ethnicity				0.29			0.18			0.07
White	78.29%	70.15%	68.81%		81.08%	82.50%		88.15%	90.53%	
Visible minority	21.71%	29.85%	31.19%		18.92%	17.50%		11.85%	9.47%	
Pain				<.001** *			<.001***			<.001***
No pain	77.62%	87.22%	78.69%		79.01%	61.86%		69.64%	59.70%	
Prevents no or few activities	13.23%	9.02%	12.56%		12.76%	16.83%		18.91%	19.13%	
Prevents some or most activities	9.15%	3.76%	8.75%		8.23%	21.32%		11.44%	21.17%	
Lifetime mental health diagnosis				<.001** *			<.001***			<.001***
No	66.30%	69.89%	49.69%		67.27%	45.97%		78.99%	66.10%	
Yes	33.70%	30.11%	50.31%		32.73%	54.03%		21.01%	33.90%	
Psychological distress				<.001** *			<.001***			<.001***
Low	78.31%	82.58%	47.88%		85.99%	54.84%		89.41%	65.50%	
Moderate/severe	21.69%	17.42%	52.12%		14.01%	45.16%		10.59%	34.50%	
Spiritual				<.001** *			<.001***			<.001***
Not spiritual	44.01%	51.20%	59.25%		39.59%	50.24%		27.22%	42.80%	
Spiritual	55.99%	48.80%	40.75%		60.41%	49.76%		72.78%	57.20%	

Note. * $p < .05$; ** $p < .01$; *** $p < .001$

Positive mental health

A (-2) log likelihood test of the change in model fit with the inclusion of the age by R/S interaction terms (45-64 years: $p=.093$, 65+ years: $p<.001$) demonstrated that there was a significant age by spirituality interaction ($p<.01$), and the model accounted for 12.1% of the variance in flourishing status. The statistically significant interaction term warranted stratifying the analyses by age group.

Age stratified results showed that among respondents aged 25 to 44 years, individuals who reported high R/S had increased odds of flourishing relative to low R/S participants, after controlling for known covariates (OR=1.44, 95% CI=1.28-1.63, $p<.001$) (Table 2). The model accounted for 11.3% of the variance in flourishing ($\chi^2(16) = 488.65$, $p<.001$).

Table 2. Logistic regression results for the relationship between religion/spirituality and positive mental health for younger adults (25-44 years)

Variable	B	Wald χ^2	OR	95% CI		p
				Lower	Upper	
Intercept	-1.17	24.83				
Household income						
<20k			Referent (1.00)			
20-39k	0.38	5.01	1.47	1.05	2.05	0.03
40k-59k	0.24	2.25	1.28	0.93	1.75	0.13
60-79k	0.40	6.07	1.49	1.09	2.05	0.01
>=80k	0.63	16.03	1.87	1.38	2.55	<.001
Education						

<Secondary school			Referent (1.00)			
Secondary school	0.08	0.43	1.09	0.85	1.38	0.51
Some post-secondary	0.09	0.30	1.09	0.80	1.48	0.58
Post-secondary	0.11	1.08	1.12	0.91	1.38	0.30
Marital status						
Single/separated/divorced			Referent (1.00)			
Widowed	-0.28	0.17	0.75	0.20	2.90	0.68
Married/Common law	0.28	20.45	1.33	1.17	1.50	<.001
Sex						
Male			Referent (1.00)			
Female	-0.16	7.47	0.85	0.76	0.96	0.01
Culture/Race						
White			Referent (1.00)			
Non-white	0.26	15.47	1.30	1.14	1.48	<.001
Pain						
No pain or discomfort			Referent (1.00)			
Pain prevents no or few activities	-0.27	8.72	0.77	0.64	0.91	<.01
Pain prevents some or most activities	-0.52	18.93	0.59	0.47	0.75	<.001
Relationships						
No close relationships			Referent (1.00)			
Close relationships vs. no close relationships	1.72	106.93	5.61	4.05	7.78	<.001
Mental disorder						
No mental health disorder/ substance use			Referent (1.00)			
Mental health disorder/substance use during life	-0.76	161.07	0.47	0.41	0.52	<.001
Religion/Spirituality						
Not spiritual			Referent (1.00)			
Spiritual	0.37	36.62	1.44	1.28	1.63	<.001

Among middle aged participants (45-64 years), respondents who reported high R/S were at increased odds of flourishing, in comparison to the respondents who reported low R/S (OR=1.62, 95% CI=1.44-1.82, $p<.001$) (Table 3). This model accounted for 15% of the variance in flourishing ($\chi^2(16) = 658.93, p<.001$).

Table 3. Logistic regression results for the relationship between religion/spirituality and positive mental health for middle aged adults (45-64 years)

Variable	B	Wald χ^2	OR	95% CI		p
				Lower	Upper	
Intercept	-1.12	27.40				
Household income						
<20k			Referent (1.00)			
20-39k	0.33	4.51	1.39	1.03	1.88	0.03
40k-59k	0.54	13.62	1.72	1.29	2.28	<.001
60-79k	0.57	15.05	1.77	1.33	2.40	<.001
>=80k	0.85	35.80	2.34	1.77	3.09	<.001
Education						
<Secondary school			Referent (1.00)			
Secondary school	-0.14	1.68	0.87	0.71	1.07	0.20
Some post-secondary	0.11	0.49	1.12	0.82	1.51	0.48
Post-secondary	-0.06	0.38	0.95	0.79	1.13	0.54
Marital status						
Single/separated/divorced			Referent (1.00)			
Widowed	0.43	4.46	1.54	1.03	2.30	0.03
Married/Common law	<.01	<.00	1.00	0.87	1.16	0.98
Sex						
Male			Referent (1.00)			
Female	-0.14	5.00	0.87	0.78	0.98	0.03

Culture/Race						
White			Referent (1.00)			
Non-white	0.04	0.25	1.04	0.89	1.22	0.62
Pain						
No pain or discomfort			Referent (1.00)			
Pain prevents no or few activities	-0.45	30.63	0.64	0.55	0.75	<.001
Pain prevents some or most activities	-0.87	150.13	0.42	0.35	0.49	<.001
Relationships						
No close relationships			Referent (1.00)			
Close relationships vs. no close relationships	2.10	180.84	8.17	6.02	11.10	<.001
Mental disorder						
No mental health disorder/ substance use			Referent (1.00)			
Mental health disorder/substance use during life	-0.72	139.05	0.49	0.43	0.55	<.001
Religion/Spirituality						
Not spiritual			Referent (1.00)			
Spiritual	0.48	63.20	1.62	1.44	1.82	<.001

As shown in Table 4, older adults (≥ 65 years) who reported high R/S had higher odds of flourishing, when compared to their counterparts with low R/S (OR=2.04, 95% CI=1.70-2.45, $p<.001$). The model accounted for 10% of the variance in flourishing ($\chi^2(16) = 250.34$, $p<.001$).

Table 4. Logistic regression results for the relationship between religion/spirituality and positive mental health for older adults (≥ 65 years)

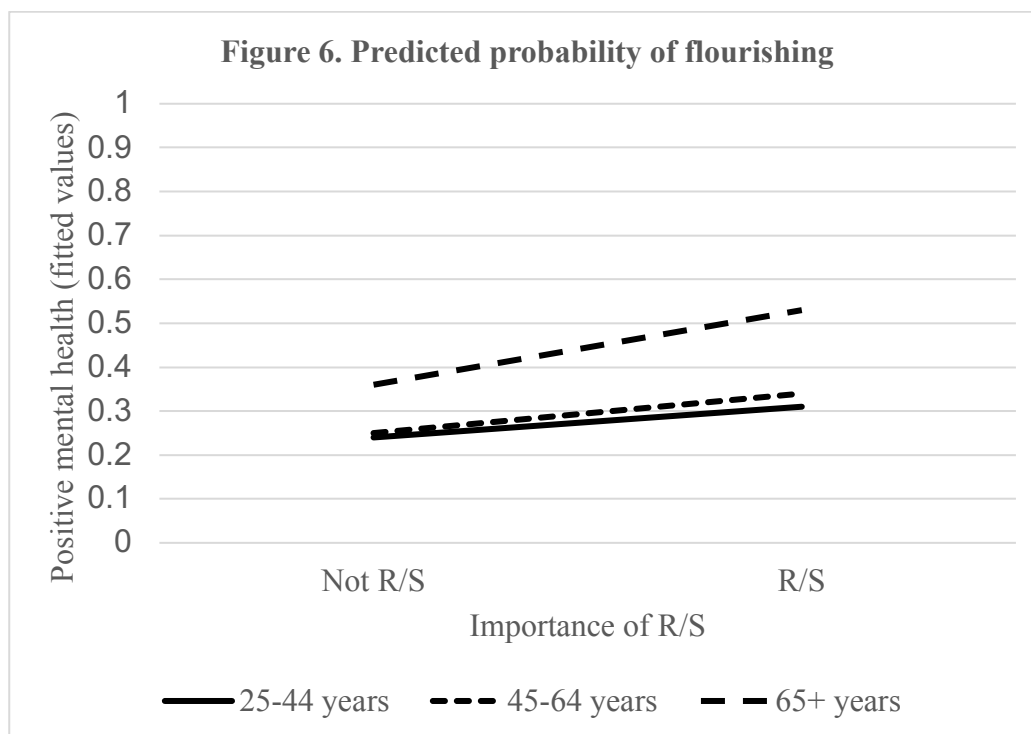
Variable	B	Wald χ^2	OR	95% CI		p
				Lower	Upper	

Intercept	-0.60	3.91				
Household income						
<20k			Referent (1.00)			
20-39k	0.02	0.01	1.02	0.69	1.51	0.91
40k-59k	0.15	0.56	1.17	0.78	1.74	0.45
60-79k	0.17	0.62	1.19	0.77	1.83	0.43
>=80k	0.29	1.79	1.34	0.87	2.05	0.18
Education						
<Secondary school			Referent (1.00)			
Secondary school	0.10	0.56	1.11	0.84	1.46	0.46
Some post-secondary	-0.18	0.66	0.83	0.54	1.29	0.42
Post-secondary	0.07	0.43	1.07	0.87	1.32	0.51
Marital status						
Single/separated/divorced			Referent (1.00)			
Widowed	-0.07	0.25	0.93	0.70	1.24	0.61
Married/Common law	0.21	2.36	1.23	0.94	1.61	0.12
Sex						
Male			Referent (1.00)			
Female	-0.02	0.04	0.98	0.81	1.19	0.84
Culture/Race						
White			Referent (1.00)			
Non-white	-0.22	2.13	0.81	0.60	1.08	0.14
Pain						
No pain or discomfort			Referent (1.00)			
Pain prevents no or few activities	-0.09	0.67	0.91	0.73	1.14	0.41
Pain prevents some or most activities	-0.73	38.19	0.48	0.38	0.61	<.001
Relationships						
No close relationships			Referent (1.00)			
Close relationships vs. no close relationships	1.86	93.92	6.45	4.42	9.40	<.001
Mental disorder						
No mental health disorder/ substance use			Referent (1.00)			

Mental health disorder/substance use during life	-0.54	29.68	0.59	0.48	0.71	<.001
Religion/Spirituality						
Not spiritual			Referent (1.00)			
Spiritual	0.71	58.80	2.04	1.70	2.45	<.001

Figure 6 shows the predicted probability of flourishing by age group. As can be seen in the figure, the greatest effect of R/S on flourishing was among older adults.

Figure 6. The predicted probability of flourishing status (positive mental health) by R/S and age group



Psychological distress

There was a nonsignificant R/S by age interaction (45-64 years: $p=0.32$, 65+ years: $p=0.38$); as such, unlike with the flourishing analyses, the analyses treating psychological distress as the outcome were not stratified by age group. In the main effect model (i.e., non-stratified; Table 5) adjusted for covariates, there was no association between R/S and psychological distress ($p=0.24$). There was an inverse relationship between age and psychological distress; older respondents were at reduced odds of reporting psychological distress (45-64 years: $p<.001$; 65+ years: $p<.001$), compared to respondents in the youngest age category (25-44 years).

Table 5. Logistic regression results for the relationship between religion/spirituality and psychological distress

Variable	<i>B</i>	Wald χ^2	OR	95% CI		<i>p</i>
				<i>Lower</i>	<i>Upper</i>	
Intercept	0.30	4.52				
Household income						
<20k			Referent (1.00)			
20-39k	-0.24	5.57	0.79	0.65	0.96	0.02
40k-59k	-0.35	12.90	0.71	0.58	0.85	<.001
60-79k	-0.52	27.76	0.59	0.49	0.72	<.001
>=80k	-0.86	80.08	0.42	0.35	0.51	<.001
Education						
<Secondary school			Referent (1.00)			
Secondary school	-0.26	13.22	0.77	0.67	0.89	<.001
Some post-secondary	0.04	0.19	1.04	0.87	1.26	0.66
Post-secondary	-0.16	7.88	0.85	0.76	0.95	0.01
Marital status						

	Single/separated/divorced			Referent (1.00)			
	Widowed	-0.24	5.46	0.79	0.65	0.96	0.02
	Married/Common law	-0.29	40.79	0.75	0.68	0.82	<.001
Sex	Male			Referent (1.00)			
	Female	0.26	42.45	1.30	1.20	1.40	<.001
Culture/Race	White			Referent (1.00)			
	Non-white	0.04	0.76	1.05	0.95	1.15	0.38
Pain	No pain or discomfort			Referent (1.00)			
	Pain prevents no or few activities	0.72	182.19	2.05	1.84	2.27	<.001
	Pain prevents some or most activities	1.14	362.17	3.14	2.79	3.54	<.001
Relationships	No close relationships			Referent (1.00)			
	Close relationships vs. no close relationships	-1.28	169.59	0.28	0.23	0.34	<.001
Age	25-44			Referent (1.00)			
	45-64	-0.48	120.48	0.62	0.57	0.67	<.001
	65+	-1.01	227.08	0.37	0.32	0.42	<.001
Mental disorder	No mental health disorder/ substance use			Referent (1.00)			
	Mental health disorder/substance use during life	1.21	900.20	3.35	3.09	3.62	<.001
Spirituality	Not spiritual			Referent (1.00)			
	Spiritual	0.05	1.41	1.05	0.97	1.14	0.24

Discussion

This thesis examined whether R/S was associated with increased positive mental health and decreased psychological distress throughout the adult lifespan. In addition, this project further examined whether the effects of R/S depended on age. The analyses yielded several noteworthy findings.

Flourishing status was reported by the majority of the participants in the sample study. The individuals who were flourishing reported having close relationships, experiencing less pain, having a higher income, and were less likely to have been diagnosed with a mental illness and/or substance abuse, when compared to the participants who were not flourishing. A significant determinant of positive mental health across all age groups was also R/S.

Regarding demographic variables, it was seen throughout the project that older adults aged 65 years and older were more likely to experience symptoms of positive mental health, decreased psychological distress, and find support in R/S when in need. When accounting for sex/gender differences, female participants were more likely to report that R/S provided them with strength throughout their lifespan, that R/S was an important part in their lives, positive mental health, and were also slightly more likely to experience psychological distress throughout their lives. These results align with previous research that used population health data and accounted for the similar covariates (e.g., Baiden & Fuller-Thomson, 2016; Fuller-Thomson et al., 2016).

Achieving positive mental health and having close relationships were significantly associated across all age groups. It is possible that promoting social relationships and connection is pivotal in promoting wellbeing and increasing the chances of one's experience of symptoms related to mental health. For instance, Keyes (2002a; 2002b; 2007a; 2007b; 2012), suggests that

experiencing positive mental health is associated with positive feelings about oneself and a sense of belonging within society. It can be inferred that as one experiences a higher sense of belonging and more positive emotions, they also experience increased positive mental health. These results are in line with previous literature that outlines the association between social connection, close relationships, and flourishing status (Choenarom et al., 2005; Cohen, 2004; Cohen & Syme, 1985; as cited in Feeney & Collins, 2014). Similarly, research suggests that attending support groups and/or group therapy also helps increase social connection within the community, which in return helps facilitate close connections and promotes positive mental health (Cruwys et al., 2014; Pfeiffer et al., 2010; as cited in Fuller-Thomson et al., 2016).

Experiencing less pain was also significantly associated with flourishing status across all age groups. Previous research that examined the relationship between pain and flourishing outlined that individuals who were experiencing chronic pain, and activity-preventing pain, were less likely to experience flourishing status (Gilmour, 2015). As pain increases or prevents activities, it restricts the pursuit towards pleasurable and meaningful activities (Gilmour, 2015). This may lead to social isolation and an inability to fully experience meaningful or close relationships (Gilmour, 2015). These results portray similar information as outlined by various theories of aging, which mention the importance of pleasurable and meaningful activities during later life stages (Carstensen, 1987; as cited in Shaw et al., 2016).

Fuller-Thomson and colleagues (2016), further outline that individuals who experience mobility issues are at increased odds of experiencing social isolation, and tend to rely more on family members or personal workers in developing social connections. They note the importance of assessing and treating physical health and mental health in tandem, as they both appear as

being associated with flourishing status across the adult lifespan, where less pain is associated with higher chances of achieving positive mental health (Fuller-Thomson et al., 2016).

With regards to age differences, the results of this thesis show that older adults who experience less pain are at increased odds of experiencing positive mental health. The relationship between pain and flourishing can be traced back to theories of aging, where older adults who age with certain disabilities or care needs experience overall wellbeing and life satisfaction if they develop an awareness towards their aging needs (Tesch-Romer & Wahl, 2017).

Higher income was associated with flourishing only among the young adults and middle-aged adults' groups which supports results from previous research noting the link between socioeconomic status and positive mental health (Keyes, 2007; Gilmour, 2014; as seen in Fuller-Thomson, 2016). These results may also align with theories of aging which suggest that older adults tend to develop an increased interest in social connection, meaningful relationships, and R/S, rather than being focused on external resources and goals (Carstensen, 1987).

Mental illness and/or substance abuse diagnoses were also associated with positive mental health. The participants who had never been diagnosed with a mental illness and/or a substance abuse issues, were at increased odds of experiencing flourishing across all age groups. Fuller-Thomson and colleagues (2016) conducted multiple studies which looked at achieving complete mental health after diagnoses of mental illness. Throughout their literature, they found that at highest odds of experiencing complete mental health were individuals who were free from any lifetime symptoms of mental illness and/or substance abuse.

One of the strongest predictors of positive mental health was R/S. This association was predominant within the older adults' group, where the odds of experiencing positive mental

health and R/S was the greatest. When accounting for the effects of R/S and age of positive mental health, the magnitude of the effects of R/S was greatest among participants aged 65 years and older. These results are consistent with findings from pre-existing literature which support the promoting factor of R/S across the adult lifespan (Worthington, 1989; Noronha, 2015). Further evidence shows that older adults in particular rely on R/S (Agli et al., 2015; Colishaw et al., 2013).

Indeed, the literature notes that older adults who report R/S, may exhibit higher resiliency in face of experiencing difficulties in life (Araujo dos Reis & de Olivia Menezes, 2017), with findings supporting theories of aging in gerontology and in developmental psychology which point to the importance of R/S during this stage of life (e.g., Erikson, 1982; Erikson, Erikson, & Kivnic, 1989; Tornstam, 1989). According to multiple theories of aging, older adults wish to turn towards a personal connection with oneself and others, the divine or a higher being, and tend towards developing and focusing their attention towards meaningful relationships (Shaw et al., 2016). The results of this thesis point towards this shift as well. Throughout the study sample, older adults who experienced closer connections and were relying on R/S were at increased odds of experiencing positive mental health. Yet, the cross-sectional nature of the study precludes any conclusions about whether these results stem from aging effects or cohort differences.

Porter and Ronnenberg (2013), were interested in assessing the relationship between successful aging and religious affiliation among older transgender adults. In efforts to do so, a logistic regression model was conducted (Porter & Ronnenberg, 2013). Covariates such as age, race, income, disability, and social support were accounted for within the model (Porter & Ronnenberg, 2013). Results indicated that the odds of aging successfully were increased as age, social support, and income increased (Porter & Ronnenberg, 2013). Although the variables

mentioned above reached significance in the model, religious affiliation was not found to be a significant predictor of successful aging among members of this sample. Taken together with the findings presented in this thesis, it may be that R/S may not be salient for all members of the population, an important consideration for mental health practitioners. As clinicians, it is important to thoroughly assess the importance of R/S for each client/patient, to tailor treatment plans towards individual needs, in efforts of increasing positive mental health and overall wellbeing as effectively as possible (Porter & Ronnenberg, 2013).

In terms of psychological distress, a significant interaction between R/S and age was not observed, nor was a main effect of R/S. These results somewhat align with previous literature which notes that R/S is not necessarily a resource for persons living with mental illness. For instance, Mohr, Brandt, and Borrás (2006), when examining the effects of R/S in patients living with schizophrenia, reported that in some cases R/S was seen as being a detriment to treatment as some patients may have experienced increased psychotic symptoms, induced spiritual despair, increased suicide attempts, and substance abuse.

Other studies have shown that R/S was a preferred element in the treatment of older adults living with symptoms of anxiety and depression (Stanley et al., 2011). The findings from this study along with the findings from the previous study mentioned, on the hindering effects of R/S among patients experiencing symptoms related to schizophrenia, may help underline that R/S may be beneficial for some clients potentially experiencing less severe mental illness.

As psychological distress was categorized as a dichotomous variable (i.e., low distress and moderate to high), this may have hindered the ability to fully focus on individuals with either moderate or high distress separately. As previous literature notes (e.g., Getz, Fleck & Strakowski, 2001; Stanley et al., 2011), individuals who experience mental illness may have

different needs and may cope differently with their symptoms. For example, previous research points towards the potential detrimental effects of R/S in living with symptoms of psychosis (Getz, et al., 2001). This thesis was not able to capture specific mental illnesses and/or substance abuse issues in order to fully understand how R/S may benefit treatment or hinder it. Being able to further tease apart moderate and high psychological distress symptoms may help us develop an understanding on the effects of R/S for this particular group.

Regarding the assessment for R/S, it was limited to two questions. Evidence suggests that R/S are multifaceted phenomena, such that their relationship with mental health may be more complex than captured in this thesis. For example, Exline, Yali, and Sanderson (2000), make note that although religion may be seen as providing comfort, if one experiences “religious strains”, they may lead to living with symptoms of depression and suicidality. Religious strain can be indicative of a person experiencing God as punitive (Rizzuto, 1979), or being fearful of God’s punishment (Pargament et al., 1998, as cited in Exline et al., 2000). As the questions only encapsulate the presence or absence of R/S beliefs and the importance of R/S in one’s life, it is not clear if any participants who were categorized as having R/S beliefs experienced any religious strains. This may help explain the nonsignificant association between R/S and psychological distress. This being said, previous literature appears to point towards the benefits of having R/S in treatments of some mental illnesses, which may help explain the findings of the results for psychological distress (Corrigan, McCorkie, Schell, & Kidder, 2003; Irene, Nienow, Choi, Enghahl, Nguyen, & Thuras, 2015).

Strengths

This thesis adds to the growing body of literature on R/S, aging, mental health, and mental illness, and has numerous strengths. The data were drawn from a large representative sample of adult Canadians, with a high response rate.

Apart from the large sample, the scales used throughout this study, such as the Mental Health Continuum-Short Form and the K6, are well-validated and applicable to many diverse populations (Hajebi, et al., 2018; Won & Hae, 2015). This constitutes a strength as the chances of the results being reliable and valid are maximized. The data for this study were drawn from a data set which can be used by the public. This constitutes a strength as the approach used throughout this study allows for replication. Furthermore, the results found throughout the study were similar to results from previous research conducted with the CCHS-MH data set and in line with the literature pertaining to positive mental health, mental illness, and the protective effect of R/S. The study also accounted for a variety of confounding variables, which has increased the chances of the results being associated to the main variables, such as positive mental health, mental illness, and R/S.

Limitations

While the study adds to the literature on R/S mental health and aging, it is not without limitations. The results presented are drawn from self-report data. Self-reporting can be considered a limitation as the answers are based on the participants' current subjective experiences, and may be affected by recall bias (Baiden & Fuller-Thomson, 2016). The data were cross-sectional; therefore, we cannot assess temporality of variables limiting causal inferences. In terms of mental illness, there were only a few disorders included in this study (i.e., anxiety, depression, psychosis), while disorders such as cluster B illnesses (i.e., personality disorders – borderline personality disorder, narcissistic personality disorder, etc.) (American

Psychiatric Association, 2013), were not included. The exclusion of these disorders may hinder our understanding of the comforting effects of R/S for these particular illnesses, and in particular within the personality disorder clusters.

As mentioned, psychological distress was categorized as a dichotomous variable, encapsulating moderate to high distress. This constitutes as a limitation, as this thesis may have not been able to fully assess the promoting effects of R/S based on the different types of mental illnesses, in efforts of noting any beneficial or hindering effects. This may have also hindered the ability to show the relationship between psychological distress and age.

Demographic data suggests that Canada is becoming increasingly secular, and it may be that the age dependent effect of R/S is reflective of cultural differences between young, mid-aged, and older adults, rather than changes related to the aging process (Pew Research Center, 2013). For instance, religious adherence, religious commitment, and religious attendance were seen to decline over the past decades. Moreover, newer generations were seen to be less religious compared to Canadians born before 1946 or earlier (Pew Research Center, 2013). As noted in the method section, certain groups were also excluded from our the CCHS-MH. Of particular consideration to the study of aging, mental health, and spirituality are individuals residing in long-term care homes, indigenous elders living on reserve, older Canadians who are not fluent in either French or English, and older prisoners. The excluded members of these subpopulations limit the generalizability of these findings.

Due to my inability to tease apart R/S within the dataset, I was unable to determine whether participants based their responses on religion, spirituality, or a combination of the two constructs. Both spirituality and religion are complex and multifaceted constructs with numerous distinctions (Hill, Pargament, Hood, McCullough, Swyers, Larson, & Zinnbauer, 2000). Future

research should use tools which can tease apart spiritual versus religious differences. As spirituality can describe an individual experience, researchers note that one may identify with being spiritual without adhering to a religion (Hill et al., 2000).

Sawatzky, Ratner, and Chiu (2005), explored the defining differences between religion and spirituality, and concluded that although similar, there are important points of departure that ought to be considered. For instance, spirituality was seen to reflect one's personal experience, rather than extrinsic behaviors (Sawatzky et al., 2005). It is therefore important to fully understand the differences between the two constructs in order to have a better grasp of their promoting effects. The literature also points towards the importance of being consistent in defining these two constructs (Hill et al., 2000). Hill and colleagues (2000) report that if one is not consistent with defining "religion" and "spirituality", it may make results difficult to draw conclusions and understand their importance in promoting one's wellbeing. Therefore, according to Hill and colleagues (2000), spirituality can be operationalized as a search for meaning, identity, etc., while religion is understood as the behaviors exhibited that help one receive support from a religious support system (Hill et al., 2000). As the majority of the literature combines R/S, it is important for further research to tease apart these two constructs and understand their differential effects on adults' mental health across the lifespan.

Implications

The results presented throughout this thesis have great implications for the Canadian aging population and the importance of promoting positive mental health and decreasing symptoms of mental illness. R/S was deemed to play a protective role in relation to promoting mental health throughout the adult lifespan, however this relationship was mostly salient within

the older adult population. By being aware of this important relationship, health practitioners can start integrating R/S interventions in health care in efforts of increasing overall wellbeing.

It is clear that the majority of the Canadian population identifies with symptoms of flourishing throughout the lifespan and that R/S may play an important role in their experience. While health care professional may assess the importance of R/S in one's life, in order to develop a tailored plan that can fit their unique needs, it is also important to be aware of the potential external variables that may influence their mental health or symptoms of mental illness, such as income, sex/gender, education, previous mental illness, etc.

The results shown through this study also help inform and increase the awareness of mental health practitioners and larger society regarding the protective role of R/S in the older adult population. This may help health practitioners develop openness towards exploring the importance of R/S with clients/patients and discovering how they can rely on their faith for support and strength.

Future Directions

Further research should focus on teasing apart R/S, in efforts of understanding the implications related to the two concepts. As individuals several groups were not part of the study (i.e., members of the Armed Forces, older adults within residential care, and First Nation individuals living on reserves), future research could examine the effects of R/S within these groups. Individuals who are a part of the Armed Forces may live with significant symptoms of mental illness and R/S may be a protective factor in helping them derive meaning from their traumatic experiences.

An important association found by this thesis was the relationship between close relationships and positive mental health. These results can be important for clinicians to note as

the therapeutic alliance can constitute as a close relationship. As such, further research could examine the relationship between having a strong and healthy therapeutic alliance and positive mental health. It can be that, similar to support groups where clients experience increased wellbeing and positive mental health, the relationship built within the therapeutic room may hold benefits to the client. This potential relationship ought to be explored in more detail further as it can help inform health care practitioners about the importance of the therapeutic alliance and its benefits for the clients seen.

The results of this thesis along with results from previous research suggest that younger adults experience increased psychological distress when compared to older adults. It may be that older adults experience unwillingness to come forward and report symptoms of mental illness due to their negative perceptions and stigma surrounding mental illness (Segal, Coolidge, Minic, & O'Riley, 2004). Further research could examine the relationship between age and psychological distress in efforts of better understanding the reasons behind the increased distressed experienced by younger adults. It may be that younger generations tend to be more open in regards to their mental illness and be more comfortable reporting the symptoms experienced due to potential societal shifts where mental health is less stigmatized. On the other hand, older adults may be more inclined to shy away from seeking help from mental health professionals, as previous literature suggests (Segal et al., 2004).

Longitudinal studies would be suggested as further research in efforts of understanding any time effects of R/S and more importantly how R/S may help improve physical and psychological health throughout different life stages. More specifically, for the individuals who already hold a belief that R/S is important and rely on particular behaviours or rituals (i.e.,

praying, meditation, etc.), determining the effects of such behaviors on promoting physical health and increasing positive mental health is pivotal.

As the Canadian population is steadily aging and the number of individuals developing dementia is increasing (Alzheimer Society, 2010), further research could also continue examining the potential benefits of R/S and the impact it may have on improving symptoms of mental health and increasing overall wellbeing among older adults living with dementia or residing in residential facilities. In particular, for older adults who are living with dementia and who report R/S as being important in their lives, further research could examine how spiritual reminiscence therapy as developed by MacKinlay and Trevitt (2010) may serve to improve cognitive functioning, positive mental health, and overall wellbeing.

The results of this thesis are promising in terms of improving positive mental health among the Canadian population, and have opened many avenues for further research. It is important to attend to the future directions proposed within this project as they may help inform mental health practitioners regarding the benefits of including R/S in treatment plans and understand the potential points of departure as to when R/S stops being helpful and becomes detrimental to overall wellbeing and positive mental health.

Conclusion

The Canadian population is rapidly aging and it has been reported that there are 1.4 million persons aged 65 and older (Statistics Canada, 2018). As members of this population continue to age, the likelihood of experiencing age-associated stressors (e.g., illness, loss of spouse, etc.) increases and R/S may be an important means of coping with such stressors. Longitudinal work is needed to understand the potential protective effect of R/S across time. This thesis highlights the importance of R/S among all Canadian adults, but especially in older

adults' lives. These findings confirm that promoting positive mental health throughout the adult lifespan may involve attending to and supporting one's religious/spiritual beliefs, traditions, and practices. It is important for further research to continue examining the importance of religion and spirituality, positive mental health and the aging process. As this thesis did not account for the important differences between religion and spirituality, teasing these constructs apart is imperative in order to fully capture each of their essence and understand their healing properties.

As clinicians we hold an ethical responsibility to offer the most valuable treatment for the clients we hold in our care. As such, and in line with the results of this thesis, attending to religious/spiritual beliefs and values is important when attending to older adults' mental health. Therefore, it is important to be open towards the inclusion of faith into the therapeutic practice when needed. This inclusion can be assessed during the initial interview process, which would allow the practitioner to determine the importance of religious/spiritual beliefs. By doing so, clinicians may be more aware of the client needs and form appropriate treatment planning that is best suited for the clients.

As health care practitioners become increasingly aware of the benefits of including religion/spirituality into their practice, older adults may shift from experiencing the potential despair related to the aging process into experiencing symptoms of wellbeing, positive emotions, and flourishing.

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