

The relationship between spiritual health, spiritual dissonance and positive mental health

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### Abstract

In his doctoral work, Fisher (1998) developed a definition of spiritual health inspired by positive psychology. He described four domains of spiritual health, namely the personal, communal, environmental, and transcendental domains. He then defined spiritual health as “a fundamental dimension of people’s overall health and well-being, permeating and integrating all the other dimensions of health (i.e., physical, mental, emotional, social and vocational)” (Fisher, 1998, p. 191). Although most of the scientific literature has found that religion and spirituality are negatively correlated to mental illness, the relationship between spiritual health, proposed by Fisher’s four domain model, and mental health has yet to be explored. Furthermore, in later writings, Fisher introduced the novel concept of spiritual dissonance which he defines as the difference between one’s actual spiritual lived-experience and one’s spiritual ideals. His model theoretically implies that spiritual dissonance would have a similar relationship to mental health as spiritual health; however, to this author’s knowledge, this has yet to be tested (Fisher, 2008).

Mental health, as defined by Keyes, is not the mere absence of disease, but optimal emotional, psychological, and social functioning (Keyes, 2006b, 2007). Those three dimensions of positive mental health resemble the three dimensions that Fisher believes would be permeated by spiritual health and spiritual dissonance.

The present thesis explored the relationship between spiritual health, spiritual dissonance, mental illness, and positive mental health in a convenient sample of undergraduate students from a Canadian university. The findings suggest that mental health is positively correlated to spiritual health ( $r = .40, p < .001$ ) and negatively correlated to spiritual dissonance ( $r = -.39, p < .001$ ). Furthermore, even though 22% of mental health variance was accounted for by psychological distress, an additional 13 % of variance was accounted for by spiritual health or 8% of variance

by spiritual dissonance. Both spiritual health and spiritual dissonance were significantly related to mental health and significant predictors of mental health.

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# **The Relationship Between Spiritual Health, Dissonance and Positive Mental Health**

## **Literature Review**

### **Spirituality models**

The topic of spirituality has been gaining attention in both the general public and the scientific community and has been the subject of many scientific publications (Bruce, Sheilds, & Molzahn, 2011; Buck, 2006; Delgado, 2005, 2005; Henery, 2003; Martsof & Mickley, 1998; Říčan, 2004; Stephenson, Draucker, & Martsof, 2003). Interestingly, as Rose (2001) so poignantly titled her work, spirituality is a “ Word that Everyone Uses, But Nobody Knows What Anyone Means by it” (p. 193). In fact, many authors agree that there is a plethora of divergent definitions of spirituality in the scientific literature and reaching a consensus is an arduous if not impossible task (e.g. Hill & Hood, 1999; Kharitonov, 2012; Koenig, McCullough, & Larson, 2001; MacDonald & Kuentzel, 1999; Vivat, 2008). Therefore, one of the biggest challenges in conducting research on spirituality is defining and subsequently operationalizing the construct (Buck, 2006; Martsof & Mickley, 1998; Moberg, 2002).

**Anthropological understanding of spirituality.** The word spirituality comes from the latin root *spiritus* which means breath. It finds its equivalent in the greek word *pneuma*, the sanskrit word *atman* and the hebrew word *ruah* (Delgado, 2005). In all of these cultures and languages, breath is intimately associated with life. In fact, when a child is born, everyone awaits the child’s first breath (and often his first cry) as a sign of sustainable life. Similarly, someone’s life has indeed ended when he takes his last breath. This experience of life being associated with the ebb and flow of breathing is a fundamental and universal human experience. This understanding of spirituality as life sustaining breath suggests that spirituality is an essential and fundamentally innate universal trait of human existence that transcends religious and cultural

constructs (Berry, 2005; Burkhardt, 1989; Delgado, 2005; Fisher, 1998; Miller & Thoresen, 2003; Paley, 2008).

**Monotheistic understanding of spirituality.** The association of life and breath is also present in all three monotheistic religious traditions: Judaism, Christianity and Islam. The Quran (see Quran 3:59) and the two Creations stories included in the Torah and the Bible (see Gn 1:3-2:3 and Gn 2:4-2:25), poetically recount the creation of the world and the creation of man. For example, the second narrative in the book of Genesis depicts God modeling Adam, the first human being, out of clay. This first step of the creation process symbolically brings Adam into material existence. However, it is only when God breathes into his nostrils that Adam becomes alive. This narrative taken from the Judeo-Christian faith illustrates the clear distinction of physical existence and life, the first being material in nature and the second spiritual in nature (Martinez de Pison Libanas, 2005). Because spirituality is so intricately intertwined with life, spirituality is understood as an essential dimension of human life. Any attempts to deny the spiritual dimension of life reduces spirit to matter, life to existence, and makes the mistake of erroneously confusing substance for essence (Fahlberg & Fahlberg, 1991).

Fisher's (2011) review of the Oxford dictionary's definitions of the word "spirit" echoes that of the creation narratives in distinguishing between mere existence and life. He states that "the general meaning underlying all the uses [of the word spirit] is that of an animating or vital principle which gives life, transcending the material and mechanical" (p. 19). In the West, for historical and cultural reasons, the concept of spirituality has been greatly influenced by monotheistic concepts derived from Christian faith. In Christian theology, the Holy Spirit was given to humanity by God on the day of Pentecost and dwells within every person (Bash, 2004). The Holy Spirit is one of the three divine persons of the Holy Trinity, therefore God himself

(Bash, 2004). Moreover, because breath comes from God, God is life, God gives life and God sustains life. Hence, monotheistic spirituality can be understood as the continuous creation and maintenance of life by God, communion to God's life giving breath and to God himself (Bash, 2004). Thus, to live in a spiritual manner is to live in constant relation to the Holy Spirit (God), to be inspired by God and to live in accordance with God's spirit (Bash, 2004).

**Ternary anthropology.** Michel Fromaget, a modern French anthropologist, has reintroduced and structured the tripartite human model which he coined ternary anthropology (Fromaget, 2017). In ancient Eastern and Western societies, before the influence of dualism, human existence was seen as having three ontological dimensions, including a spiritual dimension. This is evidenced by the writings of philosophers such as Plato, Aristotle, Marcus-Aurelius and Seneca as well as early Christian writers such as Saint Paul, the early church fathers and Saint-Augustine (Fromaget, 2017). The ternary model suggests that human beings are comprised of three fundamental, interconnected, and inseparable dimensions: the body (*sôma*), the mind (*noûs*) and the soul (*psykhê*) (Fromaget, 2009, 2017). The body is the physical and material human dimension that experiences the world through the five senses and is able to relate to and act on the material world (Fromaget, 2017). The soul, a concept which may erroneously be associated to spirituality, is the psychological dimension of human beings (Fromaget, 2017). The soul is able to understand, to reason, to think and to feel (Fromaget, 2017). The mind (*noûs*) is the spiritual dimension (Fromaget, 2017). Fromaget believes that the mind is the human dimension that is open to transcendence (Fromaget, 2017). Figuratively, it is a meeting place where communion between man and the transcendence is possible (Fromaget, 2009, 2017). According to his model, all three dimensions are interrelated and inseparable (Fromaget, 2009, 2017).

**Relationship between religion and spirituality.** The strong Christian influence in the West has affected the way in which spirituality has often been defined (Bash, 2004; Gall, Malette, & Guirguis-Younger, 2011; Pargament, 1999). Many traditional definitions of spirituality are theocentric and influenced by Christian religious beliefs and practices (Fisher, 2010, 2016; Gall et al., 2011; Koenig et al., 2001). Because of this, many authors amalgamate religion and spirituality (r/s) into a single r/s construct (Koenig, 2011). Moreover, some authors consider spirituality and religion to be synonymous and use the two terms interchangeably (Řičan, 2004). In addition, research has found that study participants spontaneously define spirituality in relation to religious constructs (Ammerman, 2013; Griffith, Caron, Desrosiers, & Thibeault, 2007).

These definitions of spirituality influenced by religion, more specifically by Christianity, have recently been challenged because they may not apply to a growing number of people who do not affiliate with religions or believe in a higher power (Ammerman, 2013; Berry, 2005; Brown, 2009; J. Moore, 2014; Newby, 1996; Paley, 2008; Walach, 2014). Specifically, many Western countries, including Canada, are becoming increasingly secular and people are less likely to consider themselves religious and engage in traditional religious practice (Brown, 2001; CROP, 2017; Koenig, 2011; Paley, 2008; Tacey, 2003; Watts, 2018). Interestingly, the decline of organized religion has not led to an equal decrease of self-reported levels of spirituality since non-religious and even agnostics or atheists may identify as spiritual (Ammerman, 2013; Bruce et al., 2011; CROP, 2017; Hay & Socha, 2005; Kaiser, 2000; Lambert, 2004).

Others have argued that spirituality and religion are conceptually different constructs (Banks, Poehler, & Russell, 1984; Burkhardt, 1989; Swinton & Pattison, 2010; Walton, 1996). For example, Abraham Maslow and John Dewey consider spirituality to be innate therefore

fundamentally different from religion that is acquired through education, community and culture (Fahlberg & Fahlberg, 1991; Hay, Reich, & Utsch, 2006). Other authors support this view and posit that spirituality is experienced long before one is aware of religion (Bjarnason, 2007; Highfield & Cason, 1983; Horsburgh, 1997; Koenig, George, Titus, & Meador, 2004; Lukoff, Lu, & Turner, 1992). Furthermore, one study involving a sample size of 375 participants found that “subjective spirituality and tradition-oriented religiousness are empirically highly independent” (Saucier & Skrzypińska, 2006, p. 74).

Contemporary scholars have taken an intermediary position arguing that r/s are separate yet interrelated constructs (Bjarnason, 2007; Hay et al., 2006; Hill & Pargament, 2008; Hill, Pargament, & Hood, 2000; Kharitonov, 2012; Swinton & Pattison, 2010). To better understand spirituality in an increasingly secular culture, the scientific community has attempted to develop more inclusive conceptual definitions and measures of spirituality (without religious influence) that would apply as well to the religious, non-religious and atheists alike (Barker & Floersch, 2010; Hay et al., 2006; Hay & Socha, 2005; MacLaren, 2004; Muldoon & King, 1995). However, finding a consensus on a secular definition of spirituality has proven to be a difficult task (Chiu, Emblen, Van Hofwegen, Sawatzky, & Meyerhoff, 2004; Diaz, 1993; Goodloe & Arreola, 1992; Seaward, 1991; Tanyi, 2002) among competing and divergent philosophical, cultural, political, social and religious influences (Bjarnason, 2007; Buck, 2006; Delgado, 2005; Lim & Yi, 2009; Martsof & Mickley, 1998, 1998; Meleis, 2007; Paley, 2008; Pesut, 2006; Pesut & Thorne, 2007; Vader, 2006; van Dierendonck, 2004; Weathers, McCarthy, & Coffey, 2016; Yang & Wu, 2009).

**Secular definitions of spirituality.** Many authors have suggested different secular definitions of spirituality (e.g., Burkhart, Schmidt, & Hogan, 2011; Fisher, 1998; Hungelmann,

Kenkel-Rossi, Klassen, & Stollenwerk, 1985; Muse-Burke, 2004; Nagai-Jacobson & Burkhardt, 1989; Palmer, 1998). Even though they do not refer to God or another divinity, most definitions refer to some form of transcendence (Jaberi, Momennasab, Yektatalab, Ebadi, & Cheraghi, 2017). For example, Palmer (1998) defined spirituality as:

...the ancient and abiding human quest for connectedness with something larger and more trustworthy than our egos—with our own souls, with one another, with the worlds of history and nature, with the invisible winds of the spirit, with the mystery of being alive (p. 6).

Fisher (2011) defines spirituality as:

...a person's awareness of the existence and experience of inner feelings and beliefs, which give purpose, meaning and value to life. Spirituality helps individuals to live at peace with themselves, to love (God and)<sup>i</sup> their neighbor, and to live in harmony with the environment. For some, spirituality involves an encounter with God, or transcendent reality, which can occur in or out of the context of organized religion, whereas for others, it involves no experience or belief in the supernatural (p. 20).

## **Health**

Before studying the concepts of spiritual health and mental health and their relationship to one another, it seems rather important to gain a better understanding of what is meant by health. From an etymological, it is interesting to note that the words health and whole are derived from the same Old English word *hal* (Harper, 2010a, 2010c). Furthermore, health and whole are

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<sup>i</sup> “These words were placed in parentheses as they will be meaningless to those people who do not acknowledge a

derived from the same Proto-Indo-European root, *kailo*, as the old English word *helge* which means holy (Harper, 2010a, 2010c, 2010b). The common root of these words reflects the Ancient Greek understanding of health: “a sense of well-being that is derived from an intensified awareness of wholeness and integration among all dimensions of one’s being” (Coward & Reed, 1996, p. 278).

However, over centuries, there has been a significant increase in scientific knowledge and medical advancements which caused a paradigm shift towards a biomedical model that often equated health to the absence of disease or perhaps positive bio-medical indicators (Fisher, 1998). More recently, faced with the obvious limits of this model, there has been a renewed shift towards a holistic, multi-dimensional and integrative health model (Fisher, 1998). For example, the World Health Organisation (WHO; 1946) defines health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (p. 1). This definition echoes Keyes' (2002) mental health continuum model that will be presented later.

### **Spiritual Health and Spiritual Well-Being**

Despite increasing literature in the field of spiritual health including quantitative and qualitative studies, the concept of spiritual health remains ambiguous and complex. Furthermore, there is little consensus regarding the operationalization of this construct (e.g., Bensley, 1991; Buck, 2006; Burkhart et al., 2011; Cotton et al., 2006; Fisher, 1998; Hawks, Hull, Thalman, & Richins, 1995; Jaber et al., 2017; Parsian & Am, 2009).

That being said, the term spiritual health was first introduced at the 1971 White House Conference on Aging in the United States of America (Moberg, 2010). A few years later, the National Interfaith Coalition on Aging defined a similar concept, spiritual well-being (SWB), as “the affirmation of life in relationship with God, self, community and environment that nurtures

and celebrates wholeness” (Cited in Ellison, 1983, p. 331). In his work, Ellison (1983) clarifies the relationship between spiritual health and well-being: “spiritual well-being arises from an underlying state of spiritual health and is an expression of it, much like the color of one’s complexion and pulse rate are expressions of good [physical] health” (p. 332).

Fehring, Miller and Shaw (1997) also support the view that spiritual well-being is the subjective experience of spiritual health. They state that “spiritual well-being is an indication of individuals’ quality of life in the spiritual dimension or simply an indication of their spiritual health” (Fehring et al., 1997, p. 664).

**Fisher’s Spiritual Health and Well-Being Model.** In his doctoral work, Fisher (1998) conducted an extensive literature review on spirituality, spiritual health and spiritual well-being and developed an initial working definition and working model of spiritual well-being. He further refined his research by conducting a qualitative study on spiritual well-being based on semi-structured interviews involving 98 teachers from 22 schools (independent and religious) as well as 23 experts in his native Australia. Finally, he developed a Spiritual Health Measure (SHM) based on his definition and model of spiritual health which was later replaced by the Spiritual Well-Being Questionnaire (SWBQ) (Gomez & Fisher, 2003). Fisher defines spiritual health as:

a fundamental dimension of people’s overall health and well-being, permeating and integrating all the other dimensions of health (i.e., physical, mental, emotional, social and vocational)...spiritual health is a dynamic state of being, shown by the extent to which people live in harmony within relationships in up to four domains of spiritual well-being (Fisher, 1998, p. 191).

This definition of spiritual health clearly expresses Fisher's (1998) belief that spirituality is an ontological dimension of human existence. Furthermore, as suggested by literature cited earlier in this work, Fisher's definition suggests that there exists a relationship between spiritual health and other facets of health. Fisher's (1998) model theoretically implies that a spiritually healthy individual would experience better mental health than spiritually unhealthy individuals.

***Four dimensions of spiritual health.*** In addition, Fisher's definition suggests that spiritual health is a complex construct composed of four relational domains. In his doctoral thesis, Fisher (1998) describe the four types of relationships namely the relationship with self, with others, with nature and with God which make up the personal, communal, environmental, and transcendental domains of Fisher's four-domain model.

Fisher's four domain model aligns with contemporary scientific literature from various fields (for a thorough review see Fisher, 1998). For example, Hood-Morris (1996) speak of a spiritual component [that] includes transcendent and existential features pertaining to an individual's relationship with the self, others and a higher being... coupled with interactions with one's environment (p.440).

Hungelmann Kenkel-Rossi, Klassen and Stollenwerk (1985) define spiritual well-being as:

a sense of harmonious interconnectedness between self, others/nature, and Ultimate Other which exists throughout and beyond time and space. It is achieved through a dynamic and integrative growth process which leads to a realization of the ultimate purpose and meaning of life (p. 152).

Fisher (1998) articulates that each domain is comprised of *knowledge* and *inspiration* aspects and can be expressed in many different ways (see Table 1). Fisher suggests that *knowledge* is influenced by world views while *inspiration* reflects the essence and more

experiential aspects of each domain and is given meaning based on belief (Fisher, 1998, 1999, 2011). He further suggests that for spiritual development to occur, individuals need to integrate the *knowledge* and *inspiration* aspects of each domain (Fisher, 1998, 1999, 2011).

The *knowledge* aspect of the personal domain reflects the way in which a person relates to themselves, particularly with regards to meaning, purpose, and values (Fisher, 1998, 1999, 2011). The inspirational aspects include self-awareness (Fisher, 1998, 1999, 2011). Together, the personal domain can be expressed as self-esteem and identity (Fisher, 1998, 1999, 2011).

The communal domain reflects the way in which a person relates to others. Fisher (2011) specifies that this domain is representative of both the quality and depth of those interpersonal relationships and can be expressed in many ways including love, forgiveness, trust, hope, and faith in humanity. Besides close interpersonal relationships, the communal domain also represents the way in which people engage in relationships with people they may not know, groups of people or society at large (Fisher, 2011). Therefore, the communal domain reflects the *knowledge* aspects such as morality and culture and *inspirational* aspects such as the quality and depth of relationship (Fisher, 2011).

The environmental domain reflects the way in which a person relates to the cosmos, to nature and to the environment (Fisher, 1998, 1999, 2011). *Knowledge* aspects include care, nurture, and stewardship towards the environment while *inspirations* aspects include a deep sense of connectedness and harmony with the environment (Fisher, 1998, 1999, 2011). It can be expressed as care and nurture for nature, as a sense of awe and wonder or as the notions of unity with all living things (Fisher, 1998, 1999, 2011).

Finally, the transcendental domain reflects the way in which a person relates to God or to a transcendent other (Fisher, 1998, 1999, 2011). Fisher describes the transcendental domain as

the relationship a person has with something or someone that is greater than the self. This domain engages faith, mystery and can be expressed as adoration and worship (Fisher, 1998, 1999, 2011).. Fisher (2016) adds that the transcendent *other* may include Allah, angels, Buddha, a deceased person, Deity/deities, Divine, Fate, Father God, God, Heaven, Higher Power, Higher Self, Mystery, Universe/universal spirit, Tao, etc.

Table 1

*Table Illustrating Knowledge and Inspiration Aspects of Each Domain of Spiritual Health as Well as its Expressions.*

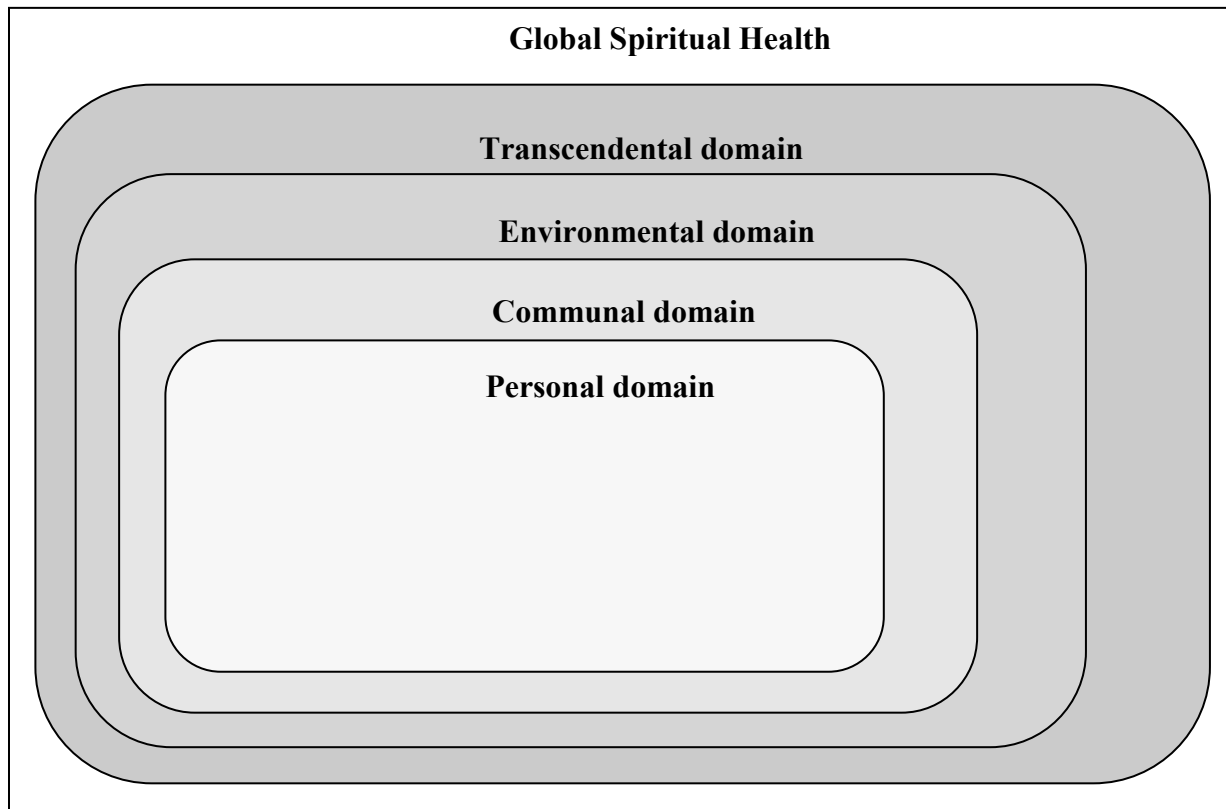
	Domains of Spiritual Health			
	Personal	Communal	Environmental	Transcendental
Knowledge aspects	Meaning, purpose, and values	Morality and culture	Care, nurture and stewardship	Transcendent <i>Other</i> , Cosmic force, God, Ultimate concern
Inspiration aspects	Self-awareness	Religion and interpersonal relationships	Connectedness with nature	Faith and Mystery
Expressions	Self-esteem, identity	Forgiveness, love, and faith in humanity	Awe and wonder	Adoration and Worship

*Note.* Fisher's spiritual health model. Adapted from *Spiritual Health: Its nature and place in the school curriculum* (Doctoral thesis, University of Melbourne, Australia), by J. Fisher, 1998.

The quality of the relationship in each of the domains represents the level of spiritual health of that specific domain (Fisher, 1998, 1999, 2011; Fisher & Johnson, 2000, 2000, 2000; Gomez & Fisher, 2003, 2005a, 2005b; Moodley, 2008; Moodley, Beukes, & Esterhuyse, 2012; J. Moore, 2014). Fisher suggests that the four domains also cohere to form an overarching global dimension of spiritual health (Fisher, 1998, 1999, 2011; Fisher & Johnson, 2000; Moodley, 2008; Moodley et al., 2012; J. Moore, 2014). Furthermore, Fisher explains how the different dimensions of his model are interrelated and interact with one another (Fisher, 1998, 1999, 2011; Fisher & Johnson, 2000; Moodley, 2008; Moodley et al., 2012; J. Moore, 2014).

***Progressive synergism.*** Fisher argues that integration of new domains not only adds on to previous domains but also build up the previous domain which he calls progressive synergism (see Figure 1; Fisher, 1998, 1999, 2011; Fisher & Johnson, 2000; Moodley, 2008; Moodley et al., 2012; J. Moore, 2014). Similarly, Walton (1996) suggests that the relationship to the self is the basis for all other relationships therefore the most important of all domains.

For instance, the communal domain is seen as building on and building up the personal domain. Therefore, the meaning, purpose and values fostered through self-awareness in the personal domain, are precursors to and are fostered by, the development of morality, culture and religion through in-depth inter-personal relationships. In the same way, connectedness with nature would build on and build up self-awareness and in depth inter-personal relationships from the previous two domains. Finally, faith would encompass the previous three domains and be developed by them (Fisher, 1998, 1999, 2011; Fisher & Johnson, 2000; Moodley, 2008; Moodley et al., 2012; J. Moore, 2014).



*Figure 1.* Adapted from (Fisher, 1998).

Fisher (1998, 1999) suggests that spiritual health can be enhanced by developing increasingly positive relationships in each spiritual domain and increased by integrating more domains (Moodley et al., 2012). While Fisher argues for the development of spiritual health in all four domains, he also recognizes that individuals may give priority to one domain over the others based on their world views (Fisher, 1998, 1999). For example, he reports that rationalists generally value the knowledge aspects of the personal, communal and environmental domains but do not value the transcendental domain or the inspirations aspects of any domain (Fisher, 1998, 1999). Hence, Fisher (1998, 1999) recognizes the importance of gaining a better understanding of a person's world-view and the necessity to adapt the spiritual health measure to individual differences.

*Spiritual dissonance.* To address the previously stated problem, Fisher introduced the concept of spiritual dissonance (Fisher, 2006, 2008, 2010, 2013, 2014, 2016). Spiritual dissonance is defined as the incongruence between an individual's personal spiritual ideals and their lived experience (Fisher, 2006, 2008, 2010, 2013, 2014, 2016; Fisher & Brumley, 2008; Moodley, 2008; Moodley et al., 2012; J. Moore, 2014). A person who lives up to their own spiritual ideal is said to have low spiritual dissonance or high spiritual harmony. On the contrary, a person who does not live up to their own spiritual ideals is said to have high spiritual dissonance and low spiritual harmony.

Spiritual dissonance is measured by two repeated measures of the SWBQ. The first measure called the spiritual health measure (SHM) asks participants to express their actual experience in all four spiritual domains. The second measure called Life Orientation Measure (LOM) is comprised of the same items as the SHM but asks participants to express their spiritual ideal in all four domains. Together, they form the Spiritual Health and Life Orientation Measure (SHALOM). Fisher (2006) has proposed that dissonance should quantitatively be defined as differences in mean values between SHM and LOM greater than one in any domain of spiritual health.

SHALOM's strength is that it bases its assessment of an individual's spiritual health on their own self-standards rather than imposing arbitrary universal norms. For this reason, SHALOM is arguably a more suited spiritual health measure in religiously and culturally diverse populations (J. Moore, 2014).

Fisher suggests that spiritual harmony is associated with higher levels of spiritual health (Fisher, 1999, 2004, 2014, 2016) and theoretically higher levels of mental health however the validity of this postulate has yet to be tested. On the other hand, there are many other theories

with concepts akin to spiritual dissonance: such as Rogers' (1957, 1961) concept of incongruence, Higgins' self-discrepancy theory (SDT; Higgins, 1987) and Duval's (1972) objective self-awareness theory (OSA). All of these theories suggest that dissonance is related to mental illness (especially anxiety and depression) and lower levels of well-being (Duval, Silvia, & Lalwani, 2001; Duval & Wicklund, 1972; Higgins, 1999b; Higgins, Bond, Klein, & Strauman, 1986; Higgins, Klein, & Strauman, 1985; Rogers, 1957, 1961; Silvia & Duval, 2001; Strauman & Higgins, 1987, 1988). The importance of these theories and how they relate to mental health and mental illness will be discussed further.

### **Mental illness and mental health**

**Importance of mental illness and mental health in Canada.** Mental illness is a serious cause for concern in Canada. A recent national survey reported elevated and even epidemic, levels of mental health problems in Canadian youth (Public Health Agency of Canada, 2011). For adults, the life-time prevalence rate for depression is 8%, bipolar disorder is 1%, anxiety is 5% and schizophrenia is 1% and it is estimated that more than 50% of adults over the age of 40 will have suffered from a serious mental illness at some point during their lifetime (Mental Health Commission of Canada, 2013).

Mental illness can be accompanied by significant human and financial loss. Suicide accounts for 16-24% of deaths among 15-44 year-olds and is one of the leading causes of death in that age group (Mental Health Commission of Canada, 2013). Among adults, depression was the leading cause of disability in the world measured by the years of life lived with disability (Koenig, 2011). In addition, it comes with a financial cost: work absenteeism, diminished productivity and healthcare costs (Committee on Prevention of Mental Disorders, 1994; Murray & Lopez, 1996).

The high prevalence of mental illness and the serious human and financial costs are cause for concern. Although the study of mental illness is warranted for the reasons discussed above, the study of optimal mental health needs to be developed since 50% of people will never experience mental illness in their lifetime and 80-90% of people will not experience mental illness in the course of the year.

**Defining the concept of mental health.** Mental health has often been described as the absence of mental illness. However, in this paper, inspired by Keyes' dual continuum model of mental health and mental illness, mental health and mental illness will be considered as two separate yet related constructs (Keyes, 2002, 2005, 2007). Because some authors use mental illness and mental health interchangeably, mental health will hereafter be referred to as positive mental health (PMH).

PMH stems from the emerging field of positive psychology. Positive psychology is principally interested in helping individuals achieve optimal functioning in a variety of areas of life including biological, personal, relational, institutional, cultural, and global dimensions of life (Seligman & Csikszentmihalyi, 2000). Within the school of positive psychology, two philosophical traditions have long maintained opposing views on well-being: hedonism and eudaimonism.

The hedonistic school of thought monopolized the study of well-being for many years (Keyes, 2006a). Researchers from this philosophical tradition referred to mental health as subjective well-being, however later research expanded this dimension to include happiness, interest in life and life satisfaction (Keyes, 2005). More recently, there is a general consensus that this item is best measured in terms of life satisfaction combined with measures of positive

and negative affect (Diener, 1984; Diener, Suh, Lucas, & Smith, 1999). This amalgam of measure will later be known in literature as emotional well-being.

The eudaimonic tradition, is consistent with Aristotle's views that a good life is the consequence of one's own potential and optimal functioning (Ryff, 1989). Ryff (1989) reviewed psychological theories about optimal development over the lifespan (e.g., Erikson, Jung, Neugarten), on optimal functioning and self-actualization (e.g., Allport, Maslow, Rogers) and on positive mental health (e.g., Jahoda<sup>ii</sup>), and concluded that there were six elements of positive functioning including self-acceptance, purpose in life, autonomy, positive relations with others, environmental mastery, and personal growth. The combination of these will later be known as psychological well-being.

Keyes (1998) extended Ryff's work by suggesting that mental health should include a social dimension. He extrapolated five elements of positive social functioning in society based on the work of sociologists and social psychologists' (e.g., Marx, Durkheim, Seeman, and Merton). These elements include social coherence, social acceptance, social actualization, social contribution and social integration. The five-factor structure of social well-being has been widely supported by two large studies (Keyes, 1998).

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<sup>ii</sup> In her book *Current Concepts of Positive Mental Health* (1958), Marie Jahoda introduced the premises of an emerging field of psychology which would later be known as positive psychology. She states "...the absence of mental illness is not a sufficient indicator of mental health" (Jahoda, 1958, p. 15). Her unique contribution to this field also includes the observation and description of 5 characteristics found by mentally healthy people.

**Keyes' mental health continuum.** Keyes' mental health continuum model unites the hedonic concept of emotional wellbeing, the eudaimonic concepts of psychological and the social well-being in his definition and model of mental health (Keyes, 2006b, 2007). Keyes believes that PMH is a consequence of emotional, psychological and social well-being as opposed to the mere absence of disease. He defines mental health as "an individual's perceptions and evaluations of their own lives in terms of their affective states and their psychological and social functioning" (Keyes, 2002, p. 605). The parallel between Keyes definition of PMH and the WHO's (WHO; World Health Organization, 1946) earlier cited definition of health are striking. Keyes describes mental health as a continuum with "flourishing" and "languishing" respectively at the upper and lower limits of the mental health continuum (Keyes, 2002). Those who are neither mentally healthy nor mentally unhealthy are considered moderately mentally healthy (Keyes, 2002).

**The Two Continua Model of Mental Illness and Health.** Keyes' two continua model of mental illness and mental health (Keyes, 2002, 2005, 2007; Westerhof & Keyes, 2010) illustrates the relationship between mental health and mental illness. Keyes' two continua model can best be represented as two perpendicularly intersecting axes representing mental health and mental illness (see Figure 2). The mental health axis represents the mental health continuum ranging from flourishing to languishing while the mental illness axis ranges from the absence of mental illness to severe mental illness. The four quadrants represent four possible scenarios: high PMH with or without mental illness and low PMH with or without mental illness. Studies have supported this model and shown that mental health and mental illness are independent but strongly related constructs (Keyes, 2002, 2005, 2007; Westerhof & Keyes, 2010).

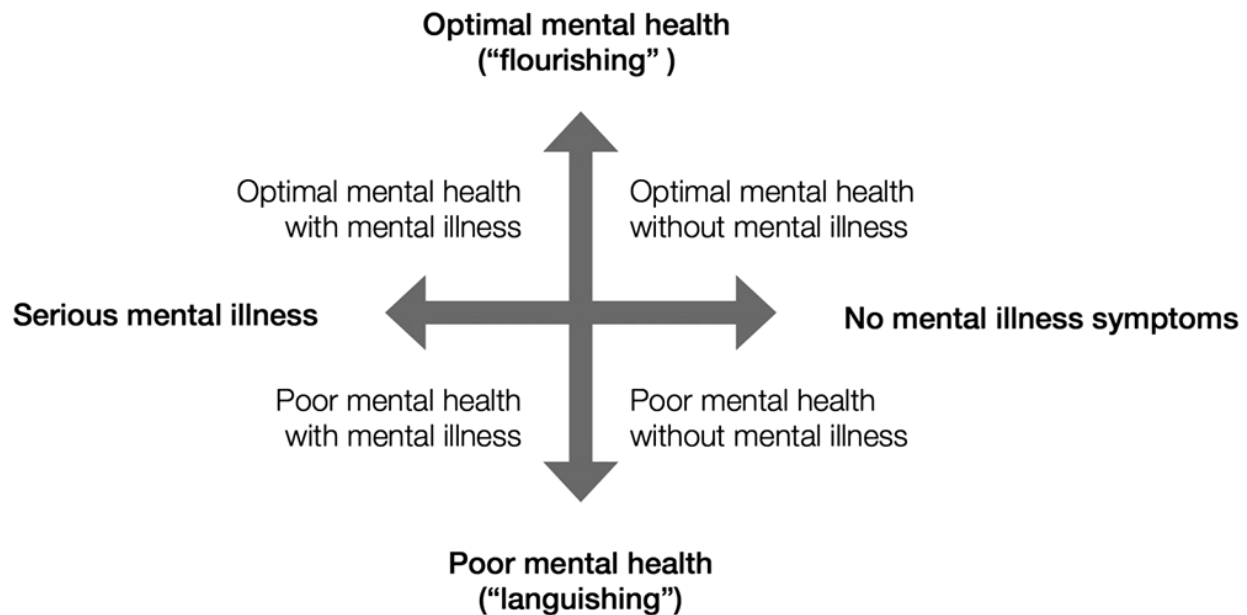


Figure 2. Dual Continuum Model of Mental Health and Mental Illness. Adapted from MacKean (2001)

### Religion, spirituality and mental health

Research in the field of spirituality religion and health has been rapidly increasing (Bjarnason, 2007; Bredle, Salsman, Debb, Cella, & Arnold, 2011; Buck, 2006; Kharitonov, 2012; Koenig et al., 2001). More than 2500 quantitative studies on religion, spirituality, and health have been produced using original data (Koenig, 2011). Of those 3000 studies, 70-75% are about mental health (Koenig, 2011).

Beyond the theoretical foundation of a relationship between r/s and mental health that has been outlined earlier, many studies have provided empirical support for a positive relationship between r/s and mental health (See Koenig, 2011; and J. Moore, 2014). In his book, Koenig (2011) presents an extensive review of the available literature on r/s and mental health. He divides the studies into studies about positive emotions and studies about negative emotions.

**Religion and spirituality (r/s) and positive emotions.** At the time of his review, 326 quantitative studies examined the relationship between spirituality and well-being. 256 of those

studies (79%) were associated with higher measures of happiness and life satisfaction. Of the most rigorous studies, 82% indicated higher levels of well-being and less than 1% showed lower levels of well-being (Koenig, 2011). Furthermore, of the 40 studies that examined the relationship between spirituality, hope and optimism, 73% showed more hope and optimism among the spiritual or religious. That number increased to 81% when strictly examining the 32 studies that dealt only with optimism (Koenig, 2011).

Other studies have already shown that finding meaning and purpose in life has a positive effect on mental health and contributes to well-being and resilience. Of the 45 studies conducted on the relationship between spirituality, meaning and purpose, 93% have shown a positive correlation. Of the 10 most methodologically sound studies, 100% have shown a positive relationship (Koenig, 2011).

Furthermore, studies have demonstrated correlations between negative self-esteem and emotional disorders such as depression (Koenig, 2011). Of the 42 studies examining the relationship between spirituality and positive self-esteem, 61% have demonstrated a positive relationship (Koenig, 2011).

In addition, a recent study in Canada showed that higher spiritual health scores were associated with higher levels of life satisfaction and increased positive physical and psychological health in youth (Michaelson, Trothen, Ascough, & Pickett, 2016).

**Religion and spirituality (r/s) and negative emotions.** At the time of Koenig's (2011) review of existing literature, he found 444 studies about spirituality and depression (Koenig, 2011). Depression was the most common cause for suicide. Of the 144 studies about spirituality and suicide (ideation, attempted or completed), 75% showed a negative association (Koenig, 2011).

Furthermore, of the 299 studies about anxiety and spirituality, 49% showed an inverse relationship (Koenig, 2011). That percentage climbed to 55% when only considering the most methodologically-sound studies (Koenig, 2011). R/s were also negatively associated with alcohol use and abuse (86% of 278 studies) and drug use and abuse (84% of 185 studies; Koenig, 2011).

In addition, a recent study in Canada showed that higher spiritual health scores were associated with decreased negative emotional outcomes and 2.5 times less psychosomatic symptoms in youth (Michaelson et al., 2016).

Thus, it can be concluded that there is a very large body of literature establishing a positive relationship between r/s and PMH and negative relationship between r/s and negative mental health.

**Spiritual dissonance, mental illness and mental health.** As discussed earlier, spiritual dissonance is the incongruence between one's ideal and one's experience in at least one spiritual domain. Very little research has been conducted on spiritual dissonance and mental health to support Fisher's position that it would also be related to positive mental health outcomes. Having said that, spiritual dissonance, in the few studies that have explored this avenue, has been associated with higher risk of burnout (Monteiro, 2011), lower scores on the Oxford Happiness Inventory (Fisher, 2008) and higher on psychoticism on the Junior Eysenck Personality Questionnaire-Revised (Fisher, 2008).

Furthermore, as mentioned earlier, many self-state theories have explored the relationship between concepts analogous to dissonance and mental illness (Duval et al., 2001; Duval & Wicklund, 1972; Higgins, 1989; Higgins et al., 1986, 1985; Rogers, 1957, 1961; Silvia & Duval, 2001; Strauman & Higgins, 1987, 1988). All of those theories suggest that gaps between the

actual self and the ideal self would be related to mental illness (especially anxiety and depression) and lower levels of well-being.

Rogers (1957, 1961) may have produced the most well-known conceptual frame-work on incongruence. Just like dissonance, Rogers conceptualizes incongruence as the gap between a client's self-concept and their ideal self (Rogers, 1957, 1961). It is important to note that Roger's ideal-self is not based on an internalized condition of worth but rather on the fruit of a self-valuating process. When he writes "The first [person], whom we shall term the client, is in a state of incongruence, being vulnerable or anxious"(Rogers, 1957, p. 96), he implies that incongruence is either the same thing or the cause of anxiety (and possibly other psychological dysfunctions). Helping individuals become increasingly self-congruent is a central therapeutic goal in person-centered therapy (Rogers, 1957, 1961).

Maddi (2001) questioned whether a person's statements of ideal may be contaminated by internalized normative socially imposed operational representations of conditions of worth. Self-discrepancy theory (SDT) (Higgins, 1987, 1999b) further elaborates on Rogers's work and addresses this issue. SDT stipulates that there are three different self-states: the actual-self, the ideal-self and the ought-self (Higgins, 1987, 1999b). The actual self represents the individual's self-concept, the ideal-self represents who the client would like to be while the ought-self represents who others or society would like them to be (Higgins, 1987, 1999b).

The specificity of SDT is that it purports that discrepancies between the actual self and the ought-self will specifically lead to agitation related emotions such as anxiety, nervousness and guilt while discrepancies between the actual-self and the ideal-self will specifically lead to dejection-related emotions such as sadness, disappointment, and depression. Multiple studies conducted by Higgins and his colleagues supported this theory (Boldero & Francis, 1999, 2000;

Carver, Lawrence, & Scheier, 1999; Fairbrother & Moretti, 1998; Higgins, 1987, 1999b, 1999a; Higgins et al., 1986, 1985; Higgins, Shah, & Friedman, 1997; Scott & O'Hara, 1993; Strauman & Higgins, 1987, 1988). Many other studies in clinical and non-clinical populations have supported the relationship between self-state discrepancy and negative emotional states but have failed to note the unique relationship of actual-ideal discrepancies to dejection emotions and actual-ought discrepancies to agitation emotions (Bruch, Rivet, & Laurenti, 2000; Fromson, 2006; Gonnerman, Parker, Lavine, & Huff, 2000; Gramzow, Sedikides, Panter, & Insko, 2000; Hart, Field, Garfinkle, & Singer, 1997; Key, Mannella, Thomas, & Gilroy, 2000; McDaniel & Grice, 2008; Ozgul, Heubeck, Ward, & Wilkinson, 2003; Phillips & Silvia, 2005; Tangney, Niedenthal, Covert, & Barlow, 1998). Some authors have suggested that this may be due to highly correlated ideal and ought scores which would suggest that ideal-self and ought-self are not distinct constructs (Hart et al., 1997; McDaniel & Grice, 2008; Phillips & Silvia, 2005; Tangney et al., 1998).

Objective self-awareness theory (Duval et al., 2001; OSA; Duval & Wicklund, 1972; Silvia & Duval, 2001) also predicts that congruency between the self and self-standards produces positive affect which rewards the action that generated congruence (Duval & Silvia, 2002; Duval et al., 2001). On the contrary, a discrepancy between self and standards generates aversive negative emotional states with the principal function of motivating change. OSA adds that objective self-focused attention increases the association between discrepancies and emotions (Phillips & Silvia, 2005).

### **Statement of purpose**

Fisher's (1998) spiritual health model suggests that spiritual health permeates and integrates all other dimensions of health including mental, emotional and social health.

Furthermore, his later work arguably suggests that spiritual dissonance is a better measure of spiritual health and relates in a similar fashion to various dimensions of health.

There is much support in literature that r/s are related to increased positive and decreased emotional states. However, even though many authors agree that spirituality and religion are separate constructs, (Bjarnason, 2007; Hill et al., 2000; Kharitonov, 2012; Swinton & Pattison, 2010), for practical reasons, health research has often compounded the two concepts into a single religion and spirituality construct (e.g., Koenig, 2011). Furthermore, many r/s measures commonly used in the scientific literature are theocentric and influenced by religious, often Christian, world-views. Some of these measures may not be applicable in increasingly secular populations, like in Canada. As a result, to this day, little is known about the specific contribution of spirituality and more precisely secular spirituality on mental health and mental illness.

After having reviewed the available literature on r/s and health, Koenig (2011) recommends that more r/s research needs to focus on positive psychological states. Keyes's mental health continuum model provides a solid foundation for PMH research. Furthermore, Fisher's (1998) theory that spiritual health (and dissonance) permeates and integrates mental, emotional and social health echoes the three dimensions of Keyes' mental health continuum model.

Finally, to the author's knowledge, Fisher's (1998) hypothesis that spiritual dissonance permeates and integrates other dimensions of health also lacks empirical support. Although many self-state theories suggest that similar concepts are related to negative emotional states, the relation between spiritual dissonance and mental illness has yet to be explored. Furthermore, it is

unknown if spiritual dissonance would also be related to PMH once the specific contribution of mental illness was accounted for.

For the reasons cited above, this thesis proposes to examine the relationships between spiritual health and spiritual dissonance, mental illness, and PMH among Canadian undergraduate students.

### **Hypotheses**

It is hypothesized that within a convenience sample, spiritual health will be positively correlated to PMH. Additionally, it is hypothesized that spiritual dissonance will be negatively correlated to mental health event.

Hypothesis 1: Spiritual health will be positively correlated to PMH

Hypothesis 2: Spiritual dissonance will be negatively correlated to PMH

### **Methods**

#### **Research Design**

This study was a quantitative cross-sectional survey study. Ethics approval was obtained from the Saint Paul University (REB file number: 1-1360.7/18) and the University of Ottawa Research Ethics Boards (REB file number: H-08-18-1060).

#### **Participants**

The participant pool was composed of student volunteers enrolled in the undergraduate psychology program at the University of Ottawa for the fall semester of the 2018-2019 academic year. Participants were recruited for this study using the University of Ottawa's School of Psychology's Integrated System of Participation in Research (ISPR). Students received course credit for their participation. Hence, the sampling method was non-random sampling of a convenient sample.

**Data sources and measures:**

The data were collected using an online survey developed using Qualtrics, a trusted research platforms available for the collection of survey data.

**Demographic data.** Demographic data were collected on participants including their age, sex, gender, sexual orientation, relationship status, highest level of education, ethnic background, religious affiliation, and lifetime prevalence of mental illness.

**Measures.**

***Spiritual Health And Life-Orientation Measure (SHALOM).*** The Spiritual Health and Life-Orientation Measure (SHALOM)'s predecessor, the SWBQ that contains the identical items, is well-accepted measure in quantitative research in the field of spirituality (de Jager Meezenbroek et al., 2012; J. Moore, 2014). Furthermore, SHALOM is the only measure that compares each person's ideal spirituality to their lived experience, providing researchers with a better understanding of the effects of spiritual congruence.

SHALOM is comprised of two subscales: the Spiritual Health Measure (SHM) and the Life Orientation Measure (LOM). The SHM measures the lived experience of the participant in all four domains and represents spiritual health while the LOM measure's the participant's ideal in the same four domains. Combined, they measure the degree to which people live out their spiritual ideals.

SHALOM is comprised of 40 questions. The SHM portion is comprised of 20 items with five items measuring the quality of relationships people entertain with each of the spiritual domains (i.e. personal, communal, environmental and transcendental). Participants are instructed to answer each question based on their actual lived experience. The LOM portion is comprised of the identical 20 questions but participants are instructed to answer each item based on their

spiritual ideals. Each question is scored using a 5-point Likert scale ranging from 1 (*very low*) to 5 (*very high*).

SHALOM has undergone extensive validation under the name of the SWBQ (Gomez & Fisher, 2003, 2005a, 2005b). Both exploratory factor analysis and confirmatory factor analysis show strong support for the domain and global construct validity (Gomez & Fisher, 2003, 2005a, 2005b). It has demonstrated good convergent and discriminate validity when compared to Ellison's widely used Spiritual Well-Being Scale (SWBS) (Ellison, 1983) (Gomez & Fisher, 2003, 2005a, 2005b).

A joint factor analysis of the four SWBQ domains demonstrated significant evidence in the factorial independence of SWB and personality, mental, physical and emotional well-being (Gomez & Fisher, 2003, 2005a, 2005b). There was evidence of generally high internal consistency, composite reliability, and variance extracted for the global and the four domains of the SWBQ (Gomez & Fisher, 2003, 2005a, 2005b). Moderate to high correlation between domains suggests they may come together to form a single higher order constructs such as the global spiritual well-being suggested by Fisher. In general, these results support the reliability of the four spiritual well-being domains as well as the global spiritual well-being construct (Gomez & Fisher, 2003, 2005a, 2005b).

***The Mental Health Continuum Short Form (MHC-SF).*** In this study, the Mental Health Continuum Short Form (MHC-SF) was used to measure PMH. The MHC-SF is a 14 items measure of PMH developed by the author to specifically measure the three subscales of Keyes's Mental Health Continuum. The questions are derived from lengthier scales developed by Cantril (1965), Mroczek & Kolarz (1998), Ryff and Keyes (1995), Keyes (1995, 1998, 2005). There are three questions regarding emotional well-being (happiness, interest in life and life satisfaction),

six questions regarding psychological well-being (self acceptance, environmental mastery, positive relations with others, personal growth, autonomy, purpose in life) and five questions regarding social well-being (social contribution, integration, actualization, acceptance and coherence).

Respondents were asked to answer question about the frequency of certain beliefs, thoughts, feelings and behaviours experienced in the last month using a 6-point Likert scale with the following values and anchors: 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*).

To be categorized as having flourishing mental health, respondents must report frequently (i.e., *every day* or *almost every day*) experiencing at least one of the three symptoms of emotional well-being subscale and at least six of the eleven symptoms of positive functioning during the past month. To be diagnosed with languishing mental health, respondents must report rarely (i.e., *never* or *once or twice*) experience at least one symptoms of emotional well-being and at least six of the eleven measures of positive functioning. Individuals who are neither flourishing nor languishing are classified as having moderate mental health. In accordance with Keyes's continuum model, the present study will not use his categorical classification but will use the MHC-SF total score as a continuous measure.

Internal consistency (i.e., Cronbach alpha) is consistently  $>.80$  (Keyes, 2005, 2006b; Lamers, Westerhof, Bohlmeijer, Klooster, & Keyes, 2011; Westerhof & Keyes, 2010); reliability values (Cronbach alpha) of above 0.70 are referred to as acceptable and above 0.80 as high (Kline, 2000). The emotional well-being, psychological well-being and social well-being scale have an internal consistency of 0.83, 0.74 and 0.89 respectively. The test-retest reliability of the

MHC-SF over three successive three month periods averaged 0.68 and the 9 month test-retest was 0.65 (Lamers et al., 2011).

Even though each domain was developed separately, the independence of each domain has been demonstrated in multiple studies (Keyes, 1998; Ryff, 1989; Ryff & Keyes, 1995) and exploratory and confirmatory factor analysis provided evidence to support a three factor highly related but independent factor structure (Westerhof & Keyes, 2010). These findings have been reproduced in multiple studies in different countries including US, South Africa and the Netherlands. It has been used in with pupils as young as 12 and in geriatric populations (Gallagher, Lopez, & Preacher, 2009; Keyes, 2005; Keyes & Annas, 2009; Lamers et al., 2011; Robitschek & Keyes, 2009).

***Kessler Psychological Distress Scale (K10).*** The Kessler Psychological Distress Scale (K10) was used to evaluate symptoms of mental illness as one of the two part continuum model of mental illness and health. The K10 is a test used to evaluate non-specific psychological distress related to depression and anxiety as described in the Diagnostic and Statistical Manual of Mental Disorders (DSM-5).

The K10 has been validated and used extensively in many countries and languages. It has been used in nationwide national government sponsored surveys in the United States (Kessler et al., 2002, 2003), Australia (Andrews & Slade, 2001; Furukawa, Kessler, Slade, & Andrews, 2003), Canada (Cairney, Veldhuizen, Wade, Kurdyak, & Streiner, 2007), New Zealand (Oakley Browne, Wells, Scott, & Mcgee, 2010), the Netherlands (Fassaert et al., 2009) and Japan (Furukawa et al., 2008; Sakurai, Nishi, Kondo, Yanagida, & Kawakami, 2011). It has also been used in First Nations and Métis and Inuit communities in Canada (Bougie, 2016).

The K10 is composed of 10 items that measure the frequency of non-specific psychological distress symptoms over the course of the last 30 days. For example, respondents are asked how often they felt “tired out for no good reason” “nervous”, “so nervous that nothing could calm you down”, “hopeless”, “restless or fidgety”, “so restless you could not sit still”, “sad or depressed”, “so depressed that nothing could cheer you up”, “everything was an effort” or “worthless”. Items are rated using a 5-point Likert scale with the following response options: 1 (*none of the time*), 2 (*a little of the time*), 3 (*some of the time*), 4 (*most of the time*) and 5 (*all of the time*). The total K10 score can range from 10 to 50. Higher scores indicate higher levels of psychological distress.

### **Statistical Analyses**

Participant characteristics were explored through descriptive functions, including frequencies, means, and standard deviations. The strength and direction of linear relationships between variables were explored via bivariate correlations and scatter plots.

To examine the relationship between spiritual health, spiritual dissonance and PMH, a series of multiple hierarchical linear regressions were constructed treating PMH as the outcome variable. Other predictor variables included in the analysis included demographic variables (age, gender and race) and psychological distress (K10). All analyses were performed SPSS version 25.

### **Preliminary Data Screening**

A total of 265 participants were recruited to participate in this study. Of those, 11 were excluded for not having consented to their data being used and another nine participants were excluded due to undifferentiated ratings in the data submitted (i.e. *straightliners*). A further eight participants were excluded due to survey completion time  $\leq 7$  minutes. Volunteers who had

previously pilot-tested the survey all reported survey completion times of 10 minutes or more. The cut-off point was slightly lowered to 7 minutes to account for fast readers. Furthermore, as described below, after screening for outliers, 3 more participants were removed from the study. Two-hundred and thirty-four participant's data were used for analysis.

Prior to analysis, the data were screened for accuracy, plausibility, and missing values (Tabachnick & Fidell, 2013). Accuracy was screened for by comparing values entered in Qualtrics and values in the computer generated exported SPSS output data file. No discrepancies were detected. Plausibility was evaluated by examining minimum and maximum values as well as mean values. Missing values assessment revealed that data were 100% complete.

**Normality.** Continuous measures of age, spiritual health (SHM), spiritual dissonance (DIS), psychological distress (K10), and PMH (MCH-SF) were inspected to assess normality through their standardized skewness ( $z\text{-skew}$ ) and standardized kurtosis ( $z\text{-kurt}$ ) scores. Scores with a critical value above 3.29 or below -3.29 indicated significant skewness or kurtosis (Tabachnick & Fidell, 2013). Age was positively skewed and leptokurtic ( $z\text{-skew}_{Age} = 30.18$ ,  $z\text{-kurt}_{Age} = 86.40$ ). DIS was positively skewed and leptokurtic ( $z\text{-skew}_{Dis} = 5.39$ ,  $z\text{-kurt}_{Dis} = 13.16$ ). The distribution of K10 scores was positively skewed ( $z\text{-skew}_{K10} = 3.83$ ). SHM and MHC-SF were acceptably normally distributed. Visual inspection of histograms and Q-Q plots confirmed the findings for age and K10. Positive skew for age and K10 was expected from this population. Because of the robustness of statistical tests to violations of normality in large samples, no further transformations were required (Tabachnick & Fidell, 2013).

Visual inspection of the DIS histograms and Q-Q plot revealed the presence of extreme outliers. It was suspected that the outliers were affecting the normality of distribution and, once

removed, scores would be acceptably normally distributed. This proved to be true ( $z\text{-skew}_{Dis} = 1.97$ ,  $z\text{-kurt}_{Dis} = 0.50$ ).

**Univariate outliers.** The presence of univariate outliers for all relevant variables was assessed using standardized scores (z-scores). Standardized scores in excess 3.29 or below -3.29 were identified as outliers (Tabachnick & Fidell, 2013). Three outliers were identified from the DIS variable. These participants were deleted from the study.

**Multiple regression assumptions.** Prior to analysis, age, SHM, DIS, K10, and MHC-SF were inspected to assess if the assumptions of multivariate assessments were met by the dataset. A ratio of cases to variables of  $N \geq 104 + (m)^{iii}$  is recommended by Tabachnick and Fidell (2013) for predicting variables. With six predicting variables, the sample size of 234 far surpasses the 110 cases required. Visual inspection of residuals as histograms, Q-Q plots and scatter plots against fitted values revealed that the data reasonably met all three assumptions of normality, linearity and homoscedasticity.

In both models, multivariate outliers were identified using Mahalanobis distance greater than the critical  $\chi^2$  value of 20.52 (where  $p = 0.001$  and  $df$  is 5). Four outliers were detected. Upon examination, these participants varied only on the “age” variable. These outliers were not deleted to be able to generalize finding.

Multicollinearity and singularity were assessed through a correlation matrix of all the predictor variables. There were no substantial bivariate correlations between any predictors (see Table 5). Furthermore, conditioning indices and variance proportions were also examined for

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<sup>iii</sup> Where  $m$  is the number of predictors and  $N$  is the sample size.

evidence of multicollinearity. No variables tested positive for multicollinearity since no condition indexes were above 30 accompanied by two variance of proportion above .50 (Tabachnick & Fidell, 2013).

The Durban-Watson statistic was used to test the assumption of independent errors. The test statistic can vary between 0 and 4. Values between 1.5 and 2.5 are deemed acceptable. All regression models' Durban-Watson tests indicated no evidence of serial correlations (Durbin & Watson, 1951).

## Results

### Sample Description

**Sample's Demographic Characteristics.** The final sample consisted of 234 participants between the age of 17 and 50 ( $M = 19.31$ ,  $SD = 4.03$ ). Most of the respondents (84.6%) identified as women while 15.4% identified as man. The sample had an equal number of non-white (50.0%) and white (50.0%) participants. A summary of the demographic characteristics of the sample can be found in Table 2.

Table 2  
*Participant' Demographic Characteristics*

Variables	Counts	Percent
Gender		
Woman	198	84.6 %
Man	36	15.4 %
Race		
White/European	117	50.0%
Non-white	117	50.0%
Black/African/Caribbean	26	11.1%
Southeast Asian	21	9.0%
Arab	21	9.0%
Mixed	20	8.5%
South Asian	18	7.7%
West Asian	8	3.4%
Latin American	2	0.9%
Indigenous	1	0.4%

**Sample's Religious and Spiritual Characteristics.** An overview of participant's religious and spiritual characteristics can be found in Table 3. When asked if they considered themselves to be "a religious person", 85 (36.3%) participants answered "yes" while 149 (63.7%) answered "no". However, when asked "what is your religion if any", 164 participants named a religion while only 70 did not. However, the participants may not consider themselves to be religious because they may not espouse certain beliefs or participate in certain practices. The three participants who reported being members of a non-listed religion reported being pagan, Jehovah's Witness and of mixed religion respectively.

The number of participants who considered themselves to be "a spiritual person" was slightly higher than those that considered themselves religious. When asked if they considered themselves to be "a spiritual person", 124 (53.0%) participants answered "yes" while 110 (47.0%) answered "no".

Table 3  
*Participants' Religious And Spiritual Characteristics*

Variable	Frequency	Percentage
Religious		
Yes	85	36.3 %
No	149	63.7%
Religion		
Christianity	116	49.6 %
No religion (including agnostic and atheist)	70	29.9 %
Islam	34	14.5 %
Hinduism	4	1.7 %
Buddhism	4	1.7 %
Judaism	2	.9 %
Sikhism	1	.4 %
Other	3	1.3 %
Importance of religion		
Extremely important	34	14.5 %
Very important	42	17.9 %
Moderately important	35	15.0 %
Slightly important	58	24.8 %
Not at all important	65	27.8 %
Spiritual		
Yes	124	53.0 %
No	110	47.0 %
Importance of spirituality		
Extremely important	38	16.2 %
Very important	43	18.4 %
Moderately important	44	18.8 %
Slightly important	58	24.6 %
Not at all important	51	21.6 %

**Sample's Psychological Characteristics.** One hundred and fifty-one participants (64.5%) had no history of mental illness while the remaining 83 (35.5 %) participants reported experiencing one or more mental illness in their lifetime. Anxiety (62 cases) and depression (46 cases) were the most common psychological disorders reported. Concurrent disorders were reported by 44 participants (18.9%), 38 of which reported experiencing depression and anxiety (see Table 4).

Table 4  
*Descriptive Statistics of Participants' Psychological Characteristics*

Variable	Frequency
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History of a Mental Health Disorder	
Depression	46
Anxiety	62
Personality disorder	4
Schizophrenia spectrum	1
Alcohol or substance abuse	3
Eating disorders	20
OCD	7
PTSD	4
ADHD	12

**Spirituality Measures.** The mean SHM score was 65.15 (*SD* 13.26). The mean LOM score was 73.56 (*SD* 12.29). As expected, mean LOM scores were higher than mean SHM scores. The mean spiritual dissonance (DIS) score was 8.41 (*SD* 10.31; see Table 5).

Table 5  
*Total And Subscale Scores For Spirituality Measures*

Variables	<i>SHM</i>	<i>LOM</i>	<i>DIS</i>
Total score			
Mean	65.15	73.56	8.41
Standard Deviation	13.26	12.29	10.31
Range	32-97	34-100	-17-41
Personal domain subscale			
Mean	18.39	21.73	3.33
Standard Deviation	4.20	3.14	4.28
Range	7-25	9-25	-7-13
Communal domain subscale			
Mean	20.09	21.94	1.85
Standard Deviation	3.26	2.70	2.82
Range	11-25	10-25	-7-10
Environmental domain subscale			
Mean	14.82	16.33	1.51
Standard Deviation	4.99	4.91	3.25
Range	5-25	6-25	-9-10
Transcendental domain subscale			
Mean	11.85	13.56	1.72
Standard Deviation	6.73	7.35	3.56
Range	5-25	5-25	-20-14

*Note.* SHM = Spiritual Health Measure; LOM = Life Orientation Measure; DIS = Spiritual Dissonance.

**Psychological Distress and Mental Health Measures.** The K10 mean score was 24.75 ( $SD = 8.04$ ). The mean score on the MHC-SF was 41.08 ( $SD = 13.13$ ). Mean scores on the subscales were 10.39 ( $SD = 3.05$ ), 12.02 ( $SD = 5.58$ ) and 18.68 ( $SD = 6.46$ ) for the emotional, psychological and social well-being subscales respectively. Findings are summarized in Table 6.

Table 6  
*Total And Subscale Scores For Psychological Distress And Positive Mental Health*

Variables	M	SD	Range
K10	24.75	8.04	12-50
MHC-SF	41.08	13.13	8-69
Emotional Well-being	10.39	3.05	2-15
Psychological Well-being	12.02	5.58	1-25
Social Well-being	18.68	6.46	3-30

*Note.* K10 = Kessler Psychological Distress Scale; MHC-SF = Mental Health Continuum Short-Form.

## Correlations

A series of Pearson product-moment correlations were run to assess the relationship between Spiritual Health and PMH. A summary of findings can be found in Table 7.

Table 7

*Correlation between, Psychological Distress (K10), Spiritual health (SHM), spiritual dissonance (DIS) and Mental Health (MHC-SF).*

Variables	Age	K10	SHM	DIS
1. Age	-			
2. K10	-.06	-		
3. SHM	.13	-.12	-	
4. DIS	-.11	.18**	-.48**	-
5. MHC-SF	.16*	-.50**	.40**	-.39**

*Note.* K10 = Kessler Psychological Distress Scale; SHM = Spiritual Health Measure; DIS = spiritual dissonance; MHC-SF = Mental Health Continuum Short-Form.

\*  $p < 0.05$  level (2-tailed). \*\*  $p < 0.01$  level (2-tailed).

**Hypothesis 1: Spiritual health (SHM) will be positively correlated to positive Mental Health (MHC-SF).** There was a statistically significant positive correlation between spiritual health scores and PMH  $r(232) = .40, p < .001$  as shown in figure 3. As can be seen, those who reported higher spiritual health also reported higher PMH.

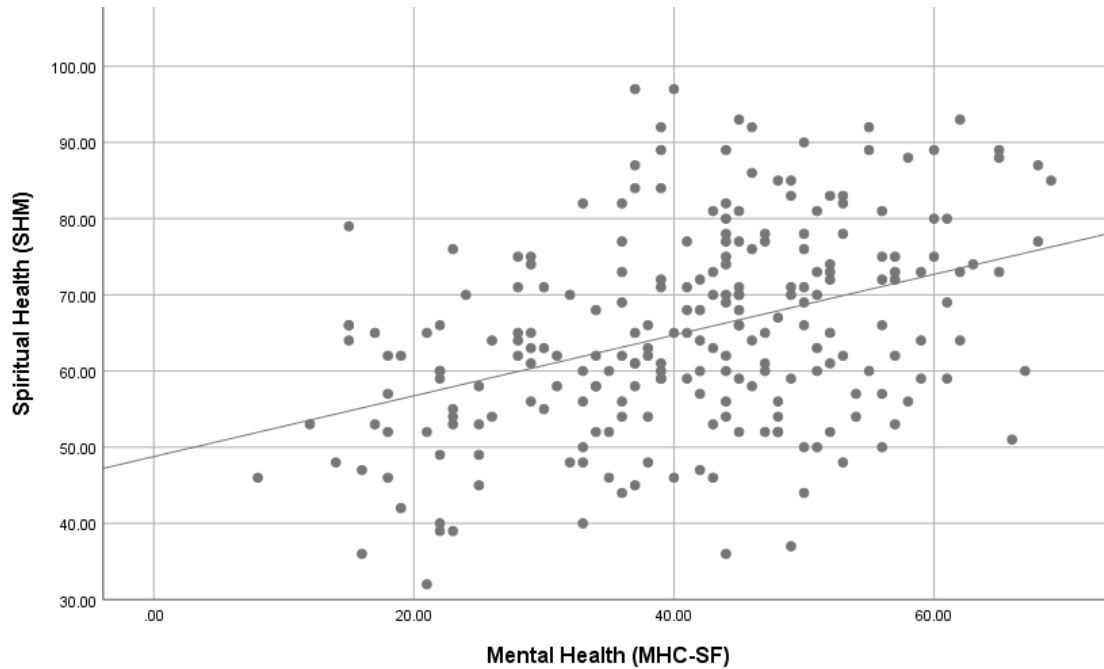
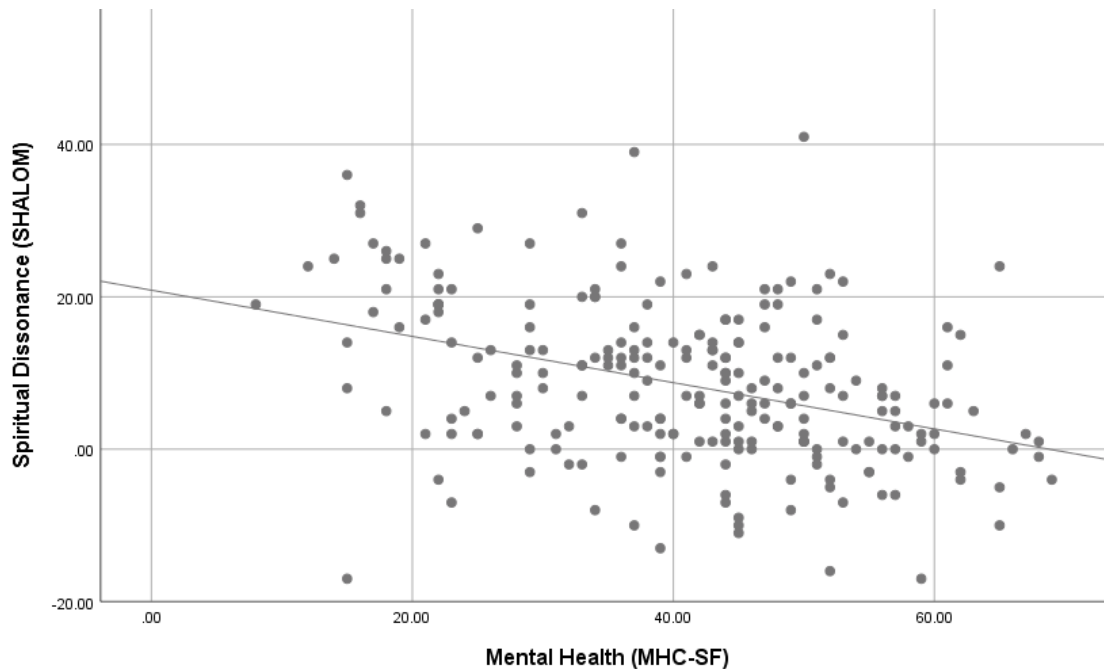


Figure 3. Scatterplot showing the relationship between spiritual health and mental health.

**Hypothesis 2: Spiritual dissonance (DIS) will be negatively correlated to Mental Health (MCH-SF).** Spiritual dissonance and Mental Health were significantly negatively correlated  $r(232) = -.39, p < .001$ . This relationship is illustrated by a scatter plot (Figure 4). Participants who reported higher spiritual dissonance also reported lower levels of mental health.



*Figure 4.* Scatterplot showing the relationship between spiritual dissonance and positive mental health.

**Other findings.** Spiritual dissonance was positively correlated to mental illness,  $r(232) = .18, p = .006$ . The relationship between these two variables is represented in figure 5. Participants who reported higher dissonance scores also reported higher levels of psychological distress.

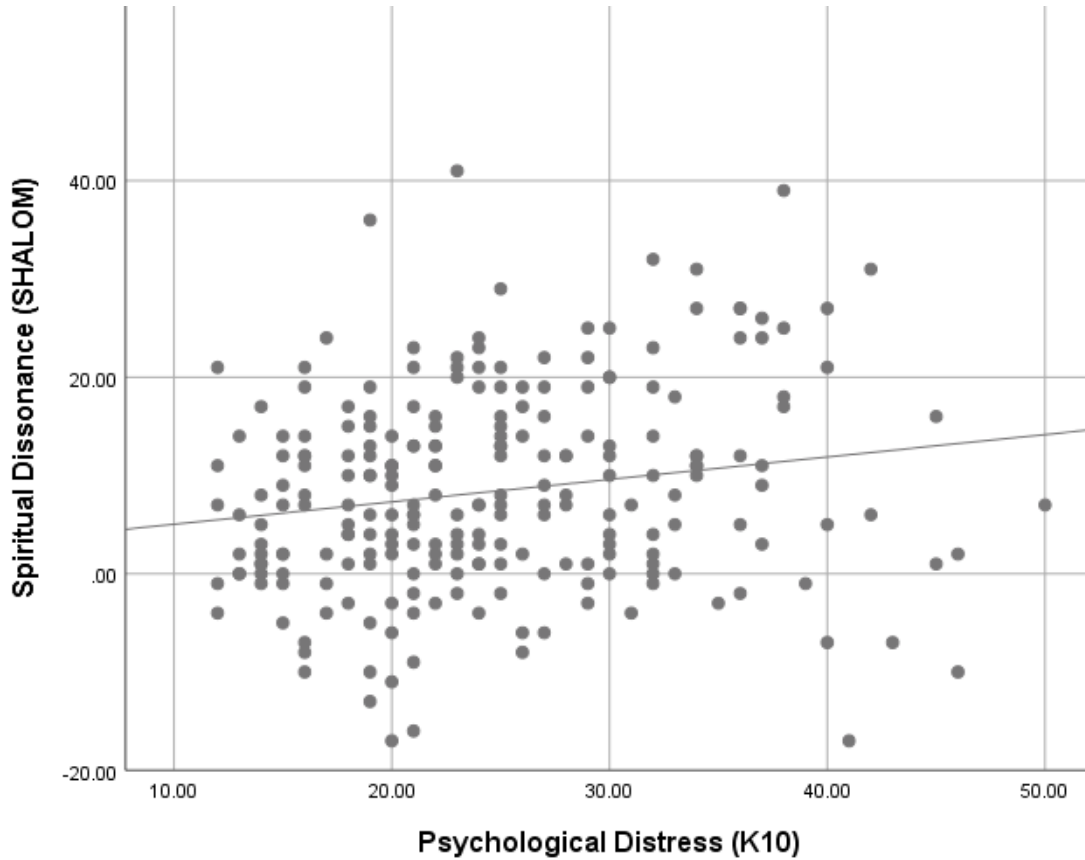
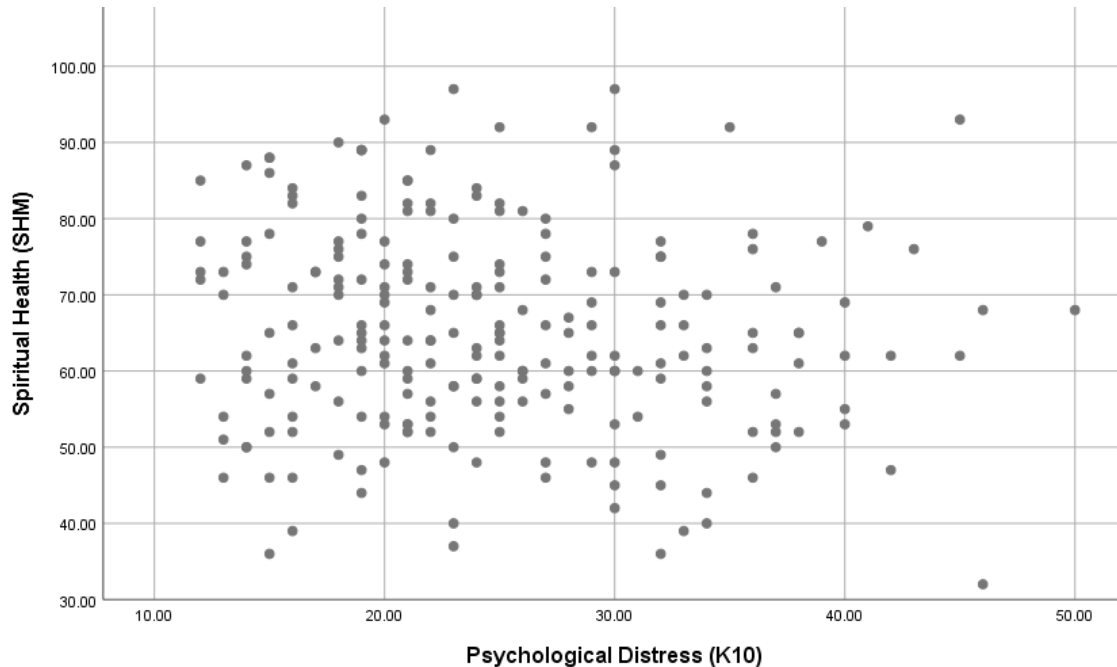


Figure 5. Scatterplot showing the relationship between spiritual dissonance and psychological distress.

The Pearson product-moment correlation test did not find any significant relationship between Spiritual Health and mental illness (Figure 6).



*Figure 6.* Scatterplot showing the relationship between spiritual health and psychological distress.

### Multiple regression model

The proportion of variance in PMH attributed to each predictor variable was assessed using a multiple hierarchical linear regression.

Age, Gender (0 = Man, 1 = Woman) and Race (White = 1, Non-White = 0) were entered as predictors into the first step, psychological distress was added into a second step, and spiritual health was added into a third step. Finally, spiritual health was removed from the fourth step and spiritual dissonance was added. Table 8 presents the results for the hierarchical multiple linear regressions.

Age and gender were non-significant contributors to the model (respectively,  $p = 0.013$  and  $p = 0.183$ ). Race (White = 1, Non-White = 0) was a significant positive contributor to the

model ( $B = 4.81, p < .005$ ). White participants scored 4.81 points higher on the MCH-SF than their non-white counterparts when all other variables were kept at a constant.

Psychological distress was a significant contributor to PMH. As seen in Step 2, psychological distress accounted for an additional 22% ( $p < .001$ ) of the variance in mental health. Psychological distress was also a significant predictor of PMH,  $B = -0.78, p < .001$ .

Spiritual health was a significant contributor to PMH. Step 3 accounted for a total of 42% ( $p < .001$ ) of the variance in MHC-SF scores. Furthermore, spiritual health accounted for an additional 13% of the variance of PMH and reached statistical significance ( $p < .001$ ). Hence, even when the variance attributed to Age, Gender, Race and Psychological distress was accounted for, spiritual health was a significant positive predictor of PMH,  $B = 0.38, p < .001$ .

Spiritual dissonance was a significant contributor to PMH. Step 4 accounted for 36% ( $p < .001$ ) of the variance in MHC-SF scores. Furthermore, spiritual dissonance accounted for an addition 8% of the variance of PMH ( $p < .001$ ). Even when the variance attributed to Age, Gender, Race and Psychological Distress was accounted for, spiritual dissonance remained a significant predictor of PMH. Spiritual dissonance was a significant negative predictor of PMH,  $B = -0.37, p < .001$ .

Table 8  
*Hierarchical Multiple Linear Regression of the Spiritual Health Model*

Variable	Step 1		Step 2		Step 3		Step 4	
	<i>B</i>	<i>p</i>	<i>B</i>	<i>P</i>	<i>B</i>	<i>P</i>	<i>B</i>	<i>p</i>
Constant	31.23	< .001	51.18	< .001	26.57	< .001	54.40	< .001
Age	0.52	.013	0.43	.019	0.28	.097	0.34	.052
Gender <sup>a</sup>	-3.10	.183	-0.97	.639	-2.23	.234	-1.12	.565
White <sup>b</sup>	4.81	.005	3.15	.035	5.73	< .001	2.82	.045
K10	-	-	-0.78	< .001	-0.68	< .001	-0.69	< .001
SHM	-	-	-	-	0.38	< .001	-	-
DIS	-	-	-	-	-	-	-0.37	< .001
Model Fit.	<i>F</i> (3,230) = 5.24	.002	<i>F</i> (4,229) = 22.46	< .001	<i>F</i> (5,228) = 32.44	< .001	<i>F</i> (5, 228) = 26.07	< .001
R <sup>2</sup>	0.06	.002	0.23	< .001	0.42	< .001	0.36	< .001
ΔR <sup>2</sup>	-	-	0.22	< .001	0.13	< .001	0.08	< .001

*Note.* K10 = Kessler Psychological Distress Scale; SHM = Spiritual Health Measure; DIS = spiritual dissonance.

<sup>a</sup> Man = 0, Woman = 1. <sup>b</sup> White = 1, Non-white = 0.

## Discussion

Even though there is much research on r/s and mental illness, there is little research specifically on the unique contribution of spirituality and more specifically the contribution of spiritual health and spiritual dissonance. Furthermore, many studies have specifically focussed on mental illness or various measures of well-being but very few have examined the relationship between these constructs and PMH. This study found that spiritual health was positively correlated to PMH and explained 13 % of variance in PMH. On the other hand, spiritual dissonance was inversely correlated to PMH and contributed to 8% of variance in PMH.

### Spiritual health, mental illness and positive mental health

**Spiritual health and positive mental health (PMH).** Much research has shown that r/s are significantly intertwined with psychological and emotional well-being (Koenig, 2011; Vieten

et al., 2016). As hypothesised, there was a statistically significant positive correlation between spiritual health scores and PMH. Furthermore, spiritual health still accounted for 13% of the unique variance in PMH once psychological distress and various demographic characteristics were accounted for. This study aligns with previous research that generally suggests that r/s are positively associated to different indicators of well-being (Koenig, 2011).

As discussed earlier in this paper, r/s research often employs measures containing items that refer to specific religious beliefs or behaviours, particularly those associated with Christianity. The current study contributes to this body of knowledge by examining the specific contribution of spirituality to PMH, without regard to religious belief or religious practice, and found that higher spiritual health scores were associated with higher PMH scores.

In addition, based on previous literature (e.g., Fisher, 1998), spiritual health is “a fundamental dimension of people’s overall health and well-being, permeating and integrating all the other dimensions of health (i.e., physical, mental, emotional, social and vocational)” (Fisher, 1998, p. 191). However, the relationship between spiritual health and other dimensions of health using Fisher’s model had yet to be explored in the scientific literature. This research suggest that spiritual health is related to PMH which is comprised of psychological, emotional and social well-being subscale and offers some degree of support for Fisher’s theory. Further research would be needed to explore the specific relationship of spiritual health to each PMH subscale as well as to other dimensions of health (physical and vocational).

Furthermore, according to the ternary anthropological model (body-soul-mind), spirituality is one of three ontological dimensions of human beings (Fromaget, 2009, 2017). Moreover, Fromaget (2009, 2017) suggests that all three anthropological dimensions are

interrelated. The results obtained from this study partially support this theory by demonstrating a relationship between soul, represented by PMH and mind, represented by spiritual health.

**Spirituality and mental illness.** The current study reported that spiritual health did not correlate significantly with mental illness. This finding was unexpected since Koenig's (2011) literature review showed that many studies reported r/s to be inversely associated to mental illness. That being said, a small percentage of studies reported a positive association and approximately two-thirds of studies showed no effect between r/s and mental illness. The current study also shows no effect.

Inconsistent findings may be due to the many different ways r/s are operationalized and measured in the literature. Furthermore, there is little consensus on the relationship between religion and spirituality. Koenig's (2011) work included studies that measured both religion and spirituality or one of the two in relation to different health indicators. Perhaps certain religious beliefs or behaviours may have an effect on mental illness while spirituality may not have any significant effect. Furthermore, as Koenig (2011) points out, many r/s studies are cross-sectional and very little is known about the possible mechanisms by which r/s and mental illness could be related. Perhaps religious belief or religious behaviours and spirituality may be associated differently to mental illness because of different underlying mechanisms. Indeed, it has been suggested that some of the psychological benefits of r/s could be due to parallel phenomenon only associated to religion including the promotion of healthy lifestyle, increased sense of social belonging, positive religious coping as well as many others (George, Ellison, & Larson, 2002; Moreira-Almeida, Lotufo Neto, & Koenig, 2006; Paloutzian & Park, 2013). The psychological benefits associated with certain aspects of religion (e.g., social support) may not be shared by

spirituality (Baetz, Griffin, Bowen, Koenig, & Marcoux, 2004; George et al., 2002; Koenig et al., 2001; McCullough & Larson, 1999; Tepper, Rogers, Coleman, & Malony, 2001).

**Psychological distress and positive mental health (PMH).** As was expected, psychological distress and PMH were negatively correlated. This result supports previous findings that mental illness and PMH are moderately negatively correlated. For example, two previous studies reported finding low to moderate negative correlations between mental illness and PMH (respectively, Lamers et al., 2011; Lamers, Westerhof, Kovács, & Bohlmeijer, 2012). In addition, as with previous studies (Keyes & Grzywacz, 2005), the results suggest that spiritual health correlates differently to mental illness and to PMH. There was a slight but non-significant correlation between spiritual health and mental illness but a significant correlation between spiritual health and PMH.

In addition to the moderate negative correlation between mental illness and PMH, this research's findings suggest that 22 % of PMH can be explained by mental illness. Psychological distress was the strongest predictor of PMH and accounted for the most variance. Therefore, these results support previous findings that mental illness and PMH are related yet separate constructs (Lamers et al., 2011, 2012) which further support Keyes' mental health continuum model of PMH (Greenspoon & Saklofske, 2001; Keyes, 2002, 2005; Lamers et al., 2011; Suido & Shaffer, 2008; Westerhof & Keyes, 2010).

### **Spiritual dissonance, mental illness and positive mental health**

**Spiritual Dissonance and mental illness.** This study found that spiritual dissonance was positively correlated to mental illness. More specifically, this study explored the relationship between spiritual dissonance and psychological distress (i.e., an indicator of anxiety and depression). Moreover, it is unknown how spiritual dissonance could relate to other forms of

mental illness. This finding aligns with a few studies that reported that dissonance was associated with burnout (Monteiro, 2011) and lower levels of happiness (Fisher, 2008). Furthermore, in a Canadian study involving youth, spiritual harmony was associated with higher levels of life satisfaction, increased psychological health, decreased negative emotional outcomes and less psychosomatic symptoms (Michaelson et al., 2016).

Spiritual dissonance is a novel concept and little research has been conducted on how it could relate to mental illness. However, similar concepts, such as incongruence and self-state discrepancy, have been extensively studied (Boldero & Francis, 1999, e.g., 2000; Bruch et al., 2000; Carver et al., 1999; Cheung, 1997; Clark & Watson, 1991; Duval & Lalwani, 1999; Duval & Silvia, 2002; Duval et al., 2001; Duval & Wicklund, 1972; Higgins, 1987, 1989, 1999a, 1999b; Higgins et al., 1986, 1997; Higgins, Vookles, & Tykocinski, 1992; Key et al., 2000; Phillips & Silvia, 2005; Rogers, 1957, 1961; Silvia & Duval, 2001, 2004; Strauman & Higgins, 1987, 1988). Generally, self-state theories stipulate that self-discrepancy is related to mental illness or negative emotional states. These results align with their theory and Fisher's statement that spiritual dissonance is related to mental illness. The previously cited self-state theories contribute significantly to the general understanding of spiritual discrepancy.

In addition, these findings also add to the body of knowledge on self-state discrepancy by suggesting that self-state theories could be applied to specific dimensions of existence, in this case, the spiritual dimension. Furthermore, this study suggests that discrepancy in one human dimension, in this case spirituality, could be related to other dimensions of human existence offering more support for Fromaget's ternary model.

**Spiritual Dissonance and Positive Mental Health (PMH).** Spiritual Dissonance and PMH are both relatively novel concepts and the relationship between them had yet to be

explored. However, this study found that spiritual dissonance and PMH were negatively correlated. In other words, spiritual harmony was associated with higher levels of PMH. Furthermore, spiritual dissonance contributed to 8% of the unique variance in PMH even after having controlled for psychological distress.

### **Other findings**

Analysis revealed that some participants had negative dissonance scores which suggests that they surpass their spiritual ideals. Although this may in fact be true, this may also be related to the instrument used to assess both ideal and actual spiritual health. First, the dual measure was on two separate survey pages. Therefore, participants were unable to consult their previous stated ideal responses from the LOM section and compare them to their responses in the SHM section. Perhaps a survey tool that would permit participants to provide relative responses rather than absolute responses would avoid difficulties in responding to SHALOM and interpreting meaning of negative dissonance scores. Furthermore, for added precision, it may be useful to use a continuous measure rather than a 5-point Likert scale.

### **Clinical implications**

Spirituality is receiving increased recognition as an important dimension of multicultural competency in clinical practice because religion and spirituality are important aspects of diversity (Barnett, 2016; Captari et al., 2018; Daniels & Fitzpatrick, 2013; Plante, 2016; Vieten et al., 2016, 2013). Some may consider it to be a therapist's professional duty as well as ethical duty to be aware of how spirituality relates to, impacts and interacts with PMH and mental illness (Barnett, 2016; Captari et al., 2018; Daniels & Fitzpatrick, 2013; Plante, 2016; Vieten et al., 2016, 2013). This study found that spiritual health and spiritual dissonance were significantly related to PMH and both accounted for a significant amount of variance in PMH. Furthermore,

spiritual dissonance was negatively related to mental illness. Hence, it may be important for mental health practitioners to include spiritual health and spiritual dissonance assessments within their practice of psychotherapy. This suggestion aligns with many r/s researchers that recommend that r/s should be included in the initial intake process to gain insight on its relation to PMH (Barnett, 2016; Pargament, 2011). Moreover, spirituality, in accordance with ethical standards of practice, should be assessed in accordance to and with the individual's own world views and spiritual ideals rather than the imposition of an absolute ideal (Canadian Psychological Association, 2000; College of Registered Psychotherapists of Ontario, 2016). Measures of spiritual dissonance with an instrument, such as the SHALOM scale, may be useful in clinical practice.

The current study does not attempt to imply that spiritual dissonance may cause mental illness or lower PMH. However, the large body of research on self-state theories does imply that self-state discrepancies lead to lower levels of well-being and higher levels of negative emotional states. If the premises of self-state discrepancy hold true for spiritual dissonance, three possible areas of interventions could be promising avenues for clinical work.

First, studies have demonstrated that dissonance can be reduced by working actively towards changing the self to become more congruent with ideals (Phillips & Silvia, 2005; Rogers, 1957, 1961; Silvia & Duval, 2001). Therapies that support change include Person centered therapy (Rogers, 1957, 1961) and motivational interviewing (Rollnick & Miller, 1995). Second, the literature suggests that it is possible and may even be more effective to reduce dissonance by lowering or letting go of self-standards (Harding & Larsen, 2014). Mindfulness meditation or mindfulness integrated approaches (e.g. MBSR, MBCT, ACT, DBT) that focus on increasing self-acceptance while removing the need to change have been shown effective at

reducing the self-discrepancy gap (Ivtzan, Gardner, & Smailova, 2011; Jimenez, Niles, & Park, 2010; Lykins & Baer, 2009; Scott & O'Hara, 1993; Turnbull & Norris, 1982; Woodman & Hemmings, 2008).

In addition, self-concept theories have suggested that avoiding objective self-focused attention and rumination mitigate the effects of self-discrepancy on negative mental health states (Moskalenko & Heine, 2003; Phillips & Silvia, 2005; Silvia & Duval, 2001). By preventing individuals from over-engaging with their thoughts, mindfulness integrated psychotherapeutic approaches and cognitive therapy may protect individuals from self-discrepancy's prejudice on mental health (Duval & Wicklund, 1972; Fejfar & Hoyle, 2000; Higgins et al., 1986; A. Moore & Malinowski, 2009; Moskalenko & Heine, 2003; Papadakis, Prince, Jones, & Strauman, 2006; Scheier & Carver, 1977; Shapiro, 1982). However, it would be premature to suggest that these would apply to spiritual dissonance and much more research is needed.

### **Strengths**

This study exhibits several strengths. First, the sample size was sufficiently large for the multivariable statistical tests that were conducted. Furthermore, while a convenience sample of ungraduated students was recruited, the sample was nevertheless diverse with approximately half of participants identifying with a race other than Caucasian. Second, as opposed to other studies that use single-item measures of spirituality, this study used a more robust measure. SHM and LOM both contained 20 items that thoroughly assessed spirituality in four generally well accepted domains of spirituality. Furthermore, unlike other measure that confound r/s, Fisher's SHALOM isolates spirituality making it possible to begin to disentangle how each construct relates differently to mental illness and mental health.

Third, dissonance is an innovative concept in the area of spirituality research. The dissonance concept is respectful of different world views because it compares an individual's lived experience of spirituality to their own spiritual ideals. Therefore, it is an instrument that lays a solid foundation for a universally accepted measure of spirituality because it can be used in multicultural and multireligious populations.

Finally, Keyes' dual continuum model, as the name suggests, is based on two continuous intersected measures. However, many studies simplify the model by using categorical data to report mental illness (e.g. presence or absence) and PMH (e.g. languishing, moderate and flourishing). The current study used continuous measures of psychological distress and PMH as which yielded significantly more statistical power to the analysis. In addition, this study used the K10 to assess psychological distress as opposed to diagnosis of mental illness. The K10 was able to capture the severity and frequency of symptoms of mental illness.

### **Limitations**

This study had several limitations. First, this study used a volunteer convenient sampling method from a limited sampling pool comprised mostly of undergraduate university students. Consequentially, the sample revealed very little variance in age, marital status, and level of education. Furthermore, participants who identified their gender as "man" were underrepresented in the sample, and no participants identified as gender queer. Because of the sample's limits, this study's findings may not generalize to the larger population.

Second, the K10 scores were positively skewed meaning that many participants reported experiencing few symptoms of psychological distress. This finding is to be expected from a measure of psychological distress/illness in a community sample. However, caution should be applied in attempting to generalize this study's findings to a clinical population. Furthermore,

this study's data collection method was based on self-reporting, introducing the potential for social desirability response bias.

Third, in the literature, there is general agreement that transcendence is an important part of spirituality (e.g. Buck & Meghani, 2012; Delgado, 2005; Gall et al., 2011; Jaber et al., 2017; Rich & Cinamon, 2007; Tanyi, 2002). However, respondent's SHM and LOM scores did not follow a normal distribution pattern. In fact, the large majority of respondents reported the lowest possible score in the transcendental domain on SHM and LOM while the remaining participants' scores were relatively evenly distributed up to the maximum score. However, the manner in which the transcendental domain of spirituality related to PMH was beyond the scope of this study.

Fourth, for analysis, this study relied on scores obtained from self-reported measures of psychological distress rather than on professional clinical assessments which would have been too time consuming and financially burdensome. Furthermore, the K10 has only been validated as a non-specific measure of psychological distress related to depression and anxiety. How spiritual health and dissonance may relate to other types of mental illness was beyond the scope of this study.

Fifth, and possibly most importantly, Koenig (2011) critiques some tautological secular definitions and operationalization of spirituality: "attempts to measure spirituality as a broad, overarching, inclusive construct have resulted in scientifically unacceptable construct overlap"(p. 199) resulting in studies that measure the exact outcomes they claim to predict. Some could argue that there is significant domain overlap in certain SHALOM subscales (personal, communal, environmental, and transpersonal well-being) and MHC-SF subscales (emotional, psychological, and social well-being). Even though the data did not test positive for singularity

and multicollinearity, perhaps, if construct overlap was limited to specific subscales in each measure, the use of total scores may have reduced the multicollinearity index and the variance proportion value. More research should further explore the relationship between each domain of spiritual health as it pertains to each domain of PMH.

Finally, Koenig (2011) stresses that r/s research is in dire need of intervention studies that could elucidate the mechanism possibly underlying the relationship between spirituality and other studied variables (i.e. mental illness and PMH). The current study was cross-sectional and cannot infer a causal relationship between spiritual health, spiritual dissonance, mental illness and mental health. Therefore, any clinical applications derived from this study remain hypothetical. Only with intervention studies will research in this field become clinically relevant and able to develop scientifically supported clinical applications and best practices.

### **Future research**

The current study offers a solid foundation for further research on spiritual health, spiritual dissonance, mental health and mental illness. Considering the novelty of the current study, further research may want to address some of this study's limitations particularly related to sampling method and sampling pool. Future studies could include a better representation of the population by including participants of different ages, levels of study, marital status and socioeconomic status. Furthermore, special attention may be warranted to ensure representation of participants that identify as men, trans\*, and gender queer. Further research should also explore spiritual health and spiritual dissonance in clinical populations. Finally, the sample should also include greater variation in the religious and secular practices of participants.

Given the possibility of construct overlap between spiritual health (personal, communal, environmental, and transpersonal) and mental health (emotional, psychological, and social),

further research may benefit from exploring separately the unique relationship between each domain of spiritual health and mental health (emotional, psychological, and social). Due to its central role in spirituality literature, particular attention should be attributed to the transcendental domain which is specific to spirituality research.

Ultimately, subsequent studies on spiritual dissonance could continue to evolve by drawing on the large body of literature on self-state theories, particularly moderating variables. For example, the roles of accessibility, self-awareness, self-consciousness, importance of self-guides and centrality of self-guides on mental illness and PMH may be important avenues for future spirituality research.

In the long-term, spiritual health and spiritual dissonance research may want to focus on intervention studies by developing various spiritual interventions and evaluating their effectiveness on spiritual health, spiritual dissonance, mental illness and positive mental health.

### **Conclusion**

This study has explored the relationship between spiritual health and dissonance as defined by Fisher's spiritual health model and PMH and mental illness as defined by Keyes' dual continuum model of mental health and mental illness. It found that spiritual health was correlated to PMH and was a significant predictor of PMH. In addition, it found that spiritual dissonance was inversely correlated to PMH and was a significant contributor of PMH. Interestingly dissonance, but not spiritual health, was correlated psychological distress. By isolating spirituality from religious beliefs and practices, these findings start to elucidate possible causes for inconsistent findings in r/s and mental health research. Furthermore, this thesis explores the manner in which spirituality relates differently to mental illness and mental health. Finally, in light of self-state research, this thesis beings to explore the original concept of

spiritual dissonance as it relates to mental health and mental illness possibly paving the way for a more adaptive and culturally sensitive way of assessing spirituality in mental health research.

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