Spiritual Intelligence, Resilience, and Well-being among Aotearoa New Zealand University Students

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Abstract

Spiritual intelligence involves utilising the spiritual, nonmaterial, and transcendent aspects of existence to possess purpose in life and develop a higher degree of consciousness, compassion, and transcendental awareness. Existing research has highlighted the adaptive applications of spiritual intelligence, specifically its relationships with aspects of well-being. However, there is a general paucity of research in the area. The purpose of this quantitative study was to explore the relationships between spiritual intelligence and aspects of well-being–resilience, depression, anxiety, and stress–among Aotearoa New Zealand university students. Two hundred and fourteen university students enrolled in an Aotearoa New Zealand university completed an online questionnaire that measured their spiritual intelligence, resilience, depression, anxiety, and stress. The current study's findings suggest that spiritual intelligence facilitates reduced experiences of depression and stress and increased resilience. However, spiritual intelligence and anxiety were not statistically significantly associated in this study. Additionally, the relationship between spiritual intelligence scores and combined depression, anxiety, and stress scores were fully mediated by resilience scores. These findings have implications for both university students and the wider society of Aotearoa New Zealand. Given that the poor mental health of university students is detailed both on a global and national scale, an alternative approach to understanding and enhancing well-being is needed. Positing a more holistic approach to well-being allows for an alternative view of intelligence in a world that places much importance on an individual's IQ.

To my Grandparents

for their ever-lasting impact on my life, and continuous spiritual guidance.

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Introduction

The mystery of the world is revealed only to the person who can look upon the material world with his physical eyes and simultaneously has the spiritual vision necessary to see the unseen spiritual world. One who knows both Matter and Spirit is thus the true knower, and is a spiritually intelligent being.

Awdhesh Singh (2014)

Throughout modern history, the traditional understanding of intelligence (i.e., intelligence quotient) has been a central concept in the Western.[1] world. Often, there is an assumption that a high IQ is necessary for a successful and desirable life. However, while IQ is an essential aspect of individual functioning, it does not reflect the full complexity of human intelligence (Sternberg, 1988). In more recent times, additional types of intelligence have gained recognition, and theories regarding the existence of multiple intelligences have become more well-known (Gardner, 1983). These additional intelligence, including emotional intelligence, social intelligence, and spiritual intelligence, provide a more holistic understanding of human intelligence and have been positively linked to measures of health and happiness (Baezzat et al., 2018; Bayrami et al., 2014; Carmeli et al., 2009; Comstock, 2020; Ebrahimi et al., 2012; Khosravi & Nikmanesh, 2014; Raina, 2018; Vlachaki & Maridaki-Kassotaki, 2013). While research regarding the adaptive applications and the role these other intelligence play in the functioning of individuals has been conducted, further research is warranted.

Spiritual intelligence—a set of mental capacities that contribute to the awareness, integration, and application of transcendental elements of one's life (King, 2008)—appears to decrease experiences of distress and ill-health (Baezzat et al., 2018; Bayrami et al., 2014; Ebrahimi et al., 2012; Khosravi & Nikmanesh, 2014; Raina, 2018). Spiritual intelligence involves individuals constructing meaning in their lives and their experiences, expanding their states of consciousness (through practices such as meditation, prayer, and yoga), and critically exploring issues that are existential in nature (e.g., reality, time, space, and death) (King, 2008). Spiritual intelligence appears to

[1] Western society is a common referent to the wealthy and industrialised societies of Western Europe and their genealogical and colonial descendants, including the United States, Canada, Australia, and New Zealand.

increase happiness (Amirian & Fazilat-Pour, 2015), quality of life (Singh and Sinha, 2013), resilience (Ebrahimi et al., 2012; Khosravi & Nikmanesh, 2014), and decrease depression (Bayrami et al., 2014; Raina, 2018), anxiety (Bayrami et al., 2014; Raina, 2018), and stress (Bayrami et al., 2014; Khosravi & Nikmanesh, 2014; Raina, 2018).

Research from around the world highlights the ever-growing issue of mental health and well-being, particularly among University students (Adlaf et al., 2001; Asif et al., 2020; Eisenberg et al., 2012; Mayer et al., 2016; Mofatteh, 2020; OUCHA, 2017; Storrie et al., 2010; Tomoda et al., 2000; Wong et al., 2006). Further, a survey conducted by the New Zealand Union of Students Associations (NZUSA, 2018) showed that New Zealand students commonly experience psychological distress, with stress, anxiety, depression, lack of energy/motivation, and feelings of hopelessness and worthlessness being the most common self-diagnosed issues reported by students (NZUSA, 2018). Another Aotearoa New Zealand based study reported that depression and anxiety were present in 17.3% and 19.7% of the participating students, respectively, while 7.3% of participants had thoughts of self-harm or "being better off dead" (Samaranayake et al., 2014, p.17). Given these recent mental health findings, there is urgency in exploring alternative ways of improving the health and well-being of Aotearoa New Zealand students (NZUSA, 2018; Samaranayake et al., 2014).

Research Aims. Given the high rates of mental health issues reported among Aotearoa New Zealand University students and the indication that spiritual intelligence plays a vital role in maintaining one's psychological health and well-being (Noble, 2001), it would be prudent to explore this relationship. Despite several findings that spiritual intelligence plays a significant role in the reduction of negative feelings of well-being (Baezzat et al., 2018; Bayrami et al., 2014; Khosravi & Nikmanesh, 2014; Raina, 2018), and increased protective factors of well-being (Ebrahimi et al., 2012; Khosravi & Nikmanesh, 2014), research in this area remains underdeveloped, particularly within Aotearoa New Zealand. Therefore, this research aims to investigate the relationship between spiritual intelligence and several components of well-being– specifically resilience, depression, anxiety, and stress. By conducting this research, it is hoped that a more holistic way of improving the well-being of students in Aotearoa New Zealand, and perhaps this wider society, will be highlighted.

The following quantitative self-administered online survey is an exploratory study designed to address the following research questions:

1. Is there a relationship between spiritual intelligence and resilience of university students in Aotearoa New Zealand, and if so, what is the direction of this relationship?
2. Is there a relationship between spiritual intelligence and perceived stress among university students in Aotearoa New Zealand, and if so, what is the direction of this relationship?
3. Is there a relationship between spiritual intelligence and perceived anxiety of university students in Aotearoa New Zealand, and if so, what is the direction of this relationship?
4. Is there a relationship between spiritual intelligence and perceived depression of university students in Aotearoa New Zealand, and if so, what is the direction of this relationship?

Structure of Thesis. To place the research conducted in this thesis in context, chapter one reviews critical theories and the literature on intelligence. In this chapter, the idea that multiple intelligences exist is presented and discussed.

Chapter two then introduces the concept of spiritual intelligence and provides a review of the literature, including definitions and models of spiritual intelligence, and measures of spiritual intelligence.

Chapter three provides a brief overview of well-being, specifically depression, anxiety, and stress. This section details existing research findings regarding the well-being of university students both internationally and in Aotearoa New Zealand. The link between spiritual intelligence and well-being are also examined in this chapter. The objectives and scope of the study are detailed at the end of this chapter.

Chapter four describes the methodology of the research. A quantitative online questionnaire was used to measure participants' spiritual intelligence and aspects of well-being.

Chapter five details the results of the study. Findings between selected demographic data and the measures are provided first, with the research questions being addressed secondly. Additional analyses conducted are presented throughout the chapter.

Chapter six provides a discussion and interpretation of the research. This chapter integrates the findings of the current study with existing literature and research in the field. The limitations, strengths, and ideas for future research around spiritual intelligence are outlined. This chapter ends with concluding comments.

Chapter 1. Intelligence

While we may continue to use the words smart and stupid, and while IQ tests may persist for certain purposes, the monopoly of those who believe in a single general intelligence has come to an end.

Gardner (1983)

This chapter explores intelligence in terms of its definition, theories and models, and types. While understandings of intelligence are culturally derived (Cocodia, 2014), the current thesis will focus on Western research and understandings of intelligence, as that is where most of the literature is derived.

1.1 Theories of Intelligence

In what has been described as the first efforts of defining human intelligence, in the fourth-century Greek philosopher, Plato provided his philosophical views of intelligence. Using an analogy, Plato described human intelligence as blocks of wax. Intelligence differed in size, moistness, and purity, while intellectual deficits were described as the result of overly hard, overly soft, muddy, or impure blocks of wax (Cianciolo & Sternberg, 2004). In the late nineteenth century, naturalist Charles Darwin believed that human intelligence developed from the instincts of non-human ancestors (Darwin, 1871). Darwin (1871) believed that the difference between the intelligence of humans and that of other non-human species was a matter of degree rather than type, resulting from evolutionary processes.

A more contemporary understanding of intelligence is given by the Oxford English Dictionary, which defines intelligence as the faculty of understanding, a branch of knowledge, the action of mentally apprehending something, and knowledge concerning events communicated by or obtained from another (Oxford University Press, 2020). While many authors seem apprehensive about defining intelligence, intelligence is generally considered analytic or mathematical and linguistic intelligence (Wigglesworth, 2004).

The modern study of intelligence generally dates back to the work of Stern and Spearman in the early 1900s; therefore, Stern's theory of intelligence quotient will lead this section, followed by the discussion of Spearman's theory of generalised intelligence, Cattell and Horn's fluid and crystallised intelligence theory, and Sternberg's triarchic theory. Finally, Gardner's theory of multiple intelligences will be explored in great depth in order to introduce the idea of numerous types of intelligence existing for human beings.

Stern's Theory of the Intelligence Quotient. When the general public thinks of human intelligence, most think of the well-known concept of intelligence quotient (IQ), which is generally used to reflect an individual's mental or cognitive ability (i.e. linguistic and logical reasoning, problem-solving, and learning). Developed by Stern in 1912, IQ is determined by calculating a person's mental age (the performance level on a test), dividing this score by chronological age, and dividing that number by 100 (King, 2008). Primarily, IQ scores have been used to diagnose and classify children from special education services (Detterman & Thompson, 1997). Outside of educational contexts, IQ scores have been used to screen job applicants in vocational counselling to help students plan career paths and assist in psychological assessments.

While IQ and measurements of IQ are highly debated within the area of intelligence theory, they are still greatly cherished by psychology (Gardner, 1938). Sternberg (1988) believes that IQ tests explore a construct that has come to be represented by only IQ, reflecting select abilities and knowledge. He claims this definition does not accurately reflect the nature of human intelligence. Stern's intelligence quotient (IQ) has also played a significant role in the harmful use of intelligence, given the synonymous use of intelligence and IQ. By providing a somewhat 'empirical' way of numerically describing the intelligence of individuals, IQ has been used as a tool of racism. This will be discussed in more detail in section 1.3.

Spearman's Generalised Theory of Intelligence. British psychologist Charles Spearman believed that human intellect came down to one single factor or mental energy. He proposed a two-factor model of intelligence consisting of general ability ('*g*') and specific abilities ('*s*') (Spearman, 1961). Spearman (1927) noted that the specific abilities humans have do not capture the essence of intelligence but rather the difference in people's mental capacities due to general

abilities. According to Spearman, *g* is a single mental capacity, or mental energy, measured by all intelligence tests, whereas *s* is uniquely measured by a particular test (e.g., mathematical computation) (Cianciolo & Sternberg, 2008; Spearman, 1927, 1961). In this model, Spearman (1927) asserted that the differences observed in mental test scores are due to *g* alone. His theory was subject to much debate, most notably from Louis Thurstone (1938, as cited in Ruzgis, 1994), who argued that Spearman's *g* was actually composed of a variety of mental capabilities, skills, and motivations that operate simultaneously, as opposed to the single mental energy (King, 2008).

Cattell-Horn Theory of Fluid and Crystallized Intelligence. British psychologist Raymond Cattell originally proposed the theory of fluid and crystallised intelligence in the 1940s, which was further developed by his own graduate student John Horn (Cianciolo & Sternberg, 2004). The theory suggests that general intelligence is not a single construct but a formation of many mental abilities, divided into two categories; fluid and crystallised. Horn and Cattell (1966) propose that these mental abilities manifest differently across individuals. Fluid intelligence is the measurable outcome of biological factors on intellectual development that occur independently of environmental factors (Horn & Cattell, 1966). More specifically, fluid intelligence includes the capability for abstract reasoning, problem-solving, and flexibility of thought (Cianciolo & Sternberg, 2004; Horn & Cattell, 1966; King, 2008). Problem-solving or solving puzzles require an individual to draw on fluid intelligence. Crystallised intelligence is the primary manifestation of learning within educational and cultural settings (Horn & Cattell, 1966; King, 2008). This type of intelligence includes facts learned and the individual's experiences of the past. Most standardised tests require a person to draw upon their crystallised intelligence.

Sternberg's Triarchic Theory of Human Intelligence. In the 1980s, Robert Sternberg developed his triarchic theory of 'successful' human intelligence (Sternberg, 1988). His theory suggests that successful intelligence involves balancing analytical, creative, and practical abilities to succeed in a particular social-cultural context (King, 2008; Sternberg, 1988). Analytical abilities allow individuals to evaluate, compare and contrast different information (King, 2008). Creative abilities enable an individual to discover or create new ideas and concepts.

On the other hand, practical abilities allow individuals to practice, apply, and use learned information (Sternberg, 1988). In this theory, successful intelligence and success in life is

determined by an individual's ability to develop and strengthen each set of abilities while compensating for or correcting any weaknesses (Cianciolo & Sternberg, 2008). For example, if an individual has well-developed creative and practical abilities but less well-developed analytical abilities, in order to be successful, the individual should aim to inhabit an environment in which creative and practical abilities are more critical for success (Cianciolo & Sternberg, 2008).

1.2.1 Gardner's Theory of Multiple Intelligences

Arguably one of the most influential theories of intelligence is the theory of multiple intelligences developed by Gardner in 1983. Gardner's theory suggests that IQ alone is not representative of human intelligence. In his book *Frames of Mind*, Gardner (1983) describes intelligence as seven independent intelligences rather than one single entity. Individuals draw on these intelligence, individually and collectively, to create products and solve problems relevant to the societies in which they live (Gardner, 1983). Gardner further defines intelligence as a "computational capacity" or a capacity to process a certain kind of information (p. 6). He states that this capacity originates in human biology and human psychology and that an intelligence is the ability to solve problems or create products that are important or valuable in a particular cultural setting or community.

Gardner's (1983) theory considers skills and abilities that are seemingly universal among humans. A distinction between *domain* and intelligence is made with a domain defined as "any organised activity in society in which individuals can be ranked in terms of expertise" (Gardner, 1993, p. 65). Therefore, any sport, art, craft, or occupation is recognised as a domain rather than an intelligence. The theory challenged traditional beliefs and understandings of intelligence by suggesting that humans have nine different kinds of intelligence, each reflecting different ways of interacting with the world. Through this theory, the concept of intelligence broadens beyond the traditional cognitive, primarily linguistic, and logical abilities commonly associated with IQ (Gardner, 1983; Emmons 2000a; Sternberg 1998).

Gardner (1983) developed eight criteria that must be met for a potential mental capacity to be considered an intelligence:

1. Potential for brain isolation by brain damage
2. The existence of savants, prodigies, and other exceptional people
3. Presence of core operations
4. Susceptibility to encoding (symbolic expression)
5. A distinct developmental progression
6. Place in evolutionary history
7. Support from experimental psychology
8. Support from psychometric findings

1) The first criteria that must be met is isolation by brain damage. This criterion refers to the idea that for any set of abilities or skills to be considered an intelligence, it must demonstrate neurological autonomy from other intelligence and skillsets (Gardner, 1983). This criterion can be fulfilled through neuropsychological studies or cases of its destruction by localised brain lesions (King, 2008). According to Gardner (1983), this criterion is the most persuasive evidence for a potential intelligence.

2) The second criterion, and second most influential piece of evidence for a potential intelligence, is the existence of prodigies and other exceptional individuals (Gardner, 1983). Those who demonstrate above-average abilities in one or more skill sets, or individuals who demonstrate below-average performance in most abilities but display exceptional or above-average performance in one skill, provide valuable evidence for a potential intelligence (Gardner, 1983; King, 2008). Both the first and second criterion show human intelligence's autonomous nature and neurological foundations (Gardner, 1983).

3) Gardner's (1983) third criterion states that an intelligence must have an identifiable core operation or set of operations. He further describes this criterion as the "existence of one or more basic information-processing operations or mechanisms, which can deal with specific kinds of input" (Gardner, 1983, p. 64). For example, musical intelligence may have a core operation of sensitivity to pitch, and bodily-kinaesthetic intelligence may have the ability to imitate others movements (Gardner, 1983).

4) The fourth criterion, susceptibility to encoding, refers to the idea that an intelligence must display susceptibility to encoding in a symbol system. Symbol systems are culturally forced systems of meaning, which capture forms of information (Gardner, 1983). Examples of these symbol systems include languages and mathematical symbols. Gardner (1983) suggests that symbol systems provide an advantage for particular mental abilities. He also suggests that symbol systems may have needed raw mental ability in order to evolve in the first place. Gardner (1983) argues that a characteristic of any human intelligence is its "natural gravitation toward embodiment in a symbol system" (p. 66).

5) The fifth criterion, Gardner (1983), states that an intelligence should have a unique developmental history, along with a definable set of expert 'end state' performances. The developmental history should be observable in all individuals, ranging from below-average to normal, above average, or gifted. Early stages of the developmental path will be experienced by all novice individuals, most likely at a young age, and at the other end of the developmental path are stages of high competence and performance, observable in those with exceptional talent, ability, or specialised training (King, 2008).

6) The sixth criterion is evolutionary history and evolutionary plausibility. This criterion requires that an intelligence have some evolutionary lineage or antecedents (Gardner, 1983). Gardner (1983) notes that each intelligence must meet the test of having roots deeply embedded in the evolution of humans and/or other species. For example, there is evidence of musical instruments dating back to the Stone Age, which gives evolutionary history for musical intelligence (Gardner, 1983).

7) Support from experimental psychology is the seventh of Gardner's (1983) criterion. This criterion requires empirical support from research. This criterion allows for a potential intelligence to be distinguishable from other intelligences. In Gardner's (1983) view, experimental psychology can help demonstrate how domain-specific abilities interact with complex tasks.

8) The final criterion is the support from psychometric findings, such as cognitive tests like IQ tests. The seventh and eighth criterion aid in explaining the details of specific mental operations

and processing, allowing for study on how different abilities interact, interfere, or transfer between contexts (Gardner, 1983).

Based on these eight criteria, Gardner (2000) proposes eight forms of intelligence; linguistic, logical-mathematical, musical, spatial, bodily-kinaesthetic, interpersonal, intrapersonal, and naturalist.

Although not included within Gardner's theory of multiple intelligence, Gardner explored other potential intelligences. Gardner (1983, 2000) considered *moral intelligence* as a potential addition to his model. According to Gardner (2000), morality is more an issue of personality and one's character than it is an issue of intelligence. Therefore, Gardner contends that it does not have a place in multiple intelligence theory (Gardner, 2000). Further, Gardner (2000) doubted the possibility of delineating a moral domain from other domains in order to establish the autonomous construct of moral intelligence. In addition, Gardner considered including *existential intelligence* within his theory. Described as "the intelligence of big questions" (Gardner, 1993, p. 20), this intelligence was based on the tendency for humans to contemplate the most fundamental questions of life. Even though existential intelligence scores relatively well in regard to Gardner's eight criteria, the lack of evidence for possible brain localisation saw Gardner deny its inclusion in his 1983 theory (Gardner, 2000).

Critical Discussion of Gardeners (1983) Multiple Intelligences Theory. Like most theories and models in the academic world, Gardner's (1983) theory of multiple intelligences has had both criticism and praise. In terms of criticism, there is a lack of empirical evidence for Gardner's (1983) multiple intelligence theory other than his own book *Frames of Mind*. White (2000) poses the question of why the criteria are relevant anyway, to which Gardner (1983) admits "that the selection (or rejection) of a candidate intelligence is reminiscent more of an artistic judgement than of a scientific assessment. Borrowing a concept from statistics, one might think of the procedure as a kind of 'subjective' factor analysis" (p. 63). Gardner (1983) claims that an intelligence candidate does not need to qualify with every criterion to be included within his theory. Despite saying this, there are several potential intelligences that Gardner has dismissed from his theory because they do not fit with all of his criteria.

Gardner (1983) also pays little attention to the sixth and seventh criteria for a potential intelligence while putting much effort into providing evidence for the second of the eight criteria for a potential intelligence, the existence of prodigies and individuals who demonstrate above-average abilities in a particular skill set. Gardner (1983) noted famous individuals who have shown exceptional ability in each of his proposed intelligence but does not spend time describing individuals of regular or average ability (King, 2008; Sternberg, 1988). Sternberg (1988) questions how the theory of multiple intelligences explains how typical people function on a day-to-day basis, claiming that it is more important to look at typical cases than extreme ones when examining the nature of intelligence. The seventh criterion requires support from psychometric findings; however, several intelligences are overlooked by psychometric tests or are unable to be measured by psychometric tests, such as bodily-kinaesthetic intelligence (King, 2008).

Research also suggests that Gardner's multiple intelligences are interrelated components of general intelligence (Visser et al., 2006). A factor analysis by Visser et al. (2006) showed that several of Gardner's (1983) proposed intelligence loaded on a general intelligence (g) factor. These findings suggest that the purely cognitive abilities in Gardner's (1983) theory are general intelligence factors while other abilities reflect personality, motor, and sensory abilities (King, 2008; Visser et al., 2006).

Although Gardner's (1983) criteria and application of said criteria has been debated over the years, his multiple intelligence theory provides the academic and psychological community with a toolset for the identification of additional intelligences. Few others have attempted to define criteria for intelligence. The presence of multiple intelligence theory in society aids in reconsidering the position in which the ethnocentric concept of IQ occupies in society (Shearer, 2004). The multiple intelligence theory allows for the unique abilities of individuals around the world to be recognised, supported, and developed. Alternative views of intelligence have come about due to the intellectual space that multiple intelligence theory has provided.

1.3 Social and Emotional Intelligence

In particular, authors are extending the parameters of the intelligence construct with their research into social and emotional intelligence.

1.3.1 Social Intelligence

Social intelligence was first conceptualised in the 1920s by Edward Thorndike, an American psychologist (Walker & Foley, 1973), who defined it as "the ability to understand and manage men and women, and boys and girls–to act wisely in human relations" (Thorndike, 1920, as cited in Walker & Foley, 1973, p. 840). More concisely, Walker and Foley (1973) define social intelligence as understanding others and acting wisely in social situations. Social intelligence involves understanding verbal (e.g., speech and tone) and non-verbal (e.g., body language and emotion) communication, resulting in an awareness of how other people think, feel, and behave. Gardner's (1983) interpersonal intelligence is comparable to social intelligence.

Social intelligence helps build strong and positive social relationships, which are vital for well-being in all stages in life. Goleman (2006) states a connection between strong relationships and better physical health, therefore stressing the importance of social intelligence. Research suggests that children who lack social skills have noticeable difficulties in making friendships and understandings the concepts of sharing, listening, and negotiating (Comstock, 2020). Lack of empathy and bullying is often seen in children who experience decreased social relationships and understandings (Comstock, 2020).

Social intelligence can be developed over the lifespan. The Social Intelligence Institute identified four principles of social intelligence: viewing others as thinking and feeling individuals rather than objects; recognising and utilising the perspectives and viewpoints of others in order to approach them appropriately; recognising internal and external automatic behaviour that lacks judgement and forethought; and finally, choosing how to engage, work, and interact with others (Social Intelligence Institute, n.d). There has been few apparent criticisms of social intelligence.

1.3.2 Emotional Intelligence

Emotional intelligence (EQ) is described as the ability to monitor one's own and others' emotions to guide one's thinking and actions (Salovey & Mayer, 1990). Emotional intelligence includes competencies and several psychological processes, including the ability to perceive, interpret, and express emotion accurately, generate feelings to facilitate cognition, understand effective communication, and be aware of and regulate one's emotional states to facilitate well-being (Mayer et al., 2000; Nasel, 2004).

The concept of emotional intelligence was first mentioned in 1976 by Davitz and Beldoch but did not gain recognition until the mid-1990s when Daniel Goleman published his book titled *Emotional Intelligence*. Goleman (1995) accepted IQ but asserted another dimension of human intelligence, stating that humans have two types of intelligence: thinking and feeling. Goleman (1995) states that emotional intelligence allows a person to judge a situation and then behave appropriately within that situation. Emotional intelligence encompasses intrapersonal and interpersonal skills, involving awareness of one's own thoughts and feelings and self-control (Mayer, 2000). It also encompasses the ability to listen, communicate, and empathise with people who have diverse beliefs, views, and values (Mayer, 2000; Nasel, 2004). While emotional and social intelligence appears to overlap, Goleman (2006) differentiates the two by asserting that social intelligence is the ability to manage the emotions of others, while emotional intelligence is to manage one's own emotions.

Salovey and Mayer (1990) described emotional intelligence as a type of social intelligence and defined it as the capacity to understand emotional information and reason with emotions. While some criticised their association between emotions and intelligence (Eysenck, 1998; Locke, 2005; Murphy, 2014), Mayer and Salovey (1993) contend that problems intellectual in nature contain emotional information that must be interpreted and processed. Salovey and Mayer (1990) outlined four primary abilities of emotional intelligence: 1) the capacity to accurately perceive emotions, 2) the capacity to use emotions to facilitate thinking, 3) the capacity to understand emotional meanings, and 4) the capacity to manage emotions.

Emotional intelligence has been found to positively affect one's well-being, with research indicating a positive association between emotional intelligence and psychological well-being components such as self-esteem, life satisfaction, and self-acceptance (Carmeli et al., 2009). Research has also found that emotional intelligence impacts the occurrence of coronary heart disease (Vlachaki & Maridaki-Kassotaki, 2013). Vlachaki and Maridaki-Kassotaki (2013) found that the occurrence of coronary heart disease is positively related to decreased ability to regulate emotions. Those who had difficulty controlling their anger and temper were more likely to experience coronary heart disease.

1.4 Other Understandings of "Intelligence"

While general intelligence or IQ is the most well-known intelligence, it is valuable within Western cultures and plays a major role in society, as Gardner recognised it does not solely represent the intelligence of the human species. There is a need to explore other avenues of intelligence further and challenge dominant Western understandings, which have been used to make comparisons throughout society, often with damaging consequences. For example, in the United States of America, the Binet-Simon intelligence scale provided 'scientific' evidence of people of colour's intellectual inferiority compared to white people (Croizet, 2013). Herrnstein and Murray's 1994 book titled *The Bell Curve: Intelligence and Class Structure in American Life*, which claimed that black individuals in America were genetically and intellectually inferior to white Americans, was supported and informed by the Pioneer Fund, who promoted the forced sterilisation of groups of people considered genetically unfit and to be "undesirables" (Miller, 1994, p. 58). Though lacking empirical validity and reliability, these findings have had major educational and social consequences, which are still seen today. At the beginning of colonisation in Aotearoa New Zealand, the skulls of Indigenous Māori were measured and weighted to prove that 'primitive' minds were smaller than the minds of the European colonists (Smith, 2012). In addition, Western colonisers measured the 'faculties' of Māori by filling Māori skulls with millet seed to represent the capacity for mental thought (Smith, 2012). Therefore, 'intelligence' testing can result in cultural harm when the definition and understanding of intelligence are too narrow and ethnocentric.

What is considered necessary knowledge in one culture may not be valued in another, meaning what is considered 'intelligence' may differ. In te ao Māori (the Māori world), Mātauranga Māori

is the pursuit and application of knowledge and understanding of Te Taiao (nature) (Hikuroa, 2017). According to Mead (2003), mātauranga Māori is the term most used to describe Māori knowledge. Mātauranga Māori incorporates the body of knowledge which originates from tīpuna (ancestors) and includes Māori world views and perspectives, Māori creativity and cultural practices'; the knowledge, comprehension, and understanding of the visible and invisible in the universe (i.e., multiple realities), including present-day, historical, local, and traditional knowledge; systems of knowledge transfer and storage; and Māori goals, aspirations, and issues (Hikuroa, 2017). Western cultures tend to view human intelligence as a way for individuals to devise categories and to engage in rational debate, whereas Eastern[2] cultures view intelligence as a way for the members of a community to play their social roles successfully (Benson, 2003; Nisbett, 2003). For example, research by Sternberg and Yang (1997) found that Taiwanese-Chinese notions of intelligence focus on understanding and relating to others, which is somewhat similar to emotional and social intelligence. In Africa, specifically the Luo people of rural Kenya, intelligence consists of four broad concepts: *rieko*, which corresponds to the Western idea of academic intelligence, and specific skills; *luoro*, which includes social qualities including respect, responsibility, and consideration; *paro*, which refers to more practical thinking; and *winjo*, or comprehension (Benson, 2003). Only one of the four intelligence concepts among the Luo people correlates with the traditional Western understanding of intelligence (IQ).

1.5 Summary

The notion of intelligence is developing as research expands. The traditional theories of intelligence are perhaps now outdated, given the progression and evolution of society since their conception. More contemporary understandings of the concept, including the idea of multiple intelligences, are becoming more accepted, suggesting that further research on additional intelligences is needed. One form of intelligence receiving increasing empirical attention is known as spiritual intelligence. The next chapter will discuss the concept of spiritual intelligence, why it should be considered a unique form of intelligence, and the current position of spiritual intelligence within academic literature.

[2] Eastern cultures include Asia and the Middle East.

Chapter 2. Spiritual Intelligence

A close inspection of these concepts will suggest to us that IQ is important for entrance into educational institutions, EQ is essential for success in life and SQ is useful for meaningful life.

Nathawat (2001)

The following chapter reviews the existing literature on spiritual intelligence. The chapter begins by providing definitions of spiritual intelligence. A differentiation of religion, spirituality, and spiritual intelligence will be given, followed by an overview of the conceptualisations and models. Spiritual intelligence in relation to other theories and models of intelligence will be explored, as well as a brief description of various spiritual intelligence measures. Finally, a summary of the chapter will be provided.

2.1 The Definitions of Spiritual Intelligence

Given that the literature on spiritual intelligence is growing, many conceptualisations and definitions of spiritual intelligence are emerging (e.g., Emmons, 2000; King, 2008; Vaughan, 2002; Wigglesworth, 2004; Zohar & Marshall, 2000). Zohar and Marshall (2000) define spiritual intelligence as the intelligence with which problems of meaning and value are addressed and solved. The authors further position spiritual intelligence as enabling individuals to prescribe meaning to their actions and lives (Zohar & Marshall, 2000).

Psychologist Frances Vaughan (2002) views spiritual intelligence as involving the capacity for a deep understanding of existential issues and questions such as "Who am I?" and "What really matters?" Vaughan (2002) suggests spiritual intelligence encompasses the capacity to recognise multiple levels of consciousness and the awareness of one's relationship to the transcendent, people, and the earth. Author Cindy Wigglesworth (2004) describes spiritual intelligence as "the innate human need to be connected to something larger than ourselves" (p. 3). Wigglesworth (2004) further describes spiritual intelligence as the ability to behave with compassion and wisdom while maintaining equanimity, regardless of the circumstances.

King (2008, p. 56) defines spiritual intelligence as a set of mental capacities that contribute to the "awareness, integration, and adaptive application of the nonmaterial and transcendent aspects of one's existence", leading to outcomes including existential reflection, enhancement of meaning, recognition of a transcendent self, and mastery of spiritual states. This definition informs King's (2008) model of spiritual intelligence and his four proposed components of spiritual intelligence– critical existential thinking, personal meaning production, transcendental awareness, and conscious state expansion. The definition and conceptualisation of spiritual intelligence offered by King (2008) are used by this thesis as it best aligns with the researchers understanding of spiritual intelligence and provides ample research and evidence behind its conception and workings.

Overall, there is no noticeable controversy or disagreement among authors. Instead, the various definitions of authors tend to compliment and expand on one another, with many drawing on similar ideas. Zohar and Marshall (2000), Emmons (2000a), and King (2008) all note in their definitions the problem-solving capabilities spiritual intelligence assists. Further, many of the definitions describe some form of meaning-making as a critical element of spiritual intelligence (Emmons, 2000a; King, 2008; Zohar & Marshall, 2008) and refer to the transcendent (Emmons, 2000a; King, 2008; Vaughan, 2002; Wigglesworth, 2011).

2.2 The Difference Between Religion, Spirituality, and Spiritual Intelligence

In the same sense that spirituality is not religion, nor religion spirituality, spiritual intelligence is neither spirituality nor religion (Peerzadah, 2018). While spiritual intelligence and spirituality, more broadly, may share similar aspects as religion, spiritual intelligence is not related to religiosity (Peerzadah, 2018; Zohar, 2000). Instead, religion is best described as a domain where spiritual intelligence can be expressed (Gardner, 2000; King, 2008). Religion has been broadly defined as a set of beliefs concerning the "cause, nature, and purpose of the universe" (Dhote, 2012, p. 57). It can be understood as the search for the sacred within formal institutional structures (e.g., institutions that exist to manage the practice of a specific set of beliefs, including churches, temples, and mosques) (Hjemdal et al., 2000). As Zohar and Marshall (2000) explain, conventional religion is an externally imposed set of beliefs, values, and rules, passed down from priests and prophets and holy books or absorbed through family, tradition, and culture. In contrast, spiritual intelligence is an internal and innate ability of the brain and psyche of humans. Therefore, an

individual can have a high level of spiritual intelligence without adhering to any religion (Soylemez & Koc, 2019). For some people, spiritual intelligence can be expressed through formal religion; however, "being religious does not guarantee high spiritual intelligence" (Zohar & Marshall, 2000, p. 9).

Spirituality can be understood as the search for and the experience of elements of the sacred or higher-consciousness and transcendence. In contrast, spiritual intelligence involves abilities that draw on spirituality and spiritual resources in order to predict functioning and adaption and to produce valuable outcomes (Emmons 2000a, 2000b). As with religion, Nasel (2004) states that high or well-developed spiritual intelligence does not appear to require the adoption of a specific spiritual path.

2.3 Conceptual Understandings and Models of Spiritual Intelligence

The following are some of the most cited understandings and models of spiritual intelligence.

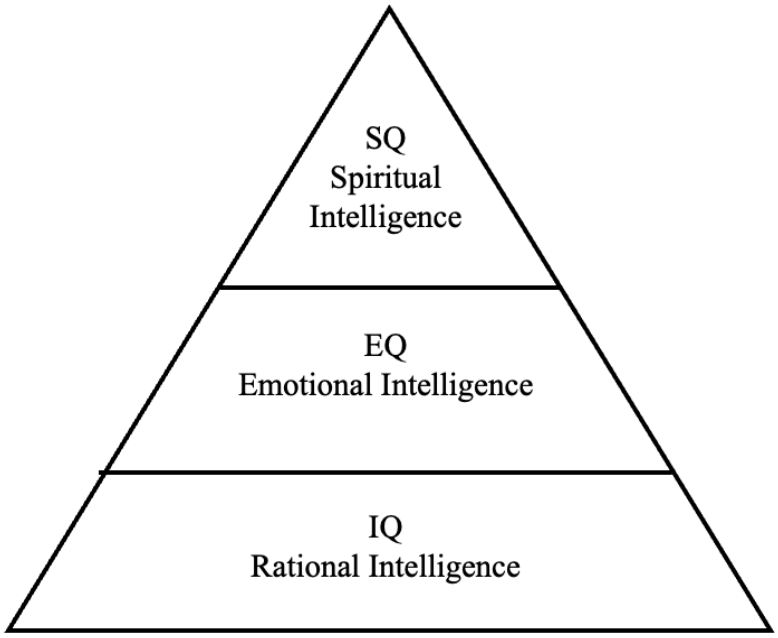
Zohar and Marshall. Zohar and Marshall (2000) stress the utility of spiritual intelligence in solving problems of meaning, value, and those of an existential nature. In addition, spiritual intelligence facilitates decision making and allows individuals to recognise choices that may be more meaningful. Zohar and Marshall (2000) note the relationship spiritual intelligence has with moral reasoning, suggesting that it is used "to wrestle with questions of good and evil" (p. 5) and "gives us our moral sense" (p. 5). It allows individuals to be creative, alter situations and rules, dream, aspire, see the uses and limits of understanding and compassion (Zohar & Marshall, 2000). According to Zohar and Marshall (2000), 12 principles underlie spiritual intelligence, including self-awareness, holism, compassion, and humility:

1. Self-Awareness: Knowing what I believe in and value and what deeply motivates me
2. Spontaneity: Living in and being responsive to the moment
3. Being vision and value-led: Acting from principles and deep beliefs and living accordingly

4. Holism: Seeing larger patterns, relationships, and connections, having a sense of belonging
5. Compassion: Having the quality of "feeling-with" and deep empathy
6. Celebration of diversity: Valuing other people for their differences, not despite them
7. Field independence: Standing against the crowd and having one's own convictions
8. Humility: Having the sense of being a player in a larger drama, of one's true place in the world
9. Tendency to ask fundamental "why?" questions: Needing to understand things and get to the bottom of them
10. Ability to reframe: Standing back from a situation or problem and seeing the bigger picture or wider context
11. Positive use of Adversity: Learning and growing from mistakes, setbacks, and suffering
12. Sense of vocation: Feeling called upon to serve, to give something back

According to Zohar and Marshall (2000), spiritual intelligence (SQ) sits at the top of the hierarchy of intelligence, followed by emotional (EQ) and rational intelligence (IQ), positioning spiritual intelligence as the "ultimate intelligence" and is necessary for the functioning of IQ and EQ (p. 9). Figure 1.1 was created by the author of this thesis to illustrate how Zohar and Marshall (2000) positioned the intelligences. Ideally, these three basic intelligences (IQ, EQ & SQ) work together to support one another, with each having its own strength and the ability to function separately (Zohar and Marshall, 2000).

Figure 1.1.
A Visual Representation of Zohar and Marshalls (2000) Hierarchical Model of Intelligence



Loosely based on somewhat limited neurological findings of neurologist V. S Ramachandran, the authors suggest that spiritual intelligence represents processes of unitive thinking, in which the lower processes of rational and emotional intelligence are combined to "reframe or re-conceptualise our experience… and thus transform our understanding of it" (Zohar & Marshall, 2000, p. 65).

Zohar and Marshall (2000, p. 15) detail indications of highly developed spiritual intelligence. These indications include:

- the capacity to be flexible (actively & spontaneously adaptive)
- a high degree of self-awareness; a capacity to face and use suffering
- a capacity to face and transcend pain; the quality of being inspired by vision and values
- a reluctance to cause unnecessary harm; a tendency to see the connections between diverse things (being ‘holistic’)

- a marked tendency to ask ‘Why?’ or ‘What if?’ questions and to seek ‘fundamental’ answers
- possessing a facility for working against convention

King (2008) identifies problems with these proposed indicators. Firstly, he claims that flexibility is more closely related to personality than cognitive ability (King, 2008). He also suggests that self-awareness is more a characteristic of emotional intelligence, or Gardner's (1983) proposed intrapersonal intelligence. King (2008) suggests that Zohar and Marshall's (2000) indicators of high spiritual intelligence are more likely outcome variables of having high spiritual intelligence. In addition, Zohar and Marshall (2000) have not established a core set of mental abilities.

Emmons. By contrast, Emmons (2000a) provides five core components of spiritual intelligence: (a) the capacity for transcendence; (b) the ability to enter into heightened spiritual states of consciousness; (c) the ability to invest everyday activities, events, and relationships with a sense of the sacred; (d) the ability to utilise spiritual resources to solve problems in living; and (e) the capacity to engage in virtuous behaviour or to be virtuous (to show forgiveness, to express gratitude, to be humble, to display compassion) (p. 10). Emmons (2000a) details that the five components are not "sacred" in that there are five and only five and that they are not presented in any predetermined order (p.10). He asserts that these five abilities are valued by many cultures worldwide, explaining that some cultures may place greater value on some abilities than others (Emmons, 2000a).

His first two core abilities both essentially describe the capacity to engage in heightened or extraordinary forms of consciousness (Emmons, 2000a). In his model, Emmons (2000a) describes transcendence as representing the ability to surpass the physical matter and develop a deeper awareness of a divine being and/or oneself–which often results in the ability to sense synchronicity. The term synchronicity describes the experience of two or more events that parallel each other in such a way that they seem to be connected, yet there is no 'evidence' or causal relationship to support the connection (Jung, 1952; Main, 2007). Heightened spiritual states can include feelings of oneness and unity, as well as reflective and meditative prayer. Emmons (2000a) asserts that individuals who possess a high degree of spiritual intelligence are skilled at entering higher states of consciousness.

The third core ability of Emmons (2000a) model of spiritual intelligence is sanctification– ultimately the ability to “set apart for a special purpose–for a holy or godly purpose” or “a recognition of the presence of the divine in ordinary activities" (p. 11). Emmons (2000a) asserts that sanctification and its consequential sense of meaningfulness and fulfilment facilitates problem-solving, planning, and personal goal attainment. In particular, Gardner (2000) expressed concern over this component of Emmons (2000a) model as he questioned how one would decide what is considered sacred instead of sacrilegious.

The fourth component of Emmon's (2000a) model, the ability to utilise spiritual resources to solve problems in living, is described by Emmon's (2000a) as "religious and spiritual coping" (p.12). While Emmon's (2000a) cites literature that suggests the usefulness of spiritual and religious resources for coping processes and problem-solving, King (2008) claims that this barely denotes a core ability of spiritual intelligence.

The fifth and final component of Emmons' (2000a) model has a similar problem. The capacity to engage in virtuous behaviour or to be virtuous strays away from mental ability and instead describes behaviours than abilities of the mind. Intelligence theorists have strongly suggested that an intelligence be distinguishable from preferred ways of behaving (Gardner, 1983; Mayer et al., 2000; Sternberg, 1998). According to Gardner (2000), this inclusion of behaviours considered admirable by Emmons (2000a) undermines the structure of intelligence. This was agreed by Mayer (2000), who stated that many of the qualities described by Emmons (2000a) result from life experience rather than intellectual potential. Responding to these criticisms, Emmons (2000b) later removed the fifth component. Mayer (2000) further critiqued Emmons' (2000a) model of spiritual intelligence for its lack of focus on *actual* mental performance. Mayer (2000) claims that a person with any intelligence should be able to solve specific problems that can only be solved if a person has a high level of that particular intelligence.

As discussed earlier in the chapter, spirituality, religion, and spiritual intelligence are interrelated but are not synonymous. Despite this, Emmons (2000a) made the error of proposing spirituality as a type of intelligence. Mayer (2000) noted that the definition of spiritual intelligence offered by

Emmons (2000a) is perhaps just a relabelling of spirituality. Further, Emmons' (2000a) model of spiritual intelligence has its foundation in religion and seems to equate spirituality with religiosity and provides support for spiritual intelligence based on research regarding religious experiences and behaviours.

Despite the criticisms, Emmon's (2000a) model of spiritual intelligence has been supported by others (Noble, 2000, 2001). Noble (2000, 2001) supports Emmon's (2000a) model and adds two additional core abilities:

> (1) the conscious recognition that physical reality is embedded within a larger, multidimensional reality with which we interact, consciously and unconsciously, on a moment-to-moment basis; and
> (2) the conscious pursuit of psychological health, not only for ourselves but for the sake of the global community (p. 46).

Describing spiritual intelligence as "an innate human ability" (p. 3), Noble (2000) adds that spiritual intelligence includes an "openness to unusual and diverse experiences broadly labelled as 'spiritual'" (p. 3). In addition, Noble (2000) emphasises the fact that spiritual intelligence includes an awareness that "the whole is greater than the sum of its parts, no matter how cherished a part might be" (p. 3). Noble (2001) stresses the importance of high spiritual intelligence for psychological well-being and health. In particular, Noble (2001) details the relationship between spiritual intelligence and resilience, suggesting that those with higher spiritual intelligence can adapt and overcome adversity better through relying on inner strengths.

Wigglesworth. Wigglesworth (2011) states that spiritual intelligence is about seeking something larger than the human ego. Spiritual intelligence is about behaving with compassion and wisdom while maintaining inner and outer peace, regardless of the circumstances (Wigglesworth, 2004). Wigglesworth further explains that 'regardless of the circumstances, it is particularly important as it shows that even under great stress, a peaceful centre can be maintained (Wigglesworth, 2004). Wigglesworth (2011) highlights that spiritual intelligence does not require a belief in divinity, God or spirit, and aimed to develop faith-neutral competencies of spiritual intelligence in order for its

discussion in the workplace to be more acceptable (Wigglesworth, 2004). Spiritual intelligence benefits not only individuals, but also their families, communities, and workplaces (Wigglesworth, 2004).

Based on her definition and conceptualisation of spiritual intelligence, Wigglesworth (2004) created a set of 21 skills that she believes represents the skills of spiritual intelligence. The skills are broken down into four categories: higher self/ego self-awareness, universal awareness, higher self/ego self-mastery, and social mastery/spiritual presence (see Figure 1.2). Smith (2013) praises Wigglesworth's 21 skills of spiritual intelligence, claiming that it has "faith-friendly and faith-neutral language", making her model appropriate for various settings, including workplaces, religious institutions, and education (p. 21).

Figure 1.2
Wigglesworth (2004) Skills of Spiritual Intelligence and Four Categories

Higher Self/Ego self Awareness 1. Awareness of own worldview 2. Awareness of life purpose (mission) 3. Awareness of values hierarchy 4. Complexity of inner thought 5. Awareness of Ego self / Higher Self	**Universal Awareness** 6. Awareness of interconnectedness of all life 7. Awareness of worldviews of others 8. Breadth of time perception 9. Awareness of limitations/power of human perception 10. Awareness of Spiritual laws 11. Experience of transcendent oneness
Higher Self/Ego self Mastery 12. Commitment to spiritual growth 13. Keeping Higher Self in charge 14. Living your purpose and values 15. Sustaining your faith 16. Seeking guidance from Higher Power or Higher Self	**Social Mastery / Spiritual Presence** 17. A wise and effective spiritual teacher/mentor 18. A wise and effective change agent 19. Makes compassionate and wise decisions 20. A calming, healing presence 21. Being aligned with the ebb and flow of life

Note. Reprinted from *Spiritual Intelligence and Why it Matters,* by C Wigglesworth, 2004. Copyright 2004 by Cindy Wigglesworth.

2.3.1 King's Model of Spiritual Intelligence

Based on the various definitions, models, and criteria for intelligence discussed in the previous chapter, King (2008) articulated a set of standard criteria for an intelligence. These must: 1) include

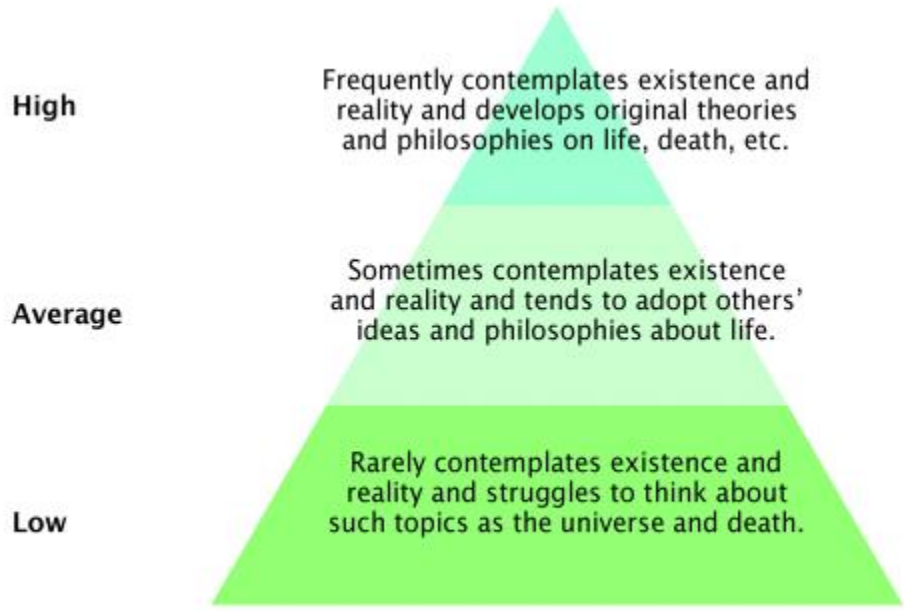
a set of interrelated mental abilities (distinct from behaviours, experiences, etc.); 2) develop over the lifespan; 3) facilitate adaptation and problem-solving in a particular environmental context; 4) allow an individual to reason abstractly and make appropriate judgements, and 5) demonstrate a biological component or foundation in the brain. Utilising his criteria for intelligence and drawing on the work of Emmons (2000a, 2000b), King (2008) proposes four core components that amount to spiritual intelligence: 1) critical existential thinking, 2) personal meaning production, 3) transcendental awareness, and 4) conscious state expansion. These components are discussed in more depth below:

Critical Existential Thinking. Definitions of spirituality and spiritual intelligence often include existential thinking, with many describing existential issues as 'ultimate questions' of life (e.g., Kiesling et al., 2006; Vaughan, 2002). In its most simplistic form, 'existential' is defined as having to do with existence (Oxford Dictionary Press, 2020); therefore, existential thinking refers to thinking about one's existence. It is the capacity to critically contemplate the nature of existence, reality, the universe and other existential issues and the capacity to contemplate non-existential issues concerning one's existence. Since the facets of existence are complex and diverse, thinking about one's existence involves thinking about matters of life and death, reality, consciousness, the universe, time, truth, justice, evil, and other similar issues (King, 2008, 2013).

Critical existential thinking can be understood as a multifaceted source of adaption, coping, problem-solving, and abstract reasoning, especially in crises of an existential nature, or crises that arouse anxieties and questions such as death, truth, and justice (King, 2008). Mastery in this ability is not achieved by simply asking questions, but rather an individual must be able to contemplate existential issues using existential thinking (King, 2013). Figure 1.3 outlines the different levels of critical existential thinking.

Figure 1.3

The Different Levels of Critical Existential Thinking that Might be Observed Among Different People



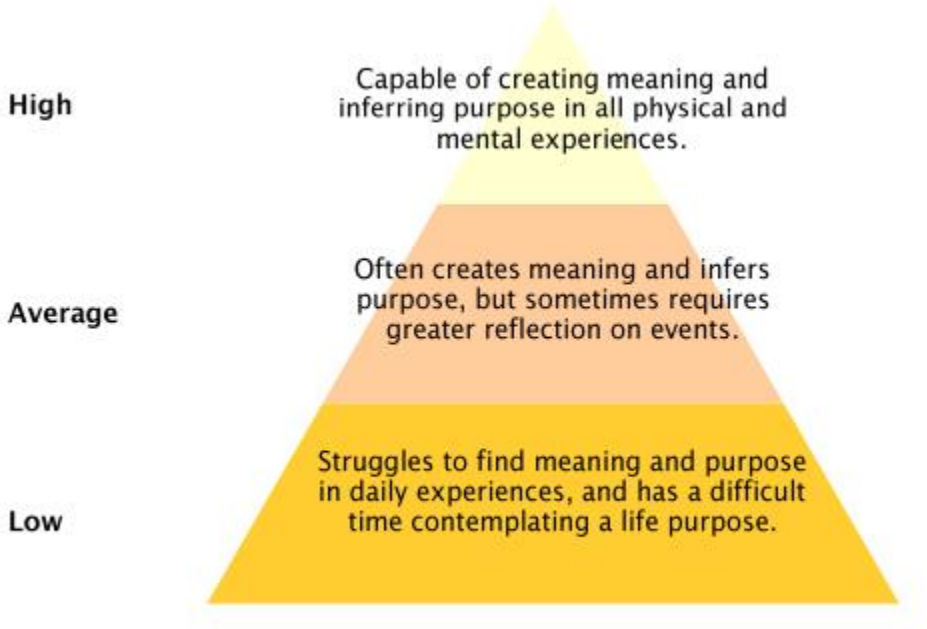
Note. Reprinted from *A Practical Guide to Spiritual Intelligence,* by D King, 2013. Copyright 2013 by David King.

Personal Meaning Production. Personal meaning production refers to the ability to construct personal meaning and purpose in physical and mental experiences. When faced with stress, personal meaning production acts as a coping method by allowing individuals to construct meaning and purpose within the stressful situation, therefore alleviating the negative impact of the stressor (King, 2008/2010).

Like existential thinking discussed above, personal meaning is frequently referenced as a component of spirituality. The recognition of meaning and purpose by other authors lends further validity to King's (2008) component of personal meaning production. For example, in line with King's (2008) personal meaning production factor, Nasel (2004) asserts that spiritual intelligence involves contemplation of the meaning and symbolic value of personal events and circumstances in order for purpose and meaning in all life experiences to be found and understood. In addition,

Reker (1997) defines personal meaning as "having a purpose in life, having a sense of direction, a sense of order and a reason for existence" (p. 710). While this definition allows one to see a relationship between meaning and existential thinking, it is important to note that there is a difference between the two–that is, having a reason for existence goes beyond thinking about the existence (King, 2008; Reker, 1997). Figure 1.4 provides a brief overview of what high, average, and low personal meaning production would potentially look like.

Figure 1.4
Different Levels of Personal Meaning Production that Might be Observed Among Different People



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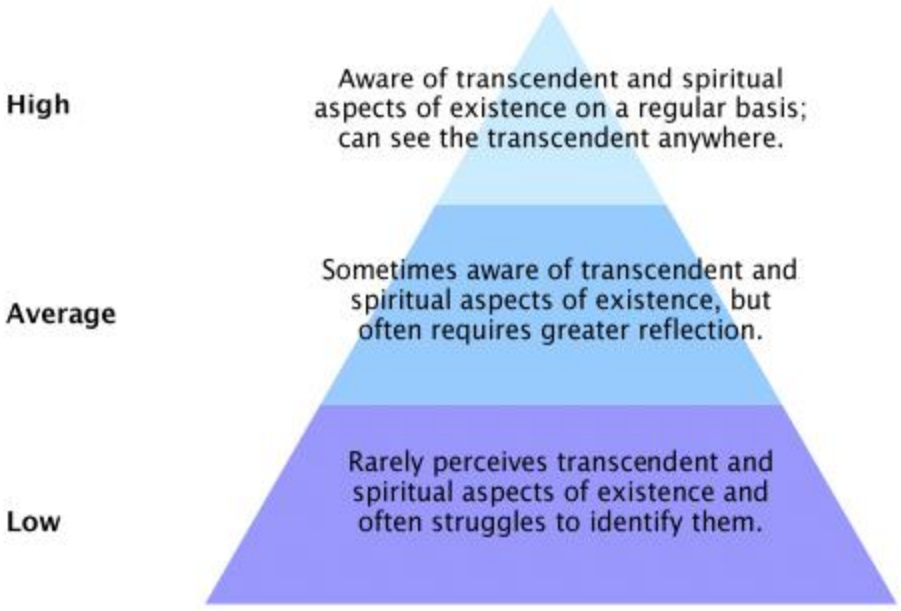
Transcendental Awareness. Transcendental awareness involves the capability to identify and perceive transcendent dimensions or patterns of oneself, of others, and the physical world (non-materialism) during the normal waking state of consciousness (see Figure 1.5 for more details) (King, 2008; King & DeCicco, 2009). In addition, this element of spiritual intelligence allows people to identify their relationship to themselves and the physical world. While King (2008) acknowledges that some may dismiss a mental capacity concerning the transcendental (perhaps

due to the arguably restricted view Western culture has on the nonmaterial), he is quick to offer a comprehensive explanation. According to the Oxford University Press (2001), transcendent is defined as "going beyond normal or physical human experience" or "existing apart from and not subject to the limitations of the material universe" (p. 972). King (2008) asserts that the first definition reflects the capacity of transcendental awareness most accurately as it is an awareness that is beyond the physical or material. King (2008) further clarifies that transcendental is a more appropriate term than transcendent, as the awareness itself is not transcendent, but rather it is an “awareness of that which is transcendent” (p. 65).

Other authors concur with King's (2008) transcendental awareness factor of spiritual intelligence. Emmons (2000a) describes the capacity for transcendence as being a core ability of spiritual intelligence. He defines this as the ability to surpass physical matter and develop a deeper awareness of a divine being or oneself (Emmons, 2000a). Wolman (2001) describes this in a broader sense as the ability to perceive a spiritual dimension of life. Further, Noble (2001) adds to Emmons' (2000a) model by proposing the ability to recognise "that physical reality is embedded within a larger, multidimensional reality" (p. 64), while Nasel (2004) specifically refers to transcendent awareness as a component of spiritual intelligence. King's (2008) definition of transcendental awareness is somewhat of a combination of these capacities and beliefs but does not require a deeper awareness of a divine being as he describes this as being "far too exclusive" (p. 66).

Figure 1.5
Different Levels of Transcendental Awareness that Might be Observed in Different People

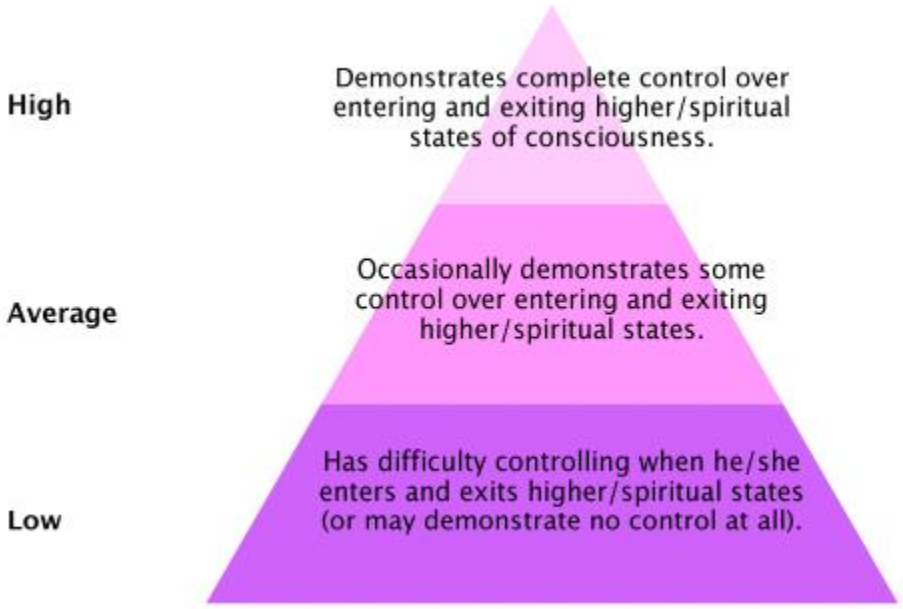


Note. Reprinted from *A Practical Guide to Spiritual Intelligence,* by D King, 2013. Copyright 2013 by David King.

Conscious State Expansion. Conscious State Expansion is the capability to enter and exit spiritual or higher states of consciousness and other states of trance at one's discretion, such as deep contemplation, meditation, and prayer (King, 2008). Tart (1975) describes a state of consciousness as "a unique configuration or system of psychological structure or subsystem" (chap. 5, para. 16). States are often described as levels of consciousness to give a comparable indicator of different amounts of awareness (including self-awareness, environmental awareness, and spiritual awareness) (King, 2008). Higher or heightened levels of consciousness refer to a mental configuration where an individual's awareness is greater than that experienced during the normal waking state (Tart, 1975). Altered states of consciousness are states in which delineate from the waking state and involve lowered or heightened awareness (King, 2008; Tart, 1975). These altered states of consciousness can occur spontaneously or due to physical stimuli, psychological processes, mental exercises, disease, or drug use. Due to the narrowed field of awareness, dreaming and sleeping states of consciousness are often considered low levels of consciousness when compared to the normal waking state (Vatil et al., 2005). Lucid dreaming is a higher level of

consciousness than the dreaming state (Tart, 1975). Lucid dreaming involves an element of control–entering and exiting the state of consciousness, and is therefore considered a higher state of consciousness (Tart, 1975). Figure 1.6 provides an insight into the varying levels of conscious state expansion.

Figure 1.6
Different Levels of Conscious State Expansion that Might be Observed in Different People



Note. Reprinted from *A Practical Guide to Spiritual Intelligence,* by D King, 2013. Copyright 2013 by David King.

There is a lack of recent literature regarding spiritual intelligence. Most of the literature exploring spiritual intelligence is quite dated, with the majority of articles and books being published in the early 2000s, and what the authors have theorised and documented has not been developed in more recent times. Perhaps a reason for the stagnant status of the research is because spiritual intelligence, spirituality and their associated concepts are still not recognised by Western academia, science and research. Valentine et al. (2017) state that the discipline of psychology "largely ignores the fundamental value of spirituality to lived experience" (p. 64). It is known that the discipline of psychology is formed on the basis of Western science and is guided by the dominant scientific principles of objectivity, positivism and empirical verification (Valentine et

al., 2017), for which spirituality does not necessarily align with. Various aspects of spirituality are often not quantifiable, measurable or easily defined, which does not fit with the scientific empiricism that much of academia strives for.

2.4 Spiritual Intelligence in Relation to Other Theories and Models–Evidence for its Inclusion as an Intelligence

Gardner's Theory of Multiple Intelligences.

Potential for brain isolation by brain damage. There is evidence for potential for brain isolation based on suggested brain activity during conscious state expansion. Neuroimaging studies have demonstrated that cerebral blood flow increases in areas of the brain during meditation. For example, Newberg et al. (2003) report that during meditation, there is an increase in cerebral blood flow in the cingulate gyrus, inferior and orbital frontal cortex, dorsolateral prefrontal cortex, and the thalamus. In addition, Newberg et al. (2003) found increased cerebral blood flow in the prefrontal cortex, inferior parietal lobes, and inferior frontal lobes when individuals engaged in verbal-based meditation practices (such as religious prayer).

The existence of savants, prodigies and other exceptional people. In terms of the existence of savants, prodigies or exceptional people, Emmons (2000a) suggests that several religious icons fulfil this criterion, including Teresa of Ávila.

Presence of core operations. The third criteria require a core set of operations, which is fulfilled when considering the numerous authors, such as King (2008) and Emmons (2000a), who have put forward sets of core abilities and operations.

Susceptibility to encoding (symbolic expression). Susceptibility to encoding in symbol systems is a criterion fulfilled with it being well-known that symbol systems have played a role in expressing spirituality. Religious traditions have long used symbols to "express truths and insights not reducible to linguistic expression (Emmons, 2000a, p. 16). Examples of symbols include the bodhi leaf, Ganesh, yin and yang, the star of David, and the cross.

A distinct developmental progression. Developmental progression is indicated with the suggested ways to develop one's spiritual intelligence, including spiritual practices such as meditation, mindfulness, and prayer (King, 2008).

Place in evolutionary history. It is suggested that the evolutionary history of spiritual intelligence is established by the evolution of religion and spiritual practices over time, which are often expressions of spiritual intelligence (Skrzypińska, 2020).

Support from experimental psychology and support from psychometric findings. The last two criteria are interrelated. Ultimately, the ability to support spiritual intelligence through research depends on the psychometric measures regarding the latter criterion. Several measures of spiritual intelligence (Amram & Dryer, 2008; King, 2008; Nasel, 2004; Wolman, 2001) have been created. While research on spiritual intelligence is still emerging, several studies provide evidence for spiritual intelligence as a unique construct (Amirian & Fazilat-Pour, 2015; Bayrami et al., 2014; Ebrahimi et al., 2012; Khosravi & Nikmanesh, 2014; King, 2008; Raina, 2018; Singh & Sinha, 2013)–discussed more in chapter 3.

King (2008) asserts that spiritual intelligence "satisfies most of" Gardner's (1983) criteria for an intelligence and would "fit quite nicely" into his multiple intelligence theory (p. 106). Despite concluding that spiritual intelligence did not meet his eight criteria for an intelligence, one facet of spirituality held potential for his theory: existential intelligence (Gardner, 1993). As mentioned in the previous chapter, Gardner ultimately decided not to include existential intelligence in his theory. However, King (2008) argues that the concept of existential intelligence is far too limiting, and it is better seen as an underlying component of both spirituality and spiritual intelligence (King, 2008).

Other Intelligence Theories and Models. Spearman's theory of intelligence consisted of two factors, general ability and specific abilities. When incorporating spiritual intelligence into the model, the capacities which make up spiritual intelligence would represent the specific abilities, whereas the general ability would represent human intelligence. Horn and Cattell's (1966) theory of fluid and crystalised intelligence also relates to spiritual intelligence. King (2008) suggests that

the fluid abilities described in Horn and Cattell's (1966) theory reflect the ability to reason abstractly about existential issues and meaning and to utilise spiritual resources and abilities in problem-solving. On the other hand, the crystallised abilities described in Horn and Cattell's (1966) theory represent the learned aspects of spiritual intelligence, mainly in educational and cultural settings. For instance, King (2008) suggests that church attendance or exposure to religious texts may help initiate critical existential thinking, and in cultures in which practices such as meditation are more commonplace, conscious state expansion may develop.

Spiritual intelligence can also be related to Sternberg's (1988) triarchic theory of intelligence as spiritual intelligence involves a combination of analytical, creative, and practical abilities. Critical existential thinking, personal meaning production and transcendental awareness employ analytical abilities, whereas creative abilities are likely utilised in all four of his suggested spiritual intelligence components. Practical abilities would be involved in the adaptive applications of spiritual intelligence–conscious state expansion in particular (King, 2008).

2.5 Measuring Spiritual Intelligence

Several scales have been developed to measure spiritual intelligence, which tend to rely on self-reporting. How the scales conceptualise, define, and subsequently measure spiritual intelligence vary slightly.

Psycho-Matrix Spirituality Inventory (PSI; Wolman, 2001). While Wolman's (2001) book is titled *Thinking with your soul: Spiritual intelligence and why it matters*, his Psycho-Matrix Spirituality Inventory is considered by some a measure of spiritual orientation rather than spiritual intelligence (Amram & Dryer, 2008). The PSI consists of self-report 80-items measured on a 4-point Likert scale with a seven-factor structure. Amram & Dryer (2008) highlight that the PSI lacks face validity in relation to spiritual intelligence. For example, the PSI contains factors assessing what Wolman (2001) believes are predictors of spiritual awareness, including childhood trauma (e.g., 'I think about serious physical injury that has happened to me'), and childhood spirituality (e.g., 'I have said prayers at night as a child'). However, these factors do not appear to correspond with Wolman's or other authors' understandings and definitions of spiritual

intelligence. From exploring the research on spiritual intelligence, the PSI appears to be seldom used.

Spiritual Intelligence Scale (SIS; Nasel 2004). As part of his doctoral dissertation, Nasel (2004) developed the 17-item self-report spiritual intelligence scale. The SIS contains positively worded items designed to assess behaviours (e.g., even when a situation seems hopeless, I can find a deeper meaning in it) and attitudes (e.g., In day-to-day living, I try to place my daily affairs within a larger context) (Nasel, 2004). While the SIS yielded good psychometric properties, the scale was designed to measure spiritual intelligence from traditional Christianity and New Age/individualistic spirituality standpoints, limiting the SIS's broader utility (Amram & Dryer, 2008). It has been criticised for failing to assess important aspects of spiritual intelligence, including the ability to use various states of consciousness (e.g., meditation or prayer) (Amram & Dryer, 2008). Nasel's (2004) understanding of spiritual intelligence does not specifically mention the involvement of states of consciousness, meditation, or prayer. However, his understanding of spiritual intelligence and his measure concerns Christianity, in which prayer is an eminent practice (Harnack, 2006).

Integrated Spiritual Intelligence Scale (ISIS; Amram & Dryer, 2008). Based on Amram's (2007) seven dimensions of spiritual intelligence, Amram & Dryer (2008) developed a self-report measure of spiritual intelligence. The scale consists of 83-items measuring 22 subscales: Beauty, Discernment, Egolessness, Equanimity, Freedom, Gratitude, Higher-self, Holism, Immanence, Inner-wholeness, Intuition, Joy, Mindfulness, Openness, Practice, Presence, Purpose, Relatedness, Sacredness, Service, Synthesis, and Trust (Amram & Dryer, 2008). These 22 subscales fall into five domains: Consciousness, Grace, Meaning, Transcendence, and Truth. The scale has attained good internal consistency, reliability, and convergent validity (Amram & Dryer, 2008). However, King (2008) highlights that due to a large number of subscales (each comprising of only 3-4 items), it makes for a rather complex measure in terms of practical application and interpretation. In addition, the ISIS tends to focus on behavioural and personality attributes rather than mental ability. The items that do explore ability do so in relation to behaviours, attitudes, values, and personality (e.g. "I draw on deep trust or faith when facing day-to-day challenges" or "I am driven and ruled by fears") (Amran & Dryer, 2008). Due to these issues, King (2008) suggests that the

scale be best described as a measure of outcomes and correlates of spiritual intelligence rather than a direct measure of the spiritual intelligence construct.

Spiritual Intelligence Self-Report Inventory (SISRI; King & DeCicco, 2009). King and DeCicco (2009) developed the 24-item Spiritual Intelligence Self-Report Inventory (SISRI-24). The SISRI uses a 4-point Likert scale to assess spiritual intelligence, with the higher the score, the higher an individual's spiritual intelligence. Based on King's own model of spiritual intelligence, the SISRI measures four dimensions of spiritual intelligence: critical existential thinking, personal meaning production, transcendental awareness, and conscious state expansion (King, 2008). Yielding strong psychometric properties (including validity, internal consistency, test-retest reliability), the SISRI has become one of the most used measures of spiritual intelligence and has been adapted by many to better fit groups outside of the original sample of Canadian university students (King, 2008).

2.6 Summary

Various definitions and models of spiritual intelligence exist; however, King (2008) defines spiritual intelligence as the "awareness, integration, and adaptive application of the nonmaterial and transcendent aspects of one's existence" (p. 56). While spiritual intelligence, religion, and spirituality share similarities and overlap, they are not synonymous, with religion and spirituality being seen as expressions of spiritual intelligence (Peerzadah, 2018). Additionally, spiritual intelligence tends to align with existing models of intelligence. Numerous measures of spiritual intelligence exist; however, there is insufficient literature regarding spiritual intelligence, and what literature exists is somewhat dated. Further research in exploring spiritual intelligence is necessary.

Chapter 3. Spiritual Intelligence, Resilience and Well-being

This chapter will provide a brief overview of well-being, including an outline of depression, anxiety, stress, and resilience, which are contributors to well-being. An overview of the well-being of university students in general, and university students of Aotearoa New Zealand will be given. Additionally, how spiritual intelligence contributes to well-being will be discussed. Finally, an overview of the research aims and objectives of the current study will be presented.

3.1 What is Well-being?

Well-being is a broad and multifaceted construct that generally refers to the experience of health, happiness, and prosperity (Tov, 2018; Ungvarsky, 2019). There are many areas of life which impact an individual's well-being, including their financial, social, workplace, and physical health-related experiences (Ungvarsky, 2019). This study explores well-being in respect to the mental, psychological, and emotional aspects of life. In this regard, Diener (2000) describes well-being as including the presence of positive emotions and moods, the absence of negative emotions (e.g., depression, anxiety, and stress), and overall satisfaction with life.

Psychological and mental distress is typically characterised by symptoms and expressions of depression, anxiety, and stress. While depression, anxiety, and stress can be used to describe many different variants of emotional experiences, for some, depression, anxiety, and stress define a passing adverse mood, while for others it is a diagnosable clinical disorder (Arvidsdotter et al., 2016). Depression, anxiety, and stress are briefly defined below.

Depression. Becker (1974) details depression to include lowered mood, decreased self-esteem and increased self-criticism, guilt regarding acts of omission, and feelings of hopelessness and helplessness. According to the American Psychological Association (APA) (2021b), depression is the most common mental disorder and involves a lack of interest and pleasure in daily activities, significant weight gain or weight loss, insomnia or excessive sleeping, lack of energy, inability to concentrate, feelings of worthlessness or excessive guilt, and recurrent thoughts of death or suicide.

Anxiety. Anxiety–often defined as feelings of tension, excessive worry, restlessness, and physical changes including increased blood pressure and difficulty sleeping (APA, 2013, 2021a)–is frequently comorbid with depression (Kalin, 2020). Recurring intrusive thoughts, avoiding certain situations due to worry, and physical symptoms such as sweating, dizziness, and rapid heartbeat are common experiences of anxiety (APA, 2021a).

Stress. Like anxiety and depression, stress has different meanings for different individuals, across different situations and conditions. Fink (2016) defines stress as a condition in which a person becomes aroused and made anxious by an uncomfortable challenge (e.g., stuck in heavy traffic on a motorway or unpaid bills). Stress can lead to feelings of fear and anxiety (Fink, 2016). Physical and emotional symptoms of stress include headaches, feeling tired, or change in sleeping habits (APA, 2019). Experiencing feelings of stress is considered a normal reaction to everyday pressures, however, stress can become unhealthy when it upsets day-to-day functioning (APA, 2019). The magnitude of the stress experienced, and its consequences, are influenced by an individual's ability to cope with the stressor (Fink, 2016).

3.2 The Well-being of University Students

While compromised well-being can be experienced by anyone, research suggests that university students are more likely to report low well-being and mental illness symptoms than non-university students (Edward et al., 2005; Mayer et al., 2016; Mofatteh, 2020). Research and literature suggest that the transition from secondary school to university education is a stressful and uncertain time, that is seen to be associated with poor well-being (Adlaf et al., 2005; Beiter et al., 2015; NZUSA, 2018; Ontario University & College Health Association [OUCHA], 2017; Palmer & Puri, 2006). This transition is accompanied by various academic and social demands which can trigger students' feelings of depression, anxiety, and stress (Palmer & Puri, 2006)–the most prevalent afflictions impacting university students (Eisenberg et al., 2012; Mayer et al., 2016; Mofatteh, 2020).

University student well-being is a global concern. Research around the world illustrates the current state of university student well-being (OUCHA, 2017). For example, in Canada, a study surveying over 25,000 university students found that 65% of students reported experiencing high levels of

anxiety, and 46% reported feeling “so depressed that it was difficult to function” over the last year (OUCHA, 2017, p. 5). Further, 13% of the participants had seriously considered committing suicide, while 11% had attempted suicide (OUCHA, 2017). Asif et al. (2020) surveyed 500 university students in Pakistan and measured their depression, anxiety, and stress using the 21-item Depression Anxiety Stress Scale (short version) (DASS-21; Lovibond & Lovibond, 1995). Their findings showed that 75% of participants experienced feelings of depression, 88.4% experienced feelings of anxiety, and 84.4% experienced feelings of stress (Asif et al., 2020). Fifty-nine percent of students had depression scores ranging from moderate to extremely severe (Asif et al., 2020). In addition, 84% of students had anxiety scores ranging from moderate to extremely severe, and 51.4% of students had stress scores ranging from moderate to extremely severe (Asif et al., 2020).

In Aotearoa New Zealand, there has been little research on the well-being of students in university settings (Harding et al., 2019). Recently, the New Zealand Union of Students Associations surveyed 1762 university students. Their findings showed that 14.9% of the sample population had been diagnosed by a health professional with depression, 14.6% anxiety, and 7% stress (NZUSA, 2018). Just over 6% of participants had been diagnosed with suicidal thoughts and thoughts of self-harm. Feelings of loneliness, eating habits, adjusting, and coping with university/student life, and academic anxiety were factors that triggered participants' senses of depression, anxiety, and stress the most (NZUSA, 2018). Another Aotearoa New Zealand based study found that depression and anxiety were present in 17.3% and 19.7% of the participating students respectively, while 7.3% of participants had thoughts of self-harm or “being better off dead” (Samaranayake et al., 2014, p.17).

Poor well-being and mental health that goes untreated can lead to distress among students, which in turn negatively influences their quality of life and academic performance, including “lower academic integrity, alcohol and substance abuse as well as a reduced empathetic behaviour, relationship instability lack of self-confidence, and suicidal thoughts” (Mofatteh, 2020, p. 37). Poor well-being early in life has been found to lead to long-term negative consequences on mental and social life later in life (Fergusson et al., 2007; Mofatteh, 2020). A longitudinal study conducted over 25 years in Aotearoa New Zealand demonstrated that depression among individuals aged

between 16 and 21 years-old was related to unemployment and welfare dependency at a later stage (Fergusson et al., 2007). As many university students are under the age of 21, these findings have relevance to the current study.

Resilience. A factor that often aids individuals in adapting to difficult and stressful situations, and protects them from poor well-being, mental health disorders, and life problems is resiliency (Izadinia et al., 2010; Rutter, 1985). Resilience is often defined as positive adaption, or the ability to maintain and regulate mental health and well-being, despite experiencing adversity, trauma, or stress (Herrman et al., 2011; Houston et al., 2017). Connor and Davidson (2003) define resilience as an individual's ability to thrive when faced with adversity.

Seville (2008) suggests that there are three key dimensions to resilience: the ability to prevent negative consequences occurring; the ability to prevent negative consequences worsening over time; and the ability to recover from the negative consequences of an event. Resilience is associated with factors that promote protection in challenging situations, including problem-focused coping, social support, physical health, cognitive flexibility, and the ability to create meaning from adversity (Whealin et al., 2008). Research indicates that those with higher levels of resilience experience less feelings of depression, anxiety, and stress (Hjemdal et al., 2006; Pidgeon et al., 2014; Steinhardt & Dolbier, 2008; Wilks & Spivey, 2010).

With regard to university students specifically, resilience assists students in managing academic demands, enhances academic outcomes, facilitates effective coping strategies when faced with academic pressures, aids in the successful transition and adjustment to university life, and is associated with greater mental health (DeRosier et al., 2013; Peng et al., 2012; Wang et al., 2009). A student who is resilient is able to manage the demands of academia, and cope with the pressures of simultaneous study, work, and life (Caruana et al., 2014). Both internal and external protective factors aid in enhancing resilience among students. Internal factors are individual qualities, characteristics, or capabilities which foster resilience, and are specific to an individual (Holdsworth et al., 2018). These include optimism, self-efficacy, and psychological well-being (Holdsworth et al., 2018; Johnson, 2008). External factors refer to positive environmental support structures, including the home, school (university), peer group, and community (Masten, 2000).

Caring relationships, high expectations, and opportunities for meaningful contributions are vital to developing resilience (Johnson, 2008).

3.3 The Association Between Spiritual Intelligence and Well-being

While the literature is relatively sparse, the relationship between spiritual intelligence and well-being has been documented. For example, previous research has reported positive associations between spiritual intelligence and self-reported quality of life (Mufti et al., 2019; Pant & Srivastava, 2014; Singh & Sinha, 2013). Singh and Sinha (2013) found that those with higher spiritual intelligence viewed life from a broader perspective, in that they did not relate to the physical elements alone, but rather the "entire spectrum of human experience" (p. 4). Research also illustrates that there is a positive relationship between spiritual intelligence and happiness (Amirian & Fazilat-Pour, 2015; Faribors et al., 2010). In 2015, Amirian and Fazilat-Pour found that spiritual intelligence was positively and significantly correlated with general health and happiness across a sample of 384 Iranian university students. More specifically, in Amirian and Fazilat-Pour's (2015) study, happiness was positively predicted by generation of the personal meaning and transcendental awareness components of spiritual intelligence.

A number of studies have explored the relationship between spiritual intelligence and resilience (Ebrahimi et al., 2012; Khosravi & Nikmanesh, 2014). Ebrahimi et al. (2012) explored the relationships between resilience, spiritual intelligence, and mental health of 100 undergraduate students in Iran. The Connor-Davidson Resilience Questionnaire (Connor & Davidson, 2003), the General Health Questionnaire (Goldberg & Williams, 1979), and the 29-Item Spiritual Intelligence Questionnaire by Abdollahzadeh et al. (2009) were used to measure the resilience, mental health, and spiritual intelligence of participants (Ebrahimi et al., 2012). Results showed that there was a positive relationship between resilience and spiritual intelligence (Ebrahimi et al., 2012). As previously mentioned, religion differs from spiritual intelligence, however, the spiritual intelligence measure utilised in this study tended to focus on the respondent's relationship with God (Abdollahzadeh et al., 2009), indicating that this measure of spiritual intelligence tends to lean towards measuring religious beliefs rather than spiritual intelligence. Khosravi and Nikmanesh (2014) also found a positive association between spiritual intelligence and resilience in their study that involved 310 university students studying in Pakistan.

A number of studies have reported associations between spiritual intelligence and anxiety (Bayrami et al., 2014; Raina, 2018), depression (Bayrami et al., 2014; Raina, 2018) and stress (Bayrami et al., 2014; Khosravi & Nikmanesh, 2014; Raina, 2018), suggesting that higher spiritual intelligence is correlated with higher well-being. For example, Khosravi and Nikmanesh (2014) examined the effect of spiritual intelligence on stress and found a significant and negative association, indicating that as spiritual intelligence increased, stress decreased. Additionally, Bayrami and colleagues (2014) explored the role of spiritual intelligence in self-reported stress, anxiety, and depression. Their study involved 457 university students attending an Iranian university and utilised Zung's Anxiety Scale (Zung, 1971), the Beck Depression Inventory (Beck et al., 1988), the Perceived Stress Scale (Cohen et al., 1983), and the Spiritual Intelligence Self-report Inventory (King, 2008). They found statistically significant negative relationships between spiritual intelligence and stress, anxiety, and depression, indicating that stress, anxiety, and depression may be reduced with increased spiritual intelligence (Bayrami et al., 2014).

Raina (2018) explored the effect of the four components of spiritual intelligence, as defined by King (2008) (i.e., critical existential thinking, conscious state expansion, personal meaning production, and transcendental awareness) on six components of mental health (i.e., anxiety, depression, loss of behavioural/emotional control, general positive affect, emotional ties, and life satisfaction). This study's participants were 200 (100 male and 100 female) university students in India, aged between 19-27 years old. Using King's (2008) spiritual intelligence self-report inventory and the mental health inventory (Reker Corporation, 1983), the association between spiritual intelligence and mental health was measured. Results found that the spiritual intelligence components of personal meaning production, transcendental awareness, and conscious state expansion had a significant and negative relationship with anxiety among male participants, but not female participants (Raina, 2018). Additionally, personal meaning production and transcendental awareness were significantly and negatively associated with depression among male participants, but not female participants (Raina, 2018). The differences across the male and female participants were not discussed, however, the authors concluded that spiritual intelligence had a positive effect on the overall well-being of their student sample (Raina, 2018).

Baezzat and colleagues positioned spiritual intelligence as the “superior intelligence” after their findings showed that spiritual intelligence had a positive influence on the well-being of students (Baezzat et al., 2018, p. 89). Two-hundred and twenty Iranian University students completed the study. Regression analysis results demonstrated that spiritual intelligence was able to predict subjective well-being (Baezzat et al., 2018). Personal meaning production showed a meaningful relationship with subjective well-being and its subscales with 22% of the changes in subjective well-being, 17% in psychological well-being, and 18% in social well-being being predicted by personal meaning production (Baezzat et al., 2018). Furthermore, 7% of the variances in emotional well-being was explained by the component of transcendental awareness (Baezzat et al., 2018). Based on their findings, Baezzat et al. (2018) propose that students with high levels of spiritual intelligence have the capacity to obtain high mental well-being.

Contrastingly, a recent study which explored spiritual intelligence in relation to the common mental health concerns of depression, anxiety, and substance use, found no significant relationship between overall spiritual intelligence and these factors (Giannone & Kaplin, 2020). In terms of subcomponents, critical existential thinking did not contribute to the likelihood of increased substance use, but interestingly was found to correspond to *increases* in depression and anxiety (Giannone & Kaplin, 2020). However, there were significant negative associations between personal meaning production and depression, anxiety, and substance use, suggesting that increased personal meaning production may result in decreased depression, anxiety, and substance use (Giannone & Kaplin, 2020).

While Giannone and Kaplin’s (2020) study was conducted in the United States with a predominantly White/Caucasian, Christian, and full-time student sample, the majority of studies to date investigating spiritual intelligence and mental health have been conducted in settings such as Iran or India (Giannone & Kaplin, 2020). While research with participant samples from these countries is still useful, the findings are not generalisable to other populations. In Iran and India, the nature of spirituality and the utilisation of spiritual capacities in daily life often differ significantly from Western settings (Giannone & Kaplin, 2020). According to the 2011 Indian census, 79.8% of the population of India practice Hinduism (Government of India, 2015). By comparison, the 2018 New Zealand census indicated that 48.2% of the New Zealand population

had no religion (Statistics New Zealand, 2018). Although spiritual intelligence is thought to be faith-independent, practices commonly associated with various religions, such as consciousness expansion techniques in Hinduism, may facilitate the development of spiritual intelligence.

It is notable that while much of the research exploring the practical applications of spiritual intelligence originates from non-Western contexts (namely Iran and India), most of the literature detailing spiritual intelligence tends to come from Western academics. This Western originating literature is utilised by non-Western researchers, perhaps because spiritual based topics are seen to hold more value in non-Western contexts than Western contexts. More research in the general area of spiritual intelligence is needed, but more specific research focusing on the adaptive applications of spiritual intelligence in a Western context is paramount. Further investigation into the effect of spiritual intelligence on aspects of well-being for Western samples is also necessary given the contrasting results recently published by Giannone and Kaplin (2020).

There is a paucity of knowledge about its protective factors such as resilience building, and other psychological and emotional constructs. Currently, when spiritual intelligence has been explored in relation to mental health, the mental health outcomes are often poorly defined (Giannone & Kaplin, 2020). Further, while research demonstrates positive relationships between spirituality and well-being, King (2008) suggests that these relationships might be indirect, and that rather spiritual intelligence acts as a moderator in many situations. In addition, some forms of coping are seen to be spiritual in nature, and it has been argued that these coping strategies and problem-solving techniques are in fact adaptive applications of spiritual intelligence (King, 2008).

3.4 Aims and Objectives of the Current Research

Research from around the world highlights the ever-growing issue of mental health and well-being, particularly among University students (Adlaf et al., 2001; Asif et al., 2020; Eisenberg et al., 2012; Mayer et al., 2016; Mofatteh, 2020; OUCHA, 2017; Storrie et al., 2010; Tomoda et al., 2000; Wong et al., 2006). The well-being of Aotearoa New Zealand university students is also poor (NZUSA, 2018; Samaranayake et al., 2014). Further research exploring the health and well-being of university students is necessary. Previous research has demonstrated positive associations between spiritual intelligence and well-being, which offers a novel avenue for addressing these

concerns (Amirian & Fazilat-Pour, 2015; Baezzat et al., 2018; Ebrahimi et al., 2012; Giannone & Kaplin, 2020; Khosravi & Nikmanesh, 2014; Raina, 2018; Singh & Sinha, 2013).

To my knowledge there is only one other study that explores spiritual intelligence in Aotearoa New Zealand, and no research regarding the associations between spiritual intelligence and aspects of health and well-being in an Aotearoa New Zealand context. Further, there is a need to explore intelligence beyond the mainstream understanding of intelligence (IQ).

This research will explore the relationship between spiritual intelligence and the well-being of university students of Aotearoa New Zealand, namely depression, anxiety, stress and resilience, and will address the following research questions:

1. Is there a relationship between spiritual intelligence and resilience of university students in Aotearoa New Zealand, and if so, what is the direction of this relationship?
2. Is there a relationship between spiritual intelligence and perceived stress among university students in Aotearoa New Zealand, and if so, what is the direction of this relationship?
3. Is there a relationship between spiritual intelligence and perceived anxiety of university students in Aotearoa New Zealand, and if so, what is the direction of this relationship?
4. Is there a relationship between spiritual intelligence and perceived depression of university students in Aotearoa New Zealand, and if so, what is the direction of this relationship?

The following chapter will describe the method, participants, measures, and data analysis plan.

Chapter 4. Method

The following chapter describes the ethical considerations, procedure, participants, measures, and data analysis.

4.1 Ethical Considerations

Ethics approval was sought and granted by the Southern B committee of the Massey University Human Ethics (MUHEC) (HEC: Southern B Application 20/34). The ethical considerations of autonomy, confidentiality, avoidance of harm, beneficence, and cultural responsiveness were adhered to, in line with the MUHEC guidelines. Psychological support was made available on request to participants, however, no participants indicated this was necessary.

Collected data was anonymised and initially stored in an online database, accessible to the Massey University School of Psychology's data analyst. At the end of data collection, all data was securely emailed to the researcher where it was then securely stored on the researcher's home computer using a password protected file. The data was only analysed by the researcher.

4.2 Procedure

The self-administered online questionnaire was constructed using the Qualtrics survey programme, hosted on an external Qualtrics server. Online and print advertisements invited participants to click the link or scan the QR (quick response) code that led them to the online questionnaire (see Appendix A). Advertisements online were targeted at student groups on Facebook, while print advertisements were displayed in student frequented areas around campus (e.g., the dining hall, library, and frequently used lecturer rooms).

The questionnaire began with a description of the research. Information was given to participants regarding their rights, confidentiality and what will happen to their data (see Appendix B). If participants agreed to participate, they were taken to the demographics section of the questionnaire (see Appendix C). Following the demographic items, participants completed the five scales (discussed further in section 3.4). The survey concluded by presenting the contact details for the

researcher and the research supervisor, in case participants wished to discuss any concerns regarding the study. Support details were also made available to participants if needed. Following this, participants had the option to enter a prize draw and request a summary of results once the research had been completed. All responses were anonymised and data was de-linked from the prize draw information.

4.3 Participants

Based on the approximate population of students in Aotearoa New Zealand in 2018 (175,000), a statistical power analysis recommended a sample size of at least 164 participants (80% CI= 1.28, *SD*= .5, *E*= +- 5%). Of the original sample of 270 participants, 56 responses were excluded from the analysis. Eight participants were excluded as they did not consent to the study, 22 were not currently enrolled in a New Zealand University, one did not provide their age, and another was not over 18-years of age. A further 24 participants were excluded from the study as their responses contained large amounts of missing data. For the remaining responses, if less than 10% of the data was missing per scale, either by deliberate omission or in error, and the variable was not categorical (e.g., enrolled university programme or religious beliefs), it was replaced using the series mean function in SPSS. Series mean is a technique for dealing with missing data in which the missing value is replaced by the mean value (Mahmoud, n.d). In total, 214 participants were considered suitable for inclusion in the final sample and subsequent analyses.

4.3.1 Participant Demographics

As shown in Table 4.1, the majority of respondents to the questionnaire were female (85%). The overall mean age of the participants was 32.29 years of age (*SD* = 10.51), and participant ages ranged from 18 to 63 years old. One-hundred and forty participants (65.42%) identified as New Zealand Pākehā and 39 (18.22%) identified as New Zealand Māori. Participants' religious/spiritual beliefs varied with 80 people (37.38%) having no religion and 48 people (22.42%) identifying as Christian. A number of participants responded in the open-ended ‘Other’ option describing themselves as having ‘mixed’ beliefs and faith (See Table 4.1).

Table 4.1

Key Demographic Characteristics of the Participants

Variable	Total Frequency (%) or mean (*SD*) (*n=214)*
Gender	
Female	182 (85.04%)
Male	29 (13.55%)
Non-binary	3 (1.40%)
Age (Range 18-63)	32.20 (*10.15)*
Ethnicity	
New Zealand Pākehā	140 (65.42%)
New Zealand Māori	39 (18.22%)
Asian*	17 (7.94%)
Pasifika**	7 (3.27%)
Other***	11 (5.14%)
Religious and/or spiritual beliefs	
No religion	80 (37.38%)
Christian	48 (22.42%)
Spiritualism and New Age religions	27 (12.61%)
Other religions, beliefs, and philosophies	24 (11.21%)
Māori religions, beliefs, and philosophies	9 (4.20%)
Buddhism	1 (.46%)
Hinduism	2 (.93%)
Islam	1 (.46%)
Object to answering	1 (.46%
Other****	21 (9.81%)

*Includes participants identifying as Indian, Korean, Filipino, Chinese, Sri Lankan, Vietnamese, and Southeast Malaysian.
**Includes participants identifying as Tokelauan, Papa New Guinea, Cook Island, and Samoan.
***Includes participants identifying as Dutch, Scottish, Caribbean, Irish, Scandinavian, African, Czech, Australian, Serbian, and Burmese (or a mix of these).
****Includes Agnostic, Bahai faith, Messianic Jew, belief in the Universe, both Māori beliefs and philosophies and spiritualism, Catholicism, something after life, mixture of Christianity and other beliefs, a mixture of spirituality, New Age religions, Hinduism, Post-Daoism, and Buddhism, not sure, spirituality through self-reflection and consideration of unobservable concepts using philosophy and mental exploration, and still questioning.

4.4 Measures

The questionnaire consisted of 106-items comprising five established measures and 13 questions pertaining to demographic background such as gender, age, ethnicity, religious beliefs, employment situation, living situation, and questions relevant to their current university study. Age, ethnicity, and current university enrolment demographic items were open-ended text questions, which were later re-coded in SPSS for data analysis purposes.

The following established measures were used in the construction of the questionnaire:

Spiritual Intelligence Self-Assessment Inventory (see Appendix D). Spiritual intelligence was measured by the *Spiritual Intelligence Self-Assessment Inventory* (SISRI-IAIE: Antunes et al., 2018). This is a self-report questionnaire consisting of 16 items. The items are divided into three subcategories of spiritual intelligence: Critical Existential Thinking, Personal Meaning Production, and Conscious State Expansion.

Critical Existential Thinking is the capacity to critically contemplate meaning and other existential or metaphysical issues (reality, time, space, death, and/or the universe) (King, 2008). This subscale (items 1, 3, 5, 9, 17 and 21) includes questions such as "I devote time to reflect upon the purpose or reason for my existence". The second subscale, Personal Meaning Production (items 7, 11, 19, 20 and 23), is concerned with human's ability to construct purpose and meaning in all physical and mental experiences. Questions such as "I can find meaning and purpose in my daily experiences" as asked within the Personal Meaning Production subscale. Conscious State Expansion (items 4, 8, 12, 16 and 24) is the ability to enter spiritual states of consciousness at one's own discretion and is measured through questions such as "I can control when to enter high states of consciousness or awareness".

The items are evaluated on a 5-point Likert scale, varying between 0— "it has nothing to do with me" and 4— "it has everything to do with me". All the items are positive expressions. The total result is calculated by the sum of all items which may vary between 0 and 64 points. Higher scores represent higher levels of spiritual intelligence and/or each capability. Reliability analysis conducted by Antunes et al. (2018) showed Critical Existential Thinking and Personal Meaning Development to have good internal consistency (a= 0.84), and Conscious State Expansion showed higher internal consistency (a= 0.86). The current study also found a high Cronbach's alpha of .90 for the complete scale, and Cronbach's alphas for the subscales Critical Existential Thinking (a= .84), Personal Meaning Production (a= .85), and Conscious State Expansion (a= .94) were found to also be of good value.

This scale does not include the factor of Transcendental Awareness dimension included in the Spiritual Intelligence Self-Report Inventory developed by King and DeCicco (2009), for which the SISRI-IAIE is a modification of. This dimension was omitted from the scale by Antunes and colleagues (2018) due to lack of correspondence with other scale factors. After exploring several spiritual intelligence scales, and consulting with two Māori colleagues regarding their thoughts regarding a number of spiritual intelligence scales, the SISRI-IAIE by Antunes et al. (2018) was deemed the most appropriate spiritual intelligence scale for this study. One minor adaptation was made to the scale for it to better suit the population of Aotearoa New Zealand. The te reo Māori (Māori language) term *wairua*, loosely translated as spirituality or the spirit, was added to the examples in parentheses that accompanied item six of the spiritual intelligence scale– "I have reflected deeply on whether there is a superior power (e.g., god, goddess, divine being, greater energy, wairua etc.)".

The Brief Resilience Scale (see Appendix E). The *Brief Resilience Scale* (BRS) is a six item self-report questionnaire that assesses the ability to bounce back or recover from stress (Smith et al., 2008). Items include statements such as "I tend to bounce back quickly after hard times" and "It is hard for me to snap back when something bad happens". The items are scored on a 5-point Likert scale ranging from 1— "strongly disagree" to 5— "strongly agree", with a possible minimum score of 6 and maximum of 30. With regard to scoring, the total sum of scores for each response is divided by the total number of questions answered. Interpretation of scores is a follows: 1.00-2.99 low resilience, 3.00-4.30 normal resilience, and 4.31-5.00 high resilience (Smith et al., 2008). Internal consistency for two samples of undergraduate students in America was .84 and .87, showing good reliability (Smith et al., 2008). In this study, the BRS was found to have a good Cronbach's alpha of .89, further confirming the scales good internal consistency. Convergent validity has been assessed by zero-order correlations between the BRS and other measures, finding that the BRS was positively correlated with other resilience measures, optimism, active coping, positive reframing, social support, and purpose of life (Smith et al., 2008). In terms of health-related outcomes, the BRS was negatively correlated with perceived stress, anxiety, depression, negative affect, and physical symptoms demonstrating its discriminant validity (Smith et al., 2008).

Depression, Anxiety, Stress Scale (see Appendix F). The *Depression Anxiety Stress Scale* (DASS; Lovibond & Lovibond, 1995) is a 42-item self-report questionnaire designed to measure the negative emotional states of depression, anxiety, and stress (Lovibond & Lovibond, 1995). The depression subscale assesses dysphoria, hopelessness, devaluation of life, self-deprecation, lack of interest/involvement, anhedonia, and inertia. An example item for the depression subscale is "I couldn't seem to experience any positive feeling at all". The anxiety subscale assesses autonomic arousal, skeletal muscle effects, situational anxiety, and subjective experience of anxious affect through items such as "I found myself in situations that made me so anxious I was most relieved when they ended". The stress subscale assesses difficulty relaxing, nervous arousal, and being easily upset/agitated, irritable/over-reactive, and impatient. The stress scale is sensitive to levels of chronic non-specific arousal. For example, "I found myself getting upset by quite trivial things" is an item from the stress subscale.

The items are scored on a 4-point Likert scale of frequency or severity of the participants experiences over the last week, shown as such; 0–"did not apply to me at all", 1–"applied to me to some degree, or some of the time", 2– "applied to me to a considerable degree, or a good part of the time", 3–"applied to me very much, or most of the time" (Lovibond & Lovibond, 1995). Scores are calculated for the three subscales of the DASS by adding up the total sum of scores for each subscale. The depression subscale scores are as follows: 0-9 indicates no depression, 10-13 indicates mild, 14-20 indicates moderate, 21-27 indicates severe, and 28+ indicates extremely severe (Lovibond & Lovibond, 1995). For anxiety, 0-7 indicates normal levels of anxiety, 8-9 indicates mild, 10-14 indicates moderate, 15-19 indicates severe, and 20+ indicates extremely severe (Lovibond & Lovibond, 1995). Finally, stress scores between 0-14 indicate normal stress, 15=18 indicate mild, 19-25 indicate moderate, 26-33 indicate severe, and 34+ indicate extremely severe (Lovibond & Lovibond, 1995).

Internal consistency coefficients have been reported as .92 (Depression scale), .92 (Anxiety scale), and .95 (Stress scale), indicating high reliability (Lovibond & Lovibond, 1995). Lovibond and Lovibond (1995) found that the depression scale correlated highly with other measures of depression, and moderately with anxiety measures, suggesting the DASS had good convergent

validity. The current study found the DASS and its depression, anxiety, and stress subscales to have a high level of internal consistency with Cronbach's alpha's of .97, .96, .92, .94, respectively.

The Brief Inventory of Thriving (See appendix G). The *Brief Inventory of Thriving* (BIT) is a brief measure of psychological well-being. The 10-item scale aims to serve as an indicator of psychological well-being and a brief screening tool of mental health (Su et al., 2014). The items are scored on a 5-point scale ranging from 1— "strongly disagree" to 5— "strongly agree". High scores indicate better well-being. Items include statements such as "My life has a clear sense of purpose", "I feel good most of the time", and "I feel a sense of belonging in my community" (Su et al., 2014, p. 33-34). Su et al. (2014) found all 10-items were good indicators of the scale, with item loadings ranging from .58 to .84 (Su et al., 2014). Test-retest reliability was .83 after a four-month period (Su et al., 2014). Internal consistency for the BIT was good with alpha coefficients ranging from .90 to .93 across four samples (Su et al., 2014). The current study found the BIT to have a high level of internal consistency with a Cronbach's alpha of .89, which is in line with the internal consistency reported by Sue et al. (2014). The BIT has shown high convergent validity by strongly correlating with existing measures of psychological well-being with correlations ranging from .72 (Self Mastery Scale, Pearlin & Schooler, 1978) to .82 (Flourishing Scale, Diener et al., 2009) (Su et al., 2014).

4.5 Data Analysis

Quantitative data were analysed using the Statistical Package for the Social Sciences (SPSS) for Mac, version 27.0.1.0 (IBM, 2020). To test the normal distribution of errors, the Shapiro-Wilk test statistic was calculated for each measure. Skewness and kurtosis were examined for each measure also. From these tests, four of the five measures, and the six subscales of the measures were identified as violating the assumptions of normality. No data was transformed as some authors claim that data transformations can often introduce new issues more problematic than non-normally distributed data (Changyoung et al., 2014). In line with recommendations of authors, when assumptions of normality were violated, equivalent nonparametric tests were therefore conducted (Changyoung et al., 2014).

Cronbach's alpha (α) were calculated to measure the consistency of each scale and corresponding subscales (Field, 2017). Values of between 0.7 and 0.8 are considered good by much of the literature, and scores above 0.9 to be best (Bland & Altman, 1997; Field, 2017). Univariate statistics were used to generate means, standard deviations, ranges, and frequencies for demographic data and measures. Pearson's product-moment correlation coefficients were used to explore the relationships between normally distributed variables. Preliminary One-way ANOVA analyses were conducted to assess whether there were statistically significant differences between groups. When normality assumptions were violated, Spearman's Rho correlation coefficients and Kruskal-Wallis post hoc tests were conducted.

If significant effects were detected at the bivariate level, multiple linear regressions were conducted to further examine the relationship between multiple dependent variables and a single dependent variable. For example, to identify which aspects of the demographic characteristics accounted for the most variance in levels of spiritual intelligence. Mediation analyses were also conducted following significant bivariate findings.

For correlation coefficients, effect sizes were calculated using guidelines by Cohen (1988) which recommend a value less than .01 indicates a minimal effect, 0.1-0.3 a small effect, 0.3-0.5 a moderate effect, and 0.5 or greater a large effect. For ANOVAs, $\eta 2$ (Eta squared) was used to report effect size, with resulting statistics interpreted as small effects: 0.01, medium: 0.059, or large: 0.138 (Cohen, 1988). For nonparametric r_s values, .00-.19 is very weak, .20-.39 weak, .40-.59 moderate, .60-.79 strong, and .80-1.0 very strong. For this study, the statistical significance level was set at $p < 0.05$.

Chapter 5. Results

This chapter presents the quantitative results from the online questionnaire. For each measure, descriptive statistics will be detailed and information regarding participant demographics will be given. Results from bivariate and multivariate statistical analyses will be presented.

5.1 Measures

Table 5.1 outlines the means, standard deviations, and Cronbach's alphas for each of the measures used in this study. Cronbach's alphas for the various measures demonstrate that each scale and associated subscales had more than acceptable reliability as per psychometric criteria (Bland & Altman, 1997). Scores ranged across the entire available range for all measures and means mostly fell into the midpoint for the possible range.

Table 5.1
Range, Means, Standard Deviations (SD), and Cronbach's Alphas (α) for Measures

Measure	**Range**	**Mean (*SD*)**	***α***
Spiritual Intelligence Self Report Inventory (SISRI-IAIE)	4-64	36.44 (*12.00*)	.91
Critical Existential Thinking Subscale (CET)	0-24	15.67 (*5.21*)	.84
Personal Meaning Production Subscale (PMP)	2-20	13.00 (*4.38*)	.85
Conscious State Expansion Subscale (CSE)	0-20	7.76 (*5.20*)	.93
Depression Anxiety Stress Scale (DASS)	0-111	28.62 (*24.85*)	.97
Depression Subscale	0-42	8.79 (*9.78*)	.96
Anxiety Subscale	0-36	7.39 (*7.95*)	.92
Stress Subscale	0-38	11.99 (*9.16*)	.94
Brief Resilience Scale (BRS)	6-30	20.29 (*5.39*)	.89
Brief Inventory of Thriving (BIT)	17-50	40.07 (*7.02*)	.90

Prior to each analysis, normality assumptions were checked for each scale through skewness, kurtosis, and Shapiro-Wilks tests. The SISRI-IAIE data did not deviate significantly from normal

indicated by the Shapiro-Wilk test results, $W(214)= .993$, $p = .433$. On the other hand, the remainder of the scales (and subscales) violated assumptions of normality. Most of these scales were symmetrically to moderately skewed and had platykurtic distribution. However, the DASS was highly skewed to the right (Skewness = 1.25) and had a leptokurtic distribution (Kurtosis = 1.03).

DASS Subscale Scores. According to Lovibond and Lovibond's (1995) scoring criteria, for the subscale of depression 66.35% (n = 142) had a score indicating no depression, 10.28% (n = 22) indicated mild depression, 9.34% (n = 20) indicated moderate depression, 7.47% (n = 16) indicated severe depression, and 6.54% (n = 14) indicated extremely severe depression.

For the DASS subscale of anxiety, 62.61% (n = 134) had a score indicating no anxiety, 8.87% (n = 19) indicated mild anxiety, 13.08% (n = 28) indicated moderate anxiety, 6.07% (n = 13) indicated severe anxiety, and 9.34% (n = 20) indicated extremely severe anxiety.

For the DASS subscale of stress, 71.02% (n = 152) had a score indicating no stress, 8.87% (n = 19) indicated mild stress, 8.41% (n = 18) indicated moderate stress, 7.94% (n = 17) indicated severe stress, and 3.7% (n = 8) indicated extremely severe stress.

BRS Scores. According to the BRS scoring criteria offered by Smith et al. (2008), 17.28% (n = 37) of the participants had a score indicating high resilience, 52.33% (n = 112) indicated normal resilience, and 30.37% (n = 65) indicated low resilience.

5.2 Demographic Findings

To identify any potential confounding variables, bivariate analyses between the demographic data and scale data were conducted. Inspection of skewness, kurtosis and Shapiro-Wilk statistics indicated the assumptions of normality were met for the SISRI-IAIE scale total scores, so Pearson's correlation coefficients and one-way ANOVAs were considered appropriate to assess for significant relationships between demographic data and spiritual intelligence. However, assumptions were violated for the remaining scales, including spiritual intelligence and depression, anxiety, and stress scale subscales, so Spearman's rank-order correlations (a nonparametric equivalent to Pearson's correlation coefficient) and Kruskal-Wallis tests (a nonparametric

equivalent to one-way ANOVA) was performed instead. For post-hoc analyses, Bonferroni adjusted alphas were calculated for each independent variable based on the number of comparisons that were made (Allen & Bennett, 2008).

5.2.1 Ethnicity

Table 5.2 and Figure 5.1 show that participants who identified as Pasifika had the highest mean scores for SISRI-IAIE (M = 46.71, SD = 10.12), BIT (M = 44.00, SD = 3.60), and BRS (M = 22.85, SD = 4.87), and the lowest DASS scores (M = 15.77, SD = 14.26). By contrast, New Zealand Pākehā participants scored the lowest on the SISRI-IAIE (M = 34.26, SD = 12.28) and for BIT (M = 39.55, SD = 6.89).

A one-way ANOVA was conducted to compare the effect of ethnicity on spiritual intelligence, and results show that there were statistically differences in SISRI-IAIE scores across different ethnicity groups ($F(4, 209) = .4.20$, $p = .003$, $\eta^2 = .07$), with a medium effect. Post hoc comparisons using the Tukey HSD test indicate that the mean SISRI-IAIE score for New Zealand Pākehā (M = 34.26, SD = 12.28) was significantly lower than Pasifika (M = 46.71, SD = 10.12, p = .049) and New Zealand Māori (M = 40.68, SD = 11.03, p = .022). The Asian and 'Other' ethnicity groups did not significantly differ from New Zealand Pākehā, New Zealand Māori, or Pasifika groups in terms of their SISRI-IAIE scores.

As the SISRI-IAIE subscales violated assumptions of normality, Kruskal-Wallis tests were used. Results indicate significant differences between ethnicity and CET (critical existential thinking) ($H(4)= 11.62$, p = .020), PMP (personal meaning production) ($H(4)= 12.38$, p = .015), and CSE (conscious state expansion) ($H(4)= 12.16$, p = .016). For post-hoc analyses, Dunn's pairwise tests were carried out, with alphas adjusted using the Bonferroni correction for multiple tests. For the SISRI-IAIE subscale PMP scores, Dunn's pairwise comparisons indicate Pasifika had significantly higher mean ranks than New Zealand Pākehā (H = -76.10, p = .015). For the CSE SISRI-IAIE subscale scores, Dunn's pairwise test results indicate a significant difference between New Zealand Pākehā and New Zealand Māori (H = -32.77, p = .034). There was no evidence of a difference between the other pairs. No evidence of a difference between ethnicity groups for the CET subscale was found from Dunn's pairwise test results.

Table 5.2
Mean and Standard Deviations (SD) of Scores on the Spiritual Intelligence Scale (SISRI-IAIE) for Participant Ethnicity Groups

Ethnicity (*N*)	SISRI-IAIE	DASS	BIT	BRS
New Zealand Pākehā (*140*)	34.26 (*12.28*)	29.50 (*25.27*)	39.55 (*6.89*)	20.35 (*5.37*)
New Zealand Māori (*39*)	40.69 (*11.03*)	24.22 (*24.86*)	40.87 (*6.94*)	20.33 (*5.98*)
Asian* (*17*)	38.17 (*9.74*)	35.60 (*25.91*)	40.57 (*8.49*)	17.17 (*3.77*)
Pasifika** (*7*)	46.71 (*10.12*)	15.77 (*14.26*)	44.00 (*3.60*)	22.85 (*4.87*)
Other*** (*11*)	39.90 (*8.16*)	30.36 (*21.11*)	40.63 (*8.13*)	22.63 (*4.24*)
Total (*214*)	36.44 (*12.00*)	28.62(*24.85*)	40.07 (*7.02*)	20.29 (*5.39*)

* Includes participants identifying as Indian, Korean, Filipino, Chinese, Sri Lankan, Vietnamese, and South East Malaysian.

** Includes participants identifying as Tokelauan, Papua New Guinea, Cook Island, and Samoan.

*** Includes participants identifying as Dutch, Scottish, Caribbean, Irish, Scandinavian, African, Czech, Australian, Serbian, and Burmese (or a mix of these).

5.2.2 Religious and/or Spiritual Beliefs

As seen in Table 5.3, participants who identified as having no religion and/or spiritual beliefs tended to have lower SISRI-IAIE, BRS, and BIT scores, and higher DASS scores. A one-way ANOVA was conducted to examine the association between religious and/or spiritual beliefs and SISRI-IAIE scores. There were statistically significant difference between religious and/or spiritual beliefs and SISRI-IAIE scores ($F(9, 204) = 7.37$, $p < .001$, $\eta^2 = .24$), with a large effect. No post hoc comparisons were conducted due to some religious and/or spiritual belief groups having fewer than 2 cases.

Kruskal-Wallis tests also indicated that the difference between religious and/or spiritual beliefs groups levels of PMP ($H(9) = 45.62$, $p < .001$), CSE ($H(9)= 40.510$ $p < .001$), and CET ($H(9)= 39.33$, $p < .001$). For post-hoc analyses, Dunn's pairwise tests were carried out, with alphas adjusted using the Bonferroni correction for multiple tests. Dunn's pairwise post-hoc tests indicated no significant differences between religious and/or spiritual beliefs and the PMP subscale of the SISRI-IAIE. For the CSE SISRI-IAIE subscale, Dunn's pairwise comparisons indicate No religious beliefs had significantly lower mean ranks than Spiritualism and new age religions ($H =$

-56.06, p = .002) and Māori religions, beliefs, and philosophies (H = -80.87, p = .009). For the CET SISRI-IAIE subscale, Dunn's pairwise comparisons indicated No religious beliefs had significantly lower mean ranks than Spiritualism and new age religions (H = -56.65, p = .002), Other religions, beliefs, and philosophies (H = -49.83, p = .024), Māori religions, beliefs, and philosophies (H = -71.13, p = .048).

Table 5.3

Mean and Standard Deviations (SD) for Each Scale across Religious and/or Spiritual Beliefs Group

Religious and/or Spiritual Beliefs	SISRI-IAIE	BRS	DASS	BIT
No religion (*N*=80)	29.18 *(9.94)*	19.47 (*5.67*)	32.68 (*26.51*)	38.02 (*7.75*)
Buddhism (*N*=1)	52.00 *(0.00)*	22.00 (*0.00*)	25.00 (*0.00*)	28.00 (*0.00*)
Christian (*N*=48)	40.31 (*10.75)*	22.12 (*5.18*)	22.07 (*21.80*)	42.56 (*5.15*)
Hinduism (*N*= 2)	41.00 (*4.24*)	19.00 (*0.00*)	20.50 (*28.99)*	47.34 (*2.33*)
Islam (*N*=1)	30.00 (*0.00*)	18.00 (*0.00*)	71.00 (*0.00*)	47.00 (*0.00*)
Māori religions, beliefs, and philosophies (*N*=9)	47.55 (*12.84*)	22.55 *(4.53*)	17.99 (*9.56*)	43.11 (*6.15*)
Spiritualism and New Age Religions (*N*= 27)	41.62 (*9.46*)	20.07 (*5.06*)	28.25 (*21.59*)	40.00 (*7.49*)
Other religions, beliefs, and philosophies (*N*=24)	39.00 (*11.99*)	19.54 (*4.23*)	31.30 (*31.39*)	39.87 (*6.99*)
Object to Answering (*N*=1)	35.00 (*0.00*)	18.00 (*0.00*)	10.00 (*0.00*)	40.00 (*0.00*)
Other* (*N*=21)	40.09 (*12.07*)	19.66 (*6.50*)	29.84 (*22.82*)	40.76 (*5.41*)
Total (*N*=157)	36.44 (*12.00*)	20.29 (*5.39*)	28.62 (*24.85*)	40.07 (*7.02*)

*Includes Agnostic, Bahai faith, belief in the Universe, both Māori beliefs and philosophies and spiritualism, Catholicism, something after life, mixture of Christianity and other beliefs, a mixture of spirituality, New Age religions, Hinduism, Post-Daoism, and Buddhism, not sure, spirituality through self-reflection and consideration of unobservable concepts using philosophy and mental exploration, and still questioning.

5.2.3 Age

Participants aged 45-years-old and over had the highest SISRI-IAIE mean score of 39.86 (SD = 14.31), while those aged between 35-years and 44-years had the lowest mean score of 31.78 (SD = 11.06). In addition, participants within the age group of 45-years-old and over had the highest mean score for the BRS (M =23.28, SD = 4.64), BIT (M = 42.02, SD = 7.03), and the lowest mean for the DASS (M = 13.78, SD = 18.38). In addition, age was positively significantly correlated

with PMP (r_s= .148, p = .030), and negatively significantly correlated with depression (r_s= -.317, p < .001), anxiety (r_s= -.415, p < .001), and stress (r_s= -.352, p < .001) separately.

Kruskal-Wallis test statistics indicate that the differences across age groups were statistically significant for scores of the BRS (H(3)= 17.83, p < .001), DASS (H(3)= 33.48, p <.001), BIT (H(3)= 10.63, p = .014), PMP (H(3)= 20.29, p = .017), depression (H(3)= 21.40, p <.001), anxiety (H(3)= 36.80, p < .001), and stress (H(3)= 29.73, p < .001).

Gender was not significantly correlated with any of the scales in this study.

5.2.4 Multiple Linear Regression Analysis

As ethnicity, religious and/or spiritual beliefs, and age all significantly correlated with SISRI-IAIE scores, a multiple linear regression analysis was conducted to explore which of the demographic variables were responsible for the most variance in SISRI-IAIE scores. No outliers were identified, and assumptions of linearity, homoscedasticity, and multicollinearity were met. Results revealed a medium effect, with the combined predictor variables (ethnicity, religious and/or spiritual beliefs, and age) accounting for 15.7% of the variance in SISRI-IAIE scores, R_2= .15, F(3, 210)= 12.98, p < .001, f_2= .17. As Table 5.4 shows, religious and/or spiritual beliefs was the most significant predictor variable for SISRI-IAIE scores, followed by ethnicity.

Table 5.4

Multiple Linear Regression Analysis for Significant Predictor Variables and Spiritual Intelligence (SISRI-IAIE)

Predictor Variable	***B***	**(*β*)**	***t***	***p***
Age	.116	.102	1.597	.122
Ethnicity	1.949	.178	2.791	.006
Religious and/or Spiritual Beliefs	1.066	.327	5.116	.001

5.3 Research Questions

This section details the findings pertaining to the four research questions. Normality assumptions were violated, so Spearman's Rho correlation coefficients were used to examine the relationships between the variables.

Is there a relationship between spiritual intelligence and resilience of Aotearoa New Zealand university students? To address this research question, Spearman's Rho correlation coefficients were conducted to examine the relationship between spiritual intelligence (and its three subscales) and resilience. Results showed that SISRI-IAIE and BRS scores had a statistically significant and positive relationship, although the effect size was weak (r_s = .202, p = .003). PMP subscale of the SISRI-IAIE and BRS scores also had a moderate and positive statistically significant relationship (r_s= .377, p < .001). The CET (r_s= .065, p = .343) and CSE (r_s= .088, p = .198) SISRI-IAIE subscales both had positive but weak and non-significant relationships with BRS scores.

Based on significant demographic findings, a partial correlation analysis was conducted to further explore the relationship between SISRI-IAIE scores and BRS scores. When controlling for the effect of age (r_s= .203, p = .003), ethnicity (r_s= .209, p = .002), and religious and/or spiritual beliefs (r_s= .217, p = .001), there was still a statistically significant relationship between SISRI-IAIE and BRS scores.

As ethnicity, religious and/or spiritual beliefs, age, PMP, and total SISRI-IAIE scores significantly correlated with BRS scores, a multiple linear regression analysis was conducted to explore which of these variables were responsible for the most variance in BRS scores. No outliers were identified, and assumptions of linearity, homoscedasticity, and multicollinearity were met. Results revealed a medium effect (according to Cohen's 1988 criteria), with the combined predictor variables (age, ethnicity, religious and/or spiritual beliefs, PMP, and SISRI-IAIE scores) accounting for 19.7% of the variance in BRS scores, R_2= .197, F(5, 208)= 10.18, p < .001, f_2= .24. As Table 5.5 shows, PMP was the most significant predictor variable for BRS scores, followed by age. Participants with higher levels of PMP were predicted to score .630 units more on the BRS than participants with lower PMP.

Table 5.5
Multiple Linear Regression Analysis for Significant Predictor Variables and Resilience (BRS)

Predictor Variable	*B*	(*β*)	*t*	*p*
PMP	.630	.512	4.798	<.001
SISRI-IAIE	-.094	-.209	-1.881	.061
Age	.100	.195	3.083	.002
Ethnicity	.025	.005	.078	.938
Religious and/or Spiritual Beliefs	-.026	-.017	-.258	.797

Is there a relationship between spiritual intelligence and perceived depression among Aotearoa New Zealand university students? To address this research question, Spearman's Rho correlation coefficients were conducted using scores on the SISRI-IAIE (and its three subscales), and the depression subscale of the DASS. The SISRI-IAIE and depression subscale showed a statistically significant and negative relationship (r_s= -.240, p < .001). The PMP subscale of the SISRI-IAIE was negatively, moderately, and statistically significantly associated with the scores on the depression subscale (r_s= -.385, p < .001). The CSE subscale of the SISRI-IAIE was also negatively and significantly correlated with scores on the depression subscale, although this relationship was rather weak (r_s= -.157, p = .022). The CET (r_s= .071, p = .299) subscale of the SISRI-IAIE was not statistically significantly associated with scores on the depression subscale. Partial correlation analyses were conducted to further explore the relationship between SISRI-IAIE scores and DASS depression subscale scores, controlling for the effect of age (r_s= -.245, p < .001), ethnicity (r_s= -.240, p < .001), and religious and/or spiritual beliefs (r_s=.-.212, p = .002), SISRI-IAIE scores and DASS depression subscale scores still had a statistically significant relationship.

As ethnicity, religious and/or spiritual beliefs, age, PMP, CSE, and SISRI-IAIE scores significantly correlated with DASS depression subscale scores, a multiple linear regression analysis was conducted to explore which of these variables were responsible for the most variance in scores. No outliers were identified, and assumptions of linearity, homoscedasticity, and multicollinearity were met. Results revealed a large effect, with the combined predictor variables (age, ethnicity, religious and/or spiritual beliefs, PMP, CSE, and SISRI-IAIE scores) accounting

for 26.5% of the variance in depression subscale scores, R_2= .26, F(6, 207)= 12.43, p < .001, f_2= .36. As Table 5.6 shows, PMP was the most significant predictor variable for depression subscale scores, followed by CSE, SISRI-IAIE scores, religious and/or spiritual beliefs, and age respectively. Participants with higher levels of PMP were predicted to score 1.765 units less on the DASS depression subscale than those with lower levels of PMP.

Table 5.6
Multiple Linear Regression Analysis for Significant Predictor Variables and Depression (DASS Subscale of Depression)

Predictor Variable	***B***	***(β)***	***t***	***p***
PMP	-1.765	-.790	-6.982	<.001
CSE	-.618	-.329	-2.857	.005
SISRI-IAIE	.596	.731	4.240	<.001
Age	-.135	-.146	-2.396	.017
Ethnicity	.296	.033	.542	.588
Religious and/or Spiritual Beliefs	-.354	-.133	-2.045	.042

Is there a relationship between spiritual intelligence and perceived anxiety among Aotearoa New Zealand university students? Spearman's Rho correlation coefficients were conducted using scores on the SISRI-IAIE (and its three subscales), and the anxiety subscale of the DASS. No significant relationship was found between scores on the SISRI-IAIE and the anxiety subscale (r_s= -.038, p = .581). Contrastingly, the PMP subscale of the SISRI-IAIE and the anxiety subscale showed a negative, but weak statistically significant relationship (r_s= -.142, p = .038). The CET (r_s= .028, p = .682), and CSE (r_s= -.060, p = .382) subscales of the SISRI-IAIE were not statistically significantly associated with the anxiety subscale of the DASS.

As age and the SISRI-IAIE PMP subscale scores significantly correlated with DASS anxiety subscale scores, a multiple linear regression analysis was conducted to explore which of these variables were responsible for the most variance in DASS anxiety subscale scores. No outliers were identified, and assumptions of linearity, homoscedasticity, and multicollinearity were met. Results revealed a small effect (according to Cohen's 1988 criteria), with the combined predictor

variables (age and PMP scores) accounting for 12.2% of the variance in DASS anxiety subscale scores, R_2= .12, $F(4, 209) = 7.23$, $p < .001$, f_2= .13. As Table 5.7 shows, age was the only significant predictor variable for DASS anxiety subscale scores. Participants higher in age were predicted to score .229 units lower on the DASS anxiety subscale than younger participants.

Table 5.7
Multiple Linear Regression Analysis for Significant Predictor Variables and Anxiety (DASS Subscale of Anxiety)

Predictor Variable	***B***	**(*β*)**	***t***	***p***
PMP	-.236	-.130	-1.916	.057
Age	-.229	-.303	-4.593	<.001

Is there a relationship between spiritual intelligence and perceived stress of Aotearoa New Zealand university students? Spearman's Rho correlation coefficients were conducted with the SISRI-IAIE (and its three subscales) and the stress subscale of the DASS. Findings showed that scores on the SISRI-IAIE and the stress subscale had a negative and statistically significant relationship, although the relationship was somewhat weak (r_s= -.168, p = .014). The PMP subscale of the SISRI-IAIE was negatively and statistically significantly associated with scores on the stress subscale (r_s= -.305, p = < .001). The CSE subscale of the SISRI-IAIE also had a significant and negative association with the stress subscale (r_s= -.138, p = .044). The CET subscale of the SISRI-IAIE had a very weak and negative association with the stress subscale of the DASS, but this relationship was not a statistically significant result (r_s= -.016, p = .816). A partial correlation analysis indicated that when controlling for the effect of age, SISRI-IAIE scores and scores on the stress subscale of the DASS still had a statistically significant relationship (r_s= -.171, p = .012).

As age, the SISRI-IAIE, and the SISRI-IAIE PMP and CSE subscale scores significantly correlated with DASS stress subscale scores, a multiple linear regression analysis was conducted to explore which of these variables were responsible for the most variance in stress scores. No outliers were identified, and assumptions of linearity, homoscedasticity, and multicollinearity were met. Results revealed a medium effect with the combined predictor variables (age, SISRI-IAIE, PMP, and CSE scores) accounting for 19.5% of the variance in stress scores, R_2= .19, $F(4, 209)$=

12.65, $p < .001$, $f_2 = .24$. As Table 5.8 shows, PMP was the most significant predictor variable for stress subscale scores, followed by CSE, SISRI-IAIE scores, and age respectively. Participants with higher levels of PMP were predicted to score 1.097 units less on the stress subscale than those with lower levels of PMP.

Table 5.8
Multiple Linear Regression Analysis for Significant Predictor Variables and Stress (DASS Subscale of Stress)

Predictor Variable	***B***	**(*β*)**	***t***	***p***
PMP	-1.097	-.524	-4.537	<.001
CSE	-.489	-.278	-2.330	.021
SISRI-IAIE	.393	.514	2.999	.003
Age	-.226	-.260	-4.124	<.001

5.3.1 Other Relevant Findings

The Relationship Between DASS Scores and Spiritual Intelligence. A weak and negative statistically significant relationship was identified between SISRI-IAIE scores and combined DASS scores ($r_s = -.177$, $p = .010$). Further, the PMP ($r_s = -.319$, $p < .001$) and CSE ($r_s = -.141$, $p = .040$) SISRI-IAIE subscales had negative and significant relationships with DASS scores.

The Relationship Between BIT Scores and Spiritual Intelligence. A moderate and positive statistically significant relationship was identified between SISRI-IAIE scores and BIT scores ($r_s = .376$, $p < .001$). Further, the PMP ($r_s = .523$, $p < .001$), CSE ($r_s = .211$, $p = .002$), and CET ($r_s = .146$, $p = .032$) SISRI-IAIE subscales had positive and significant relationships with BIT scores.

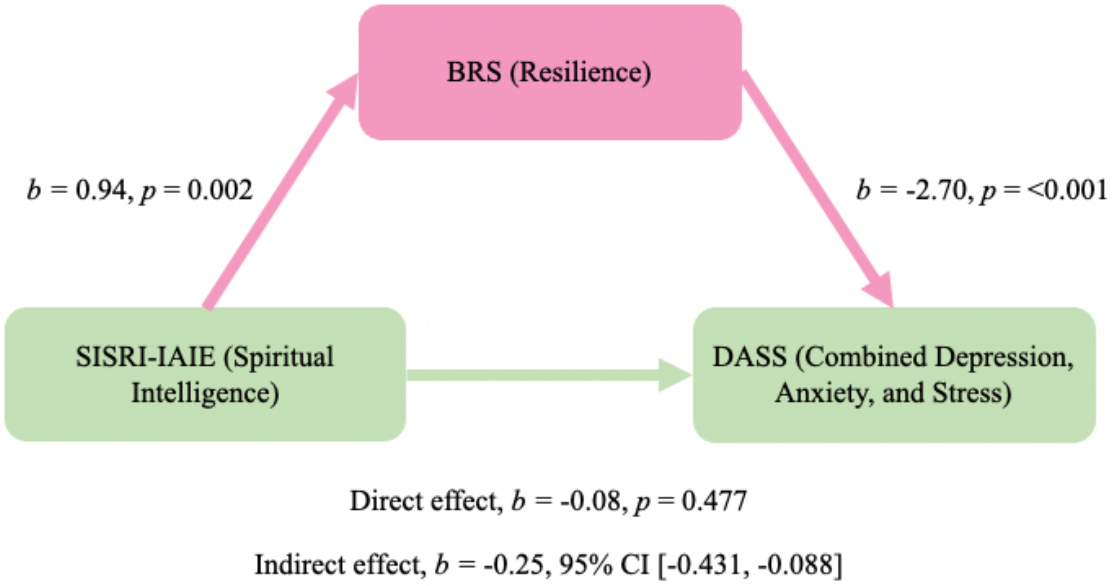
5.4 Further Analyses

The Effect of Resilience in The Relationship Between Spiritual Intelligence and Depression, Anxiety, and Stress. Given the moderate and significant relationship between BRS scores and scores on the DASS ($r_s = -.621$, $p < .001$) and scores on the SISRI-IAIE and BRS ($r_s = .202$, p

= .003), a mediation analysis was conducted to explore the effect of BRS scores in the relationship between SISRI-IAIE scores and the DASS. Results show that the relationship was fully mediated by BRS scores. As Figure 5.2 illustrates, the standardised regression coefficient between SISRI-IAIE scores and BRS scores were statistically significant (p = .002), as was the standardised regression coefficient between BRS scores and scores on the DASS (p = < .001). Results show that there was a significant indirect effect of SISRI-IAIE scores on the DASS through scores on the BRS, b= -0.25, 95% CI [-0.431, -0.088].

Figure 5.2

Model of SISRI-IAIE (Spiritual Intelligence) as a Predictor of DASS (Combined Depression, Anxiety, and Stress), Fully Mediated by BRS (Resilience). The Confidence Interval for the Indirect Effect is a BCa Bootstrapped CI Based on 5000 Samples

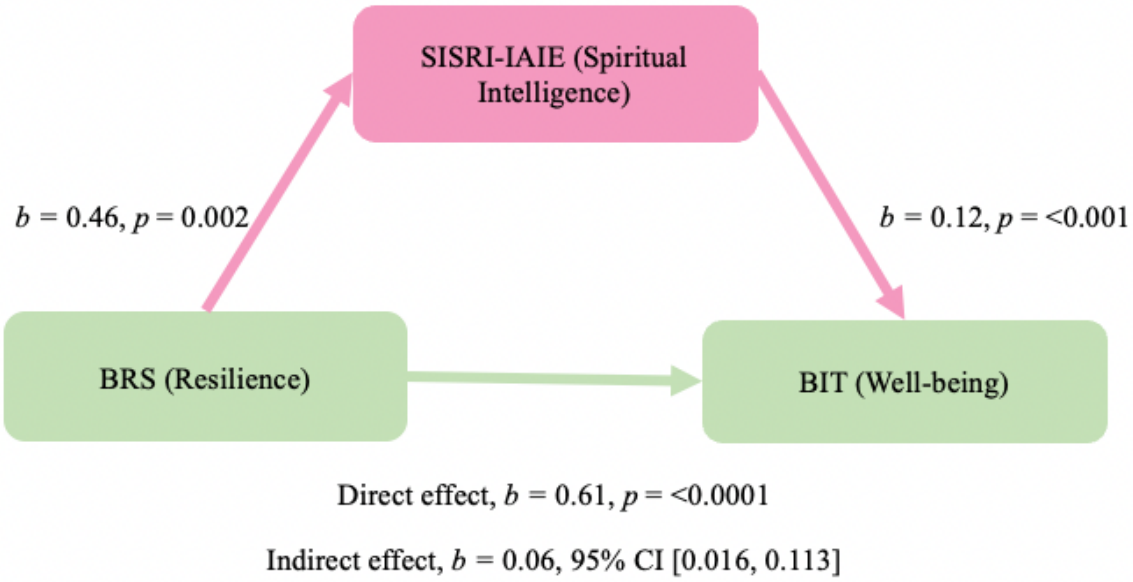


The Effect of Spiritual Intelligence on The Relationship Between Resilience and Well-being. BIT scores were significantly and positively correlated with both scores on the SISRI-IAIE (r_s= .367, p < .001) and BRS (r_s= .512, p < .001). With analyses indicating positive and significant associations between BRS scores and BIT scores, and SISRI-IAIE scores with both scores on the BRS and BIT, a mediation analysis was conducted to determine the extent to which SISRI-IAIE scores affect the relationship between BRS and BIT scores. Results show that the relationship between scores on the BRS and BIT were partially mediated by SISRI-IAIE scores. As Figure 5.3

illustrates, the standardised regression coefficient between BRS and SISRI-IAIE scores was statistically significant (p = .002), as was the standardised regression coefficient between SISRI-IAIE and BIT scores (p < .0001). Results show that there was a significant indirect effect of BRS on BIT scores through SISRI-IAIE scores, b= 0.06, 95% BCa CI [0.016, 0.113].

Figure 5.3

Model of BRS (Resilience) as a Predictor of BIT (Well-being), Partially Mediated by SISRI-IAIE (Spiritual Intelligence). The Confidence Interval for the Indirect Effect is a BCa Bootstrapped CI Based on 5000 Samples



The Effect of Religious and/or Spiritual Beliefs on The Relationship Between Spiritual Intelligence and Resilience, Depression, and Stress. It is possible that religious and/or spiritual beliefs may have potentially mediated the statistically significant relationships between scores on the SISRI-IAIE and BRS, depression DASS subscale, and the stress DASS subscale. Mediation analysis results show that religious and/or spiritual beliefs did not mediate the relationships between SISRI-IAIE and BRS scores (b = -0.01, 95% CI [-0.039, 0.007]), DASS depression subscale scores (b = 0.006, 95% CI [-0.045, 0.032]), or DASS stress subscale scores (b = 0.01, 95% CI [-0.023, 0.059]). As the anxiety subscale of the DASS and SISRI-IAIE scores did not

indicate a significant relationship, no mediation analysis was conducted to explore this relationship further.

Chapter 6. Discussion

This research aimed to investigate the relationship between aspects of well-being and spiritual intelligence. Depression, anxiety, stress, and resilience as contributors to well-being were explored. This chapter begins by providing an overview of the main findings of this study, including a discussion of how these findings compare to relevant literature and previous results. The practical and theoretical implications of the current study are discussed. Limitations and strengths of the present study will be acknowledged, as well suggestions for future research. To conclude, final remarks are provided.

6.1 Summary of Key Findings

Overall, the current research suggests a significant positive relationship between spiritual intelligence and several factors that contribute to well-being. The following research questions and associated findings are briefly recapped below:

Is there a relationship between spiritual intelligence and resilience of Aotearoa New Zealand university students? There was a significant positive correlation between SISRI-IAIE scores and BRS scores. As SISRI-IAIE scores increased, so did BRS scores. Scores on the PMP subscale of the SISRI-IAIE were also significantly positively correlated with BRS scores. Scores on both the CET and CSE subscales of the SISRI-IAIE were not significantly associated with BRS scores. Scores on the PMP SISRI-IAIE subscale were the most significant predictor variable of BRS scores.

Is there a relationship between spiritual intelligence and perceived depression among Aotearoa New Zealand university students? There was a significant and negative correlation between SISRI-IAIE scores and scores on the depression subscale of the DASS. As the SISRI-IAIE scores increased, scores on the depression subscale of the DASS decreased. Scores on the PMP and CSE subscales of the SISRI-IAIE were also significantly negatively associated with depression scores. The CET SISRI-IAIE subscale scores were not significantly associated with depression scores. Scores on the PMP SISRI-IAIE subscale were the most significant predictor variable of depression scores.

Is there a relationship between spiritual intelligence and perceived anxiety among Aotearoa New Zealand university students? The findings indicate that as SISRI-IAIE scores increased, DASS anxiety subscale scores decrease, but not at a level of significance. The SISRI-IAIE PMP subscale scores were negatively and significantly associated with DASS anxiety subscale scores. Both the CET and CSE SISRI-IAIE subscale scores were not significantly associated with scores on the DASS subscale of anxiety. Age was the only significant predictor of anxiety scores.

Is there a relationship between spiritual intelligence and perceived stress of Aotearoa New Zealand university students? A negative and significant association between SISRI-IAIE scores and scores on the DASS stress subscale was observed. This finding indicates that as SISRI-IAIE scores increase, scores on the DASS stress subscale decrease. Additionally, scores on the PMP and CSE subscales of the SISRI-IAIE were negatively significantly associated with scores on the stress subscale. SISRI-IAIE CET subscale scores were not associated with the stress subscale scores. Scores on the PMP SISRI-IAIE subscale were the most significant predictor variable of stress subscale scores.

6.2 Spiritual intelligence and Well-being

The following section describes the above findings in greater detail and compares them to existing literature and research. The relationships between spiritual intelligence and aspects of well-being found in this study are primarily consistent with existing research (Bayrami et al., 2014; Ebrahimi et al., 2012; Giannone & Kaplin, 2020; Khosravi & Nikmanesh, 2014; Raina, 2018).

6.2.1 Spiritual Intelligence and Resilience

A significant and positive association between spiritual intelligence scores and resilience scores was identified, suggesting increased spiritual intelligence may result in increased resilience, supporting existing research (Ebrahimi et al., 2012; Khosravi & Nikmanesh, 2014; Noble, 2001).

As previously defined, resilience can be understood as the ability to thrive, respond adequately, and perform successfully when faced with adversity, and is believed to moderate the adverse effects of stress and promote adaption to undesirable circumstances and events (Connor &

Davidson, 2003; Gilligan, 2007; Pigeon et al., 2014). Research shows that resilience results from individuals interacting with their environments and the processes that promote well-being or protect them against the influence of risk factors (Kumar, 2017; Zautra et al., 2010). Spiritual intelligence is thought to facilitate meaningful decision making (Zohar & Marshall, 2000), which could increase an individual's ability to interact appropriately in environments and situations. Noble (2001) noted that individuals with high spiritual intelligence could adapt and overcome adversity better than those with lower spiritual intelligence. The current study supports Noble's (2001) theoretical position, as findings suggest those with greater spiritual intelligence had greater resilience.

In particular, personal meaning production appeared to be a significant determinant of resilience for Aotearoa New Zealand university students. This positive and significant relationship supports theoretical suggestions made in the existing literature. Smith et al. (2009) stated that having purpose and meaning in life is necessary to adapt to complex and stressful situations and conditions. Further, having meaning and purpose in life is a known protective factor that enhances the resilience of individuals (Pan et al., 2008). When confronted with a stressor, personal meaning production operates as a coping method, allowing individuals to find meaning and purpose within the stressful situation, therefore transforming the stressor and reducing its negative impact (King, 2010; Whealin et al., 2008). For example, if a student fails an exam, they may transform that experience into something more meaningful. Having a sense of purpose in life, a sense of direction, a sense of order, and a reason for existence are examples of personal meaning (Reker, 1997). Understanding the reasons which led to failing the exam and re-evaluating their situation may contribute to a clearer understanding of their direction or purpose in life.

Notably, the current study found that resilience fully mediated the relationship between spiritual intelligence and combined depression, anxiety, and stress scores (DASS). The present findings suggest that higher levels of spiritual intelligence may decrease combined depression, anxiety, and stress, but only through increasing resilience. To my knowledge, no other studies have explored this relationship. With resilience being found to mediate the relationship between spiritual intelligence and depression, anxiety, and stress, King's (2008) suggestion that the relationships between spiritual intelligence and aspects of well-being are indirect; that is, spiritual intelligence

acts as a moderator in many situations is supported. Those with high meaning in their lives have resiliency against stress and those with low meaning having "vulnerability to stress-induced emotional problems" (Mascaro & Rosen, 2005, p. 1005).

6.2.2 Spiritual Intelligence and Depression

The current study's findings suggest that increased spiritual intelligence may result in decreased depression. The significant and negative relationship between personal meaning production and depression supports other literature (Bayrami et al., 2014; Rania, 2018). Depression often involves feelings of worthlessness and a lack of hope (APA, 2013, 2021b). When individuals prescribe meaning to their lives and experiences, perhaps increased value and purpose help decrease feelings of worthlessness and hopelessness, as meaning can provide individuals with the sense that their lives matter (Steger, 2012). Mascaro (2006) states:

> To take a hit to one's belief in a spiritual purpose that pervades life, to experience confusion about the direction and purpose of one's own life, and to decrease one's engagement in the experiences thought to lead to a meaningful life will likely lead to increased symptoms of depression (p.50).

Longitudinal analyses have suggested that existential meaning plays an essential role in preventing depression (Mascaro & Rosen, 2005). These findings indicate that individuals with high levels of meaning tend to have fewer symptoms of depression (Mascaro & Rosen, 2005). The current research contributes to these studies by providing further evidence that meaning does play a role in the experience of depression.

The current research also supports other research examining conscious state expansion and depression. As a component of spiritual intelligence, conscious state expansion is understood as the ability to enter and exit spiritual states of consciousness at one's discretion (King, 2008). One way in which a heightened or spiritual state of consciousness can be achieved is through meditation (Kiranda, 2019). Existing research on mindfulness-based initiatives (including meditation) demonstrates that the cultivation of greater awareness, attention, and acceptance gained through meditational practices is associated with lower symptoms of depression (Nolen-Hoeksema, 2000).

Additionally, mindfulness mediation has been found to improve the cognitive processes commonly associated with the onset, maintenance, and worsening of depression (Edenfield & Saeed, 2012; Just & Alloy, 1997; Spasojević & Alloy, 2001). While it cannot be known for sure that the participants in the current study engaged in meditation, meditation is becoming popular in Western contexts (Sharma, 2015). Perhaps the participants in the present study engage in meditative practices to expand their consciousness. If that is the case, the current study supports existing literature on conscious state expansion and depression.

6.2.3 Spiritual Intelligence and Stress

While little research has directly explored why and how stress can decrease with higher levels of spiritual intelligence and the individual components of spiritual intelligence, inferences can be made through research and literature regarding practices and ideas related to spiritual intelligence. The negative relationship between stress and conscious state expansion found in this study supports research by Oman et al. (2008). Compared to their control group, participants engaging in meditation management of stress treatment indicated larger decreases in stress (Oman et al., 2008). Focusing on awareness of the present moment, mind-body connection, control of attention, non-judgemental thoughts, bodily sensations, and mindfulness-based mediation has also been found to decrease stress (Bamber & Schneider, 2015). Becoming aware of the present moment and clearing one's mind of the stressful experiences through techniques such as meditation may also aid in prescribing meaning to the experience of stress. King (2008, 2010) states that personal meaning production acts as a coping method that allows individuals to construct meaning and purpose when faced with stressful situations. Further, Halama (2014) states that having strong and stable meaning can contribute to a positive reinterpretation of stress and stressful situations. In this sense, it serves as a buffer against the negative consequences of stress. Applying meaning to stressful situations can aid in cognitively transforming stressful situations through evaluating the circumstances (Halama, 2014).

6.2.4 Spiritual Intelligence and Anxiety

The current study did not find a significant relationship between spiritual intelligence and anxiety, which both supports (Giannone & Kaplin, 2020) and contradicts (Bayrami et al., 2014) previous findings. However, the personal meaning production component of spiritual intelligence and

anxiety did have a significant and negative relationship in the current study, supporting previous research (Giannone & Kaplin, 2020; Raina, 2018). This relationship suggests that as personal meaning production increases, anxiety decreases. By re-evaluating a situation that may cause anxiety by prescribing meaning and purpose to that situation, perhaps an individual can understand the situation more holistically and why it is occurring. For students, academic performance, pressure to succeed, and post-graduate plans can cause feelings of anxiety (Beiter et al., 2015). Forming meaning and purpose around a stressful academic workload, such as attaining a degree as the end goal of studying, may allow some individuals to experience less anxiety. Further, reflecting on the higher spiritual meaning of studying at a tertiary level, such as honouring ancestors and those who came before you, may reduce anxiety as the greater purpose of studying is understood.

Although heightened spiritual intelligence may not decrease experiences or feelings of anxiety, perhaps spiritual intelligence aids in reducing the longevity and severity of these feelings. For some individuals who experience anxiety, the onset may be relatively abrupt, potentially not allowing enough time for an individual to utilise the abilities associated with spiritual intelligence to stop the anxiety from occurring. Once an individual is anxious, perhaps spiritual intelligence helps minimise the adverse effects and aids in returning an individual to a non-anxious state.

Swinton and Pattison (2001) argue that anxiety can result in physical symptoms and spiritual symptoms, including loss of meaning in life, no sense of the future, feelings of alienation and indifference, and an inability to focus on 'God' or to meditate. Perhaps these spiritual symptoms experienced alongside anxiety diminish an individual's ability to draw on their spiritual intelligence and utilise spiritual resources, minimising the impact spiritual intelligence may have on anxiety. Meaning and expanding consciousness are key elements of spiritual intelligence; therefore, if the capacity to engage with these tools is diminished, perhaps the benefits of spiritual intelligence become absent.

6.3 Theoretical and Practical Implications of the Current Research

As discussed previously, there is a lack of research and literature regarding spiritual intelligence. Further, as the majority of research exploring the practical benefits of spiritual intelligence

concerning mental health and well-being having been conducted in non-Western contexts (Amirian & Fazilat-Pour, 2015; Bayrami et al., 2014; Embrahimi et al., 2012; Khosravi & Nikmanesh, 2014; Mufti et al., 2019; Pant & Srivastava, 2014; Singh & Sinha 2013), the current study provides further insight into spiritual intelligence within a Western context.

One of the more notable Western-based studies on spiritual intelligence and aspects of well-being is that of Giannone and Kaplin (2020). As discussed in an earlier chapter, Giannone and Kaplin's (2020) findings differ from predominately Eastern-based studies (Amirian & Fazilat-Pour, 2015; Bayrami et al., 2014; Embrahimi et al., 2012; Khosravi & Nikmanesh, 2014; Mufti et al., 2019; Pant & Srivastava, 2014; Singh & Sinha 2013). Very little Western research is available to compare to the findings of Giannone and Kaplin (2020). The current study provides supporting and opposing findings to their research, further illustrating the need to explore these differences.

Differences between existing non-Western research and the current study may be due to cultural differences. Unlike the critical existential thinking and conscious state expansion subscales of spiritual intelligence, in this study, personal meaning production was significantly associated with depression, anxiety, stress, and resilience. For New Zealanders, perhaps being able to construct meaning of one's life experiences is a more accessible ability than the other components of spiritual intelligence. For instance, not everyone has the ability or the awareness that it is even an option to enter and exit spiritual or higher states of consciousness, but prescribing meaning to experiences may be more easily developed. In non-Western contexts, such as India, conscious state expansion is more of an everyday or commonplace activity as Eastern contexts traditionally place much greater emphasis on altered states of consciousness than the West (Shear, 2011). Higher states of consciousness are considered a crucial part of the major Eastern religions, including Hinduism and Buddhism, mainly achieved through meditation (Shear, 2011).

Although Western society and psychology typically recognises few additional states beyond that of the usual waking and sleep states (King, 2008; Walsh & Shapiro, 2006), the significant relationships between conscious state expansion, depression and stress found in the current study suggest that some of Aotearoa New Zealand society is becoming more aware and open to alternative states of consciousness. Meditation is becoming increasingly popular in Western

society (Sharma, 2015) and more accessible with the emergence of mindfulness tools downloadable to individuals' smartphones. In recent times, technology has contributed to the promotion of psychological and physiological health, and as such, many meditation applications have been developed (e.g., The Mindfulness App, Headspace, Calm, and MINDBODY) (Kiranda, 2019). These applications help facilitate higher states of consciousness through meditative practices without the need for a face-to-face instructor. With more accessible ways of becoming aware of and enhancing an individual's abilities to enter higher states of consciousness, perhaps the conscious state expansion element of spiritual intelligence will become more commonplace in Western contexts.

It is worth noting that there are ways to enter higher states of consciousness other than meditation. While literature regarding expanding states of consciousness tends to describe more heightened states of consciousness in terms of meditation, prayer, and yoga (Kiranda, 2019; Oman et al., 2008), individuals can experience higher states of consciousness through other techniques. Lucid dreaming, euphoria through exercise, and out-of-body experiences are other well-documented states of consciousness (Siebers et al., 2021; van der Tempel & Moodley, 2020). Additionally, Indigenous cultures believe that intuition is considered an experience of heightened consciousness (Ngata, 2014). In te ao Māori, *matakite*, documented through lived experiences include predicting future events, foreseeing, detecting light radiating from living objects (e.g., auras), and communicating with unseen presences (Lindsay et al., 2020; Ngata, 2014), has been described as an intuitive capability (Ngata, 2014). For many, entering higher states of consciousness is part of their everyday lived experiences and realities. Literature on spiritual intelligence tends to neglect these less normalised states of consciousness, potentially limiting the understanding of the phenomena.

The current study contributes to the discussion of the spiritual and existential parts of existence. In predominantly Western settings, including Aotearoa New Zealand, spirituality is not as commonly discussed or practised as it is in other countries, such as Iran and India (Shear, 2011). Therefore, perhaps the lack of open discussion regarding existential issues within the society of Aotearoa New Zealand explains the non-significant association found in this study. Critical existential thinking is known to serve as a "multifaceted source of adaption, coping, problem-

solving, and abstract reasoning, particularly in crises of an existential nature" (Ajawani, 2017, p. 176). Without the prevalent discussion of existential issues within society, participants are perhaps unaware of or do not face existential issues in their lives.

Spiritual Intelligence in Aotearoa New Zealand. To my knowledge, only one other study has explored spiritual intelligence in Aotearoa New Zealand; therefore, the current study could be seen as being at the forefront of spiritual intelligence research in Aotearoa New Zealand. The findings of this study suggest that increased spiritual intelligence can have advantageous impacts on the well-being of university students of Aotearoa New Zealand. Poor mental health and well-being can impact students' academic performance and desire to remain in higher education (NZUSA, 2018). In the current study, scores on the DASS subscales indicate that 23.36% (*n*= 50), 28.50% (*n*= 61), and 20.09% (*n*= 43) of participants scored moderately to extremely severe on the depression, anxiety, and stress subscales of the DASS, respectively. Little research reports health and well-being statistics of university students in Aotearoa New Zealand. Therefore, these findings prove beneficial as they provide insight into the well-being of university students in Aotearoa New Zealand.

Current healthcare providers in the university context may need to be better equipped with understandings and awareness regarding spiritual aspects and how these contribute to ill-health and well-being. Therapists and other healthcare professionals are trained in various skills. Just as some therapists are trained to deal with cognitive or behavioural issues, specialised spiritual therapists or healthcare professionals could be trained in spiritual matters and spiritual intelligence. These specialised professionals could be educated about spirituality and spiritual intelligence, including spiritual issues individuals face and the adaptive applications of spiritual intelligence. A counsellor or therapist trained in transpersonal psychology or educated on spiritual aspects may allow their student clients to attain greater sensitivity to and experience spiritual or transcendent states (e.g., higher states of consciousness). Further, engaging with a counsellor or therapist with greater insight into spiritual matters can be beneficial for gaining support and guidance for embarking on spiritual pursuits, including the development of spiritual intelligence (MacHovec, 2002; Nasel, 2004).

Introducing Transpersonal Psychologists into Aotearoa New Zealand. The spiritually trained healthcare professionals described above potentially represent a profession that already exists globally, however, not in Aotearoa New Zealand. Transpersonal psychology studies human transcendence, wholeness, and transformation (Hartelius et al., 2007). Hartelius et al. (2007) define transpersonal psychology as "an approach to psychology that 1) studies phenomena beyond the ego as context for 2) an integrative/holistic psychology; this provides a framework for 3) understanding and cultivating human transformation" (p. 145). Transpersonal psychology draws on historical and more modern ideas and practices from many religions, cultures and periods of time (Lukoff & Lu, 2005). Meditation, mindfulness, yoga, aikido (traditional Japanese martial art), Sufism, and qigong are examples of practices that have been adapted as modalities for transpersonal psychology (Deikman, 1996; Faggianelli & Lukoff, 2006; Lukoff & Lu, 2005; Mayer, 1999; Scotton & Hiatt, 1996). Further, practices related to heightened states of consciousness play a key role in transpersonal psychology, including meditation, bodywork, movement, dream work, guided imagery, prayer, drumming, chanting, sweat lodges, fasting, shamanic journeying, and psychedelic drugs (Cortright, 1997).

Transpersonal counselling psychology programmes and various Master's degree programmes exist globally to train transpersonal psychologists (Alef Trust, n.d; Naropa University, n.d; Sofia University, n.d). There are known benefits of spirituality and spiritual intelligence (as demonstrated by the current study) to health and well-being, yet Aotearoa New Zealand is limited in recognised pathways and methods of engaging with these modalities on a professional psychological level. Perhaps this restriction to professionally practice in the realm of spirituality through transpersonal psychology reflects the subordinate position spirituality occupies in Aotearoa New Zealand. Given their field of expertise, perhaps transpersonal psychologists can help develop peoples spiritual intelligence. Facilitating discussion and contemplation of existential and transcendental issues and topics, encouraging meaning production, facilitating conscious state expansion techniques including meditation, and enhancing spiritual resources are just a few ways transpersonal psychologists could improve individuals spiritual intelligence.

While benefits may come from enhancing individuals spiritual intelligence, it is important to note that the benefits may rely upon prior openness and responsiveness to the existence and reality of

spirituality, the transcendent, and existential issues. An individual with a more spiritual outlook may find the benefits of spiritual intelligence and its associated spiritual resources more compelling than someone with no interest in that beyond the material.

Potential Concerns Promoting Spiritual Intelligence in Aotearoa New Zealand. While there is evidence from both this study and previous research that spiritual intelligence may effectively impact aspects of well-being (Bayrami et al., 2014; Ebrahimi et al., 2012; Giannone & Kaplin, 2020; Khosravi & Nikmanesh, 2014; Raina, 2018), caution should be taken when promoting spiritual intelligence in the context of Aotearoa New Zealand.

The term intelligence has many negative connotations for many cultures and groups of people who have been degraded, segregated, treated differently, and deemed to be the 'other' based on intelligence and its measures. Research involving Māori and Pasifika groups has perpetuated colonialism and stems from a discriminatory and deficit view of Māori and Pasifika (Mahuika, 2008). In particular, research exploring Māori education and intelligence tends to detail the inadequacy of Māori intelligence in comparison to Pākehā (Lovegrove, 1964; Ritchie, 1957; Smith, 2012; Walters, 1958; Zimmerman, 1971). Challenging the deficit view maintained by research, the current study identified Pasifika and Māori participants to have the highest levels of spiritual intelligence. This suggests that spiritual intelligence is a form of intelligence that is important to Māori and Pasifika and clearly has adaptive cultural and evolutionary value. By broadening our definition of intelligence beyond traditional Western understandings, we help elevate Māori and the Māori worldview. However, this finding simultaneously impacts the New Zealand Pākehā group, who reported lower levels of spiritual intelligence. Regardless of the group with higher or lower levels of spiritual intelligence, it is important to be mindful of the consequences of labelling a group as having a lower intelligence than other groups.

Whether the sets of abilities associated with spiritual intelligence should be labelled as intelligence has been asked by authors (Gardner, 2011; Sternberg, 1988). When acknowledging the existence of Māori lived realities and experiences alongside the Westernised concept of spiritual intelligence, some would be inclined to say no, spiritual intelligence should not be labelled as an intelligence. However, due to the dominance of Western ideals in society, for the benefits and adaptive

applications of spiritual intelligence to be acknowledged and utilised, perhaps it needs to be understood and accepted by the West. Therefore, conceptualising it as an intelligence, a concept which the West treasures, positions spiritual intelligence in a way that can strengthen its recognition. The first chapter highlighted that intelligence was and still is used as a tool of discrimination and to perpetuate the effects of colonisation. To redress the ongoing negative effects of colonisation, and due to the overwhelming negative connotations linked to the word intelligence, perhaps rephrasing spiritual intelligence to exclude the word 'intelligence' needs to be considered. While it appears other authors have not addressed this issue, rephrasing spiritual intelligence to *spiritual capabilities* could be considered.

6.4 Limitations of the Current Study

While making an important contribution to the existing knowledge, research, and literature on spiritual intelligence, the findings presented in this thesis should be considered in light of several limitations.

Participant Sample. Although the current study exceeded the recommended sample size as determined by a power analysis, a larger sample size would allow more generalisable findings. In addition, the current study's sample was not evenly proportionate across demographic characteristics (e.g., age, gender, ethnicity, religious and/or spiritual beliefs), also making it difficult to generalise the findings. Rather than providing concluding certainty from this study's findings, this study should be viewed as a contribution to the small amount of existing research and literature that explores spiritual intelligence and its adaptive applications, particularly in a Western context. Future research should aim to collect a wider, more generalisable sample.

This survey collected data through self-report. This method of collecting data can often be biased due to the conscious or unconscious influence of social desirability (Robins et al., 2009). Given the sensitive nature of some of the collected data, such as measures of depression, anxiety and stress, it is possible that participants reported their experiences or answered items in a more socially acceptable or preferred way. In addition, the visual advertisement for the study announced that the study explored spiritual intelligence. Including the word 'intelligence' may have encouraged socially desirable answers also. Further, given that the advertisement for the survey highlighted its

relation to spirituality, there may be some sampling bias. Potentially only individuals with interest in the spiritual realm may have volunteered.

Limitations of the Measures Used in this Study. The current study used a Portuguese adapted version of King's (2008) Spiritual Intelligence Self-Report Inventory–the SISRI-IAIE (Antunes et al., 2018)–to measure spiritual intelligence. This potentially limits the extent to which results of previous research can be compared to this study's findings. Most of the previous research uses King's original Spiritual Intelligence Self-Report Inventory to measure spiritual intelligence. The adapted version of the measure does not include the transcendental awareness component of King's model of spiritual intelligence, potentially resulting in a slightly narrowed view of the spiritual intelligence King (2008) initially presented. In hindsight, it would have been better to use the original Spiritual Intelligence Self-Report Inventory, as few other studies exploring spiritual intelligence concerning mental health and well-being have used the adapted version.

The scales used in this study were not designed with an Aotearoa New Zealand population in mind; however, no other suitable options were available. As this limitation was known from the beginning of this study, a pilot was conducted with some Māori colleagues. As a result of this pilot, the te reo Māori term *wairua*, loosely translated as spirituality or the spirit, was added to the examples in parentheses that accompanied item six of the spiritual intelligence scale, and the SISRI-IAIE was deemed most appropriate. Given the diverse population of Aotearoa New Zealand, evident in the participants of this study, perhaps multicultural measures need to be developed, particularly a measure relevant to spiritual intelligence.

Suggestions for Future Research. While quantitative data provides invaluable information in research, the findings of this study could be further explored and understood through qualitative data. A qualitative component would provide meaningful insight into participants' abilities of spiritual intelligence. For instance, those who score highly on conscious state expansion could give more personal accounts and details of their abilities in this area. Having a better understanding of participants' spiritual intelligence would result in more practical implications and outcomes.

Given the findings of the mediation analysis conducted in the current study, further research should explore resilience in relationship to spiritual intelligence. The adaptive applications and the relationship between well-being and spiritual intelligence will be better understood as the involvement of resilience is explored in more depth. Further, it is suggested that future research give thought to re-naming spiritual intelligence to omit the negative connotations the word intelligence holds for many groups and cultures in society.

6.5 Concluding Comments

The present study aimed to explore spiritual intelligence and aspects of well-being for university students of Aotearoa New Zealand. In keeping with previous research, the findings of the current study suggest that spiritual intelligence facilitates reduced experiences of depression and stress, as well as increased resilience. Despite previous research indicating a significant negative relationship between spiritual intelligence and anxiety, this study's findings did not support this relationship. The individual components of spiritual intelligence–personal meaning production and conscious state expansion–were associated with better well-being in Aotearoa New Zealand university students. In particular, prescribing meaning to the situations, experiences, and feelings an individual encounters may assist in decreasing depression, anxiety, and stress, while increasing resilience.

These findings have important implications for both the field of spiritual intelligence and wider society. Detailing spiritual intelligence and its practical benefits allows for an alternative view of intelligence in a world that continues to place such importance on an individual's IQ. In addition to supplementing the sparse literature on spiritual intelligence, the current study fills a gap in the literature by exploring spiritual intelligence in an Aotearoa New Zealand context. To my knowledge, this is the first study that has investigated the impact of spiritual intelligence on aspects of well-being in Aotearoa New Zealand. Therefore, this study stands at the forefront of spiritual intelligence in this context. Further research should be conducted with spiritual intelligence, particularly its adaptive applications and benefits for society. In addition, exploring other ways to position spiritual intelligence linguistically must be considered, given the colonialist connotations and undertones of discrimination that accompany the word 'intelligence'.

On a final note, during the course of completing this thesis, I have felt judgement from others when answering the question of what I am studying, to which I self-consciously began answering "student well-being"–completely excluding the spiritual focus of my thesis. While there is increasing research being conducted in the realm of spirituality, there is still an evident deficiency. I aspire that this thesis plays a role in creating space for similar research and gives those who might have experienced the same stigma and judgement as I have the courage to research what they desire despite the opinions of those who perhaps do not understand the virtue of the spiritual realm and its associated concepts. It is hoped that the work completed in this thesis provides evidence that will encourage and contribute to improving the well-being of students in Aotearoa New Zealand, and perhaps the wider society, in a more holistic fashion. As Selman et al. (2005) note, "…neither IQ nor EQ, separately or in combination, is enough to explain the full complexity of human intelligence, nor the vast richness of the human soul and imagination" (p. 23).

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Appendix A: Advertisements

1. *Facebook advertisement*

Kia ora koutou!
I am currently completing my Masters of Arts (Psychology) at Massey University and I am conducting research which explores the relationship between spirituality and well-being among Aotearoa New Zealand university students.
The research consists of a questionnaire which will take approximately 20 minutes to complete.
To participate, you must currently be enrolled in a New Zealand university, and be over the age of 18 years.
As an appreciation of your time and participation, there is a prize draw for the chance to win 1 of 10 $40 gift cards!
Even if you don't have spiritual beliefs as such, please give it a go as we want to make sure that we capture everyone's perspectives.
Ngā mihi,
Laura

2. *Print advertisement*

Appendix B: Information sheet preceding questionnaire

NGĀ KUPU WHAKAMĀRAMA/INFORMATION SHEET

He aha te kaupapa o tēnei rangahau? / What is this research about?

Spiritual intelligence is a type of intelligence that involves the use of nonmaterial (spiritual), and transcendent (beyond or above the range of normal or physical human experience) aspects of your existence to help with your everyday problem solving, decision making, and goal attainment. This involves the ability to construct meaning and purpose within situations and having an understanding for deep existential questions such as "who am I?" and "what really matters?". So far, very little research regarding spiritual intelligence, and its benefits, has been conducted in Aotearoa New Zealand. In order to identify any meaningful relationships, I am conducting an exploratory study into the relationship between spiritual intelligence and perceived well-being of current New Zealand university students.

Ma wai e mahi tēnei rangahau? / Who is doing this research?

The primary researcher is Laura O'Sullivan, a postgraduate student of the School of Psychology, Massey University. Dr Nicole Lindsay is the supervising staff member. The research will contribute towards the requirements of a Master of Arts degree.

He aha āku mahi mā ngā kairangahau? / What will I be asked to do?

Should you decide to take part, you will be required to answer several demographic questions regarding your background, including your ethnicity, age, and gender. You will also be asked several questions regarding your current status at university. This will be followed by a series of scales designed to measure your spiritual intelligence and perceived well-being. As the research is measuring several constructs, for ethical reasons you will not receive your individual results at the end of the questionnaire.

It is anticipated the online questionnaire will take approximately 20 minutes to complete. As compensation for your time, and as a token of gratitude, you will be given the opportunity to win one of five $100 online gift cards.

Ma wai ngā tāngata e whai wāhi tēnei rangahau? / Who can take part in this research?

If you are aged 18 and over, and are currently enrolled in a New Zealand University, then you are eligible to take part in this study.

He aha ōku mōtika? / What are my rights as a participant?

Your decision to participate in this questionnaire will imply consent, however, you are under no obligation to accept this invitation. If you do participate, you have the right to skip, or decline to answer a particular question, ask questions about the study, and withdraw from the study at any time. Your responses to the questionnaire will remain completely anonymous, and no material that could personally identify you will be captured or used within this study. All raw data from this questionnaire will be kept on the researching students' password secured computer and external hard drive using encryption software, and data security will adhere to the Massey University Code of Responsible Research Conduct.

If you would like to enter the prize draw following the survey, you will be directed to an anonymised raffle page where you may enter your contact email address. This page is not directly connected to the main survey and ensures your survey responses remain confidential.

Me aha ahau ināianei? / What do I do now?
If you feel you would like to participate in this research, you can click on the >>**Next** button below, to begin the online version of the research questionnaire.

Mēnā he pātai āku, mā wai aku pātai e whakautu? / Who can I contact about the research?
If you have any further questions, queries, or would like to know more about this study, please contact Laura or Nicole:

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This project has been reviewed and approved by the Massey University Human Ethics Committee: Southern B, Application SOB 20/34. If you have any concerns about the conduct of this research, please contact Dr Gerald Harrison, Chair, Massey University Human Ethics Committee: Southern B, telephone 06 356 9099 x 83570, email humanethicsouthb@massey.ac.nz

Appendix C: Questionnaire

Thank you for participating in this questionnaire. Your participation implies consent. You have the right to decline to answer any particular question.

Consent

I have read and understood the information sheet for this study and consent to collection of my responses.

(Please click on the 'Yes' choice if you wish to proceed.)

- o Yes (1)
- o No (2)

Demographics

D1 *Age*

_____

D2 Gender

_____

D3 Ethnicity

_____

D4 Are you currently enrolled in a New Zealand University?

- o Yes (1)
- o No (2)

D5 What programme of study are you enrolled in at University?

(eg. Bachelor of Arts, Masters of Science, Postgraduate Diploma in Business, PhD)

_____

D6 What year of your studies are you in?

- o 1st (1)
- o 2nd (2)
- o 3rd (3)
- o 4th (4)
- o 5th (5)
- o 6th (6)
- o 7+ (7)

D7 Are you an undergraduate or postgraduate student?

- o Undergraduate (1)
- o Postgraduate (2)

D8 Are you studying full-time or part-time?

- o Full-time (1)

o Part-time (2)

D9 Are you an internal or distance student?
o Internal (1)
o Distance (2)
o Blended mode *(i.e.. mix of internal and distance)* (3)

D10 Are you currently employed?
o Yes, part-time (1)
o Yes, full-time (2)
o Yes, casual/on call/contract (3)
o No (4)
o Other (5) _____

D11 What is your current living situation?
o Living by myself (1)
o Living with parents (2)
o Flatting (3)
o University Halls of Residence (4)
o Living with family (e.g., spouse/partner and/or children) (5)
o Other (6) _____

D12 How satisfied are you with your living situation?
o Extremely unhappy (1)
o Somewhat unhappy (2)
o Neither happy nor unhappy (3)
o Somewhat happy (4)
o Extremely happy (5)

D13 Do you have any religious/spiritual beliefs?
o No religion (1)
o Buddhism (2)
o Christian (3)
o Hinduism (4)
o Islam (5)
o Judaism (6)
o Māori religions, beliefs, and philosophies (7)
o Spiritualism and New Age religions (8)
o Other religions, beliefs, and philosophies (9)
o Object to answering (10)
o Other (11) _____

S2_hdr **Section 2**

The following series of questions are interested in your spiritual beliefs and practices. Please answer as honestly as you can. There are no right or wrong answers.

S2a Please select your level of agreement with each statement.

	Not at all true of me (0)	Not very true of me (1)	Somewhat true of me (2)	Very true of me (3)	Completely true of me (4)
I have often reflected on the relationship between human beings and the rest of the universe. (S2_1)	o	o	o	o	o
I devote time to reflect upon the purpose or reason for my existence. (S2_2)	o	o	o	o	o
I often wonder or reflect on the nature of reality. (S2_3)	o	o	o	o	o
I can reflect deeply on what happens after death. (S2_4)	o	o	o	o	o
I have developed my own theories about life, death, reality, and existence. (S2_5)	o	o	o	o	o

I have reflected deeply on whether there is a superior power (e.g., god, goddess, divine being, greater energy, wairua etc.). (S2_6)	o	o	o	o	o
I can find meaning and purpose in my daily experiences. (S2_7)	o	o	o	o	o
I can make decisions according to my purpose in life. (S2_8)	o	o	o	o	o

S2b Please select your level of agreement with each statement.

	Not at all true of me (0)	Not very true of me (1)	Somewhat true of me (2)	Very true of me (3)	Completely true of me (4)
My capacity to find meaning and purpose in life helps me adapt to stressful situations. (S2_9)	o	o	o	o	o
I can define a purpose or a reason for being for my life. (S2_10)	o	o	o	o	o
I recognize qualities in people that are more significant than their bodies, personality, or emotions. (S2_11)	o	o	o	o	o

I can control when to enter high states of consciousness or awareness. (S2_12)	o	o	o	o	o
I often see problems and choices more clearly in higher states of consciousness/awareness. (S2_13)	o	o	o	o	o
I can pass freely between levels of consciousness or awareness. (S2_14)	o	o	o	o	o
I have developed my own techniques to enter the highest states of consciousness or awareness. (S2_15)	o	o	o	o	o
I can reach high levels of consciousness or awareness. (S2_16)	o	o	o	o	o

S3_hdr **Section 3**
This section is interested in beliefs and experiences that many people describe as wairua, spiritual, paranormal or supernatural. What these terms mean can differ from person to person. We ask that you interpret the words/kupu in each item according to your own perspective.

Please answer as honestly as you can. There are no right or wrong answers.

S3a Please select your level of agreement with each statement.

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Strongly agree (5)
It is possible to communicate with deceased others, wairua or spirits. (S3_1)	o	o	o	o	o

I believe that we receive tohu or spiritual signs or messages in our time of need. (S3_2)	o	o	o	o	o
If I do wrong to others, there will be wairua or spiritual repercussions. (S3_3)	o	o	o	o	o
Some people (e.g., matakite or psychics) can accurately predict the future, in ways that do not depend on rational prediction or normal sensory channels. (S3_4)	o	o	o	o	o
All things have a wairua or spiritual essence. (S3_5)	o	o	o	o	o
It is possible to be influenced or controlled by a non-material being, such as a wairua or spirit. (S3_6)	o	o	o	o	o

All living things are connected by a wairua or spiritual energy. (S3_7)	o	o	o	o	o
A person's wellbeing can be influenced or manipulated through intention, incantations or rituals (e.g., karakia, prayer or makutu) carried out by another person. (S3_8)	o	o	o	o	o
After death our wairua or spiritual essence can come back as a person, animal, or other inanimate or animate form. (S3_9)	o	o	o	o	o
During sleep, illness or trance the wairua or soul or spirit can leave the body. (S3_10)	o	o	o	o	o

S3b Please select your level of agreement with each statement.

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Strongly agree (5)

Each person exists on earth for a unique reason or purpose. (S3_11)	o	o	o	o	o
Some places are haunted. (S3_12)	o	o	o	o	o
When we die, our wairua or spirit can return to earth in a different form. (S3_13)	o	o	o	o	o
A greater force, which some may call wairua, spirit or a higher power (e.g., God), helps to guide me in the right direction. (S3_14)	o	o	o	o	o
It is possible to place a makutu or curse or cast spells on people. (S3_15)	o	o	o	o	o
Everything in our life happens for a reason. (S3_16)	o	o	o	o	o

When we die, our wairua or soul or spirit will continue to exist. (S3_17)	o	o	o	o	o
It is possible to heal others using wairua, the mind, intention or channelled energy. (S3_18)	o	o	o	o	o
There are mystical creatures or supernatural beings (e.g., patupaiarehe or fairies) that exist on earth alongside humans. (S3_19)	o	o	o	o	o

S4_hdr **Section 4**

This section is interested in your ability to bounce back or recover from stress/adversity. Please answer as honestly as you can. There are no right or wrong answers.

S4 Please select your level of agreement with each statement.

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Strongly agree (5)
I tend to bounce back quickly after hard times (S4_1)	o	o	o	o	o

I have a hard time making it through stressful events (S4_2)	o	o	o	o	o
It does not take me long to recover from a stressful event (S4_3)	o	o	o	o	o
It is hard for me to snap back when something bad happens (S4_4)	o	o	o	o	o
I usually come through difficult times with little trouble (S4_5)	o	o	o	o	o
I tend to take a long time to get over set-backs in my life (S4_6)	o	o	o	o	o

S5_hdr **Section 5**

This section is interested in your subjective feelings of wellbeing over the past week. Please answer as honestly as you can. There are no right or wrong answers.

S5a Please select your level of agreement with each statement.

	Did not apply to me at all (0)	Applied to me to some degree, or some of the time (1)	Applied to me to a considerable degree, or a good part of time (2)	Applied to me very much, or most of the time (3)

I found myself getting upset by quite trivial things (S5_1)	o	o	o	o
I was aware of dryness of my mouth (S5_2)	o	o	o	o
I couldn't seem to experience any positive feeling at all (S5_3)	o	o	o	o
I experienced breathing difficulty (e.g., excessively rapid breathing, breathlessness in the absence of physical exertion) (S5_4)	o	o	o	o
I just couldn't seem to get going (S5_5)	o	o	o	o
I tended to over-react to situations (S5_6)	o	o	o	o
I had a feeling of shakiness (e.g., legs going to give way) (S5_7)	o	o	o	o

S5b Please select your level of agreement with each statement.

	Did not apply to me at all (0)	Applied to me to some degree, or some of the time (1)	Applied to me to a considerable degree, or a good part of time (2)	Applied to me very much, or most of the time (3)
I found it difficult to relax (S5_8)	o	o	o	o

I found myself in situations that made me so anxious I was most relieved when they ended (S5_9)	o	o	o	o
I felt that I had nothing to look forward to (S5_10)	o	o	o	o
I found myself getting upset rather easily (S5_11)	o	o	o	o
I felt that I was using a lot of nervous energy (S5_12)	o	o	o	o
I felt sad and depressed (S5_13)	o	o	o	o
I found myself getting impatient when I was delayed in any way (e.g., elevators, traffic lights, being kept waiting) (S5_14)	o	o	o	o

S5c Please select your level of agreement with each statement.

	Did not apply to me at all (0)	Applied to me to some degree, or some of the time (1)	Applied to me to a considerable degree, or a good part of time (2)	Applied to me very much, or most of the time (3)
I had a feeling of faintness (S5_15)	o	o	o	o

I felt that I had lost interest in just about everything (S5_16)	o	o	o	o
I felt I wasn't worth much as a person (S5_17)	o	o	o	o
I felt that I was rather touchy (S5_18)	o	o	o	o
I perspired noticeably (e.g., hands sweaty) in the absence of high temperatures or physical exertion (S5_19)	o	o	o	o
I felt scared without any good reason (S5_20)	o	o	o	o
I felt that life wasn't worthwhile (S5_21)	o	o	o	o

S5d Please select your level of agreement with each statement.

	Did not apply to me at all (0)	Applied to me to some degree, or some of the time (1)	Applied to me to a considerable degree, or a good part of time (2)	Applied to me very much, or most of the time (3)
I found it hard to wind down (S5_22)	o	o	o	o
I had difficulty in swallowing (S5_23)	o	o	o	o

I couldn't seem to get any enjoyment out of the things I did (S5_24)	o	o	o	o
I was aware of the action of my heart in the absence of physical exertion (e.g., sense of heart rate increase, heart missing a beat) (S5_25)	o	o	o	o
I felt down-hearted and blue (S5_26)	o	o	o	o
I found that I was very irritable (S5_27)	o	o	o	o
I felt I was close to panic (S5_28)	o	o	o	o

S5e Please select your level of agreement with each statement.

	Did not apply to me at all (0)	Applied to me to some degree, or some of the time (1)	Applied to me to a considerable degree, or a good part of time (2)	Applied to me very much, or most of the time (3)
I found it hard to calm down after something upset me (S5_29)	o	o	o	o
I feared that I would be "thrown" by some trivial but unfamiliar task (S5_30)	o	o	o	o

I was unable to become enthusiastic about anything (S5_31)	o	o	o	o
I found it difficult to tolerate interruptions to what I was doing (S5_32)	o	o	o	o
I was in a state of nervous tension (S5_33)	o	o	o	o
I felt I was pretty worthless (S5_34)	o	o	o	o
I was intolerant of anything that kept me from getting on with what I was doing (S5_35)	o	o	o	o

S5f Please select your level of agreement with each statement.

	Did not apply to me at all (0)	Applied to me to some degree, or some of the time (1)	Applied to me to a considerable degree, or a good part of time (2)	Applied to me very much, or most of the time (3)
I felt terrified (S5_36)	o	o	o	o
I could see nothing in the future to be hopeful about (S5_37)	o	o	o	o
I felt that life was meaningless (S5_38)	o	o	o	o

I found myself getting agitated (S5_39)	o	o	o	o
I was worried about situations in which I might panic and make a fool of myself (S5_40)	o	o	o	o
I experienced trembling (e.g., in the hands) (S5_41)	o	o	o	o
I found it difficult to work up the initiative to do things (S5_42)	o	o	o	o

S6_hdr **Section 6**

S6 Please indicate your agreement or disagreement with each of the following statements using the scale below. Please answer as honestly as you can. There are no right or wrong answers.

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Strongly agree (5)
My life has a clear sense of purpose (S6_1)	o	o	o	o	o
I am optimistic about my future (S6_2)	o	o	o	o	o
My life is going well (S6_3)	o	o	o	o	o

I feel good most of the time (S6_4)	o	o	o	o	o
What I do in life is valuable and worthwhile (S6_5)	o	o	o	o	o
I can succeed if I put my mind to it (S6_6)	o	o	o	o	o
I am achieving most of my goals (S6_7)	o	o	o	o	o
In most activities I do, I feel energized (S6_8)	o	o	o	o	o
There are people who appreciate me as a person (S6_9)	o	o	o	o	o
I feel a sense of belonging in my community (S6_10)	o	o	o	o	o

Thank you for completing this questionnaire and participating in my research!

If you wish to enter the prize draw to win one of ten $40 online gift cards, please click '**Submit**' to be directed to a page where you can input your email address. The winners will be contacted through email with access to the online gift cards at the end of my research. *(Please note that your email address will be collected and stored separately from your questionnaire responses and will not be used for any other purpose than the prize draw).*

If you feel that this questionnaire has raised any issues or feelings of distress, please contact any of the following services:

Massey counselling services https://www.massey.ac.nz/massey/student-life/services-and-resources/health-counselling-services/counselling/counselling_home.cfm

Auckland campus clinic
+64 9 213 6700 | studenthealth.auckland@massey.ac.nz

Manawatū campus clinic
+64 6 350 5533 | studenthealth.manawatu@massey.ac.nz

Wellington campus clinic
+64 4 979 3030 | studenthealth.wellington@massey.ac.nz

Helplines

Need to talk? Free call or text 1737 any time.

Talk to a trained counsellor or call: the Depression helpline – 0800 111 757 Alcohol drug helpline – 0800 787 797 Gambling helpline – 0800 654 655
Healthline – 0800 611 116 – to get help from a registered nurse 24/7.

Lifeline – 0800 543 354 | https://www.lifeline.org.nz/

Samaritans – 0800 726 666

Piki
https://piki.org.nz/
Piki empowers and supports rangatahi towards better health and wellbeing. Through specifically selected peers, professionals and technology, Piki aims to equip you with tools to help overcome adversity and strengthen your wellbeing.

Anxiety NZ
https://www.anxiety.org.nz/
0800 269 4389

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Appendix D: Spiritual Intelligence Self-Assessment Inventory

The items are evaluated on a 5-point Likert scale (varying between 0—"it has nothing to do with me" and 4—"it has everything to do with me"). All the items are positive expressions. The total result is calculated by the sum of all items which may vary between 0 and 64 points. Higher scores represent higher levels of spiritual intelligence and/or each capability.

Critical Existential Thinking

SISRI17—I have often reflected on the relationship between human beings and the rest of the universe.
SISRI3—I devote time to reflect upon the purpose or reason for my existence.
SISRI1—I often wonder or reflect on the nature of reality.
SISRI5—I can reflect deeply on what happens after death.
SISRI9—I have developed my own theories about life, death, reality, and existence.
SISRI21—I have reflected deeply on whether there is a superior power (e.g., god, goddess, divine being, greater energy, etc.).

Personal Meaning Production

SISRI23—I can find meaning and purpose in my daily experiences.
SISRI19—I can make decisions according to my purpose in life.
SISRI7—My capacity to find meaning and purpose in life helps me adapt to stressful situations.
SISRI11—I can define a purpose or a reason for being for my life.
SISRI20—I recognize qualities in people that are more significant than their bodies, personality, or emotions.

Conscious State Expansion

SISRI8—I can control when to enter high states of consciousness or awareness.
SISRI16—I often see problems and choices more clearly in higher states of consciousness/awareness.
SISRI12—I can pass freely between levels of consciousness or awareness.
SISRI24—I have developed my own techniques to enter the highest states of consciousness or awareness.
SISRI4—I can reach high levels of consciousness or awareness.

Appendix E: Brief Resilience Scale

Scoring: Add the responses varying from 1-5 for all six items giving a range from 6-30. Divide the total sum by the total number of questions answered.

1. I tend to bounce back quickly after hard times
2. I have a hard time making it through stressful events (R)
3. It does not take me long to recover from a stressful event
4. It is hard for me to snap back when something bad happens (R)
5. I usually come through difficult times with little trouble
6. I tend to take a long time to get over set-backs in my life (R)

BRS Score Interpretation
1.00 - 2.99 Low resilience
3.00 - 4.30 Normal resilience
4.31 - 5.00 High resilience

Appendix F: Depression, Anxiety, Stress Scale

Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the statement applied to you over the past week. There are no right or wrong answers. Do not spend too much time on any statement. The rating scale is as follows:

0. Did not apply to me at all
1. Applied to me to some degree, or some of the time
2. Applied to me to a considerable degree, or a good part of time
3. Applied to me very much, or most of the time

Item	Factor
1. I found myself getting upset by quite trivial things	S
2. I was aware of dryness of my mouth	A
3. I couldn't seem to experience any positive feeling at all	D
4. I experienced breathing difficulty (eg., excessively rapid breathing, breathlessness in the absence of physical exertion)	A
5. I just couldn't seem to get going	D
6. I tended to over-react to situations	S
7. I had a feeling of shakiness (eg., legs going to give way)	A
8. I found it difficult to relax	S
9. I found myself in situations that made me so anxious I was most relieved when they ended	A
10. I felt that I had nothing to look forward to	D
11. I found myself getting upset rather easily	S
12. I felt that I was using a lot of nervous energy	S
13. I felt sad and depressed	D
14. I found myself getting impatient when I was delayed in any way (eg., elevators, traffic lights, being kept waiting)	S
15. I had a feeling of faintness	A
16. I felt that I had lost interest in just about everything	D
17. I felt I wasn't worth much as a person	D
18. I felt that I was rather touchy	S
19. I perspired noticeably (eg., hands sweaty) in the absence of high temperatures or physical exertion	A
20. I felt scared without any good reason	A
21. I felt that life wasn't worthwhile	D
22. I found it hard to wind down	S
23. I had difficulty in swallowing	A
24. I couldn't seem to get any enjoyment out of the things I did	D
25. I was aware of the action of my heart in the absence of physical exertion (eg., sense of heart rate increase, heart missing a beat)	A
26. I felt down-hearted and blue	D
27. I found that I was very irritable	S
28. I felt I was close to panic	A
29. I found it hard to calm down after something upset me	S

30. I feared that I would be "thrown" by some trivial but unfamiliar task A
31. I was unable to become enthusiastic about anything D
32. I found it difficult to tolerate interruptions to what I was doing S
33. I was in a state of nervous tension S
34. I felt I was pretty worthless D
35. I was intolerant of anything that kept me from getting on with what I was doing S
36. I felt terrified A
37. I could see nothing in the future to be hopeful about D
38. I felt that life was meaningless D
39. I found myself getting agitated S
40. I was worried about situations in which I might panic and make a fool of myself A
41. I experienced trembling (eg., in the hands) A
42. I found it difficult to work up the initiative to do things D

Score Interpretation:

	Depression (D)	**Anxiety (A)**	**Stress (S)**
Normal	0-9	0-7	0-14
Mild	10-13	8-9	15-18
Moderate	14-20	10-14	19-25
Severe	21-27	15-19	26-33
Extremely Severe	28+	20+	34+

Appendix G: Brief Inventory of Thriving

Please indicate your agreement or disagreement with each of the following statements using the scale below:

1. Strongly Disagree
2. Disagree
3. Neither Agree nor Disagree
4. Agree
5. Strongly Agree

Item	**Corresponding Facet**
1. My life has a clear sense of purpose	(meaning and purpose)
2. I am optimistic about my future	(optimism)
3. My life is going well	(life satisfaction)
4. I feel good most of the time	(positive affect)
5. What I do in life is valuable and worthwhile	(self-worth)
6. I can succeed if I put my mind to it	(self-efficacy)
7. I am achieving most of my goals	(accomplishment)
8. In most activities I do, I feel energized	(flow)
9. There are people who appreciate me as a person	(support)
10. I feel a sense of belonging in my community	(belonging)

Low scores indicate ill-being, whereas higher scores indicate well-being.