

Why Meaning Does in Fact Matter:  
An Exploration of Meaning in Life and its Impact on Well-Being

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## Abstract

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Human beings are naturally inclined to search for, and achieve meaning in life as a means of understanding life events, and integrating them into a coherent whole. Although the experience of possessing meaning in life has been widely researched, the process of searching for meaning which is of utmost importance, has been largely neglected (Steger, 2009). These two constructs are argued to be related, yet distinct from one another, and they share a weak inverse relationship (e.g., Steger & Kashdan, 2006). However, searching for meaning does not appear to lead to the attainment of meaning as one might intuitively expect (Steger, Kashdan, Sullivan, & Lorentz, 2008). As research has tended to be cross-sectional, there is scope to explore how the relationship between these two constructs unfolds over time.

Meaning in life appears to share a positive relationship with well-being such that happiness and life satisfaction are elevated, and depression reduced; however, search for meaning has been shown to have the opposite pattern of correlates (Park, Park, & Peterson, 2010). Given that searching for meaning is an instinctual human motivation, it is important that research investigate whether it does share positive relations with well-being under certain conditions, and whether these relationships are evidenced longitudinally too. Additionally research has considered whether certain personal qualities might be closely linked to both searching for, and having meaning in life (e.g., McAdams, 2012; Michael & Snyder, 2005; Steger et al., 2008). It is also valuable to investigate whether certain dispositional traits might facilitate productive search for meaning which leads to meaning attainment, and preclude the experience of impoverished well-being while searching for meaning.

Chapters Two to Five explored the relationship between search for meaning, presence of meaning, and well-being, and considered what influence dispositional traits might have on these processes. The sample used for these chapters comprised 543 community adults (15 to 81 years) who completed measures of presence of meaning, search for meaning, happiness, life satisfaction, depression, rumination, hope, and grit five times with three-month intervals. Generally, findings obtained from analyses confirmed that while searching for meaning is an essential human process, it does not appear to predict a gain in the presence of meaning. Additionally, variation in the two constructs at different times in the lifespan gives weight to a developmental perspective for understanding of the overall meaning process, incorporating both search for meaning and presence of meaning dynamically over time. The pattern of correlates between search for meaning, presence of meaning, and well-being outcomes was

confirmed with longitudinal data, however the research showed that search for meaning exhibited stronger negative relationships with life satisfaction and happiness when individuals reported low presence. Furthermore, when life satisfaction was very high, searching predicted *an increase* in presence longitudinally, highlighting that under some conditions, search for meaning does not lead to impoverished well-being.

Age-related results were obtained for the relationships between search for meaning and presence of meaning with various outcomes. In particular, presence of meaning predicted increased happiness and life satisfaction, and decreased depression over time for older adults, but not for younger adults; this result suggests that the beneficial impact of meaning on well-being only starts to unfold later in life. Additionally, for older adults reporting high presence of life, less depression and rumination were reported when searching for meaning. The results also showed that search for meaning and depression were more strongly positively related and rumination predicted increased search in younger individuals. Although as mentioned, searching for meaning has not been shown generally to actually lead to increased meaning in life, the present research demonstrated that this did occur for individuals with high grit: having tenacity, determination and passion for goals. Furthermore, hope and grit were both found to mitigate the negative well-being outcomes resultant from searching for meaning, thus making the search for meaning more fruitful, and less likely to harm one's well-being.

While the first four chapters explored meaning on a general level, the degree to which individuals felt that they search for meaning in life, and the overall level of meaningfulness that they experienced, the subsequent two chapters elucidated the more specific sources of meaning in life. Research has examined what brings human beings a sense that their lives are meaningful, and these sources vary between individuals from relationships with others, to personal development, to social and political beliefs (O'Connor & Chamberlain, 1996). Although there is quite some variation between individuals, concerning the nature and degree of sources, on the whole, relationships with other people are thought to be most meaningful to people (e.g., Debats, 1999). Individuals tend not to derive meaning from just one sphere in life however, and research has demonstrated that it is advantageous for well-being to have greater breadth of meaning: one should experience meaning in a variety of areas in life (e.g., Reker & Woo, 2011). Research still needs to examine more closely which sources of meaning are of greatest importance, and determine variations according to demographic factors such as age, gender and education level. Further, the possibility of particular sources of meaning being differentially predictive of well-being outcomes has yet to be explored. Holding a strong conviction that one's sources of meaning are important may also have an

impact on overall meaning and well-being levels. Additionally, strongly endorsing a wide variety of sources may facilitate the process of searching for meaning leading eventually to meaning attainment and fewer negative well-being outcomes.

For the last two chapters a community sample of 247 individuals (30 to 69 years) provided open-ended descriptions of the meaning in their lives, rated their meaning in certain domains, and completed 11 well-being measures. Family was most frequently reported as an important source of meaning, followed by interpersonal relations, however health also featured prominently when individuals were prompted with a list of possible domains. Personal growth was more meaningful for younger people, whereas standard of living and community activities were more meaningful for older adults. Leisure activities were more meaningful for males, whereas females derived meaning from life across a wide range of sources. Those with higher education found community activities meaningful, whereas those with less education found family, standard of living, health, leisure activities and life in general more meaningful. These findings highlight that although some aspects of life are meaningful for all individuals, such as relationships with others, the way that meaning is constructed varies according to demographic groups. Meaning from family and health was found to facilitate the process of searching for meaning leading to greater presence of meaning. Also, meaning from family, interpersonal relationships, health, religiosity/spirituality and life in general mitigated negative well-being outcomes when searching for meaning. Finally, highly endorsing a larger variety of sources buffered against impoverished well-being when searching for meaning. Meaning was obtained from important spheres such as family and interpersonal relationships, but also, strongly endorsing a large number of sources alleviated the negative impact of searching for meaning on well-being.

This research makes valuable contributions with its longitudinal findings. The results also go some way in illuminating the complex ways in which search for meaning and presence of meaning are related to one another, to well-being outcomes, and how they are influenced by personality traits. This research has also considered meaning from a global, general level, and then delved deeper to the level of sources of meaning in order to understand more specifically what provides human beings with a sense of meaning. All of the obtained findings are discussed in Chapter Eight, with a focus on how these might be applied practically, for example in treatment interventions aiming to mitigate experiences of psychopathology. This chapter concludes by contemplating the strengths and limitations associated with the research, and detailing new directions for subsequent investigations to take.



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## CHAPTER ONE

### Meaning in Life: A Review

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"Alright," said the computer, and settled into silence again. The two men fidgeted.

The tension was unbearable.

"You're really not going to like it," observed Deep Thought.

"Tell us!"

"Alright," said Deep Thought. "The Answer to the Great Question..."

"Yes..!"

"Of Life, the Universe and Everything..." said Deep Thought.

"Yes...!"

"Is..." said Deep Thought, and paused.

"Yes..."

"Is..."

"Yes...!!!...?"

"Forty-two," said Deep Thought, with infinite majesty and calm. (Adams, 1979; pp. 187–188).

The most sophisticated supercomputer in the Hitchhiker's Guide to the Galaxy, Deep Thought, had finally produced an answer that was seven and a half million years in the making. The answer to the meaning of life, the universe and everything, was quite perplexingly, simply a pair of digits. As it transpired, those who had commanded Deep Thought to generate the answer, did not actually know the right question to ask, rendering the response useless. So the search for the ultimate answer to the universe, and all it contained, continued....

Evidently, asking the question, "what is the meaning of life", is a difficult and problematic one, one which does not straightforwardly produce an answer. Consequently, the current investigation will not attempt to answer it; instead it will endeavour to explore what is meaningful *in* life for people. This goal is the more subjective examination of what spheres in life provide individuals with a sense of meaningfulness, rather than what the meaning of human existence in a general and abstract fashion, is.

Before reviewing the relevant literature, it is appropriate to make a short note about the way that the thesis is structured. It is comprised of six journal manuscripts which are in the process of being submitted for publication, preceded by an overall introduction section,

knitted together with linking passages, and finished with a general discussion. As the journal manuscripts need to be able to stand alone as separate documents (i.e., they will be submitted to different journals), there will be some repetition of the relevant literature reviews at the beginning of each manuscript, for example why meaning is an important process for human beings, and the ways in which meaning in life is defined and conceptualised. The general introduction, i.e., the section you are reading at present, is termed Chapter One, and it will cover basic definitions, theories, and constructs relevant to all manuscripts, so a close reading of each of the subsequent introductory sections within each chapter is not necessary. The following sections of the Introduction review extant literature and point out gaps in the literature that the six studies address.

### **Literature Review**

#### **The Good Life and Philosophical Underpinnings of Meaning**

Meaning has long been considered from a philosophical vantage point, however the emphasis has generally been placed on the meaning *of* life: endeavouring to unearth an ultimate purpose to the human existence (Joske, 2006). Aristotle was a philosopher who considered what comprised “the good life” and he championed the notion of eudaimonia: fulfilling one’s potential (Delle Fave & Fava, 2011). From this perspective, well-being is achieved through living according to one’s true self and through pursuit of qualities such as excellence, virtue and self-realisation (Waterman et al., 2010). A related, yet divergent, philosophical construct advocated by Aristuppus is hedonia, which is concerned with maximising subjective pleasurable experiences and minimising pain (Vella-Brodrick, Park, & Peterson, 2008). Meaning is thought to be essential to eudaimonia, and happiness or pleasure is considered to be necessary for hedonia. The way in which these two constructs relate to one another has been extensively debated within psychology, and a clear conclusion remains elusive.

Waterman and colleagues (2010) describe eudaimonia and hedonia as two conceptualisations of happiness, with an asymmetrical relationship between the two such that experiences giving rise to eudaimonia also facilitate hedonia but that hedonic activities are less likely to expedite eudaimonia. The two are also conceived of differently in terms of their process in that hedonia is focused on achieving a pleasurable outcome, whereas eudaimonia focuses on the quality or nature of the process itself, although a positive by-product may result (Huta & Ryan, 2009). In addition, the two constructs have been argued to share many characteristics, reflecting considerable overlap (Deci & Ryan, 2008; Kashdan, Biswas-Diener, & King, 2008).

Different conceptualisations of well-being have originated from these two philosophical traditions, for example, psychological well-being reflects the ideas of flourishing, virtue and fulfilment of potential in eudaimonia (Ryff, 1989). The constituents of psychological well-being are self-acceptance, positive relations with others, personal growth, purpose in life, environmental mastery and autonomy. For the other tradition, subjective well-being is thought to reflect hedonia, however, eudaimonia also leads to greater subjective well-being (Schmotkin & Shrira, 2012) as it includes satisfaction, pleasant affect and low negative affect (Diener, 2000). Research has also considered whether there are different orientations toward the achievement of happiness: pleasure, meaning, and the additional domain of engagement (Peterson, Park, & Seligman, 2005). Although having an orientation toward pleasure was not found to be as advantageous as orientations toward meaning or engagement, individuals endorsing all three perspectives simultaneously were most satisfied with their lives (Peterson et al., 2005; Vella-Brodrick et al., 2008).

Some research has found that regardless of how hedonia and eudaimonia are related, a happy life comprises both striving towards one's potential and pleasurable experiences, so both dynamics are integral to the good life (Vittersø, Sørholt, Hetland, Thoresen, & Røysamb, 2009). This sentiment is echoed by Schmotkin and Shrira (2012), who argue that modern psychology need not polarise or attempt to separate eudaimonia and hedonia as in traditional philosophy, since both are important qualities in life. This view is also shared by most people's understanding of what comprises a good life as research on laypersons' conceptualisations showed that both happiness and meaning were considered to be integral (King & Napa, 1998). Ultimately, it is evident that the current study of meaning in life has been informed by the philosophical concepts of eudaimonia and hedonia, albeit in a somewhat convoluted, complicated, and inconclusive way.

### **Meaning in Life**

Frankl (1963) asserted that there is a universal human instinct to search for meaning, a core psychological need, in fact, which he described as a need to recognise one's life and the experiences within it as fulfilling a significant purpose. Although there is some discrepancy between various understandings of how meaning is achieved, there is consensus that it is a central concern of human life, a fundamental motivation (Reker & Chamberlain, 2000).

Human beings are natural meaning-makers, in fact we are considered to be the only species to engage in this activity (Emmons, 2003). We are inclined to try to understand specific situations, and also more globally construct an overarching belief system or value system (Baumeister & Vohs, 2002). The process of developing an overarching meaning

system is based on our experiences in the world and is influenced by biological, social, and cultural factors (Dittmann-Kohli & Westerhof, 2000). Essential to imbuing life with meaning is making connections between ideas and things as a way of imposing a sense of stability on life, which, paradoxically, constantly changes (Baumeister & Vohs, 2002). Crucial to this ability to create meaning is the idea of memory as meaning-making, the process of recalling and reflecting on life experiences allows us, and in fact may actually encourage us, to combine them into a coherent whole (Beike & Crone, 2012).

Finding meaning is not a conclusion or an end-point, rather, human beings continually re-evaluate their life experiences in response to new information, attributing different meaning to certain events and then reappraising their meaning systems (Delle Fave & Fava, 2011). Centuries ago, finding meaning was instilled from above, for example from religious leaders, political leaders, and teachers (Fabry, 1998). Today, people increasingly take on this responsibility for finding meaning themselves, however, since most of us have never been trained to do so, it is a search coloured by challenge and difficulty. As this search process is highly individual in nature, derived meanings are consequently very subjective and idiosyncratic (Wong, 2012). Although the search is an individually-driven process, making meaning is influenced by external forces: “we create our world personally, idiosyncratically and dynamically, yet, to a significant extent, we are also influenced and created by a world that is larger than ourselves” (Kenyon, 2000, p. 10).

### **Conceptualisations of Meaning in Life**

Meaning in life has proved to be a difficult construct to operationalise, with scholars concluding that despite a plethora of research in various disciplines, both theoretical and empirical, a unifying theory evades our grasp (Auhagen & Holub, 2006; Mascaro & Rosen, 2008; Steger, 2012a). Debats (2000) argues that although many theories of meaning exist, and it is difficult to judge one to be superior to the others, this is not an impediment if one chooses to acknowledge the contribution of various approaches, rather than trying to find one ultimate theory of meaning. Let us consider the chief theories in this vein.

Existentialists were perhaps first to consider meaning in the realm of psychology. Frankl's (1963) central assertion was that human beings have a will to search for and achieve meaning in life, and this premise has become one of the core tenets of the field of existential psychology. When someone fails to achieve a substantive sense of meaning in his or her life, Frankl argued that this ensuing meaninglessness could be a precursor to physical and/or mental illness which could be remedied through actualising creative, experiential, and attitudinal values (Feldman & Snyder, 2005). Frankl's view was that meaning exists

externally from the person, and individuals must endeavour to identify and embrace this meaning. Also, from the existentialist point-of-view, but with a differing perspective, Yalom (1980) posited that meaning is not something that exists outside individuals and therefore not something to be ‘found’, rather, meaning is chosen and constructed by the person. Taking the middle ground, Reker (2000) asserted that existential meaning is arrived at via tandem processes of both internal creation and external discovery.

Acquiring meaning in life, either by searching or constructing, was considered to be an important goal of life by existential psychology. Although searching for meaning is argued to be an important dynamic in the construction of meaning, Steger and colleagues (2006) have argued that theoretical accounts of the bases of well-being have repeatedly failed to include it. Thus, most of the theoretical approaches described focus on *having* meaning and the *experience* of meaning, not on the process of *finding* it. Steger (2012) suggests that meaning theories typically have a cognitive or motivational basis to them that undergirds the search process. He describes how, from a cognitive perspective, meaning is essentially a series of connections and explanations we attribute to life experiences; it is how we cognitively try to make sense of our identity and how we relate to the world and everything within it. In the same vein, Bering (2003) has suggested that a foundation of critical cognitive skills is necessary before people can identify meaning in life from naturally occurring events.

Several theorists have also discussed the motivational basis to searching for meaning. Frankl (1967) asserted that humans have an inherent need for meaning, and as a consequence, are motivated to search for it; he termed this trait ‘the will to meaning’. Maslow’s theory of needs has also frequently been applied to the meaning literature, with the suggestion that once basic, physiological needs are satisfied, higher needs such as finding meaning can be sought (Auhagen, 2000). Baumeister (1991) proposed a motivational theory which asserted that four specific needs for meaning--purpose, efficacy, value/justification, and self-worth--act as the catalysts for the search for meaning. When these needs are met, individuals are fulfilled, however certain life events might threaten one or more of the meanings, and in some instances, the four different needs might conflict with one another (Sommer & Baumeister, 1998). Extending this idea, the Meaning Maintenance Model asserts that by possessing meaning simultaneously in a variety of spheres, if one is compromised, others can be bolstered in a process coined ‘fluid compensation’ (Heine, Proulx, & Vohs, 2006). Deci and Ryan’s self-determination theory is another example of a motivational theory, and it stipulated intrinsic motivation and self-knowledge as crucial components: essentially it is vital to know oneself and live according to that knowledge in order to arrive at true meaning

(Weinstein, Ryan, & Deci, 2012). Emmons' (2005) theoretical account of meaning also has a motivational emphasis, however, goals serve as the mechanism through which we are motivated to find meaning.

Reker and Wong's (1988) theory also included motivational and cognitive aspects, with the addition of an affective component. The cognitive component of the model captures the ways in which individuals seek to make sense of and understand people and situations; the motivational element is an individual's unique life framework reflecting values and goals; and the affective aspect is the feeling of fulfilment derived from goal achievement. Battista and Almond's (1973) account of meaning in life encompassed both cognitive and affective components: a framework or philosophy of life with which to make sense of events; and feelings of enjoyment resulting from one's life philosophy being fulfilled.

In contrast to the emphasis in these theories on the presence of meaning, many theorists, one might say 'most', have ignored the process of *searching for meaning* which Frankl (1963) argued to be so vital. However, Steger and colleagues' (2006) approach gives equal weight to presence of meaning and search for meaning. Presence of meaning is experienced when individuals feel that their lives have purpose and significance, and search for meaning is the set of various endeavours used to enhance existing meaning as well as attempts to unearth further meaning. This two-part theory aligns with King and Hicks' (2009) conceptualisation of meaning which centres on simple detection of meaning in various experiences versus more effortful construction of meaning, sometimes following difficult experiences when an individual's sense of meaning is compromised.

### **Presence of Meaning, Search for Meaning, and their Relationship**

Presence of meaning has been widely researched and many ways of understanding its nature have been proposed, yet there is no convergence on a single definition of the construct (Steger et al., 2006). However there is agreement that it is a vital ingredient for life, especially well-being (e.g., Steger, 2012a; Zika & Chamberlain, 1992). A commonly cited definition of meaning in life is that it is "the cognizance of order, coherence, and purpose in one's existence, the pursuit and attainment of worthwhile goals, and an accompanying sense of fulfilment" (Reker, 2000, p. 41).

As described by Steger and colleagues (2006), searching for meaning is an independent yet related construct, which has largely been ignored since Frankl's seminal account of meaning. Consequently, the search for meaning has not been illuminated to the same degree as presence of meaning, and consensus is lacking with regard to the purpose of this process, how it might inform a meaningful life, and whether or not it is an adaptive

endeavour. Frankl (1963) asserted that the search for meaning was universal and an important, and positive, aspect of navigating life. Conversely, it is also seen to occur in response to unmet needs (Baumeister, 1991), when other people's behaviour is incongruent with an individual's set of expectations for understanding the world (Bruner, 1990), or when one's life scheme for making sense of the world no longer provides a useful structure (Thompson & Janigian, 1988).

Presence of meaning and search for meaning are defined as distinct and separate constructs, yet they are connected as they share an inverse relationship (Steger et al., 2006; Steger, Kashdan, Sullivan, & Lorentz, 2008); it is implied that if meaning is not achieved, individuals compensate by searching for meaning as a remedy to meaninglessness (Markman, Proulx, & Lindberg, 2013). Research has examined how search for meaning and presence of meaning are related to one another, for example, whether depleted meaning instigates a search for meaning, or whether we continually search in order to experience deeper and more satisfying meaning in life (Steger et al., 2008). Steger and colleagues tested two possible competing models, the presence-to-search model which captured the compensation strategy evident when individuals search for meaning because their overall level is depleted; and the search-to-presence model which highlights the accretion of meaning evident in the strategy of searching for meaning in order to achieve greater presence levels. They found support for a presence-to-search model: when meaning is depleted individuals will search for it. However, the obverse process did not result in a sense of meaning being achieved as the search-to-presence model, in which increasing search for meaning in turn increases presence of meaning, was not supported (Steger et al., 2008). This result calls into question the intuitive belief that searching for meaning is the mechanism through which meaning is achieved.

### **Presence of Meaning, Search for Meaning, and the Lifespan**

Although creating and sustaining meaning is a lifelong endeavour, adolescence is a time when individuals frequently grapple with questions of what one's purpose or significance in life is (Fry, 1998; Ho, Cheung, & Cheung, 2010). Finding meaning is especially pertinent for young people, as important tasks during this developmental stage include building a sense of self, establishing future ambitions, and cementing relationships with others; however this process is highly variable, reflecting the adolescent's characteristics (Fry, 1998). Research has supported the contention that searching for meaning is of particular importance for younger people as compared to their older counterparts (Steger, Oishi, & Kashdan, 2009). However, just because searching for meaning is central to earlier developmental stages does not mean that we cease to search once we reach a certain age; in

fact, research has shown elderly people continue to search for meaning in life (Krause, 2012; Thompson, 1992; Van Ranst & Marcoen, 2000). The search for meaning in older age can present a major challenge as individuals experience losses in interpersonal relationships, changes in important social roles and the imminent end of one's life (Westerhof, Bohlmeijer, & Valenkamp, 2004).

Overall meaning in life increases across the lifespan (e.g., Reker & Fry, 2003; Reker, Peacock, & Wong 1987; Steger et al., 2009), with changes in meaning thought to result from continual revision of personal value and belief systems (Zika & Chamberlain, 1992). Older individuals have been found to report greater purpose as compared to younger people who focus more on attainment of future goals (Van Ranst & Marcoen, 1997). Reker and Wong (1988) asserted that as people age, their meaning systems become more consolidated and such individuals actually have a greater *need for* meaning. This greater need for meaning is postulated to reflect the fact that day-to-day demands on the individual decrease, enabling a greater focus on one's inner life (Baum & Stewart, 1990). Furthermore, in older age, individuals are better able to take a wider perspective on their life and are likely to have fulfilled important goals (Van Ranst & Marcoen, 1997), facilitating reflection on achieved meaningfulness in life. However, the finding that elderly people possess greater meaning in life has not always been supported, as empirical research has also shown meaning to decline significantly in older age, possibly due to losing important sources of meaning with widowhood and retirement (Pinquart, 2002).

It appears that searching for meaning is of particular importance earlier in life, and over time meaning begins to be experienced and consolidated in different domains. When individuals confront life experiences in their lives, they force re-evaluation of their global meaning systems, the search for meaning continues, and resultantly presence of meaning increases.

### **Meaning, Well-Being, and Psychopathology**

Meaning in life has long been thought to be of particular importance for well-being (e.g., Frankl, 1967; Savolaine & Granello, 2002; Steger, 2012a; Zika & Chamberlain, 1992). Frankl posited that if individuals did not have a sense of meaning in life, an 'existential vacuum' would result, possibly leading to 'existential neurosis' which was characterised by depression, disengagement, and devaluation of one's goals (Mascaro & Rosen, 2005). Yalom (1980) proposed that possessing meaning is aligned with well-being, and meaninglessness with psychopathology. This hypothesis has been supported in empirical research as those



currently experiencing a psychological difficulty have been found to report lower levels of meaning in life (Debats, van der Lurbe, & Wezeman, 1993).

Frankl (1963) was a strong advocate of the idea that meaning in life can be realised through suffering. His experiences while imprisoned in the concentration camp at Auschwitz led him to observe that it was those individuals who managed to maintain a sense of meaning despite the deprivation and atrocities, who survived. He believed that challenges to meaning need not always lead to meaninglessness, and a plethora of research has examined how meaning might be achieved through growth following traumatic experiences (e.g., Triplett, Tedeschi, Cann, Calhoun, & Reeve, 2011). Simon (1997) asserts that “traumatic events often shatter people’s perceptions of themselves and/or the world, and the ability to find meaning in the event enables victims to reestablish feelings of mastery and personal control” (p. 258). However, if an individual’s attempts to search for meaning are thwarted, psychological distress in the form of depression or meaninglessness is expected to result (Cohen & Cairns, 2011).

Research has shown meaning in life to be associated with well-being, (e.g., Zika & Chamberlain, 1992; Scannell, Allen, & Burton, 2002), and negatively associated with psychopathology (e.g., Debats et al., 1993; Mascaro & Rosen, 2006). Although having meaning in life manifests positive links with well-being, search for meaning has tended to be associated with poorer well-being and psychosocial functioning (e.g., Dezutter et al., 2013; Steger et al., 2006; 2008). Although it is evident that meaning and well-being are related, additional research is required to elucidate how this relationship unfolds over time (Savolaine & Granello, 2002). For example Steger (2012a) describes that although it makes intuitive sense that experiencing meaning in life would mitigate psychopathology, we cannot assume this to be the case. Thus, it is an important hypothesis to explore.

Broadly, it is evident that, consistent with Frankl, not only does an absence of meaning contribute to psychological difficulties, but having a sense of meaning in life is linked with flourishing and well-being (Vella-Brodrick et al., 2008). Although meaning has been investigated in relation to a variety of indicators of well-being, the present set of studies will examine its associations with happiness, life satisfaction, depression, and rumination.

### **Happiness and Meaning in Life**

Happiness is thought to be fundamental to a good life, and the pursuit of happiness is an endeavour of many (Tkach & Lyubomirsky, 2006). Happiness is considered to be a constituent of subjective well-being (Diener, 2000), which is why it was investigated as a well-being outcome in the present studies. In empirical research, happiness is defined as a

subjective state of high positive affect and life satisfaction, and low negative affect (Lyubomirsky, Sheldon, & Schkade, 2005). Given that being happy has been shown to be widely beneficial in terms of success in various spheres in life such as marriage, friendship, work performance (Lyubomirsky, King, & Diener, 2005), and responding to potentially stressful life events (Lyubomirsky & Tucker, 1998), it is worthwhile examining how presence of meaning and search for meaning are related to this well-being outcome.

It has been posited that if individuals do not have a sense of meaning in life, that it is probable that this will have a flow-on effect to their happiness: is also likely to be wanting (Baumeister & Vohs, 2002). Possessing meaning in life has been found to manifest a strong positive relationship with happiness (e.g., Cohen & Cairns, 2011; Park, Park, & Peterson, 2010; Steger et al., 2009; Zika & Chamberlain, 1992), whereas search for meaning has been found to exhibit a weak negative relationship with happiness (e.g., Cohen & Cairns, 2011; Park et al., 2010). These relationships with happiness have been found to persist from adolescents to the elderly (Steger et al., 2009). Although searching for meaning has been shown to demonstrate a negative association with happiness, research has also revealed that if one possesses considerable presence of meaning while also searching for meaning, then the negative impact on happiness level is mitigated (Cohen & Cairns, 2011; Park et al., 2010). This result highlights that the two aspects of meaning have a relationship with happiness that is complex and dynamic.

### **Life Satisfaction and Meaning in Life**

The perception that one's life is satisfying involves a process of judgment and comparison with a set of standards chosen by the individual (Pavot & Diener, 1993). Some realms, such as relationships and health, are understood to be quintessential to a good life, but the contribution of other domains is often unique to the individual. Satisfaction with life is thought to be an constituent part of overall happiness level (Oishi, Diener, & Lucas, 2009), so this construct is also amenable to investigation regarding its relationship with meaning.

Research has also found a positive relationship between meaning and life satisfaction such that if one is depleted, the other is likely to be also (Diener, Fujita, Tay, & Biswas-Diener, 2012). The pattern of correlates between life satisfaction, presence of meaning and search for meaning is similar to those for happiness. Empirical research has shown life satisfaction and presence of meaning to be positively related, and life satisfaction and search for meaning to be negatively associated (Park et al., 2010; Steger et al., 2006; Steger & Kashdan, 2006). Again, the associations between life satisfaction, presence of meaning and

search for meaning have been demonstrated to continue across the lifespan (Steger et al., 2009).

However, there is a degree of complexity in the way that life satisfaction is related to search for meaning and presence of meaning, as those who have already established a sense of meaning and are searching for additional meaning experience greater life satisfaction than those who are searching without a stable sense of meaning in life (Steger, Oishi, & Kesebir, 2011). Additionally, presence of meaning has been shown to moderate the relationship between searching for meaning and life satisfaction such that the strongest positive relationship occurred under conditions of high presence of meaning (Park et al., 2010).

### **Depression and Meaning in Life**

Meaninglessness has been theorised to be linked with expressions of psychopathology, such as depression, due to existential frustration (Frankl, 1963). It has been asserted that the presence of meaning decreases susceptibility to depression because a sense of purpose counters the hopelessness that is frequently evident in depression (Savolaine & Granello, 2002). Depression and other physical and psychological illnesses may result from traumatic events, and it has been found that endeavouring to draw meaning out of such situations facilitates improvements in well-being over time (King & Pennebaker, 1998).

Research has supported the contention that those with considerable meaning in life experience less depression (Debats et al., 1993; Feldman & Snyder, 2005; Kleftaras & Psarra, 2012; Monforte-Royo, Tomás-Sábado, Villavicencio-Chávez, & Balaguer, 2011; Steger et al., 2006; 2008). Further, the association between meaning and depression has been extended over time, with lower meaning predicting increased depression two months later, and increased meaning producing a reduction in depression (Mascaro & Rosen, 2008). In addition to a negative association between meaning and depression, depressed individuals have been shown to draw meaning from fewer domains in life (Prager, Bar-Tur, & Abramowici, 1997). Conversely, searching for meaning has been shown to manifest a positive association with depression (Steger et al., 2006; 2008; Steger et al., 2009). This pattern has been found to prevail across the lifespan, however searching for meaning has been found to be more strongly related to impoverished well-being in older age (Steger et al., 2009).

Depression has been shown to be related to increased stress, however research has shown that this association is moderated by possessing spiritual meaning, such that the relationship becomes weaker as meaning increases (Mascaro & Rosen, 2006). Although search for meaning appears to have negative well-being outcomes, in this case elevated levels

of depression, if a person has an established sense of meaning in life while they search for further meaning, this association is lessened (Park et al., 2010).

### **Rumination and Meaning in Life**

Rumination can also be viewed as associated with decrements of overall well-being. Rumination has been found to predict depression over time, and the two constructs have been shown to share characteristics (Treynor, Gonzalez, & Nolen-Hoeksema, 2003). Rumination is defined as an ongoing process of brooding over negative feelings in the absence of any active attempts to improve the negative situation (Nolen-Hoeksema, 2000). When individuals attempt to make sense of death, those who are able to make meaning have been found to ruminate less, and in an associated fashion, well-being showed improvement (Michael & Snyder, 2005). Research has also shown that rumination is positively related to search for meaning and negatively linked to presence of meaning (Steger et al., 2008). Further, individuals with a greater tendency to ruminate exhibit a more negative relationship between search for meaning and presence of meaning. As research examining meaning in relation to the outcome of rumination is scarce, this gap in the literature provides an opportunity for new knowledge to be gained.

### **Meaning and the Influence of Personality**

It is evident that searching for and attaining meaning varies to an unknown extent over the lifespan and that each has particular relationships with indicators of well-being. Making meaning seems to be significantly influenced by dispositional characteristics (Steger et al., 2008). As previously mentioned, Frankl (1963) observed in Nazi concentration camps that those who lost the ability to find meaning simply did not survive, highlighting that resilience is an important quality in the derivation of meaning in life. Further, individuals vary in their inclination to search for meaning in life, and in the degree to which deriving meaning from life is of importance to them.

In this vein, personality characteristics can be seen to exert an influence on the process of searching for and possessing meaning, since meaning is argued to be of central importance in the personality literature. For example, McAdams (2012) describes that most theories of personality make provisions for the inherently human desire to make meaning by saying that the assertion that “human beings are largely about the psychological business of making sense of their own experiences and their interactions in the world” (p. 108) is central in many theories of personality. He goes on to describe that different layers of personality exert different influences on meaning in life. At the broadest level, dispositional traits such as extraversion and positive emotionality serve to augment meaning making by offering basic

resources for doing so; at the next level, adaptations created by social and developmental factors influence more specifically the kinds of meaning that people make; and finally at the individual level, people consider how their own life story or narrative aids in the construction of meaning.

Search for meaning is especially important in personality theories as human beings use certain traits as resources in their construction of a meaningful existence (McAdams, 2012). Steger and colleagues (2008) described that those with a particularly strong desire to search for meaning may be naturally more curious and questioning of the world around them, and keen to answer big questions about existence. Steger and colleagues (2008) also found that individuals who are searching for meaning possess less meaning; however this pattern was less pronounced in individuals who were particularly open to new experiences.

Presence of meaning appears to be most strongly associated with the personality trait of conscientiousness, however it also manifests moderate correlations with agreeableness and extraversion. In contrast, search for meaning seems to be most closely linked to the trait of openness (Steger et al., 2008). McAdams (2012) describes how a certain pattern of traits, namely high extraversion, conscientiousness, and openness, combined with low neuroticism, is strongly predictive of an overall tendency to view life as meaningful. He argued that these traits act as valuable resources for individuals to utilise as they search for meaning.

### **Meaning, Hardiness, and Grit**

Grit is a relatively newly conceptualised trait, defined as being “perseverance and passion for long term goals. Grit entails working strenuously toward challenges, and maintaining effort and interest over years despite failure, adversity, and plateaus in progress” (Duckworth, Peterson, Matthews, & Kelly, 2007; pp. 1087–1088). Individuals with a gritty disposition continue to face challenging situations with stamina and determination rather than admitting defeat. Due to the fact that grit has recently been developed as a construct, there is limited research pertaining to its relationship with meaning. One investigation was found, and the results showed that grit predicted reduced risk of suicidal ideation through the presence of meaning in life (Kleiman, Adams, Kashdan, & Riskind, 2013). In the absence of further research on grit and meaning, the related personality construct of hardiness will be discussed here. Hardiness shares some features with grit, and it has frequently been discussed with regard to meaning (McAdams, 2010).

Hardiness is described as having three constituents, namely commitment, control and challenge, which together enable individuals to transform stressful life events into opportunities for growth and meaning (Maddi, Khoshaba, Harvey, Fazel, & Resurreccion,

2010). The aspect of commitment concerns the belief that it is vital to engage with the world around oneself, irrespective of stressors; control is the ability to continue one's endeavour to influence outcomes even in light of difficulties; and finally, challenge is the perspective that difficulties are quintessential to living and they provide avenues for growth (Maddi, 2006). Although hardy individuals have an awareness of stressors, the focus is on coping with these successfully, rather than languishing and experiencing negative emotions (Maddi et al., 2010). Hardiness has been shown to enhance performance in stressful scenarios (Maddi, 2006) and is argued to facilitate the search for meaning (McAdams, 2010). Given this perspective, it may be possible that those individuals possessing grit while searching for meaning are more successful in achieving sustainable meaning in life. For individuals who possess a hardy disposition, unwellness does not necessarily result from experiencing stressful situations (Thompson & Janigian, 1988), so it is possible that if one exhibits grit and determination when searching for meaning, negative well-being outcomes might not inevitably result.

### **Meaning and Hope**

Hope is a personality trait described as being “a positive motivational state that is based on an interactively derived state of successful agency (goal-directed energy) and pathways (planning to meet goals)” (Snyder, Irving, & Anderson, 1991; p. 287). It has been theorised that a hopeful disposition should be positively related to a sense of meaning in life because integral to both is the concept of goals: meaning in life is reached through attainment of personally relevant goals, and hope is a goal-directed thought process which involves progressing toward such goals (Michael & Snyder, 2005).

The above assertion has been confirmed as research has ascertained that being hopeful is positively linked with the attainment of meaning (Halama, 2003; Halama & Dedova, 2007; Michael & Snyder, 2005). Additionally, meaning in life has been found to positively predict hope over a span of two months (Mascaro & Rosen, 2005). Meaning and hope have been shown to together be predictive of positive well-being outcomes, and it has been suggested that hope is in fact a component of the overarching construct of meaning in life (Feldman & Snyder, 2005; Halama, 2003). Research has not yet investigated how hope and search for meaning might be related, however, given that both are goal-directed endeavours, it is quite possible that they are positively associated.

### **Sources of Meaning in Life**

As the examination of meaning from a psychological vantage point is focused on what is subjectively meaningful within life, it makes sense that these derived meanings will

vary from person to person. Consequently, research has begun to look into *what sources* provide human beings with a sense of meaning. Given that meaning is influenced by culture and society, what is deemed to be meaningful is thought to vary across historical time periods; for example in earlier times, purpose in life was intimately linked with religion, however in more recent times everyday aspects of life are mentioned as meaningful, such as family and work (Dittmann-Kohli & Westerhof, 2000). Whether various sources are believed to be important or unimportant by an individual will shape the kind of meaning that the person experiences in life (Bar-Tur & Prager, 1994).

Empirical research has shown the sources from which individuals gain a sense of meaning to be varied, including relationships with others, personal growth through self improvement, life work, health, and pleasurable activities (Ebersole, 1998). People tend not to derive their meaning in life from only one source, rather meaning is usually abstracted from a variety of spheres (Pöhlmann, Gruss, & Joraschky, 2006). This approach is thought to be adaptive such that if one source of meaning is threatened and the person is required to re-evaluate their meaning system, other sources can be bolstered so as to avoid experiencing meaninglessness (Proulx, Heine, & Vohs, 2010).

### **Central Sources of Meaning**

Several possibilities should be considered as to how researchers might examine sources of meaning in life, and it is argued that this choice results in variation regarding the number and description of categories (Schnell, 2011). A qualitative exploration of the main sources of meaning revealed these sources: relationships, service, belief, life work, growth, pleasure, and health (De Volger & Ebersole, 1981). Also using interviews, O'Connor and Chamberlain (1996) found somewhat similar categories: relationships, creativity, personal development, relationship with nature, religiosity/spirituality, and social/political beliefs. Wong (1998) explored sources of meaning from a different perspective by asking individuals about their views of what sources would comprise an archetypal meaningful life, producing the following eight sources: religion, achievement, relationship, intimacy, transcendence, acceptance, fairness, and fulfilment. Explorations into sources of meaning also include quantitative investigations, asking individuals to describe the degree to which certain listed domains are meaningful (Prager, Bar-Tur, & Abramowici, 1997; Reker & Wong, 1988), or by using a combination of qualitative and quantitative methods with open-ended descriptions and ratings (Delle Fave, Brdar, Freire, Vella-Brodrick, & Wissing, 2010).

Emmons (2005) described that research has begun to converge on the idea that the four domains of achievement/work, relationships/intimacy, religion/spirituality, and self-

transcendence/generativity exhaustively cover the chief life domains that people find meaningful. Evidently, a consensus as to the main sources of meaning is lacking, however it is commonly asserted that social connection is vital when it comes to describing one's life as meaningful (Stillman et al., 2009). In fact, research has consistently found that the most commonly cited source of meaning is interpersonal relationships (Baum & Stewart, 1990; Debats, 1999; De Volger & Ebersole, 1981; Ebersole, 1998; O'Connor & Chamberlain, 1996; Yalom, 1980). Social connection is thought to be meaningful because interacting with others is biologically essential as human beings are social organisms (Lambert et al., 2010). When it comes to what is the next most meaningful life domain there is considerable variation, from preservation of values (Bar-Tur & Prager, 1996; Prager, 1998), to personal growth (Prager, 1996), to creativity (O'Connor & Chamberlain, 1996), and work (Debats 1999; Delle Fave et al., 2010). Thus, further research is needed to disambiguate the ranking of sources of meaning.

### **Sources of Meaning Across the Lifespan**

Reker (2000) has stated that continuity theory suggests that individuals derive meaning from the same sources across the lifespan, whereas lifespan theorists assert that the domains which provide a sense of meaning are fluid across the lifespan. While some research has not found any differences in what is reported to be meaningful by age (e.g., Baum & Stewart, 1990), the majority of empirical findings support the notion that what is meaningful for a young person is different to that of an older person. It is argued that this change occurs because individuals must adapt to changes in life circumstances, and they re-evaluate experiences so that they align with personal value systems (Bar-Tur & Prager, 1996). Additionally, it is posited that although sources of meaning may change to some extent over life stages, overall meaning levels stay relatively stable over the course of the lifespan (Prager et al., 1997; Yalom, 1980).

Various investigations into meaning domains across the lifespan have shown that sources of meaning differ between different periods of the lifespan. Krause (2012) describes that this may reflect a difference in the way the meaning in life is interpreted across the lifespan. Younger people's meaning systems have been shown to reflect goals such as finishing education, beginning a family and establishing one's identity, whereas older people's meaning systems reflect the fact that life and family have already been established (Dittmann-Kohli & Westerhof, 2000), and reconciliation of past life events is thought to be central (Krause, 2012). Research has found that younger individuals find personal growth, hedonistic activities and achievement to be most meaningful (Bar-Tur & Prager, 1996),



whereas older people find preservation of values and culture and tradition to be more meaningful (Prager, 1996). On the whole, as human beings age, they place increasing importance on social ethics and concern for others, having already established a clear sense of self, developed social connections, and realised important life goals (Prager, 1998). Although, as previously mentioned, relationships with others are the most commonly cited source of meaning irrespective of age, research has shown family relationships to be of particular importance in young adulthood (Lambert et al., 2010). The authors argue that this may be due to the fact that young adulthood is a time of change and so young people refer to the secure base of their families of origin when looking to create meaning at this time.

### **The Influence of Demographic Variables on Sources of Meaning**

Research into people's life longings have revealed some gender differences, with females more likely to have hopes pertaining to family and environmental context. These were the only domains in which gender differences were evidenced and the authors argued that this reflected the stereotypical gender role of women being caretakers (Kotter-Grühn, Wiest, Zurek, & Scheibe, 2009). There appears to be some variation in sources of meaning by gender, for example although both men and women found love/marriage and work to be very important, males more frequently reported independent pursuits and leisure, and women found birth of children to be meaningful (Baum & Stewart, 1990). Women have been found to experience interpersonal relationships (Debats, 1999; Wong, 1998) and religiosity/spirituality (Wong, 1998) as more meaningful than men. Further, females derived more meaning from relatedness and well-being than men, whereas men placed greater value on self-actualisation; this pattern was argued to reflect the female communion and male agency tendency (Schnell, 2009). Finally, women have been found to strive toward and value intrinsic sources such as self-acceptance, affiliation, fitness and community feeling more than men (Morgan & Robinson, 2013).

Though the research is scarce, there has been some examination of the influence of education level on people's meaning in life. Those with higher education have been found to possess greater meaning overall, and this result is argued to be due to the fact that greater education enables the achievement of important life goals (Pinquart, 2002; Ryff & Singer, 1998). Variation in the domains of life that are meaningful has also been found, as research has shown religiosity/spirituality, tradition, normality, practicality and reason to increase in importance the more educated a person is (Schnell, 2009). Additionally, when considering the things individuals longed for, research has shown that less educated people had more hopes pertaining to health and family, which the authors argued to be due to the fact that they

likely experienced disadvantage in these areas, raising their importance (Kotter-Grühn et al., 2009).

### **Sources of Meaning Predicting Search, Presence, and Well-Being**

Research has consistently identified that social connections are most meaningful to human beings. It would make intuitive sense that people who report significant levels for their important sources of meaning would also report higher overall well-being, however this association may not be found because people might not have sufficient insight into what makes the greatest contribution to their overall meaning in life. In his research on goals, Emmons (2005) discovered that ambitions which reflected interpersonal relations such as making a contribution to the community, and leaving a legacy, were most predictive of meaning and purpose. Additionally, aspirations which are described as being intrinsic, for example community contribution, fostering good relationships with others, and personal growth, were strongly related to the search for meaning, the desire to experience meaning (Weinstein et al., 2012), and the presence of meaning (Robinson & Morgan, 2013; Weinstein et al., 2012). In contrast, extrinsic goals which have a future reward such as social recognition, money, or physical attractiveness have been shown to be associated with the desire to find meaning and the search for it (Weinstein et al., 2012), but they are negatively related to the attainment of meaning (Robinson & Morgan, 2013). Given that varying goals are differentially predictive of aspects of meaning, research into how diverse sources of meaning predict search for meaning and presence of meaning is warranted.

Similarly, we know from research that having meaning in life contributes to experiencing well-being, and that having a sense of meaning in life while simultaneously searching for meaning protects one's sense of well-being. However, such investigations have looked at the impact of overall meaning and so we do not know whether meaning from particular sources might have more protective properties than others. Again, research on goals has shown that aspirations in the general categories of intimacy, spirituality, and generativity predict improved well-being, but power strivings predict decrements in well-being (Emmons, 2003). Further, research has demonstrated that intrinsic goals such as personal growth and contribution to the community predicted well-being, but on the other hand, extrinsic goals such as financial success and fame were negatively related to well-being (Emmons, 2003; Martos & Kopp, 2011; Sheldon, Ryan, Deci, & Kasser, 2004). Again, research ought to investigate whether particular sources of meaning are differentially predictive of well-being.

## **Breadth and Strength of Meaning**

It is usual for people to experience only one area of life as meaningful; rather a multitude of realms provide different aspects of meaning in life, forming overall meaning. Having a larger network of meanings is advantageous for well-being (Reker & Woo, 2011) because if one source of meaning becomes compromised, the individual can compensate by bolstering the meaning in other spheres (Heine et al., 2006). When examining specific sources of meaning, research has shown that people tend to experience meaning in quite diverse realms, rather than a focused range of similar areas (O'Connor & Chamberlain, 2000). Generally, people describe having approximately six sources of meaning that are of particular personal significance (De Volger-Ebersole & Ebersole, 1985; Prager, 1996). Beyond number of sources, breadth of meaning is also important.

However, in order for well-being to flow-on from meaning in life, one cannot simply endorse a large quantity of sources of meaning; the intensity of commitment to these sources of meaning is also argued to exert a vital influence (Pöhlmann et al., 2006). Essentially, feeling that one's meaning in life is particularly important is crucial for well-being. Feeling a strong sense of commitment to one's sources of meaning expedites greater well-being, but research has yet to empirically examine whether high endorsement of sources of meaning, and strong endorsement of a *wide variety* of sources, facilitates well-being and greater overall meaning.

## **Gaps in the Current Research**

The present discussion of the literature has identified a number of significant gaps in current understanding of meaning in life. One area that is wanting at present is a clearer understanding of the two components of presence of meaning and search for meaning and how they are related to one another over time. Although research with concurrent data has revealed an inverse relationship (e.g., Steger et al., 2006), research has not yet examined how the relationship unfolds over time. Additionally, although there has been research examining the stability of search and presence with regression analyses (Steger & Kashdan, 2006), we do not yet know whether the same results would be found with more sophisticated analyses such as latent growth curve modelling (LGCM) which tracks the trajectories of change over time, and whether the stability of each construct might be conditional on the level of the other over time. Limited research has been performed examining levels of search and presence at different developmental stages (Steger et al., 2009), however research is lacking on the question of whether individuals might become more successful in their search for meaning as they become older.

Research has ascertained that presence of meaning is positively related and search for meaning is negatively related to well-being outcomes (e.g., Cohen & Cairns, 2011; Park et al., 2010; Steger et al., 2008); however there is a dearth of research examining how these relationships are manifested longitudinally and at different developmental stages. Similarly, presence of meaning has been shown to exert a buffering influence on the relationship between searching for meaning and well-being (Cohen & Cairns, 2012; Park et al., 2010), but it is not yet known whether these dynamics persist over time. Also, research has not yet looked into the possibility that the inverse relationship between search for meaning and presence of meaning might be lessened under conditions of greater well-being.

Similarly, research has shown search for meaning to be positively linked and presence of meaning negatively related with negative well-being outcomes (e.g., Mascaro & Rosen, 2005; Park et al., 2010; Steger et al., 2008), yet we do not know how these relationships unfold over time and in different age groups. Again, presence of meaning has been shown to buffer the relationship between search for meaning and negative well-being outcomes (Park et al., 2010), but this relationship has not been investigated longitudinally yet. Also, rumination has been shown to lead to depression (Nolen-Hoeksema, 2000), but it is not yet known whether this association might be exacerbated by excessive search for meaning.

Personality factors seem to exert an influence on the process of deriving meaning from one's circumstances (Michael & Snyder, 2005; McAdams, 2012), but does possessing certain qualities such as being hopeful or having a gritty disposition aid in the process of searching for meaning so that it actually leads to presence of meaning over time? Further, research has not yet investigated whether being hopeful and gritty might assist in mitigating any negative well-being outcomes occurring as a consequence of searching for meaning. Research has yet to explore these avenues.

There has been research into *what sources* provides people with a sense of meaning in life (e.g., De Volger & Ebersole, 1981; O'Connor & Chamberlain, 2000; Delle Fave et al., 2010), but there is an absence of consensus concerning the *most* important sources of meaning. In the same vein, differences in what is meaningful across the lifespan have been found, but the results are divergent and examination of the influence of demographic factors has been scarce. Additionally, the question of whether the most important sources of meaning identified for these groups are actually predictive of well-being outcomes has not yet been explored. Further, although being strongly committed to one's sources of meaning and viewing them as very important is argued to be beneficial for well-being (Pöhlmann et al., 2006), we do not know whether strongly endorsed specific sources of meaning are more

predictive of presence of meaning and well-being. Finally, although having breadth of meaning has been identified as important, research has not yet examined whether strong endorsement of a wide range of sources of meaning is also beneficial in terms of facilitating the search for meaning leading to presence of meaning, and mitigating the negative well-being outcomes that result from searching for meaning.

### **Goals of the Research**

Each of the following six chapters is a stand-alone journal manuscript, and as such, each will outline its specific goals and hypotheses in detail. I will briefly describe the intent of each of the articles here. Chapter Two examined how the relationship between search for meaning and presence of meaning unfolds longitudinally, and determined how stable the two constructs were over time. Further the chapter investigated how search for meaning and presence of meaning were manifested differently at various life stages, and whether searching led to the attainment of meaning was more likely at certain ages.

The aim for Chapter Three was to examine presence of meaning and search for meaning in relation to indicators of positive well-being. The goal was to examine the patterns of association between searching for meaning, presence of meaning, and positive well-being outcomes longitudinally and at different life stages. Further the chapter aimed to investigate the bolstering effect of an established sense of meaning on well-being when searching for meaning, and to examine whether the inverse relationship between search and presence was alleviated by having strong well-being.

Chapter Four reported an examination of associations among presence of meaning, search for meaning, and negative well-being outcomes. Again, the aim was to extend the findings obtained from correlational research showing a positive relationship between search and negative well-being and a negative relationship between presence and negative well-being by examining them longitudinally and at different life stages. The chapter included an investigation of the buffering effect of presence of meaning on the relationship between search for meaning and negative well-being longitudinally, as well as an examination of whether the relationship between rumination and depression was exacerbated by searching for meaning.

The intention of Chapter Five was to examine what kind of influence personality factors have on search for meaning, presence of meaning, and well-being outcomes. The chapter investigated whether possessing hope and grit might facilitate the process of searching for meaning leading to its attainment, and whether they might be protective against negative well-being outcomes when one searches for meaning.

Chapter Six identified the sources from which people derive a sense of meaning: the intention was to identify which sources were mentioned as being of greatest importance and whether certain sources were more valued at different stages in life. Additionally, the chapter assessed whether gender and level of education exerted an influence on the nature of meaning experienced and whether important sources of meaning for different ages, genders, and levels of education were more predictive of positive well-being outcomes.

Chapter Seven endeavoured to investigate whether important sources of meaning would be predictive of positive well-being outcomes, and whether intrinsic sources of meaning (compared to extrinsic sources) would act as buffers against the negative relationships between search for meaning and presence of meaning, and search for meaning and well-being. Additionally I sought to examine whether strong commitment to sources of meaning would be linked with greater presence of meaning and well-being and lower search for meaning. Lastly, I considered whether strong endorsement of a wide variety of sources of meaning would facilitate the search for meaning, leading to its attainment, and alleviate the negative well-being outcomes associated with searching for meaning.

Finally, Chapter Eight is a general discussion of the preceding chapters, and it will draw together all the findings to summarise all of the new knowledge gained. Overall practical implications and limitations of the research will be reviewed, and recommendations for future research will be made.

## CHAPTER TWO

### **The Relationship between Presence of Meaning and Search for Meaning**

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*It is better to have a meaningful life and make a difference than merely to have a long life.*

– Bryan H. McGill

#### Abstract

People are motivated to search for and find meaning, allowing them to unify and make sense of the diverse range of experiences in their life history. There has been considerable empirical examination of possessing meaning in life (eg., Zika & Chamberlain, 1992), however, the process of searching has been under-studied. How these constructs dynamically interact with one another longitudinally has not been explored: this is a focus of the present investigation. The research examined the association between the presence of and search for meaning longitudinally and whether this relationship differed depending on people's age. Participants were 543 community adults (15 to 81 years) who completed measures of presence of and search for meaning five times with intervening three-month intervals. Consistent with previous research, longitudinal analyses showed that as presence declined, searching increased over time. Contrary to intuitive belief, searching did not lead to increased presence over time; increased searching over time predicted a *decrease* in presence. Age predicted change in presence such that younger adults showed an increase in the presence over time, but presence stayed elevated and stable for older adults. Results suggest the importance of a developmental perspective to understanding meaning and purpose in life.

*Keywords:* Presence of meaning, search for meaning, well-being, meaning in life, purpose in life

## Introduction

Humans have an intrinsic inclination to make sense of things, which is suggested to develop out of fascination with the unobservable (Bering, 2003) and a predisposition to draw patterns and connections out of randomness (Heine, Proulx, & Vohs, 2006). This tendency to *make meaning* is seen to serve the function of helping us organise information, events, and values in order to create coherent life paths (Weinstein, Ryan, & Deci, 2012).

Although the presence of meaning has been explored empirically, there is much less research on the role of the related dynamic *search for meaning*. Despite compelling theoretical and empirical justification for examining how these two elements of meaning-making relate to each other over time, little empirical investigation on this topic has occurred. For this reason, the present research examined the relationship between the presence of meaning and search for meaning, adopting a longitudinal and life-span perspective.

## Conceptualisations of Meaning in Life

Frankl's (1963) famously argued that human beings have an inherent will to search for and achieve meaning in life. He also posited that when someone fails to achieve meaningfulness in his or her life, that this ensuing meaninglessness would lead to physical and/or mental illness (Feldman & Snyder, 2005). Since Frankl, numerous theorists have emphasised the importance of finding meaning, and offered diverse perspectives on how people may find, build, or construct meaning in their lives (e.g., Baumeister, 1991; Deci & Ryan, 2000; Yalom, 1980). By comparison to the attention given to the presence of meaning, the assumedly related process of searching for meaning has been relatively neglected. Although Frankl argued that searching for meaning is a primary human motivation, only recently have researchers begun to explore the variable rigorously (e.g., Steger, Kashdan, Sullivan, & Lorentz, 2008). The present investigation sought to extend the literature on meaning in life by examining both presence of meaning and search for meaning in a community-residing sample over the course of 12 months.

## Presence of Meaning and Search for Meaning

Having meaning in one's life seems to be vitally important for people's well-being (e.g., Steger, Frazier, Oishi, & Kaler, 2006; Zika & Chamberlain, 1992). People who report greater meaning in life tend to be more satisfied with their lives, and less anxious, depressed, and less likely to brood or ruminate about their problems and distress (for reviews see Park, 2010; Steger, 2012a; 2012b). Meaning in life also is thought to aid people in responding to changes in life, including the ability to cope with adversity (Reker, 2000).



Less is known about the benefits and costs of searching for meaning and how this relates to identifying and constructing a meaningful life. People vary in their inclination to actively search for meaning, and research has shown that those who search for meaning tend to be curious, exploratory, easily engrossed in situations, and willing to consolidate information into a cohesive life philosophy (Steger et al., 2008; Wong, 2012). Searching for meaning has been viewed both as a healthy element of living, motivating people to pursue new opportunities (Frankl, 1963), as well as an unhealthy element, pointing out the presence of important, unmet needs (Baumeister, 1991).

Although searching for meaning is a good idea theoretically, empirical research has found that searching for meaning is related to reduced life satisfaction and greater depressive symptoms (Park, Park, & Peterson, 2010). Presence of meaning and search for meaning fit well with King and Hicks' (2009) conceptualisation of meaning comprising two aspects: instinctive detection of meaning within experiences, and more effortful construction of meaning, often derived from coping with negative life events. King and Hicks describe that the relation between presence and positive well-being outcomes, and search and its association with negative outcomes: "when things are going well, meaning likely springs from what we know to be true...when things are going poorly, meaning is more elusive, requiring effortful processing." (King & Hicks, 2009, p. 319).

### **The Relationship between Search for Meaning and Presence of Meaning**

Search for meaning and presence of meaning seem to be related but distinct constructs (Shmotkin & Shrira, 2012). Presence and search share a weak inverse relationship in concurrent datasets (e.g., Steger et al., 2006). Such a relationship suggests that failing to establish meaning is somewhat aversive, and may prompt compensatory strategies to achieve meaning (Markman, Proulx, & Lindberg, 2013). Beyond the linear relationship between the two variables, the interaction of presence of meaning and search for meaning has received attention, based on the assumption that searching for meaning is less likely to reduce well-being when the searcher already feels life is meaningful, rather than meaningless (Steger et al., 2006). A small number of previous studies have supported this idea among specialised and convenience samples (e.g., Cohen & Cairns, 2012; Park, Park, & Peterson, 2010; Steger, Mann, Michels, & Cooper, 2009). No research has examined whether presence of meaning and search for meaning interact with each other to predict later levels of either variable, though, as all previous research has used concurrent survey methods.

Meaning in life is thought to be stable over time, with only slight variations reflecting changes in value and belief systems (Prager, 1996). Research has supported this as search for meaning and presence of meaning exhibited moderate constancy over one year (Steger & Kashdan, 2006). Researchers have also explored whether the relative absence of meaning instigates the search for meaning, or whether the process of searching for meaning leads to its attainment. As little prior research had examined search in relation to presence, Steger and colleagues (2008) aimed to “articulate and evaluate two competing conceptual models of the relation between search and presence” (p. 202). The ‘presence-to-search’ model describes “when people feel their lives have little meaning, or when they lose meaning, they will search for it” (p. 202); this dynamic is best described as a *compensatory model*. In the ‘search-to-presence’ model, seeking meaning leads to the experience of greater meaning (p. 203); this dynamic is best described as an *accretion model*. Steger and colleagues only found support for the compensatory model, however they based their analyses on concurrent data, so it is vital that these models be re-examined with longitudinal data with multiple time points to probe directionality. Another useful way to think about the relationships between presence of meaning and search for meaning is to examine how one moderates the stability of the other. This type of analysis has not yet been conducted, but we expect it would further elucidate the longitudinal relation between search for meaning and presence of meaning.

### **Age and Meaning in Life**

Searching for meaning is seen to be a particularly important task for young adults as they navigate the process of establishing their identity, forming relationships, and creating personal future goals. Because searching is critical to finding out who they are as people, it is suggested that the process of searching may be adaptive for young people. Previous research has indicated that searching for meaning is indeed more frequent among younger compared to older adults (Steger, Oishi, & Kashdan, 2009). However, the search for meaning continues throughout the lifespan, as older adults have been found to still be endeavouring to find meaning in various spheres (Thompson, 1992).

On the other hand, presence of meaning has been found to increase with age (Reker, Peacock, & Wong, 1987; Steger et al., 2009), and older individuals report a stronger established sense of purpose and fulfilment of important life goals relative to younger adults (Pinquart, 2002; Reker, 2005; Van Ransst & Marcoen, 1997). Schnell (2009) found that meaningfulness increased from adolescence until 35, then plateaued until 45, and increased again until 60, where presence of meaning was achieved and sustained. Changes in meaning

over time are thought to be reflective of subtle revisions of personal value and belief systems (Zika & Chamberlain, 1992). The finding that presence increases with age aligns with the assertion that as we become older, our need for meaning increases as fewer demands, such as daily work and achievement of financial stability, affords more focus on, and awareness of, our inner lives (Baum & Stewart, 1990).

Overall, the inclination to search for meaning appears to be greater among younger adults, and presence of meaning generally increases with age. As life circumstances change (e.g., birth of children), some adjustment of meaning is required and experiences are re-evaluated to fit the individual's framework of meaning, thus individuals seem to continue to search for meaning over the lifespan. Research has not yet examined how age might influence the relationship between search for meaning and attainment of meaning; thus this is a pertinent issue for the present research.

### **Goals of the Present Study**

First, the study examined whether presence of meaning and search for meaning were reasonably stable over one year's time across five assessment periods. Using latent growth curve modelling with five assessment periods, the study expected that presence of meaning and search for meaning would be reasonably stable (Hypothesis 1).

The investigation also considered the association between the presence of meaning and search for meaning over this assessment period. It sought to confirm findings from previous research that found an inverse relationship between search for meaning and presence of meaning (Steger & Kashdan, 2006; Steger et al., 2008), and, further, a longitudinal design was used to test the presence-to-search and search-to-presence models proposed by Steger and colleagues (2008). Since Steger et al. (2008; and also Steger, 2013) only found support for the presence-to-search (compensatory) model, it was anticipated that this model would be supported, whereas the search-to-presence (accretion) model would *not* be (Hypothesis 2).

Longitudinal moderation analyses were used to examine how stability of each construct depended upon the level of the other construct. As this question has not been considered before, there is an absence of previous research in which to ground a hypothesis. Extrapolating from the findings in previous research, that the compensatory model was supported with depleted presence predicting an increase in search (Steger et al., 2008), it was expected to find the greatest stability of search for meaning under conditions of low presence of meaning, and the greatest stability of presence of meaning under conditions of low search for meaning (Hypothesis 3).

Next, the research explored whether mean levels of these two aspects of meaning, and their association, varied by age (or developmental period). The research aimed to replicate previous research which found that older individuals tend to report higher presence of meaning, whereas younger individuals have previously been found to report higher search for meaning. It was anticipated that reports of search for meaning would be significantly greater in younger age groups, and reports of presence of meaning would be significantly greater in older individuals. With increasing age, presence of meaning was expected to increase and search for meaning was expected to decline over time (Hypothesis 4).

Finally, this study examined whether developmental age exerted an influence on the relation between search for meaning and presence of meaning. In the absence of previous research, it was hypothesised that searching for meaning would be more positively related to attainment of meaning among older individuals as they may search for meaning more effectively due to experience doing so over the lifespan (Hypothesis 5).

## **Method**

### **Participants**

Participants in this study were 543 individuals from the International Well-Being Study (IWS). The sample comprised 455 women and 88 men, encompassing an age range from 15 to 81 years old ( $M = 41.69$  years;  $SD = 13.93$ ). A majority of individuals, 48.6%, was from New Zealand, 19.7% were from the United States, and 9.6% were from Australia. Participants spoke a total of 12 languages, with English being the most common at 89.9%.

The final sample,  $N = 543$ , were participants who completed the on-line survey at all five time points at three month intervals across the course of a year. These individuals came from six different cohorts with intakes every three months between March 2009 and June 2010. A MANOVA was computed with cohort as the independent variable, and no significant differences between the variables used in this study were found. On this basis, systematic bias due to time of assessment or time of recruitment can be ruled out. The data were combined in order to align the five assessments for the various cohorts.

### **Measures**

**Meaning in Life Questionnaire.**<sup>1</sup> The Meaning in Life Questionnaire (MLQ; Steger et al., 2006) is a 10-item measure which taps into the related constructs of presence of meaning and search for meaning. Example questions from the presence subscale are “I understand my life’s meaning” and “I have a good sense of what makes my life meaningful.”

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<sup>1</sup> See Appendix A for the Meaning in Life Questionnaire (MLQ; Steger et al., 2006).

Items from the search subscale include “I am searching for meaning in my life” and “I am always looking to find my life’s purpose.” Responses are measured on a 7-point Likert scale ranging from 1 (*absolutely untrue*) to 7 (*absolutely true*).

Convergent and discriminant validity of the MLQ presence and search subscales have been shown in multiple studies (e.g., Steger et al., 2006; 2008), and the factor structure has been replicated in college, community, and cross-national samples (e.g., Kiang & Fuligni, 2010; Steger & Frazier, 2005; Steger & Shin, 2010). In the present sample, the alpha coefficients fell above .91 for both subscales (Presence:  $\alpha$ s = .91 to .93; and Search:  $\alpha$ s = .91 to .94 over the five times of measurement).

### **Procedure**

Individuals were recruited through online and print advertisements by the research collaborators of the IWS. Participation in the research was voluntary and respondents were able to withdraw from the study at any point in the process. Ethical approval for the research was gained from The Open Polytechnic of New Zealand Human Research Ethics Committee. Participants completed the half hour survey online on the website SurveyMonkey. They were sent an e-mail every three months following the first assessment to encourage participation in subsequent assessments, until all five time points had been completed.

## **Results**

### **Descriptive Statistics**

Descriptive statistics for presence of meaning and search for meaning at the five time points are shown in Table 2.1, along with correlations among presence of meaning and search for meaning at the different time points. The pattern indicates a weak inverse relationship between search for meaning and presence of meaning at each time interval.

### **Did Search and Presence Remain Stable Over Time?**

Latent growth curve modelling (LGCM; Duncan & Duncan, 2004) was employed to explore the longitudinal trajectories of presence of meaning and search for meaning over time. In order to test Hypothesis 1 (H1), that presence and search would remain stable over time, unconditional growth models of presence of meaning and search for meaning were constructed to examine stability across the course of a year. This method of analysis first estimates the intercept of a given variable, which is usually the mean score at the first time point. Second, LGCM estimates the linear slope of the variable, which is the mean of all individuals’ trajectories across time, derived from multiple time points. The possibility of

Table 2.1

*Descriptive statistics and correlation coefficients among presence of meaning and search for meaning at five time points with three month intervals*

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10
1.Time 1 MLQ-Presence	25.35	6.67										
2.Time 1 MLQ- Search	20.59	8.14	-.13**									
3.Time 2 MLQ-Presence	25.54	6.68	.80**	-.13**								
4.Time 2 MLQ-Search	20.46	8.19	-.11*	.76**	-.14**							
5.Time 3 MLQ-Presence	25.34	6.90	.78**	-.13**	.83**	-.15**						
6.Time 3 MLQ-Search	19.95	8.13	-.09*	.73**	-.11*	.75**	-.14**					
7.Time 4 MLQ-Presence	25.74	7.06	.78**	-.10*	.83**	-.12**	.84**	-.13**				
8.Time 4 MLQ-Search	19.64	8.38	-.11*	.69**	-.15**	.75**	-.17**	.79**	-.14**			
9.Time 5 MLQ-Presence	25.59	6.94	.75**	-.11*	.78**	-.12**	.82**	-.12**	.84**	-.13**		
10.Time 5 MLQ-Search	19.30	8.50	-.12**	.69**	-.15**	.78**	-.18**	.78**	-.15**	.81**	-.16**	

\*\*  $p < .01$ , \*  $p < .05$ .

*Note.* MLQ-Presence = Meaning in Life Questionnaire-Presence; MLQ-Search = Meaning in Life Questionnaire-Search.

non-linear change was investigated, however, when quadratic and cubic slope terms were added to the models, they did not converge, nor improve model fit.

Fit indices for the unconditional linear models for presence of meaning and search for meaning indicated good model fit (see Table 2.2). The mean intercepts for presence of meaning and search for meaning possessed significant variance, reflecting meaningful variation among individuals' time one (T1) scores. The slope for search for meaning was statistically significant, reflecting a slight decline in search for meaning over the course of twelve months. The slope for presence of meaning was non-significant, suggesting reasonable stability over time. Significant variance was noted for both slopes, reflecting variation in the rate of change of the two constructs between individuals. The results provide partial support for H1 as presence was stable over time, whereas search declined over a year.

### **How Were Presence and Search Related Over Time?**

The two linear unconditional LGCM models for presence of meaning and search for meaning were combined into a parallel process LGCM (Duncan & Duncan, 2004) to probe H2, that there would be an inverse relationship between search and presence with a decline in presence instigating an increase in search. Two parallel process models were examined to investigate two possible directions, from search to presence, and from presence to search. The two models fit the data well (see Table 2.3). The intercept to intercept coefficient,  $\beta = -.15$ , suggests that individuals who reported higher T1 presence of meaning also reported lower T1 search for meaning, i.e., an inverse relationship based on concurrent measurements. A more telling analysis was whether change in search for meaning over time predicted a change in presence of meaning over the course of a year. As shown in Table 2.3, the slope to slope coefficient,  $\beta = -.33$ , indicates that a decline in presence led to an increase in search over time (and vice versa), consistent with the compensatory model and providing support for H2.

### **Did Presence and Search Moderate the Stability of Each Other Over Time?**

Another way to examine how presence and search are related to each other over time is to examine whether (and how) one aspect of meaning moderates the test-retest reliability of the other over time. In H3 it was predicted that the greatest stability of search for meaning would occur under conditions of low initial presence of meaning, and that the greatest stability of presence of meaning would occur under conditions of low initial search for meaning. In the first regression, T1 search for meaning was found to be a significant moderator of the relationship between T1 and T2 presence of meaning ( $\beta = .05, p < .05$ ).

Table 2.2

*Unconditional latent growth models of presence of meaning and search for meaning*

Variable	Factor mean	SE	Factor variance	SE	R of intercept and slope	Model fit
MLQ-P						
Intercept	5.075***	.055	1.467***	.101	-.032	$\chi^2$ (14) = 23.361; CFI = .997; RMSEA = .035
Slope	.014	.010	.017***	.003		
MLQ-S						
Intercept	4.133***	.066	2.018***	.145	-.081	$\chi^2$ (14) = 29.311*; CFI = .993; RMSEA = .045
Slope	-.068***	.013	.035***	.035		

\*\*\*  $p < .001$ , \*  $p < .05$ .

*Note.* MLQ-P = Meaning in Life Questionnaire-Presence; MLQ-S = Meaning in Life Questionnaire-Search. RMSEA = root mean square error of approximation; CFI = comparative fit index.



Table 2.3

*Parallel process latent growth models of presence of meaning and search for meaning*

Predictor Variable	Predicted Variable	$\beta$	SE	Model fit
MLQ-P	MLQ-S			
Intercept	Intercept	-.154**	.055	$\chi^2 (43) = 71.161^*$ ; CFI = .995; RMSEA = .035
	Slope	-.034	.012	
Slope	Slope	-.332**	.010	
MLQ-S	MLQ-P			
Intercept	Intercept	-.158***	.041	$\chi^2 (43) = 71.161^*$ ; CFI = .995; RMSEA = .035
	Slope	.011	.007	
Slope	Slope	-.330**	.088	

\*\*\*  $p < .001$ , \*\*  $p < .01$ , \*  $p < .05$ .

*Note.* MLQ-P = Meaning in Life Questionnaire-Presence; MLQ-S = Meaning in Life Questionnaire-Search. RMSEA = root mean square error of approximation; CFI = comparative fit index.

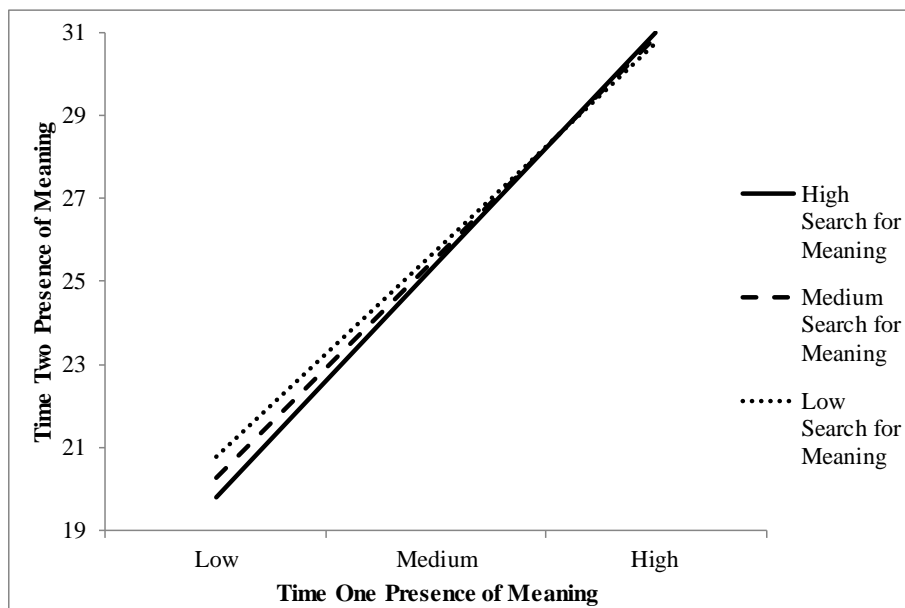


Figure 2.1. Moderation by time one search for meaning on the stability from time one to time two of presence of meaning.

Figure 2.1 graphically depicts the interaction, which shows that the greatest stability of presence over time occurred under conditions of *high* search. This pattern was inconsistent with H3 as it was expected that the most stable presence would occur when search was low; however, this result suggests that search for meaning plays a role in fostering continued presence of meaning over time. Moderation tests for other time points were non-significant.

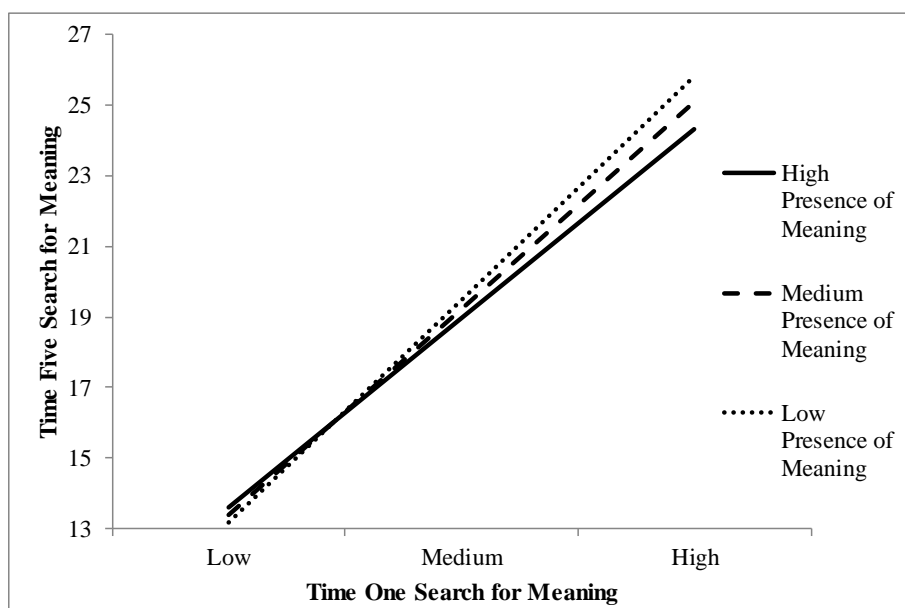


Figure 2.2. Moderation by time one presence of meaning on the stability from time one to time five of search for meaning.

In the second regression, T1 presence of meaning moderated the stability relationships between T1 search for meaning and search for meaning at all subsequent time points (T2, T3, T4, and T5). Residualised search was significantly moderated by presence for all four time periods in the same pattern ( $\beta = -.08$  to  $-.10$ ,  $ps < .05$ ). Figure 2.2 shows the greatest stability of search for meaning over time occurred under conditions of low presence, consistent with H3. This result suggests that individuals reporting lower presence of meaning continued to search for meaning at a high rate, whereas individuals reporting moderate to high presence had less need to keep searching for meaning over time. Thus, H3 was partially supported as the greatest stability of presence occurred under conditions of *high* search, and the greatest stability of search occurred under conditions of low presence.

### Presence of Meaning and Search for Meaning Across the Lifespan

**Did younger adults report higher search and older adults higher presence?** To examine H4, how presence of meaning and search for meaning varied across the life span, a 2 (search for meaning vs. presence of meaning)  $\times$  4 (age group: 18 to 24, 25 to 44, 45 to 64, 65+) multivariate analysis of variance (MANOVA) was performed. Notably, the mean scores for presence of meaning across the lifespan were greater than the mid-point of the scale (17.5), indicating that most individuals experienced a moderate sense of meaning in their lives. Search for meaning mean scores were also above the mid-point (17.5) suggesting that participants were also looking for meaning to a moderate extent (see Figure 2.3).

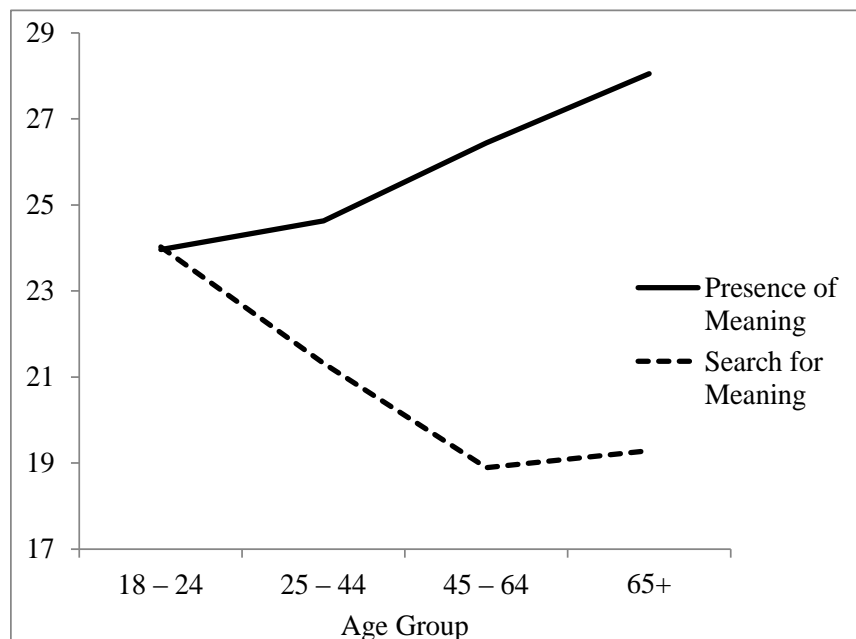


Figure 2.3. Mean group differences between age groups in presence of meaning and search for meaning.

The MANOVA yielded significant main effects of age for presence of meaning ( $F(3, 534) = 5.57, p < .001$ ) and search for meaning ( $F(3, 534) = 6.77, p < .001$ ). A post-hoc Tukey test revealed that presence of meaning was higher among individuals over 65 years than those 18 to 24 years and those 25 to 44 years. While presence of meaning was significantly higher for individuals 45 to 64 years than those in the 25 to 44 year range, it was not significantly different from the oldest group. In contrast, search for meaning was higher in the youngest age group, 18 to 24 years, than those who were 45 to 64 years and those over 65 years. Those in the 25 to 44 years range reported significantly higher search for meaning than those who were 45 to 64 years, but their mean did not differ significantly from the other two groups' means (see Table 2.4). These findings provide support for H4, as presence of meaning was higher for older adults, and search for meaning was higher for their younger counterparts.

Table 2.4

*Means and comparisons of presence of meaning and search for meaning for four age groups*

	1	2	3	4
MLQ-P	23.96 (5.38)	24.63 (6.41)	26.44 (7.02)	28.05 (6.24)
MLQ-S	24.02 (7.88)	21.32 (7.65)	18.89 (8.51)	19.29 (7.98)
	Comparison	Mean Difference	SE	
MLQ-P	1 versus 2	-.68	1.02	
	1 versus 3	-2.48	1.06	
	1 versus 4	4.09*	1.39	
	2 versus 3	-1.80*	0.63	
	2 versus 4	-3.41*	1.09	
	3 versus 4	-1.61	1.13	
MLQ-S	1 versus 2	2.70	1.25	
	1 versus 3	5.13*	1.30	
	1 versus 4	4.73*	1.70	
	2 versus 3	2.44*	.77	
	2 versus 4	2.03	1.34	
	3 versus 4	-.41	1.38	

*Note.* MLQ-P = Meaning in Life Questionnaire-Presence; MLQ-S = Meaning in Life Questionnaire-Search. Age groups: 1 = 18 to 24 years, 2 = 25 to 44 years, 3 = 45 to 64 years, 4 = 65+ years.

Table 2.5

*Conditional latent growth models of presence of meaning and search for meaning*

Predictor Variable	Predicted Variable	$\beta$	SE	Model fit
Age	MLQ-S			
	Intercept	-.218***	.005	$\chi^2 (11) = 22.872^*$ ; CFI = .995; RMSEA = .045
	Slope	.095	.001	
	MLQ-P			
	Intercept	.259***	.004	$\chi^2 (11) = 15.465$ ; CFI = .998; RMSEA = .027
	Slope	-.168*	.001	

\*\*\*  $p < .001$ , \*  $p < .05$ .

*Note.* MLQ-P = Meaning in Life Questionnaire-Presence; MLQ-S = Meaning in Life Questionnaire-Search. RMSEA = root mean square error of approximation; CFI = comparative fit index.

**Did age predict change in presence and search?** Conditional LGCM models were constructed with age predicting the intercepts and slopes of search for meaning and presence of meaning. Fit indices indicated that models for presence of meaning and search for meaning fit the data well (see Table 2.5). Age significantly predicted the intercepts of search for meaning and presence of meaning, with younger adults reporting higher search for meaning, whereas their older counterparts reported higher presence of meaning (consistent with the means reported in Table 2.4). These results provide support for H4, namely that older adults would report higher presence of meaning and younger adults would report higher search for meaning. In addition, age significantly predicted change in presence of meaning: younger people reported an increase over time, whereas the trajectories for older adults were essentially flat (see Figure 2.4). The trajectories for search for meaning did not vary by age. These results partially support H4 as age predicted an increase in presence over a year but not a decrease in search. These findings suggest that older people have a fairly established, consolidated sense of meaning, whereas younger people are still acquiring a stable sense of meaning.

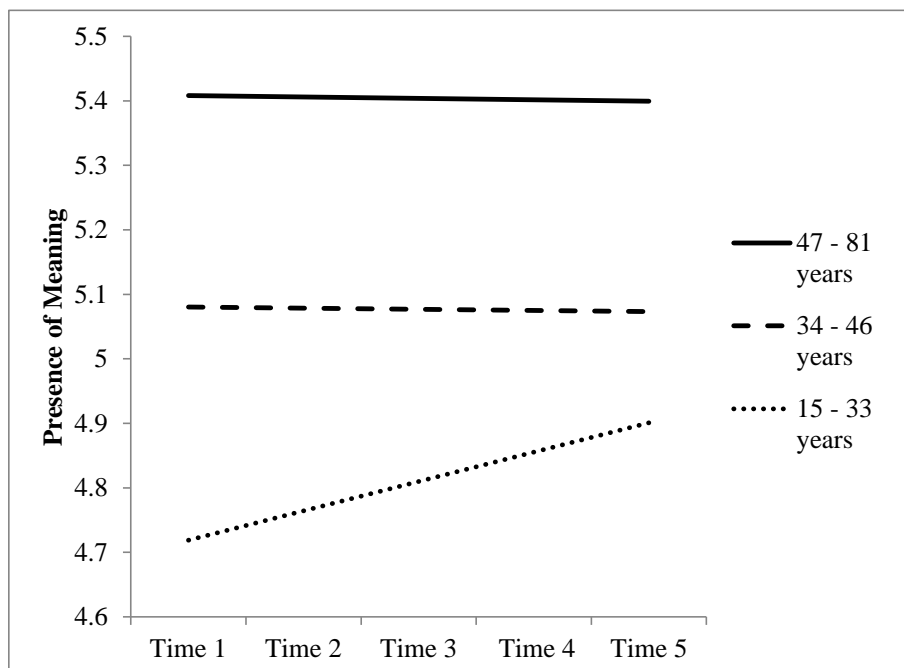


Figure 2.4. Change in presence of meaning over twelve months by age group.

**Did age moderate the relation between search and presence?** Residualised regression analyses were computed to examine whether age moderated the relationships from

search to presence and presence to search. Age was not a significant moderator of the relationships between any time points from three months to one year.

### Discussion

Most of what we know about meaning in life has been derived from cross-sectional empirical or laboratory studies (King, Hicks, Krull, & Del Gaiso, 2006; Markman, Proulx, & Lindberg, 2013; Park, 2010; Wong, 2012). The chief aim here was to examine the relationship between the distinct, yet related, constructs of search for meaning and presence of meaning, with a focus on how age and time impacted this relationship across five measurement occasions over a one-year span. The main take-home message of the findings reported here is that presence of meaning and search for meaning influenced each other over time, and the mean scores and trajectories of these constructs differed as a function of people's age.

Steger and Kashdan (2006) found "moderate stability" with a two assessment point design over one year. The present findings, obtained from a larger sample involving five assessment points, are in essential agreement with this previous finding in that presence of meaning did not change significantly over the span of a year and the search for meaning declined slightly over one year (slope =  $-.07$ ). But more interesting than these main effects is the synergy between the presence of and search for meaning. Adults endorsing higher initial levels of meaning endorsed a lower search for meaning (and vice versa), findings consistent with prior cross-sectional research (Steger & Kashdan, 2006; Steger et al., 2006). As predicted, there was support for a compensatory model (Steger et al., 2008) in that diminishing presence of meaning predicted an increase in the search for meaning over a year. The manner in which these two constructs predicted each another is suggestive of a negative feedback cycle (Heylighen & Joslyn, 2001), with increases in one corresponding to a reduction in the other. This dynamic process offers insight as to when the search for meaning is instigated and pursued. In this study, searching for meaning was found to be triggered by the recognition of the absence of meaning in life, a temporal relationship that can only be studied with multiple time points of data.

A new technique of data analysis, i.e., longitudinal moderation, was used to more fully understand the relationship between these two constructs, and that the greatest stability of presence over time occurred under conditions of high search, suggesting that search played an important role in the sustainability of possessing meaning in life. Although there was no evidence that searching for meaning preceded greater presence of meaning, this moderation finding suggests that continuing to search for meaning actually helps to *maintain* the sense

that one's life is meaningful. On the basis of this finding a *maintenance model* is proposed in order to explain how levels of meaning are sustained over time. In essence, a person who maintains a high level of meaning seems to be one who is appreciative of his/her existing sources of meaning while simultaneously seeking opportunities to identify and explore new sources of meaning (Steger et al., 2008; 2012a). On the other hand, the greatest stability of search for meaning occurred under conditions of low presence of meaning, which makes sense as individuals reporting low presence are probably motivated to continue to search until they build and consolidate their meaning system (King & Hicks, 2009). If meaning becomes diminished, individuals are motivated to search for meaning in a compensatory manner; and if meaning is already established to a reasonable degree, continuing to search for meaning aids in maintaining presence of meaning at a stable level over time.

In addition to the passage of time, age was found to be important to understanding the dynamics of both the presence of and search for meaning in life. Consistent with prior research (Reker, 2005; Reker, Peacock, & Wong, 1987; Van Ransst & Marcoen, 1997), older adults reported greater presence of meaning than their younger counterparts, and search for meaning was highest in the youngest group. It is noteworthy that adults who reported the lowest amount of search were those aged 45 to 64 years and those aged 65+ years; the declining trajectory plateaued in middle age and search remained low in the oldest adults.

Importantly, younger adults reported an increase in presence of meaning over a year, whereas older people manifested a stable trajectory over time. While cross-sectional research has found that presence of meaning tends to be higher in older age (e.g., Reker et al., 1987; Schnell, 2009), no investigation has looked at when the accumulation of meaning occurs. Accordingly, the finding that young adults report an increase in presence over a year, whereas their older counterparts do not, offers new insights into how meaning functions across the lifespan. Contrary to expectation, age did not predict longitudinal change in the search for meaning. Some alignment between this finding and Steger and colleagues' (2009) research should be noted, in that they found that all age groups seemed to be engaged in searching for meaning. The authors proposed that perhaps later adulthood was a more complex life-stage than previously experienced, requiring greater re-evaluation of meaning. Regardless of age, the majority of individuals in this study seemed to be meaning-makers by nature (Frankl, 1963; Heine et al., 2006). Given that life is characterised by change, it is reasonable to suppose that human beings constantly re-evaluate and search for meaning through our lives.

A further expectation, that age would moderate the longitudinal relationships between search and presence, was not supported. It appears that people do not get any better at



searching for meaning and thus having it lead to attainment of meaning over time. This suggests that it may be other variables which assist with the process of searching for meaning efficiently so as to accomplish meaning in life, for example personality characteristics to facilitate effective searching.

Although this research has made contributions to the field with a longitudinal extension of previous research, it is not without limitations. The sample comprised predominantly female, English-speaking individuals. The findings might not be easily generalisable to male non-Western populations. The constructs of search and presence may manifest differently across other cultures than what has been found here, and future research would do well to examine how culture moderates the relationships noted here (cf., Steger, Kawabata, Shimai, & Otake, 2008). The current work was tied to the MLQ measure and future work would benefit from additional measures that go beyond the interpretative problems of global self-report scales (e.g., Reker, 2005). At present we do not know what ‘meaning’ means to individuals responding to items on the MLQ measure. Assessment approaches that target particular domains in which individuals possess or search for meaning (e.g., Schnell, 2009) and unobtrusive behavioural measures would be invaluable.

Several future research directions can be listed. First, it would be important to replicate the current findings, especially the longitudinal contributions, to cement their reliability. Although presence of meaning has been relatively carefully explored, additional investigation on search for meaning is still required to identify its nuances and functions in various social and non-social contexts. Despite a modest decline in searching over time and with age, everyone engages in some level of searching for meaning and it would be important to explore variations in the ways that searching is manifested by assessing specific ways in which people search. For example, older people probably search for meaning in different spheres compared to their younger counterparts (e.g., family ties versus training for a career). Additionally, while everyone appears to search for meaning, the process does not seem to reliably lead to significantly greater attainment of meaning; future endeavours should explore what other purposes it serves, including differential reward responsiveness to the search and discovery of meaning in terms of ease of generating positive experiences and their intensity, arousal, and duration. Future research also needs to explore the longitudinal relations between both presence of meaning and search for meaning and various indicators of well-being, as this research will provide further insight into the distinct profiles of people who live a happy, meaningful life as compared to those who report that they are unhappy and unfulfilled (McKnight & Kashdan, 2009).

In conclusion, the findings provide clarity about the dynamic nature of how searching for meaning in life operates in conjunction with the recognition that there is ample meaning in one's life. It seems that presence of meaning remained fairly stable over time and was endorsed to a greater extent by older adults; in contrast, younger adults reported a trajectory of increasingly greater presence of meaning over time. Search for meaning did not possess the same stability in that it showed a modest decline over a one year time period. Searching for meaning seemed to be a remarkably challenging task because the achievement of a greater sense of meaning did not seem to naturally result from searching efforts. This synergy between search and presence might offer a new perspective on evidence suggesting that younger adults are more likely to search for meaning and yet experience higher levels of stress and emotional disturbances compared to their older counterparts. Despite the deficits consistently linked to the search for meaning (Cohen & Cairns, 2012; Park et al., 2010), the results showed that searching appears to be an essential process for sustaining one's sense of meaning in life.

## Bridging Comment

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Chapter Two endeavoured to untangle the complex relationship between search for meaning and presence of meaning, as although these constructs are thought to be linked, research examining this association has been scarce. The chapter made a contribution to the existing literature with its longitudinal findings as most existing research on this topic is based on cross-sectional data. Overall, the findings indicated that although searching for meaning is a difficult task in life, it is one we all embark on, it does not appear in most cases to lead to attainment of meaning in life directly. Interestingly, however, high search for meaning does aid in *maintaining* a sense of meaningfulness in life highlighting that searching for meaning does have an important role.

This chapter focused solely on the constructs of search for meaning and presence of meaning. The next several chapters examine how search and presence are related to various outcomes. Research has indicated that presence is positively related to well-being outcomes such as happiness and life satisfaction, whereas search shares an inverse relationship with these outcomes. However, there is scope to explore how these two variables are related longitudinally. Further, it would be advantageous to examine whether searching for meaning might be more likely to precede attainment of meaning as a function of different levels of other variables, for example, happiness and life satisfaction. The subsequent section, Chapter Three, will explore these questions in order to clarify the relationships between search for meaning, presence of meaning, and indicators of positive well-being further.

## CHAPTER THREE

### Presence of Meaning, Search for Meaning, and Positive Well-Being

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*This is our purpose: to make as meaningful as possible this life that has been bestowed upon us; to live in such a way that we may be proud of ourselves; to act in such a way that some part of us lives on.*

– Oswald Spengler

#### Abstract

Meaning in life is essential for well-being. This research examined why searching for meaning is negatively related to well-being and how both presence and search relate to well-being over time. Self-report data were obtained from a community sample of 543 individuals (15 to 81 years), who completed measures of search, presence, subjective happiness, and life satisfaction five times at three-monthly intervals. Presence positively predicted happiness and life satisfaction and search negatively predicted happiness longitudinally. Presence predicted increased happiness and life satisfaction over time for older adults, but not for younger adults. Search manifested stronger negative relationships with life satisfaction and happiness when individuals reported low presence. Most important, when life satisfaction was very high, searching predicted *an increase* in presence of meaning longitudinally. New findings are: 1) the longitudinal relationships between meaning and well-being, and 2) that searching was found to be related to presence and positive well-being in some circumstances.

**Keywords:** Presence of meaning, search for meaning, happiness, life satisfaction, age, time.

## Introduction

Many thinkers and writers have speculated about meaning in life, especially within the disciplines of philosophy and psychology; however, a definitive understanding of the construct remains elusive (Feldman & Snyder, 2005). Despite this lack of clarity, it is evident that making meaning in one's life is a uniquely human process which brings a sense of stability to existence (Baumeister & Vohs, 2002), helps us to shape a coherent life path (Weinstein, Ryan, & Deci, 2012), and lays a foundation for understanding new experiences (Steger, 2009). Its importance cannot be overstated: Frankl (1963) averred that all individuals have an inherent will to search for meaning in their lives and if not obtained, one is likely to feel existential emptiness.

This article will briefly mention the philosophical underpinnings of meaning in life before reviewing the psychological literature on meaning and well-being. It will highlight how, although progress has been made in the field, we must endeavour to gain greater understanding of the complexities in *how* meaning in life is related to well-being and, establish how these relationships unfold over time. A self-report measure of meaning, the Meaning in Life Questionnaire (Steger, Frazier, Oishi, & Kaler, 2006), will be used with a community sample of adults to examine the mechanisms of how presence of meaning and search for meaning relate to happiness and life satisfaction concurrently and longitudinally.

## Meaning of Life

Philosophers have long contemplated the broad question “what is the meaning of life” so as to understand the purpose of human existence (Joske, 1974). The question of what constitutes a meaningful life was first considered by the philosopher Aristotle, who proposed the concept of eudaimonia with the phrase “the good life”: if one lives life according to one's true self, one can achieve meaningful outcomes such as excellence, virtue, and self-realisation (Waterman et al., 2010). A related but contrasting dynamic is hedonia, first proposed by Aristuppus, which is centred on the notion of maximising one's experience of pleasure (Shmotkin & Shrira, 2012). How eudaimonia and hedonia are related to each other is still being discussed and investigated to this day.

Existential philosophers have proposed that the life-long search for meaning is quintessentially human and motivated by a need to integrate all aspects of life into a meaningful framework of relationships (Heine, Proulx, & Vohs, 2006). Although existentialist philosophers were also concerned with discovering an ultimate, objective meaning of life, they also acknowledged the importance of the subjective human experience of meaning in one's life (Tillich, 1944). The existentialist approach allows for the key ideas

of ancient philosophy to be examined within the context of modern psychological explorations of meaning in life.

### **The Good Life in Psychology**

Philosophical inquiry aims to ascertain an overarching meaning of human existence, but as this construct is not amenable to empirical investigations and scientific study, psychologists take a different tack and instead explore *meaning in life*, i.e., the more subjective and individual experience of what makes life worth living (Hicks & King, 2009). These investigations largely focus on individuals' efforts to maximise eudaimonia and hedonia in their lives.

Contemporary psychological interpretations of the relationship between eudaimonia and hedonia are varied. For example, some theorists have viewed these constructs as quite separate, with eudaimonia acting as a predictor and hedonia, or happiness, being an outcome or consequence (Huta & Ryan, 2009). Similarly, Delle Fave and associates (2010) have argued that achievement of meaning in life and happiness are separable dynamics, occurring in different realms of life. Alternatively, and in contrast, it has been asserted that the two constructs actually have many shared characteristics and overlap significantly (e.g., Deci & Ryan, 2008; Kashdan, Biswas-Diener, & King, 2008). This perspective asserts that placing importance on striving to achieve and realising one's potential is likely to result in both eudaimonic and hedonic enjoyment (Waterman, Schwartz, & Conti, 2006). Increasingly, these two concepts are viewed as significantly related, with both eudaimonic and hedonic motives posited to be vital for a happy, good life (Henderson & Knight, 2012; Schmotkin & Shrira, 2012). For example, King and Napa (1998) have argued that meaning is a crucial part of subjective well-being, which was previously conceptualised as being primarily based on pleasure and positive affect (for a review of the eudaimonia and hedonia literature, see Deci & Ryan, 2008).

The study of meaning in life in recent times has drawn quite heavily on eudaimonia because of its focus on well-being achieved through flourishing and recognition of true potential (Steger, 2012a). A plethora of theoretical approaches to the study of meaning exist; however, they have not been sufficiently integrated with an over-arching framework (Steger, 2012a). A proper review of such a large literature is not feasible here, instead the aim is to describe how various theories of meaning in life might be grouped before moving on to describe the framework which has informed the present research.

Existential psychologists argued that finding meaning in life was a vital goal; in fact Frankl (1967) described that human beings have an inherent will to search for meaning.

Further, he asserted that if individuals were unsuccessful in find meaning, meaninglessness would result. Steger and colleagues (2006) describe that the majority of theoretical explanations of meaning have excluded this essential process of searching for meaning. Consequently, the theories described below focus on *experience of having* meaning.

Steger (2012a) described how meaning in life theories tend to have a motivational component and a cognitive component: the cognitive dimension refers to having an understanding or framework with which to make sense of our human experience in order to achieve meaning; and the motivational dimension is reflective of knowledge of the purpose of life and what one hopes to achieve. An example of a theory with a motivational basis is Baumeister's (1991) proposal that humans have a need for meaning in terms of purpose, efficacy, value, and self-worth, and that when one strives toward personal goals, a sense of purpose is achieved. Emmons (2005) also espouses a motivational focus in his conceptualisation of possessing meaning in life insofar as goals become both the mechanism through which one is motivated to find meaning and the measurement of its achievement.

Battista and Almond's (1973) multidimensional model stipulated that a sense of meaning in one's life provides an explanatory mechanism with which to make sense of events and the context within which to judge that life goals were being fulfilled. In a similar way, Reker and Wong (1988) proposed that meaning derives from a belief system that individuals use to understand life experiences and to create values and goals for how to live one's life. Feelings of satisfaction and fulfilment accrue if this meaning is realised.

Steger and colleagues' (2006) theory has proposed a two-pronged approach to assessing meaning in life: 1) *presence of meaning* is evident when people perceive significance in their lives, and 2) that individuals endeavour to *search for meaning* in their lives. Steger's conceptualisation was adopted as the theoretical foundation for the present research efforts; one of its particular strengths is that it acknowledges the central importance of searching for meaning, as originally posited by Frankl. Search for meaning and presence of meaning have been found to be moderately stable constructs with a small inverse relationship (Steger & Kashdan, 2006). Research has shown that when one's meaning is depleted, search for meaning increases in a compensatory manner (Steger et al., 2008); a finding which has been found longitudinally over a period of a year (Grouden, Jose, & IWS Research Team, 2013a). The intuitive idea that searching for meaning will in turn lead to greater presence of meaning over time in an accretion model has not been supported in research (Grouden et al., 2013a; Steger & Kashdan, 2006; Steger et al., 2008), however searching has been found to maintain presence of meaning (Grouden et al., 2013a). Further exploration is warranted in

order to see whether the accretion model may in fact operate under certain conditions such as greater well-being.

### **Meaning and Well-Being**

Meaning in life seems to be important for well-being, though there is still much to be learned about how it influences psychological wellness (Savolaine & Granello, 2002). Happiness and life satisfaction, the two aspects of well-being investigated here, are both important components of subjective well-being; they encompass both individuals' cognitive and affective appraisals of their lives (Diener, 2000). Subjective well-being has been defined as including: a) pleasant affect, for example joy and happiness; b) lack of unpleasant affect, such as stress and sadness; and c) life satisfaction (Diener, Suh, Lucas, & Smith, 1999). In recent empirical studies, happiness is defined subjectively as the state of having high positive affect and life satisfaction and low negative affect, the same components as subjective well-being (Lyubomirsky, Sheldon, & Schkade, 2005). The construct of life satisfaction is also measured subjectively: an individual makes a cognitive judgment of how satisfied they are with their life (Pavot & Diener, 1993). One way of evaluating one's life as being satisfying is through living a meaningful existence (Peterson, Park, & Seligman, 2005).

### **Meaning and Happiness**

Research has consistently found that possessing meaning in life is positively related to happiness (e.g., Cohen & Cairns, 2011; Park, Park, & Peterson, 2010; Reker, Peacock, & Wong, 1987; Steger, Oishi, & Kashdan, 2009; Zika & Chaimberlain, 1992). While, presence of meaning is strongly linked to positive outcomes such as happiness, search for meaning typically manifests a weak negative relationship with happiness (Cohen & Cairns, 2011; Park et al., 2010). This pattern has been found to be pervasive as it is seen in all age groups; however, the strength of the negative relationship between search for meaning and happiness seems to be stronger for older individuals (Steger et al., 2009). It is apparent that the nature of the relationships among these three constructs is complicated. For example, presence of meaning has been found to moderate the relationship between search for meaning and happiness, such that search for meaning has a positive relationship with happiness under conditions of high presence of meaning (Cohen & Cairns, 2011; Park et al., 2010). Thus, it appears that possessing a certain level of meaning acts as a buffer against diminished happiness when individuals are searching for more meaning.

### **Meaning and Life Satisfaction**

A similar story is told when the relationship between meaning in life and life satisfaction is examined, as the two constructs have been found to be positively associated



(e.g., Schnell, 2009; Steger, Oishi, & Kesebir, 2011; Zika & Chaimberlain, 1992). Presence of meaning, again, manifests a strong positive association, whereas search for meaning evidences a weak negative relationship with life satisfaction (Park et al., 2010; Steger & Kashdan, 2006). These correlations have been found across all ages of the adult lifespan, and again, search for meaning was most negatively related to life satisfaction among older people (Steger et al., 2009).

As with happiness, nuances in the relationship between meaning and life satisfaction are evident in the findings from existing studies. First, search for meaning has been found to moderate the relationship between presence of meaning and life satisfaction, such that presence of meaning and life satisfaction are strongly associated among those who were searching, but not in those who were not searching for meaning (Steger et al., 2011). Further, presence of meaning was found to moderate the relationship between life satisfaction and search for meaning: search for meaning was positively related to life satisfaction among those possessing the highest presence of meaning (Park et al., 2010). The authors suggested that having a certain level of sense of meaning enables the search for additional meaning to be a positive process, with existing life satisfaction not compromised.

### **Goals of the Present Study**

While research has generally documented that presence of meaning is positively and search for meaning is negatively related to well-being, there has not yet been a thorough investigation as to *why* they are related in this fashion and *how* these associations are manifested across time. In this vein, Diener (2009) argued that within well-being sciences, “we need a more careful examination of how meaning and purpose relate to various forms of subjective well-being, such as life satisfaction” (p. 270). Consequently, the aim of the current research is to explore with longitudinal data the complex relationships between and among presence of meaning, search for meaning, happiness, and life satisfaction in order to extend and further elucidate existing research findings. Further, this research will employ methods of analysis that are able to illuminate the complex ways that the variables are related over time.

Longitudinal data were used, five times of measurement over one year, to replicate and extend the well-established findings that presence is positively, and search is negatively, associated with happiness (e.g., Cohen & Cairns, 2011; Park et al., 2010) and life satisfaction (e.g., Park et al., 2010; Steger et al., 2009) (Hypothesis 1).

Longitudinal data were also used to replicate and extend Steger and colleagues’ (2009) concurrent research which found that presence of meaning was positively correlated

with well-being at all ages, whereas search for meaning was more strongly negatively correlated with well-being in later life (Hypothesis 2).

The study endeavoured to replicate Park and colleagues' (2010) and Cohen and Cairns' (2011) findings that possessing high presence of meaning when searching for meaning results in greater life satisfaction and happiness respectively. They established this finding with concurrent data and so the present research sought to replicate these findings with longitudinal data and see whether the moderating effect could be seen over time. Further, the data were systematically examined for any non-linear relationships, which have not been investigated before (Hypothesis 3).

The study also aimed to replicate and extend to longitudinal data the Steger and colleagues' (2011) finding that presence of meaning was more strongly related to life satisfaction when individuals exhibited high search for meaning (Hypothesis 4).

To extend the research which found that there is an inverse relationship between search for meaning and presence of meaning (e.g., Steger & Kashdan 2006; Steger et al., 2011), the research sought to examine whether this relationship might be influenced by certain levels of happiness and life satisfaction. It was expected that there would be a stronger positive relationship between search for meaning and presence of meaning under conditions of high happiness or life satisfaction (Hypothesis 5).

## **Method**

### **Participants**

The sample used in the present study constituted 543 individuals (455 females and 88 males). Their ages ranged from 15 to 81 years ( $M = 41.69$  years;  $SD = 13.93$ ). These individuals participated in an international survey, the International Well-Being Study (IWS), and, therefore, hailed from a wide variety of countries, 36 in total. The largest national group were New Zealanders, 48.6%; however, the sample also comprised 19.7% North Americans and 9.6% Australians. Speakers of 12 languages were represented, with English being the most common first language with 89.9%.

The IWS utilised a rolling intake every three months with the first wave occurring in March 2009 and the final one in March 2013. Participants in the present sample were individuals who completed five sequential assessments. The starting dates ranged from March 2009 to June 2010, meaning that participants originated from six cohorts. A MANOVA using cohorts as the independent variable was computed, and it found no significant differences between cohorts' scores on the measures used in the study. The data were combined in such a manner that all the five time points were aligned across cohorts.

## Measures

**Meaning in Life Questionnaire.**<sup>2</sup> The MLQ (Steger et al., 2006) is a 10-item measure with two subscales: presence of meaning and search for meaning. The five items from the presence subscale assess the degree to which individuals perceive that there is significance and purpose in their lives. Items include “I have discovered a satisfying life purpose” and “I understand my life’s meaning” and choices are indicated on a 7-point Likert scale from 1 (*absolutely untrue*) to 7 (*absolutely true*). The remaining five items in the search subscale tap into the extent to which individuals are seeking to create or enhance their meaning in life. Examples of these items are “I am seeking a purpose or a mission for my life”, and “I am looking for something that makes my life feel meaningful.” The MLQ presence and search subscales have been found to demonstrate discriminant and convergent validity (Steger et al., 2006), and the factor structure has been replicated (Steger & Frazier, 2005). Both subscales have demonstrated excellent internal consistency: one study found Cronbach’s alphas of .88 for both subscales (Steger et al., 2011). The current research revealed alpha coefficients which all fell above .91 for both subscales (Presence:  $\alpha$ s = .91 to .93 and Search:  $\alpha$ s = .91 to .94 over the five times of measurement).

**Subjective Happiness Scale.**<sup>3</sup> The Subjective Happiness Scale (SHS; Lyubomirsky & Lepper, 1999) is a 4-item measure which ascertains an individual’s level of global subjective happiness. Participants report their level of happiness in comparison to their peers and also to archetypal happy and unhappy people. For example, participants are asked to respond to the following statement: “In general, I consider myself:” on a 7-point Likert scale from 1 (*not a very happy person*) to 7 (*a very happy person*). Another item in the scale is “Some people are generally not very happy; although they are not depressed, they never seem as happy as they might be. To what extent does this characterisation describe you?” and respondents chose an option between 1 (*not at all*) and 7 (*a great deal*). These four scores are averaged (after one item is reverse-coded), giving a range of possible scores from 1 to 7 with a higher score reflecting greater subjective happiness. The SHS has been found to manifest excellent internal consistency as Cronbach’s alphas have been found to range from .85 to .95 (Lyubomirsky & Tucker, 1998). In the present study the alphas were all above .85 for the five time points (Cronbach’s  $\alpha$ s = .86 to .89).

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<sup>2</sup> See Appendix A for the Meaning in Life Questionnaire (MLQ; Steger et al., 2006).

<sup>3</sup> See Appendix B for the Subjective Happiness Scale (SHS; Lyubomirsky & Lepper, 1999).

**Temporal Satisfaction with Life Scale.**<sup>4</sup> The Temporal Satisfaction with Life Scale-Present Subscale (TSWLS-P; Pavot, Diener, & Suh 1998) comprises items which examine how satisfied individuals are with their current life. Items include “I am satisfied with my current life” and “The current conditions of my life are excellent”, which are answered on a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). The scores are then summed, with possible scores ranging from 5, representing low life satisfaction, to 35, indicating high satisfaction with life. The TSWLS-P subscale was previously found to yield an alpha of .78 (McIntosh, 2001). The present subscale was chosen because of the longitudinal nature of the research: the aim was for participants to hone in on their current level of satisfaction with life. The Cronbach’s alphas for the five time points in the present research were consistently .90 across the five time points.

### **Procedure**

Due to the fact that the IWS is an international collaboration, participants were recruited across a wide range of countries. Individuals took part in the study on a purely voluntary basis, and were able to withdraw from the research at any time. The Open Polytechnic of New Zealand Human Research Ethics Committee granted ethical approval for the investigation. The questionnaire was completed by participants online (using the SurveyMonkey website) and took approximately 25-30 minutes to complete on average. Participants were sent an e-mail reminder every three months after the initial assessment to encourage participation across all five time points.

### **Results**

#### **Descriptive Statistics**

Table 3.1 outlines the descriptive statistics and correlations among presence of meaning, search for meaning, happiness, and life satisfaction at five time points over a year. Correlations among the measures revealed that happiness and life satisfaction yielded moderate positive relationships with presence of meaning and weak negative relationships with search for meaning. It is also notable that, as in other research, a weak negative relationship between presence of meaning and search for meaning was found as well.

#### **Did Presence of Meaning Positively, and Search for Meaning Negatively, Predict Happiness and Life Satisfaction?**

Latent growth curve modelling (LGCM) was utilised to examine how trajectories of presence of meaning, search for meaning, happiness, and life satisfaction changed in relation

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<sup>4</sup> See Appendix C for the Temporal Satisfaction with Life Scale (TSWLS; Pavot, Diener, & Suh, 1998).

Table 3.1

*Descriptive statistics and correlation coefficients among presence of meaning, search for meaning, happiness and life satisfaction at two time points with a one year interval*

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8
1.T1 MLQ-P	25.35	6.67								
2.T1 MLQ- S	20.59	8.14	-.13**							
3. T1 SHS	5.00	1.30	.52**	-.21**						
4. T1 TSWLS-P	23.12	7.24	.46**	-.19**	.61**					
5.T5 MLQ-P	25.59	6.94	.75**	-.11*	.39**	.30**				
6.T5 MLQ-S	19.30	8.50	-.12**	.69**	-.19**	.17**	-.16**			
7.T5 SHS	5.06	1.26	.42**	-.15**	.77**	.50**	.45**	.17**		
8.T5 TSWLS-P	23.67	6.99	.37**	-.20**	.47**	.63**	.38**	.20**	.57**	

\*\*  $p < .01$ , \*  $p < .05$ .

*Note.* MLQ-P = Meaning in Life Questionnaire-Presence; MLQ-S = Meaning in Life Questionnaire-Search; SHS = Subjective Happiness Scale; TSWLS-P = Temporal Satisfaction with Life Scale-Present; T = measurement occasion.

to one another over one year. Unconditional models were first created for these variables to ascertain intercepts and trajectories over twelve months. LGCM estimates an intercept of each variable, which is the group mean score at time one (T1), and the slope, which is the mean change over time, derived from an aggregate of all participants' trajectories. It is possible that change might be non-linear; however, when this question was examined by adding quadratic and cubic slope terms to the models, model fit was poor and non-linear change was not supported. Parallel process models were also constructed to examine the influence that change in one variable might have on change in another variable over time (Duncan & Duncan, 2004).

Obtained fit indices were good for the unconditional models for presence of meaning, search for meaning, happiness, and life satisfaction (see Table 3.2). The intercepts for all the variables yielded significant variance, which signified considerable variation among individuals' scores at T1. All slopes displayed significant variance, meaning that there were considerable differences in the rate of change in the variables across participants. The obtained slopes for search for meaning and happiness were statistically significant, indicating that for the whole sample search for meaning significantly declined (-.068) and happiness significantly increased (.018) over the course of the year. The slopes for presence of meaning and life satisfaction were not statistically significant, indicating reasonable stability of these two variables.

Good fit indices were obtained for the parallel process models of presence of meaning predicting happiness and for the model of search for meaning predicting happiness. The indices of model fit for the parallel process models with life satisfaction predicted by presence of meaning and search for meaning were adequate too (see Table 3.3).

**Subjective happiness.** Hypothesis 1 (H1) predicted that presence of meaning would positively, and search for meaning would negatively, predict happiness longitudinally. Two relationships in the parallel process models were examined in order to evaluate evidence for this hypothesis: intercept to intercept, and slope to slope. For intercept to intercept, individuals reporting high presence of meaning at T1 also reported high happiness at T1 ( $\beta = .58, p < .001$ ), and a significant result was obtained for the slope to slope relationship, namely an increase in presence of meaning predicted an increase in happiness over time ( $\beta = .53, p < .001$ ). On the other hand, and consistent with predictions, those who reported high search for meaning at T1 also reported low happiness at T1 ( $\beta = -.27, p < .01$ ), and an increase in search for meaning over time predicted a decrease in happiness ( $\beta = -.36, p < .05$ ).

Table 3.2

*Unconditional latent growth models of presence of meaning, search for meaning, happiness and life satisfaction*

Variable		Factor mean	SE	Factor variance	SE	R of intercept and slope	Model fit
MLQ-P	Intercept	5.075***	.055	1.467***	.101	-.032	$\chi^2 (14) = 23.361$ ; CFI = .997; RMSEA = .035
	Slope	.014	.010	.017***	.003		
MLQ-S	Intercept	4.133***	.066	2.018***	.145	-.081	$\chi^2 (14) = 29.311^*$ ; CFI = .993; RMSEA = .045
	Slope	-.068***	.013	.035***	.035		
SHS	Intercept	5.00***	.053	1.350***	.095	-.158	$\chi^2 (10) = 13.646$ ; CFI = .999; RMSEA = .026
	Slope	.018*	.009	.011***	.003		
TSWLS-P	Intercept	4.638***	.058	1.455***	.112	-.233	$\chi^2 (10) = 15.988$ ; CFI = .997; RMSEA = .033,
	Slope	.023	.012	.031***	.006		

\*\*\*  $p < .001$ , \*  $p < .05$ .*Note.* MLQ-P = Meaning in Life Questionnaire-Presence; MLQ-S = Meaning in Life Questionnaire-Search; SHS = Subjective Happiness Scale;

TSWLS-P = Temporal Satisfaction with Life Scale-Present.

Table 3.3

*Parallel process latent growth models of presence of meaning, search for meaning, happiness and life satisfaction*

Predictor Variable		Predicted Variable		$\beta$	SE	Model Fit
MLQ-P	Intercept	SHS	Intercept	.584***	.041	$\chi^2 (44) = 166.862^*$ ; CFI = .979; RMSEA = .072
	Slope		Slope	.531***	.112	
MLQ-S	Intercept	SHS	Intercept	-.273**	.039	$\chi^2 (43) = 78.534^*$ ; CFI = .993; RMSEA = .039
	Slope		Slope	-.363*	.079	
MLQ-P	Intercept	TSWLS-P	Intercept	.555**	.240	$\chi^2 (43) = 156.505^*$ ; CFI = .977; RMSEA = .070
	Slope		Slope	.769***	1.005	
MLQ-S	Intercept	TSWLS-P	Intercept	-.251***	.213	$\chi^2 (43) = 82.254^*$ ; CFI = .991; RMSEA = .041
	Slope		Slope	-.212	.557	

\*\*\*  $p < .001$ , \*\*  $p < .01$ , \*  $p < .05$ .

*Note.* MLQ-P = Meaning in Life Questionnaire-Presence; MLQ-S = Meaning in Life Questionnaire-Search; SHS = Subjective Happiness Scale; TSWLS-P = Temporal Satisfaction with Life Scale-Present.



The assertion in H1 that presence of meaning would positively, and search for meaning would negatively predict happiness over time was supported.

**Life satisfaction.** H1 also predicted that presence of meaning would positively, and search for meaning would negatively, predict life satisfaction over time. As expected, those individuals who reported high presence of meaning at T1 also reported high life satisfaction scores at T1 ( $\beta = .56, p < .01$ ), and an increase in presence of meaning was predictive of an increase in life satisfaction over a year ( $\beta = .77, p < .001$ ). And for the process of searching, individuals with high initial levels of searching for meaning reported low levels of life satisfaction ( $\beta = -.25, p < .001$ ), however, contrary to prediction, the trajectory of searching for meaning did not significantly predict a change in life satisfaction over time. As with happiness, the majority of findings for life satisfaction were in agreement with H1.

### **Was Search for Meaning more Strongly Negatively Correlated with Well-Being for Older Adults?**

H2 predicted that age might moderate the relationships between presence of meaning in the first case and search for meaning in the second case with well-being. Extrapolating from findings based on concurrent data, the prediction was that the negative searching for meaning to well-being relationship would be stronger for older individuals than younger individuals. On the other hand, the prediction that age would moderate the presence of meaning to well-being relationship was not included as research has found presence to be positively related to well-being at all ages. To more stringently examine these hypotheses, the dependent variable was residualised so that the moderation analysis would indicate whether age moderated the ability of the independent variable (either presence or search) to predict *change* in happiness or life satisfaction over one year. For example, in one analysis, T5 happiness was the dependent variable; T1 happiness was entered first in the regression, followed by T1 presence, age, and the interaction term of T1 presence x age in the last step.

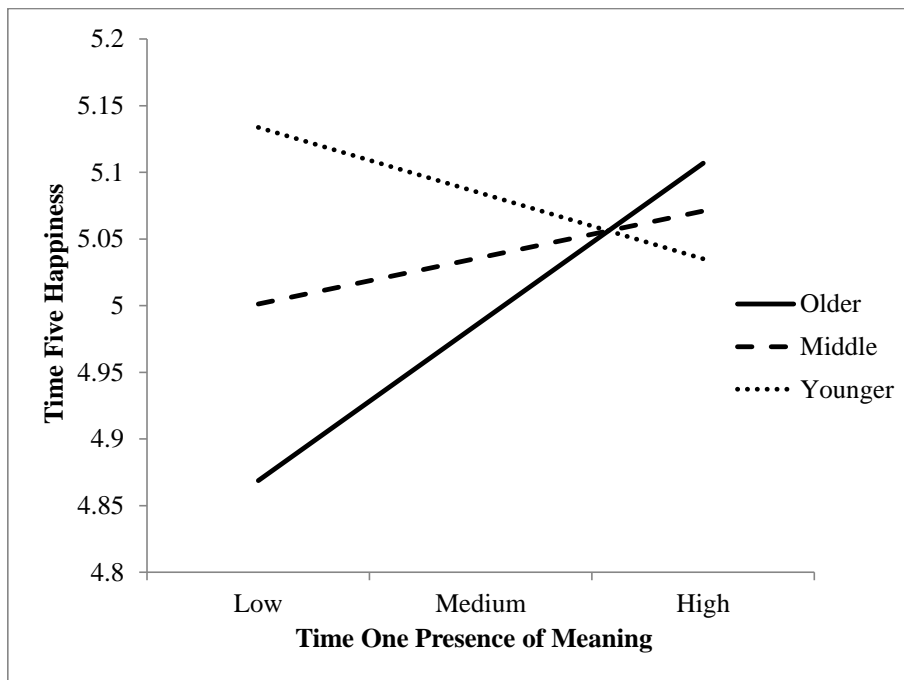
#### **Search for meaning predicting change in positive outcomes moderated by age.**

Contrary to predictions, regression analyses showed that age did not significantly moderate the relationships between T1 search for meaning and T5 happiness or T5 life satisfaction.

#### **Presence of meaning predicting change in positive outcomes moderated by age.**

Also contrary to predictions, regression analysis showed that age significantly moderated the relationship between T1 presence of meaning to T5 happiness. Happiness at T5 was positively predicted by T1 happiness in step one ( $\beta = .77, p < .001$ ), but T1 presence of meaning and age were not significant predictors in steps two and three. The interaction term

predicted T5 happiness in the final step ( $\beta = .07, p < .05$ ). ModGraph (Jose, 2008) was used to graph the interaction (see Figure 3.1). Simple slope analyses were used to determine the significance of the three age groups represented in the figure. A significant positive relationship was obtained for the oldest group of individuals (slope = .02,  $t = 2.21, p < .05$ ), however the slopes for the two younger groups were non-significant. This pattern shows that the relationship between presence of meaning at T1 and an increase in happiness over time was strongest for the oldest group, i.e., initial levels of presence of meaning significantly predicted increasing happiness for the oldest group relative to their younger counterparts. A similar pattern was found when T4 happiness was predicted by T1 presence of meaning (i.e., over 9 months), however the middle-aged group also manifested a positive relationship (slope = .01,  $t = 2.30, p < .05$ ) as well as the oldest group (slope = .03,  $t = 3.16, p < .01$ ).



*Figure 3.1.* Moderation by age on the relationship between time one presence of meaning and time five happiness.

Age also significantly moderated the relationship between T1 presence to T5 life satisfaction. Life satisfaction at T5 was positively predicted by T1 life satisfaction at step one ( $\beta = .63, p < .001$ ), and positively predicted by T1 presence of meaning at step two ( $\beta = .11, p < .01$ ). Age by itself was not a significant predictor of life satisfaction in step three; however, in step four, the interaction term significantly predicted T5 life satisfaction ( $\beta = .07, p < .05$ ). Figure 3.2 depicts the obtained interaction result, and it is similar to the one depicted

in Figure 3.1; namely, presence of meaning was a stronger predictor of increases in life satisfaction over one year for older individuals. Simple slopes showed that presence of meaning was predictive of an increase in life satisfaction for the middle-aged group (slope = .12,  $t = 3.01$ ,  $p < .01$ ) and the oldest group (slope = .20,  $t = 3.63$ ,  $p < .001$ ). Similar findings were also obtained when presence of meaning predicted T3 (6 months) and T4 (9 months) life satisfaction with the oldest group displaying a significant slope in both instances (T3 slope = .17,  $t = 2.92$ ,  $p < .01$ ; T4 slope = .23,  $t = 4.42$ ,  $p < .001$ ); however, the middle-aged group only exhibited a positive slope for T4 life satisfaction (slope = .10,  $t = 2.61$ ,  $p < .01$ ). These findings were not anticipated by H2 and differ from previous research based on concurrent data, however they may capture more veridically how meaning and well-being relate across time for adults at different points in the lifespan.

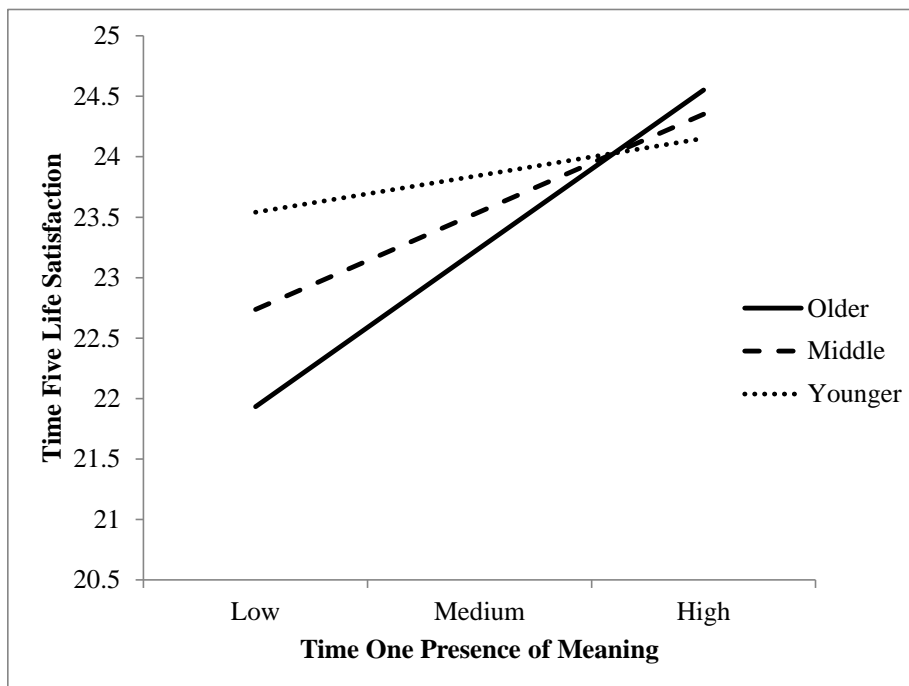
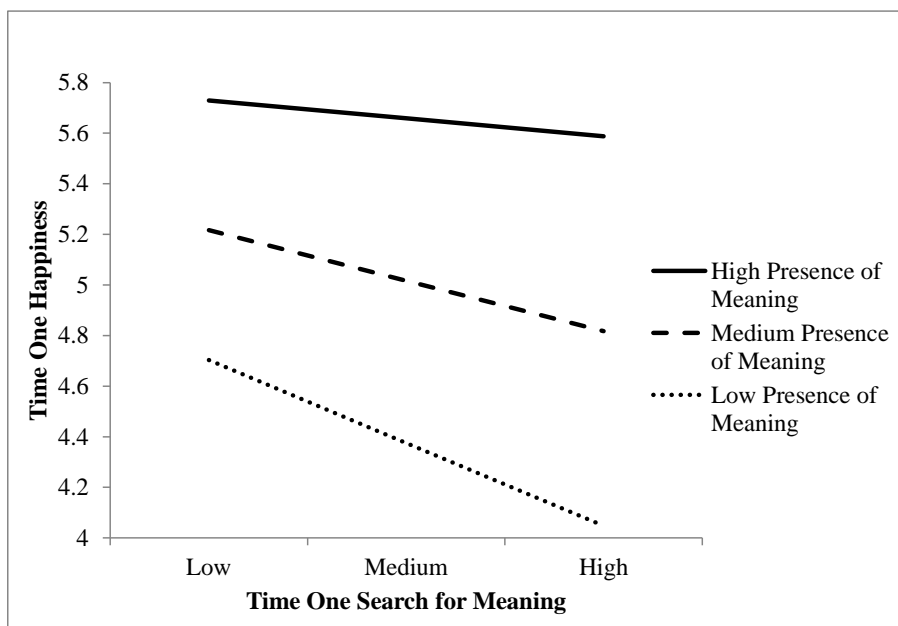


Figure 3.2. Moderation by age on the relationship between time one presence of meaning and time five life satisfaction.

### Did Presence of Meaning Moderate the Search for Meaning to Well-Being Relationship?

H3 aimed to verify previous findings by attempting to replicate the Cohen and Cairns (2011) concurrent moderation result, which found that individuals who report high presence of meaning manifest a less negative relationship between search for meaning and happiness.

To examine this hypothesis, first of all with concurrent data, presence of meaning was treated as a moderator of the relationship between search for meaning and the outcome of happiness. T1 happiness was negatively predicted by T1 search for meaning in step one ( $\beta = -.21, p < .001$ ), positively predicted by T1 presence of meaning in step two ( $\beta = .50, p < .001$ ), and positively predicted by the interaction term in the final step ( $\beta = .11, p < .01$ ). Consistent with H3, those individuals reporting higher presence displayed a less strong negative relationship between search for meaning and happiness (see Figure 3.3). Significant simple slopes were obtained for medium presence (slope =  $-.03, t = -4.23, p < .001$ ) and low presence (slope =  $-.04, t = 5.20, p < .001$ ), but not for high presence. This pattern indicates that search for meaning did not predict happiness for individuals who reported high levels of presence of meaning, however, for those reporting moderate to low presence of meaning, search for meaning was (negatively) predictive of less happiness. The longitudinal extensions of this moderation did not yield significance over three, six, nine, or twelve months.



*Figure 3.3* Moderation by presence of meaning on the relationship between concurrent search for meaning to happiness.

H3 also endeavoured to replicate the Park and colleagues (2010) moderation result for life satisfaction. In the first step, T1 search was added, followed by T1 presence, and the interaction term of T1 search x T1 presence. T1 Life satisfaction was negatively predicted by search in step one ( $\beta = -.13, p < .001$ ), positively predicted by presence in step two ( $\beta = .44,$

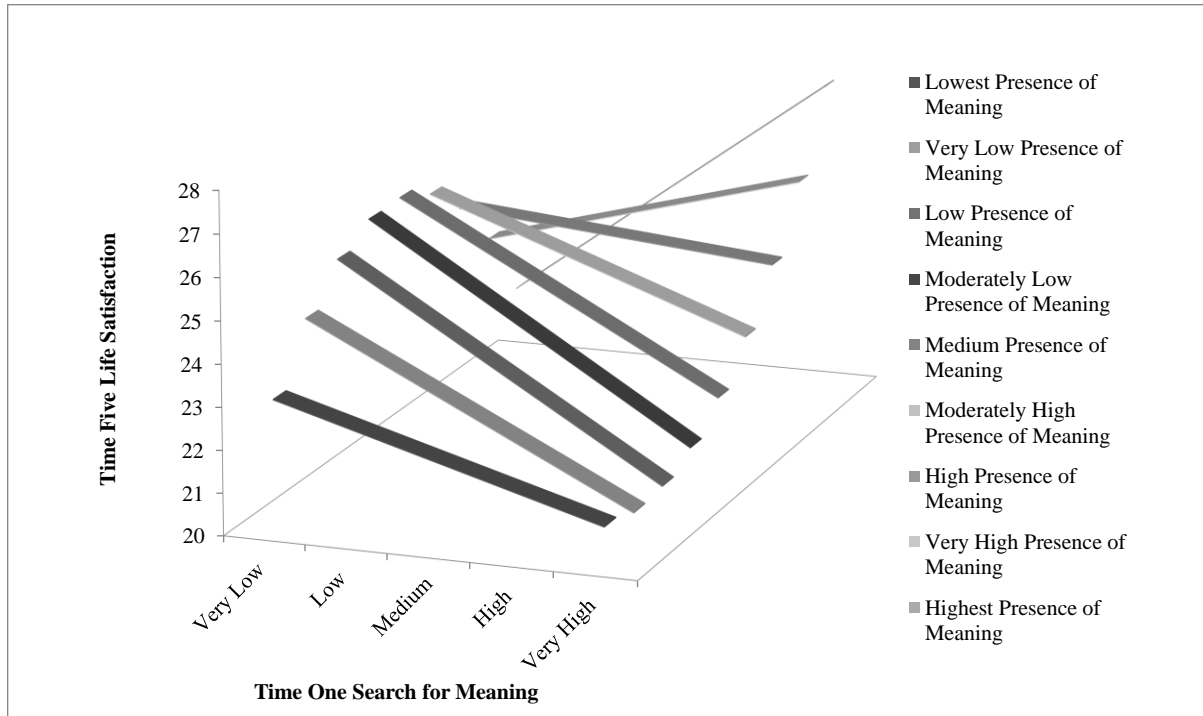
$p < .001$ ) and positively predicted by the interaction term in step three ( $\beta = .07, p = .07$ ). Despite the obtained marginal significance, the result was graphed because a particular pattern was predicted, and also because of the potential symmetry of this result with the one for happiness (see previous). As expected, the obtained pattern was identical to that depicted in Figure 3.3 for happiness. Simple slopes analyses revealed negative relationships between search for meaning and life satisfaction for those individuals reporting low presence (slope =  $-.17, t = 3.78, p < .001$ ) and medium presence (slope =  $-.12, t = 3.50, p < .001$ ), and the simple slope for high presence was non-significant.

As for most topics in psychology, researchers have only chosen to examine linear relationships among meaning in life variables up to this point, and at this juncture the current research suggests that examining curvilinear relationships might make a useful new contribution to the area. It was theorised that some relationships among the four constructs studied here might manifest quadratic relationships. Specifically, following on from the last analysis described above, it was hypothesised that presence of meaning might quadratically moderate the relationship between search for meaning and change in life satisfaction over one year. In other words, the moderating effect of presence might wax and wane curvilinearly over the range of values obtained for reported presence of meaning, yielding a positive slope for high and low levels of presence but yielding a negative slope for medium levels of presence. Following the suggestions of Baron and Kenny (1986) concerning concurrent quadratic moderation and the methods suggested by Jose (2013) for longitudinal quadratic moderation, variables were added sequentially in a hierarchical regression: T1 life satisfaction (to residualise), T1 search for meaning (independent variable), T1 presence of meaning (moderating variable), quadratic T1 presence of meaning, the interaction term of T1 search x T1 presence, the interaction term of T1 search x quadratic T1 presence, quadratic T1 search, and finally the interaction term of quadratic T1 search x quadratic T1 presence. The following formula was used to create equations, which, when computed, enabled the graphical presentation of the significant interaction (see Figure 3.4).  $Y_5$  represents T5 life satisfaction,  $x$  the numerical value of search for meaning, and  $z$  the numerical value of presence of meaning.

$$Y_5 = \beta_1 y_1 + \beta_2 x + \beta_3 z + \beta_4 xz + \beta_5 z^2 + \beta_6 xz^2 + \text{constant}$$

Life satisfaction at T5 was positively predicted by T1 life satisfaction at step one ( $\beta = .63, p < .001$ ), negatively predicted by T1 search for meaning at step two ( $\beta = -.08, p < .01$ ), and positively predicted by T1 presence of meaning at step three ( $\beta = .10, p < .01$ ). The

following two terms were not significant predictors of life satisfaction over time, however, the interaction term of T1 search by quadratic T1 presence of meaning was significant in step six ( $\beta = .11, p < .05$ ).



*Figure 3.4.* Moderation by quadratic presence of meaning on the relationship between time one search for meaning to time five life satisfaction.

As predicted, presence of meaning exhibited a quadratic moderation of the relationship of search for meaning and residualised life satisfaction, namely a positive relationship was obtained under conditions of high presence of meaning. The quadratic relationship was evident in that the individuals with the most negative relationship between T1 search and T5 life satisfaction had moderately low presence, not the lowest presence. This result suggests that the process of searching for meaning is predictive of greater life satisfaction when an individual already possesses reasonably high levels of presence of meaning. Additionally, for most individuals in our sample, namely those reporting intermediate levels of presence of meaning, it seems that searching for meaning led to lower levels of life satisfaction. However, high levels of presence of meaning seem to buffer against the deleterious influences of searching, and these individuals appear to benefit from the joint process of possessing high presence in conjunction with searching for meaning.

## **Did Search for Meaning Moderate the Presence of Meaning to Well-Being**

### **Relationship?**

H4 aimed to replicate Steger and colleagues' (2011) finding that presence of meaning was more strongly related to life satisfaction and happiness when individuals exhibited high search for meaning. Search for meaning was treated as a moderator on the relationships from presence of meaning to the positive outcomes of life satisfaction and happiness. Search for meaning was not a significant moderator of the relationship between presence of meaning and life satisfaction concurrently and longitudinally. However, search did moderate the relationship between T1 presence of meaning and T1 happiness. T1 happiness was positively predicted by T1 presence of meaning in step one ( $\beta = .52, p < .001$ ), negatively predicted by search for meaning in step two ( $\beta = -.15, p < .001$ ), and positively predicted by the interaction term in the last step ( $\beta = .11, p < .01$ ). The graphical representation yielded a pattern similar to that depicted in Figure 3.2, namely that those individuals who reported high search for meaning yielded a stronger positive relationship between presence of meaning and happiness. All three groups displayed positive slopes: low search (slope = .08,  $t = 8.11, p < .001$ ), medium search (slope = .10,  $t = 13.61, p < .001$ ), and high search (slope = .12,  $t = 12.66, p < .001$ ), but the high search group exhibited the steepest slope. This finding suggests that search for meaning did, in fact, have a positive influence on well-being. Search for meaning functioned as an enhancer (which is a similar influence as an 'exacerbator', see Jose, 2013) in that higher levels of search enhanced or fostered a stronger relationship between presence of meaning and happiness.

## **Did Well-Being Moderate the Search for Meaning to Presence of Meaning**

### **Relationship?**

Next, the inverse relationship between presence of meaning and search for meaning was examined to see whether it might change under the moderating influence of happiness or life satisfaction. H5 expected that the relationship would be more strongly positive under conditions of high happiness or high life satisfaction.

**Happiness.** Subsequent analyses showed that happiness did not moderate the relationship between search for meaning and presence of meaning longitudinally, but it did so concurrently. T1 presence of meaning was negatively predicted by T1 search for meaning in step one ( $\beta = -.13, p < .01$ ), positively predicted by T1 happiness in step two ( $\beta = .51, p < .001$ ), and positively predicted by the interaction term in the final step ( $\beta = .07, p < .05$ ). The graphical interpretation showed the relationship between search for meaning and presence of

meaning to be positive for individuals reporting high happiness and negative among those who reported low happiness (see Figure 3.5). Simple slopes showed a significant slope for very low happiness (slope =  $-.14$ ,  $t = 1.97$ ,  $p = .05$ ) but the other slopes were non-significant. This finding shows that under conditions of high happiness, the processes of searching for meaning and experiencing meaning are not inversely related as is usually found.

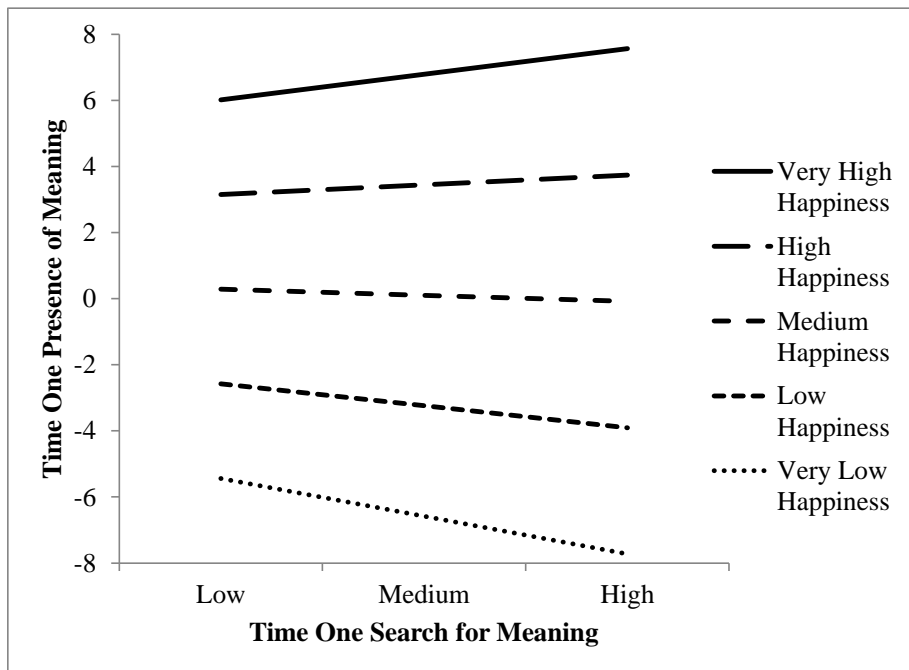
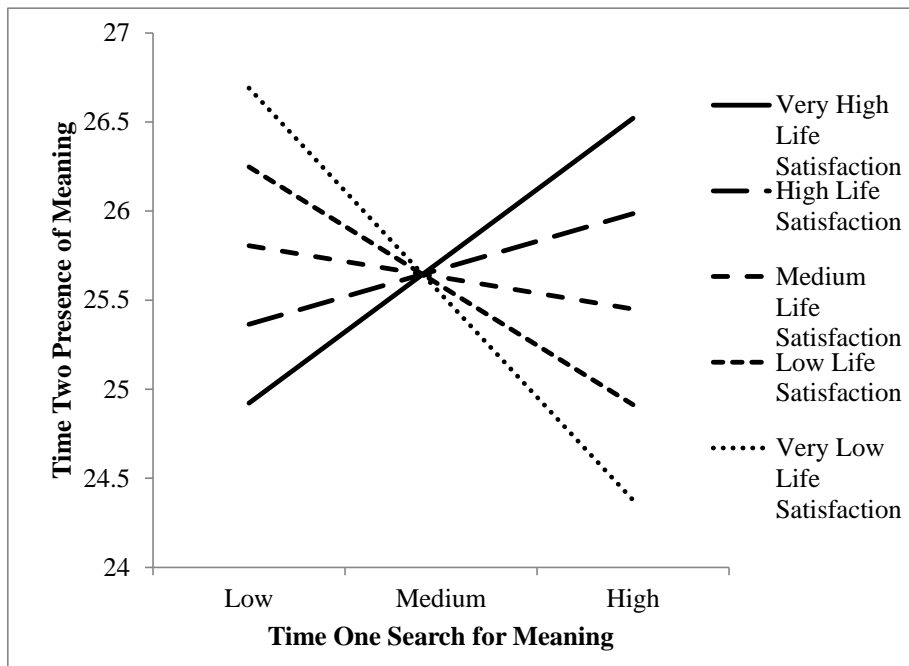


Figure 3.5. Moderation by happiness on the relationship between concurrent search for meaning to presence of meaning.

**Life satisfaction.** Level of life satisfaction was found not to moderate the search for meaning to presence of meaning relationship concurrently, but it did so over three months in a residualised regression. T1 presence positively predicted T2 presence ( $\beta = .79$ ,  $p < .001$ ), but search and life satisfaction did not significantly predict residualised presence in the subsequent steps. The interaction, however, did significantly predict T2 presence in the final step ( $\beta = .08$ ,  $p < .01$ ). The graphical interpretation indicated that under conditions high life satisfaction search for meaning predicts an increase in presence of meaning, whereas under conditions of low life satisfaction, it predicts a decrease in presence of meaning (see Figure 3.6). Simple slopes analyses indicated the presence of a significant positive relationship for very high life satisfaction (slope =  $.10$ ,  $t = 2.20$ ,  $p < .05$ ) and significant negative relationships for low (slope =  $-.08$ ,  $t = 2.69$ ,  $p = .01$ ) and very low life satisfaction (slope =  $-.14$ ,  $t = -3.00$ ,  $p = .01$ ). This pattern shows that searching for meaning when one already has very high life



satisfaction results in an increase in presence of meaning three months later, which is an important finding because it indicates that the search for meaning under certain conditions yields a positive outcome. In contrast, individuals who reported low life satisfaction did not benefit from their searching process, in fact, searching for meaning predicted a decrement in presence of meaning.



*Figure 3.6.* Moderation by life satisfaction on the relationship between time one search for meaning to time two presence of meaning.

### Discussion

The chief purpose of the present study was to investigate how presence of meaning and search for meaning relate to the positive well-being indicators of happiness and life satisfaction, with the hope of replicating and extending previous findings based on concurrent data to longitudinal data. It was hypothesised that presence of meaning would positively, and search for meaning negatively, predict happiness and life satisfaction over the time-span of one year; and that this pattern would be evident over the entire adult age-range, with the strongest negative relationship between search for meaning and well-being occurring in older age. This study also expected presence of meaning to act as a buffer against diminished life satisfaction and happiness when searching for meaning, and that those individuals searching for meaning would exhibit positive relationships between presence of meaning and positive well-being. Finally, it was hypothesised that there would be a positive association between

search for meaning and presence of meaning under conditions of high happiness and life satisfaction.

The pattern of presence of meaning being positively, and search for meaning being negatively, linked to happiness and life satisfaction (Cohen & Cairns, 2011; Park, Park, & Peterson, 2010; Steger et al., 2009) was replicated in the current research. The initial finding in the literature was based on concurrent data, and was extended with the LGCM method as this longitudinal approach describes how trajectories of variables predict the trajectories of other variables. The LGCM results were generally consistent with previous research which has found positive linkages between presence of meaning and happiness/ life satisfaction, and, on the other hand, negative relationships between search for meaning and happiness/ life satisfaction (Cohen & Cairns, 2011; Park et al., 2010; Steger et al., 2009). The value of the longitudinal result was that it showed that a positive *change* in presence of meaning over time corresponded to an *increase* in both happiness and life satisfaction. The same was true of search for meaning in that increases in searching predicted decreases in happiness. These findings provide elucidation of how these constructs relate to each other over time.

Additionally, the fact that a rise in presence of meaning predicts increases in happiness and life satisfaction has practical utility: treatments and interventions could be designed to facilitate presence of meaning for a flow-on positive effect on overall well-being. These results constitute a new contribution to the literature as research had previously not examined the relationship between presence of meaning, search for meaning, and positive indicators of well-being longitudinally.

Age was found to moderate the relationships from presence of meaning to happiness and life satisfaction longitudinally: presence of meaning predicted an increase in happiness and life satisfaction for older adults but not their younger counterparts. This result was not consistent with previous research which has found that presence of meaning was positively correlated with well-being across the lifespan regardless of age, and that search for meaning was negatively associated with well-being, especially in later life (Steger et al., 2009). It could be that as presence of meaning is greater among older individuals (Grouden et al., 2013a), meaning may become more important and stable with age, and is, therefore, better able to facilitate an increase in well-being. In contrast, younger individuals may be preoccupied with the searching for meaning process and they experience difficulty consolidating their sense of presence of meaning because they are pursuing multiple life goals simultaneously (for example finishing education/training, creating a romantic

relationship, geographical relocation, etc.) which may be why presence of meaning does not increase well-being for younger people.

Presence of meaning was found to moderate the relationship between search for meaning and happiness, with a more positive association between the latter two constructs under conditions of high presence. This finding aligns with research from Park and colleagues (2010) and Cohen and Cairns (2011), and suggests that having a more solid sense of meaning in life is protective of well-being when endeavouring to find additional meaning in life. This replication is important as it reinforces the idea that searching for new meaning need not be a universally negative process (in which one's happiness declines) if other areas of life are imbued with meaning.

Further support of this finding came from the quadratic moderation result: search for meaning at T1 positively predicted life satisfaction at T5 for individuals with high presence of meaning. This result suggests that high presence of meaning acted as a buffer against diminished life satisfaction over time caused by searching. In contrast, individuals who reported medium levels of presence exhibited a more negative relationship between searching and life satisfaction over time, than the individuals reporting the lowest levels of presence of meaning. This result contrasts with the finding by Park and colleagues (2010) but their obtained linear relationship was found with concurrent data, and they probably did not investigate quadratic relationships. The present result suggests that searching is not universally predictive of lower well-being, as for individuals with high presence of meaning, it seems to be a beneficial process in which to engage; whereas the same cannot be said for those with moderately low presence of meaning as these individuals exhibited the most negative relationship between search and life satisfaction.

Previous research by Steger and colleagues (2011), based on concurrent data, revealed that search for meaning moderated the relationship between presence of meaning and well-being, with stronger relationships found in individuals reporting greater search for meaning. This moderation was not replicated in the present research with longitudinal data; however, search for meaning was found to moderate the relationship between presence of meaning and happiness, with a more positive association seen under conditions of high search. This result provides some support for the idea suggested by Grouden et al. (2013a) who suggested that searching may *maintain* presence of meaning under certain circumstances. This research found that the greatest stability of presence over time occurred under conditions of high search, suggesting that search did in fact play a significant role in individuals' presence of meaning and is a useful process to engage in.

The study then examined whether well-being might operate as a moderator between presence and searching. Happiness was found to moderate the relationship between concurrent search for meaning to presence of meaning: those individuals reporting high levels of happiness displayed a positive relationship, whereas those individuals reporting low happiness exhibited a negative association. Further, life satisfaction moderated the relationship between T1 search and T2 presence such that, under conditions of very high life satisfaction, searching for meaning led to increased presence of meaning. These results qualify previous research which has found a simple inverse relationship between presence of meaning and search for meaning (e.g., Steger & Kashdan 2006; Steger et al., 2011) in that this relationship might not necessarily be negative in all cases and situations. Those individuals who are happy and satisfied with life display a *positive* relationship between the two meaning constructs. This result is an important amendment to the previously identified negative relationship. Searching in some situations by certain types of people seem to result in greater presence of meaning.

### **Limitations and Implications**

This research has clinical implications, insofar as therapy aiming to increase people's sense of meaning in their life may also facilitate other areas of adjustment and well-being such as happiness and life satisfaction. Further to this, the findings help to realise the goal of positive psychology to understand what it means to live a good life and flourish, by enhancing strengths and not prioritising deficits and difficulties (Seligman, 2002). In this vein, the present research may be helpful for individuals who are seeking to live a fulfilling life. The findings seem to suggest that searching for meaning in one's life is more beneficial in certain circumstances and by certain people. Searching for meaning does not always yield satisfaction and contentment.

No research is without limitations. The sample that was used in the present study over-represented female, English speakers, and this could mean that the findings might not be generalisable to a more diverse population. Another omission, which points to promising future research, is that the domains in which individuals are seeking or possess meaning in their lives were not assessed. Other research (eg., Debats, 1999; Delle Fave et al., 2010; Prager, 2010; Schnell, 2009) considers where individuals find meaning, and the present research is mute on this point because these questions were not asked. It is possible that possessing meaning in certain domains may be more enduring and generative of well-being than other domains, so future research would do well to consider this possibility. Many of the findings in the current research illuminate the complicated ways in which meaning relates to

itself (search to presence and presence to search) and to well-being. Because of the novelty and complexity of these findings, it is vital that additional research is designed to replicate these findings in order to firmly establish them in the fabric of the literature on meaning. It is also clear that much more needs to be known about search for meaning: the present research goes some distance in describing its relationships, but searching for meaning has been a neglected topic and it is likely that more is to be unearthed regarding the subtle ways in which it relates to well-being. It would be vitally important for empirical research to identify how general strategies for increasing meaning, including therapy centred on meaning, might impact the well-being of community and clinical populations, and whether any lasting improvements are evidenced. Overall, this research shows that meaning in life is inextricably linked to indicators of well-being and it opens a wealth of opportunities for people to not just live life, but to flourish while doing so.

### **Bridging Comment**

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Chapter Three focused on longitudinal relationships among search for meaning, presence of meaning, and various indicators of positive well-being. The findings also unveiled further complexity in the relationship between presence of meaning and well-being indicators, as presence predicted an increase in happiness and life satisfaction over time for older individuals only. Previous research has showed that presence of meaning acts as a buffer between search for meaning and well-being outcomes, and this finding was confirmed here. Further, the inverse relationship between search for meaning and presence of meaning was shown to be mitigated by high levels of happiness and life satisfaction. The next chapter explores similar questions, but this time pertaining to indicators of negative well-being, namely depression and rumination.

## CHAPTER FOUR

### Presence of Meaning, Search for Meaning, and Negative Well-Being

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*He who has a why to live can bear with almost any how.*

– Friedrich Nietzsche

#### Abstract

Previous research has shown that individuals possessing meaning in their life are less likely to report psychopathological symptoms, but most of this research is based on concurrent data. The present study explored how meaning in life was longitudinally related to indicators of negative well-being. A community sample of 543 individuals (15 to 81 years) completed measures of presence of meaning, search for meaning, depression, and rumination five times at three-monthly intervals. An increase in presence predicted a decrease in depression, and an increase in search predicted an increase in rumination over one year. Age differences showed that search and depression were more strongly positively related and rumination predicted increased search in younger individuals. For older people, presence of meaning predicted decreased depression six and nine months later. Also, for older adults reporting high presence of life, less depression and rumination were reported when searching for meaning. For older adults reporting low presence of meaning, rumination led to increased search three and nine months later. Altogether it was found that presence was negatively associated, and searching was positively associated, with greater maladaptation.

*Keywords:* Presence of meaning, search for meaning, depression, rumination, age, time.

## Introduction

“The question of whether and how life experiences have meaning is a central one that has interested humanity (including psychologists) perhaps since our species gained the security to stop and think.” (King & Hicks, 2009, p. 317). Although a lack of clarity exists regarding the conceptualisation of meaning and how it is attained, there is convergence on the idea that it is an essential human process (Reker & Chamberlain, 2000). One reason why human beings seek to understand the meaning of experiences is to achieve a sense of personal significance.

The process of making meaning typically occurs dynamically across the lifespan as individuals reconsider their interpretation of experiences and re-evaluate their overall system of meaning with increased age (Delle Fave, 2009). Meaning is of utmost importance for well-being, in some instances as a defining feature (Ryff, 1989), and in others an indication of optimal functioning (Ryan & Deci, 2001). An absence of meaning is associated with various forms of psychopathology (Klinger, 2012), and that is the theme of the current empirical examination.

The present article will describe the extant literature on meaning in life, with an emphasis on the question of how meaning is related to negative psychological outcomes in empirical research. Although there have been thorough concurrent examinations of meaning in relation to indicators of psychopathology, little is known about how the relationships unfold longitudinally and whether possessing meaning in life is protective against negative outcomes. The present research will report longitudinal data collected from an adult sample over one year to test the hypotheses that presence of meaning would be negatively associated, and searching for meaning would be positively associated, with psychological maladaptation.

## Meaning in Life

Before reviewing research which has examined meaning in life in relation to specific indicators of psychopathology, it is necessary to briefly consider how meaning in life is conceptualised. Meaning has long been considered in the field of philosophy, but the focus has been on understanding meaning *of* life: the reason for our collective existence (Joske, 1974). Empirically investigating the meaning of human existence seems to be an impossibility (Bering, 2003), so psychological explorations of meaning have seen an upsurge in interest recently. People’s reports of the meaning they obtain from life, i.e., meaning *in* life, are subjective in nature but they are amenable to empirical study.

While much examination of meaning in life has stemmed from Frankl’s (1963) seminal work on the human will to search for meaning, it is argued that empirical progress



has been hampered by weak conceptualisations of the construct (Mascaro & Rosen, 2008). Auhagen (2000) has reviewed psychological theories of meaning, across developmental, biological, and motivational domains, and has concluded that there is no overarching theory or definition at this point which adequately captures the concept in its entirety.

Steger (2012a) asserted that theoretical approaches to meaning tend to have a cognitive or motivational foundation. When considered from the cognitive vantage point, meaning is a web of connections and explanations of life events, and is the way in which human beings make sense of who they are, and their relationship with the world around them. Further, Bering (2003) proposed that a group of cognitive skills provide human beings with the ability to distil meaning from events and experiences in life.

Frankl (1967) was one of the first theorists to consider meaning from a motivational perspective and he argued that we have an intrinsic need for meaning, making us motivated to search for it. Though it was not designed as a theory of meaning, Maslow's theory of needs has been applied to meaning. The assertion is that if basic, physiological needs are satisfied, higher needs such as finding meaning can then be sought (Auhagen, 2000). Baumeister (1991) also developed a motivational account which proposed that humans have a need for meaning in four specific realms: purpose, value and justification, efficacy, and self-worth. Additionally, self-determination theory, which has a motivational basis, has been applied to meaning and it asserts that humans are intrinsically motivated to comprehend, make sense of, and integrate experiences, i.e., essentially to make meaning (Weinstein, Ryan, & Deci 2012).

These aforementioned cognitive and motivational aspects can be combined, and it has been argued that the cognitive aspect may underpin the motivational one (Steger, 2012a). Reker and Wong's (1988) theory retained the cognitive and motivational components and also added a third affective component. The authors argued that the cognitive aspect helps individuals to interpret experiences and make sense of life; the motivational aspect refers to one's values which shape behaviour and influence the goals that individuals seek to fulfil; and finally, the affective component is the satisfaction and fulfilment derived from achievement of important life goals. Battista and Almond (1973) created a theory which comprised both affective and cognitive components. The cognitive aspect was referred to as the framework and was thought to be the individual's goals, which formed the philosophy for understanding life. The affective component was called fulfilment, referring to the extent to which individuals felt the goals within their framework were being fulfilled.

Meaning theories have been criticised for ignoring the aspect of *searching for meaning*, which Frankl argued to be a quintessential element of meaning. One theory, and its

associated measure, the Meaning in Life Questionnaire (MLQ), does incorporate both searching for meaning in conjunction with possessing meaning (Steger, Frazier, Oishi, & Kaler, 2006). Steger and colleagues suggest that searching for meaning is not simply the absence of meaning, rather it is understood to be the set of endeavours one uses to augment existing meaning and efforts to find additional meaning. Given its inclusion of the vital search process, and the fact that the MLQ has been found to be psychometrically sound, this approach served as the theoretical foundation for the present research.

### **Meaning and Well-Being**

Having a sense of meaning in life appears to be important for overall well-being as it is positively associated with various indicators of psychological wellness such as life satisfaction, happiness, and positive emotions (Grouden, Jose, & IWS Research Team, 2013c). However, Steger (2012a) notes that we cannot make the assumption that possessing meaning shares an inverse relationship with psychological difficulties. The focus of the current research is on this presumed inverse relationship between meaning and negative well-being, but we first need to review what is known about how meaning relates to indicators of psychopathology so far.

### **Meaning and Psychopathology**

Frankl (1963) argued that meaning can be maintained, even in the face of terrible suffering. He made the insightful observation in the Auschwitz concentration camp, that although luck played a role in survival, those prisoners who managed to preserve meaning in life, irrespective of the conditions, survived. Frankl described that unavoidable suffering is part of being human, but it can lead to meaning in life if it is approached with the right attitude.

Steger (2012a) has said that it is expected that those individuals who possess a robust sense of meaning in their lives should also experience less psychopathology for the reason that viewing one's life as significant and purposeful should be protective against various psychological difficulties. Feldman and Snyder (2005) suggest that one important stance that divergent theories of meaning share is the belief that a meaningful life should manifest an inverse relationship with negative affect, particularly depression and anxiety. Klinger (2012) agrees with this position by saying that a sense of meaninglessness is strongly indicative of psychological disorder. Empirical research has supported the contention of this proposed inverse relationship as patients experiencing psychological distress have also been found to profess less meaning in their life (Debats, van der Lurbe, & Wezeman, 1993).

Much of the discipline of clinical psychology is devoted to aiding people struggling with mental health difficulties, but positive psychology has explicitly espoused the view that we should also foster abilities and strengths and encourage positive striving to move people from average to optimal functioning (Seligman, 2002). In line with this proposition, research suggests that having meaning in life may play a part in reducing psychopathology over time, but as yet there is not definitive support for this hypothesis (Steger, 2012a). Accordingly, this is a vital research question to explore.

### **Depression and Meaning in Life**

In the present study, depression was used as an indicator of diminished psychological well-being and the aim was to see how it affects, and is influenced by, the two aforementioned aspects of meaning in life: presence of meaning and search for meaning. Research on depression is important as its incidence seems to have been increasing in recent times (Mascaro & Rosen, 2005), and, therefore, any contributions that meaning in life research can make, such as how depression can be mitigated, would be valuable.

Empirical research has found support for the view that individuals with a greater sense of meaning in life experience lower depression than those with reduced meaning in life (e.g., Feldman & Snyder, 2005; Mascaro & Rosen, 2006; Steger, Kashdan, Sullivan, & Lorentz, 2008). Research has also found that diminished meaning predicted increased depression, whereas increases in one's sense of meaning predicted a reduction in depression over a period of two months (Mascaro & Rosen, 2008). In contrast to presence of meaning, depression exhibits a positive relationship with search for meaning (Steger et al., 2006; Steger et al., 2008; Steger, Oishi, & Kashdan, 2009). It seems that presence moderates this last relationship in that the positive relationship between search for meaning and depression is lessened under conditions of high presence of meaning (Park, Park, & Peterson, 2010). However, this last research study was cross-sectional so further exploration of this relationship over time is warranted.

Little research has been performed examining age as a moderator of these basic relationships. Steger and colleagues' (2009) research has shown with concurrent data that the negative relationship between presence of meaning and depression, and the positive association between search for meaning and depression persists across the lifespan, though search for meaning is more strongly related to diminished well-being in later life.

### **Rumination and Meaning in Life**

In the current investigation, rumination is utilised as an indicator of reduced well-being in a similar manner as depression. The process of rumination involves repeatedly

brooding about negative feelings without taking any substantive action to improve the situation, and it has been shown to lead to greater depression over time (Nolen-Hoeksema, 2000). The overlap between rumination and depression is considerable and research suggests that grouping ruminative responses into three types--depressive, reflective, and brooding--aids in the disentanglement of depression and brooding rumination (Treyner, Gonzalez, & Nolen-Hoeksema, 2003).

Rumination has been examined in the literature on meaning-making following trauma (e.g., Triplett, Tedeschi, Cann, Calhoun, & Reeve, 2011); for example, the process of making sense of a recent death corresponded to lesser rumination, and reduced rumination was the mechanism through which making sense of death led to better psychological wellness (Michael & Snyder, 2005). However, there is a paucity of meaning research which has examined rumination in relation to everyday search for meaning and presence of meaning in life; consequently, this topic will be part of the design of the present research.

Some research exists which has demonstrated a positive relationship between search for meaning and rumination, and a negative relationship between presence of meaning and rumination (Steger et al., 2008). Additionally, in the same study, those individuals who displayed greater ruminative responding tended to also manifest a more negative relationship between presence of meaning and search for meaning (Steger et al., 2008). Given that rumination can act as a catalyst for increased depressive symptoms, it makes conceptual sense to explore how search for meaning and presence of meaning might impact on this relationship.

### **Goals of the Present Study**

Research with concurrent data has established that meaning in life is inversely related to indicators of negative well-being such as depression and rumination, however, a lack of longitudinal research means that we do not know *how* the relationships unfold across time (Mascaro & Rosen, 2006; Steger, 2012a). Although meaning is central to well-being, Steger (2012a) notes that “there is no solid evidence that meaning in life reduces distress or psychopathology” (p. 175). In the present study, we sought to determine whether presence of meaning led to greater well-being and whether searching for meaning was predictive of greater distress and maladaptation.

Longitudinal data were obtained five times over one year (every three months), and were used to test and extend the previous findings that presence of meaning is negatively, and search for meaning is positively, related with depression (e.g., Mascaro & Rosen, 2005; Park, Park, & Peterson, 2010) and rumination (Steger et al., 2008). We expected that presence of

meaning would negatively, and search for meaning would positively, predict depression and rumination over the course of a year (Hypothesis 1).

Steger and colleagues' (2009) cross-sectional research found a negative relationship between presence of meaning and depression at all ages, whereas search for meaning was positively associated with depression, particularly in later life. The research aimed to determine whether these relationships would be evidenced with longitudinal data, and also sought to examine how presence and search would be related to rumination at different life stages. It was hypothesised that presence of meaning would negatively predict depression and rumination at all ages (and vice versa), and search for meaning would positively predict depression and rumination at all ages (and vice versa), especially for older adults, aligning with previous research (Steger et al., 2009). (Hypothesis 2).

The study endeavoured to replicate the Park and associates' (2010) cross-sectional finding that searching for meaning would not be as strongly positively associated with depression under the condition of high presence of meaning. It aimed to test the generality of this finding by examining whether presence of meaning would moderate the relationships from search for meaning to depression and rumination (and vice versa) longitudinally. It was predicted that presence of meaning would act as a buffer against search for meaning leading to depression and rumination and vice versa (Hypothesis 3).

And last, the research aimed to extend previous research which found that rumination led to depression (Nolen-Hoeksema, 2000) by examining whether search for meaning might have an influence on this relationship. It was predicted that search for meaning would exacerbate the relationship from rumination to depression (Hypothesis 4).

## **Method**

### **Participants**

The sample in this research comprised 543 participants, 455 females and 88 males, with a range of ages from 15 to 81 years ( $M = 41.69$  years;  $SD = 13.93$ ). They were involved in a collaborative, international research project, the International Well-Being Study (IWS) so a wide variety of nationalities (36 countries) were included in the sample. The largest group of participants came from New Zealand with 48.6%, followed by 19.7% from North America and 9.6% from Australia. Most individuals reported English as their first language (89.9%), but another 11 languages were listed as participants' first language.

The design of the IWS included a rolling intake of cohorts of participants every three months that began in March 2009 and ended in March 2013. Participants completed a total of five assessments over a year at three month intervals. Six cohorts, beginning with March

2009 and ending with June 2010, were included in the present sample. As a MANOVA revealed no significant differences between the cohorts' scores on the measures used in this research, the data were combined so that the five assessments were aligned across the various cohorts.

### Measures

**Meaning in Life Questionnaire.**<sup>5</sup> The MLQ (Steger et al., 2006) comprises 10 items which form two subscales: presence of meaning (five) and search for meaning (five). Examples of items in the presence subscale are "I understand my life's meaning", and "My life has a clear sense of purpose" and items in the search subscale include "I am always looking to find my life's purpose", and "I am looking for something that makes my life feel meaningful." Responses are indicated on a 7-point Likert scale from 1 (*absolutely untrue*) to 7 (*absolutely true*). Convergent and discriminant validity of the MLQ has been established in previous research (Steger et al., 2006) and high Cronbach's alphas for the subscales have been obtained (Steger, Oishi, & Kesebir, 2011). Excellent internal consistency was also found in the present research as the alphas with the current sample were found to be above .91 for all time points (Presence:  $\alpha$ s = .91 to .93; and Search:  $\alpha$ s = .91 to .94 over the five times of measurement).

**Center for Epidemiologic Studies Depression Scale.**<sup>6</sup> The Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977) is a 20-item self-report measure of depressive symptoms often found in the general population. Items included are "I was bothered by things that usually don't bother me", and "I felt sad" and they are answered on a 4-point Likert scale from 0 (*rarely or none of the time*) to 3 (*most or all of the time*). This measure has been found to have good internal consistency for various populations (Radloff, 1991). In the present sample, the measure displayed excellent internal consistency as Cronbach's alphas all fell above .91 ( $\alpha$ s = .91 to .95 over five time points).

**Brooding rumination.**<sup>7</sup> Rumination was examined with two items taken from the Ruminative Response Scale (RRS; Nolen-Hoeksema, Morrow, & Fredrickson, 1993). Since Treynor, Gonzalez, and Nolen-Hoeksema (2003) have distinguished among three forms of rumination--depression-related, reflective, and brooding--and have argued that brooding rumination is the best predictor of subsequent depressive symptoms, we focused on brooding rumination for the present study. The two items in this project were taken from the brooding

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<sup>5</sup> See Appendix A for the Meaning in Life Questionnaire (MLQ; Steger et al., 2006).

<sup>6</sup> See Appendix D for the Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977).

<sup>7</sup> See Appendix E for the Ruminative Response Scale (RRS; Nolen-Hoeksema, Morrow, & Fredrickson, 1993).

rumination subscale and asked whether, in response to recent stressful events, they thought “Why do I always react this way?”, and “Why can’t I handle things better?” Items were answered on a 7-point Likert scale from 1 (*strongly disagree*) to 7 (*strongly agree*). The entire brooding rumination subscale has been found to yield good internal consistency with a Cronbach’s alpha of .77 (Treyner et al., 2003). The 2-item brooding rumination measure in the present research yielded alphas above .83 at all five assessment points ( $\alpha$  = .83 to .88).

### **Procedure**

Participants were recruited for the research in a variety of ways, depending on each country’s research team and included posters, word-of-mouth, e-mail announcements, and other typical methods. Participation was entirely voluntary, and participants were told that they could withdraw from the research at any time without penalty. The Open Polytechnic of New Zealand Human Research Ethics Committee provided ethical approval for the project. Individuals completed the questionnaire on-line (using the SurveyMonkey website) in their own time, with completion taking approximately 25-30 minutes. Participants received an e-mail reminder every three months after completing the first assessment to promote participation in all five assessments. Participants completed the survey in their first language.

## **Results**

### **Descriptive Statistics**

The means, standard deviations, and correlations among presence of meaning, search for meaning, depression, and rumination are shown in Table 4.1. As expected, presence of meaning displayed weak to moderate negative correlations with depression and rumination, whereas search for meaning manifested weak to moderate positive associations with depression and rumination. As noted in research using the same dataset (Grouden et al., 2013a), presence of meaning and search for meaning were weakly negatively related.

### **Did Presence and Search Predict Negative Well-Being Longitudinally?**

In order to examine the longitudinal relations between presence of meaning, search for meaning, and the negative well-being indicators of depression and rumination, residualised regression analysis and latent growth curve modelling (LGCM) were utilised.

LGCM is a powerful analytic technique used to examine change in a variable over time, and further, to determine if change in one variable is able to predict change in another variable. In this research, LGCM was used to examine how presence of meaning, search for meaning, depression, and rumination changed over the span of a year. First, unconditional

Table 4.1

*Descriptive statistics and correlation coefficients among presence of meaning, search for meaning, depression and rumination at two time points with a one year interval*

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8
1.T1 MLQ-P	25.35	6.67								
2.T1 MLQ- S	20.59	8.14	-.13**							
3. T1 CES-D	12.84	10.76	-.42**	.29**						
4. T1 RUM	8.16	3.79	-.26**	.27**	.47**					
5.T5 MLQ-P	25.59	6.94	.75**	-.11*	-.31**	-.21**				
6.T5 MLQ-S	19.30	8.50	-.12**	.69**	.27**	.27**	-.16**			
7.T5 CES-D	11.88	10.05	-.26**	.21**	.58**	.35**	-.35**	.23**		
8.T5 RUM	7.61	3.80	-.22**	.26**	.43**	.60**	-.24**	.33**	.48**	

\*\*  $p < .01$ , \*  $p < .05$ .

*Note.* MLQ-P = Meaning in Life Questionnaire-Presence; MLQ-S = Meaning in Life Questionnaire-Search; CES-D = Center for Epidemiologic Studies Depression Scale; RUM = Rumination; T = measurement occasion.



Table 4.2

*Unconditional latent growth models of presence of meaning, search for meaning, depression and rumination*

Variable		Factor mean	SE	Factor variance	SE	R of intercept and slope	Model fit
MLQ-P	Intercept	5.075***	.055	1.467***	.101	-.032	$\chi^2 (14) = 23.361$ ; CFI = .997; RMSEA = .035
	Slope	.014	.010	.017***	.003		
MLQ-S	Intercept	4.133***	.066	2.018***	.145	-.081	$\chi^2 (14) = 29.311$ ; CFI = .993; RMSEA = .045
	Slope	-.068***	.013	.035***	.035		
CES-D	Intercept	.637***	.021	.165***	.014	-.310	$\chi^2 (14) = 12.626$ ; CFI = 1.000; RMSEA = .001
	Slope	-.010*	.005	.001	.001		
RUM	Intercept	4.072***	.076	2.381***	.193	-.226	$\chi^2 (10) = 2.421$ ; CFI = 1.000; RMSEA = .001
	Slope	-.068***	.017	.034*	.012		

\*\*\* $p < .001$ , \* $p < .05$ .

*Note.* MLQ-P = Meaning in Life Questionnaire-Presence; MLQ-S = Meaning in Life Questionnaire-Search; CES-D = Center for Epidemiologic Studies Depression Scale; RUM = Rumination; RMSEA = root mean square error of approximation; CFI = comparative fit index.

LGCM models were run to calculate the intercepts and slopes of the relevant variables. The intercept is the mean score of all individuals' initial level of the variable, and the slope is the mean change in the level of the variable over time. Most researchers focus on linear trajectories, but change over time can be non-linear as well. In the present case, however, when quadratic and cubic terms were added to all the models, resulting model fits were poor, thus non-linear relationships were not supported. Next, parallel process models were created to investigate how change in one variable might impact the change in another variable.

The fit indices of the unconditional models for presence of meaning, search for meaning, depression, and rumination were good (see Table 4.2). The intercepts of the variables all exhibited significant variance which means that there was considerable variation among individuals' scores on all measures at time one (T1). The slopes of search for meaning, depression, and rumination were significant, which shows that trajectories for search for meaning (-.068), depression (-.010), and rumination (-.010) all decreased over the course of a year. The slope of presence of meaning was not significant, which suggests that this construct remained reasonably stable over this time period. In addition, good values of model fit were obtained for all four parallel process models. The model fit indices for the models are reported in Table 4.3.

**Depression.** Hypothesis 1 (H1) stipulated that presence of meaning would negatively, and search for meaning would positively, predict depression longitudinally. As Table 4.3 reports, individuals reporting high mean levels of T1 presence of meaning reported low mean levels of T1 depression ( $\beta = -.51$ ), and, as expected, an increase in the trajectory of presence of meaning was predictive of a decline in the trajectory of depression over a year ( $\beta = -.89$ ). In contrast, high mean levels of T1 search for meaning was positively associated with high T1 depression ( $\beta = .36$ ), but contrary to prediction, change in search did not significantly predict change in depression over time. The expectation in H1 that presence would negatively, and search for meaning would positively, predict depression was generally supported, however support was not found for the prediction that change in search would predict change in depression over time.

**Rumination.** H1 suggested that presence of meaning would negatively, and search for meaning would positively, predict rumination longitudinally. Table 4.3 reports that individuals reporting high T1 presence of meaning reported low T1 rumination ( $\beta = -.35$ ), however, contrary to prediction, change in presence did not significantly predict change in

Table 4.3

*Parallel process latent growth models of presence of meaning, search for meaning, depression and rumination*

Predictor Variable		Predicted Variable		$\beta$	SE	Model Fit
MLQ-P	Intercept	CES-D	Intercept	-.514***	.331	$\chi^2 (44) = 155.926^{***}$ ; CFI = .974; RMSEA = .069
	Slope		Slope	-.894***	1.186	
MLQ-S	Intercept	CES-D	Intercept	.361***	.294	$\chi^2 (43) = 77.648^{**}$ ; CFI = .990; RMSEA = .039
	Slope		Slope	.017	.810	
MLQ-P	Intercept	RUM	Intercept	-.351***	.063	$\chi^2 (43) = 60.229^{**}$ ; CFI = .996; RMSEA = .027
	Slope		Slope	-.339	.221	
MLQ-S	Intercept	RUM	Intercept	.360***	.054	$\chi^2 (43) = 77.027^*$ ; CFI = .991; RMSEA = .038
	Slope		Slope	.456**	.153	

\*\*\*  $p < .001$ , \*\*  $p < .01$ , \*  $p < .05$ .

*Note.* MLQ-P = Meaning in Life Questionnaire-Presence; MLQ-S = Meaning in Life Questionnaire-Search; CES-D = Center for Epidemiologic Studies Depression Scale; RUM = Rumination; RMSEA = root mean square error of approximation; CFI = comparative fit index.

rumination over time. Those individuals reporting high T1 search for meaning also reported high T1 rumination ( $\beta = .36$ ) and an increase in search for meaning predicted an increase in rumination over time ( $\beta = .46$ ). These findings supported H1, however, it also expected that an increase in presence of meaning would predict a decrease in rumination over time, but this pattern was not found.

### **Was Presence Negatively, and Search Positively, Predictive of Negative Well-Being at all Ages?**

In order to test different time spans without conducting numerous redundant analyses (for example T2 to T4), all analyses were anchored to T1. H2 suggested that presence of meaning would negatively predict depression and rumination, and vice versa, at all ages; and that search for meaning would positively predict depression and rumination, and vice versa, at all ages but most strongly in older age as was previously found with depression (Steger et al., 2009).

#### **Age moderating the search and presence relationships with negative well-being.**

Age did not significantly moderate the relationships from search to rumination and from presence to rumination. In the next regression, age significantly moderated the relationship between concurrent search to depression ( $\beta = .29, p < .001$ ). ModGraph (Jose, 2008) was used to graph the interaction, and, contrary to H2, it showed that younger individuals manifested a stronger positive relationship between search for meaning and depression.

The next moderation examined whether age influenced the relationship from presence to depression. In this residualised regression, age was a significant moderator of the relationship from T1 presence to T3 depression ( $\beta = -.11, p < .01$ ). ModGraph was used to graph the interaction (see Figure 4.1). Simple slopes analyses revealed a negative relationship for older individuals (slope =  $-.18, t = -2.14, p < .05$ ) and a marginally significant positive slope for younger individuals (slope =  $.16, t = 1.91, p = .056$ ), and the slope for the middle group was non-significant. Thus, for older individuals, presence of meaning predicted a decrease in depression over six months, whereas for younger people it predicted an increase in depression. A similar pattern was also found between T1 and T4, nine months after T1; however this result was non-significant after three and twelve months. This finding was inconsistent with H2 which proposed that presence would negatively predict depression at all ages.

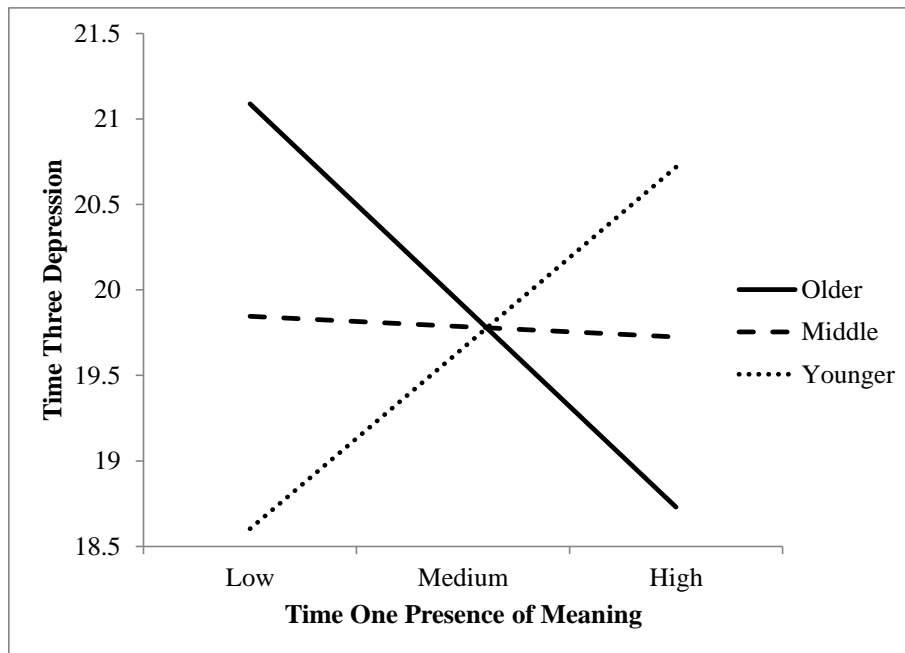


Figure 4.1. Moderation by age on the relationship between time one presence of meaning and time three depression.

**Age moderating negative well-being relationships with search and presence.** Age did not significantly moderate the relationships from depression to search, from depression to presence, and from rumination to presence. Finally, the possibility of age moderating the relationship from rumination to search was examined. Age significantly moderated T1 rumination to T3 search ( $\beta = -.09, p < .01$ ). ModGraph was again used to graph the interpretation (see Figure 4.2). Simple slopes analyses revealed a significant positive slope for younger individuals (slope = .25,  $t = 2.79, p < .01$ ), however, the slopes for middle and older individuals were non-significant. Contrary to H2, which proposed that rumination would positively predict search for meaning at all life stages, this finding suggests that for young adults, rumination predicted an increase in searching for meaning six months later.

### **Did Presence Moderate the Relationships between Search and Negative Well-Being?**

H3 predicted that presence of meaning would buffer the relationships between search for meaning and negative emotional states (rumination and depression), i.e., individuals who possess meaning in their life would be less likely to show a strong relationship between searching and maladjustment.

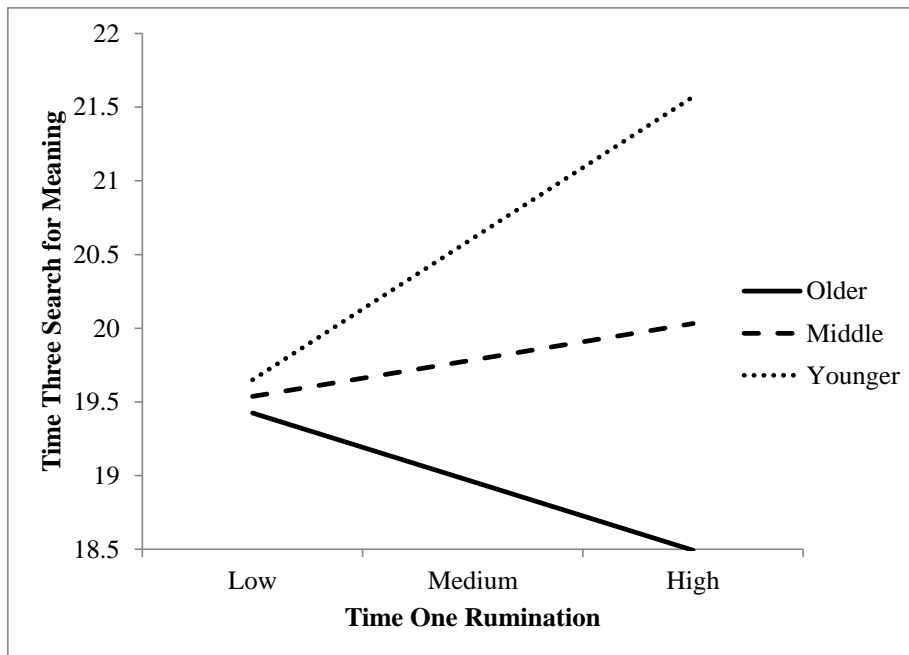
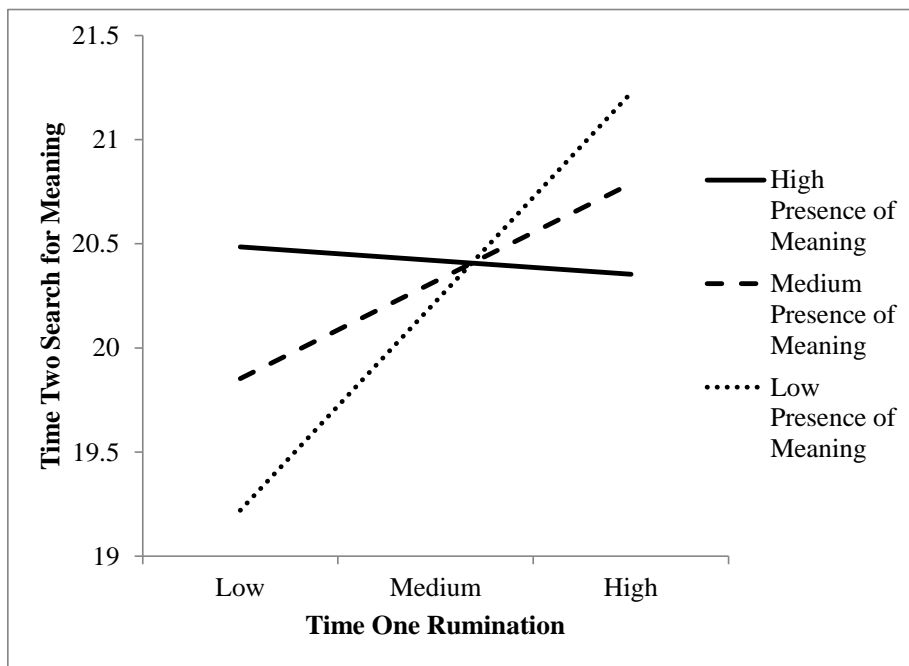


Figure 4.2. Moderation by age on the relationship between time one rumination and time three search for meaning.

**Presence moderating search to negative well-being.** This moderation analysis investigated whether having high presence of meaning when searching for meaning would protect one from depression. Consistent with H3, presence significantly moderated the concurrent relationship from search to depression ( $\beta = -.12, p < .01$ ). The influence of the moderator was such that less depression was experienced when searching for meaning under conditions of high presence of meaning. Also consistent with H3, presence was a significant moderator of concurrent search for meaning to rumination ( $\beta = -.08, p < .05$ ). Presence of meaning buffered the relationship between search for meaning to rumination such that those individuals reporting high presence exhibited the least amount of rumination when searching for meaning. The moderating effect was not seen at any other time intervals.

**Presence moderating negative well-being to search.** Presence of meaning was not found to influence the relationship from depression to search for meaning. However, presence of meaning significantly moderated the relationship from T1 rumination to T2 search for meaning ( $\beta = -.07, p < .05$ ). Simple slopes analyses yielded a significant relationship for low presence (slope = .26,  $t = 2.88, p < .01$ ), a marginally significant positive relationship for moderate presence (slope = .12,  $t = 1.90, p = .057$ ), however, the slope for high presence was non-significant (see Figure 4.3). Therefore, consistent with H3, for individuals reporting low

presence, rumination at time one led to increased search for meaning three months later. This pattern was also found for T4 search for meaning, nine months after T1.



*Figure 4.3.* Moderation by presence of meaning on the relationship between time one rumination and time two search for meaning.

### **Did Presence and Search Moderate the Relationship from Rumination to Depression?**

Presence of meaning was not a significant moderator of the relationship from rumination to depression. However, search significantly moderated the concurrent relationship between rumination and depression ( $\beta = -.10, p < .01$ ). Consistent with H4, the relation from rumination to depression was strongest under conditions of high search for meaning, suggesting that searching for meaning exacerbates the link between rumination to depression.

### **Discussion**

The central aim of this research was to determine how presence of meaning and search for meaning are linked to negative well-being outcomes over time. LCGM analyses showed that, consistent with previous research (Mascaro & Rosen, 2008; Park et al., 2010; Steger et al., 2008), initial presence of meaning was negatively related to depression and rumination, whereas initial search for meaning was positively related. The longitudinal analyses with LGCM parallel process models showed that an increase in presence was predictive of a decrease in depression, and an increase in search was predictive of an increase

in rumination over one year. These findings verify that obtained concurrent relationships are manifested over time in an expected way.

Moderation analyses showed that younger adults reported the most positive relationship between depression and search for meaning, marking a deviation from previous research which found that search for meaning was most strongly related to depression for older people (Steger et al., 2009). Perhaps this result was obtained because older people possess a more consolidated sense of a meaningful life (Reker et al., 1987; Steger et al., 2009), so any additional search for meaning is not as likely to impinge on well-being, whereas younger people do not have such an established sense of meaning in their lives so the motivation for searching may be predictive of greater depression. The study also found that for younger people, rumination predicted an increase in search for meaning six months later, which is not what was expected as searching has been found to be most strongly linked to negative well-being in later life (Steger et al., 2009). This rumination finding is interesting because it shows that not only can search for meaning influence certain well-being outcomes over time, but it can also be an outcome of previous rumination. Both searching for meaning and rumination have elements of questioning and searching for answers, and further, both are linked with negative emotional outcomes so they may share an aspect of ineffective questioning, i.e., maybe both are mostly ineffectual in leading to answers. Perhaps rumination leads to search for meaning for younger people because, although most people search, it is a process which is engaged in to a greater extent earlier in life as individuals cement their identities and create goals for the future (Steger et al., 2009).

For older individuals, possessing a sense of meaning was predictive of a decrease in depression six and nine months later. This finding departed somewhat from previous research in that presence of meaning was negatively related to depression *at all ages* in an investigation by Steger and colleagues (2009), but here this effect was only seen in older adults. It is a provocative finding, however, as it supports the idea that presence of meaning does work to reduce psychological distress over time, in this case depression, but only later in life. Although some level of presence of meaning is evidenced in all age groups, it is possible that it only begins to exert an beneficial impact on well-being in older age as meaning in life becomes more consolidated; this speculation is consistent with previous research examining positive well-being outcomes, which found that presence predicted increased happiness and life satisfaction for older individuals over a year (Grouden et al., 2013a).

The moderating effect of presence of meaning on the relationship between search and depression (as documented by Park et al., 2010) was replicated in the current research: when



searching for meaning, the level of depression experienced was lower under conditions of high presence of meaning. A direct comparison cannot be made, however, as the Park and colleagues' research primarily examined life satisfaction, but reported that the same moderating effect was found for depression. This research was extended by examining whether the effect would be seen with rumination as the outcome, and again the moderating influence was seen: when searching for meaning, rumination was lower if presence of meaning was high. These findings are important because although searching for meaning seems to have generally negative consequences for well-being, the negative impact of searching is lessened if individuals already feel that their lives are meaningful to some reasonable degree. Additionally, for those individuals reporting low presence, rumination led to increased search for meaning three and nine months later. It is possible that rumination does not instigate a search for meaning when a person has considerable presence of meaning because it acts as a buffer against rumination and there is no need to find additional meaning.

The strongest relationship between rumination and depression occurred when search for meaning was high. This finding extends previous research which has found that rumination leads to depression (Nolen-Hoeksema, 2000); namely it seems that searching for meaning intensifies this response style process. Searching for meaning in one's life, then, is an important context in life to be aware of because it seems to exacerbate the pathway from rumination to depression.

### **Limitations**

Several limitations in the present research should be noted. The sample which was used here included an overrepresentation of females and English-speaking adults, so there is a distinct possibility that the findings might not generalise to other cultures and to both genders equally. Two negative outcomes were examined in the present research: depression and rumination. Other maladaptive outcomes for example anxiety, may or may not conform to the patterns discerned here. Further, although this research has examined the mechanisms at play between searching for meaning, possessing meaning, and negative well-being outcomes, it has not investigated the specific realms in life in which people experience a sense of meaning. It is plausible that deriving a sense of meaning in certain areas of life might be more strongly linked to well-being and ill-being than others.

### **Practical Implications**

The fact that greater presence of meaning was predictive of less depression over time is a useful finding and provides strong support for the idea that having a sense of meaning is beneficial for reducing one's psychological distress (e.g., Mascaro & Rosen, 2005; Park et

al., 2010). Although it makes intuitive sense that having meaning in life would be beneficial for one's well-being, research is lacking which has empirically established that meaning actually reduces psychopathology in a significant fashion over time (Steger, 2012a). Findings of this nature have practical repercussions as treatment interventions could be developed around the idea of helping individuals establish a meaningful life as a means of reducing depression. Given the increasing prevalence of depression and the fact that it impacts so strongly on its sufferers' ability to function well in life, such interventions would be widely beneficial.

The present research also highlights that although searching for meaning is a distinctly human process, it is a difficult endeavour, constantly challenging one's sense of well-being. The present findings suggest that perhaps individuals need significant scaffolding, possibly in the form of certain character strengths, in order to search successfully and without detrimentally impacting well-being. Future research should aim to replicate the findings here and probe further into the longitudinal relationships between search for meaning, presence of meaning, and negative well-being, and extend these examinations to other outcomes such as anxiety and negative affect.

This research showed in various findings that search for meaning is a challenging process that is frequently predictive of negative psychological outcomes. Individuals who manifested an increase in search for meaning over time were found to manifest an increase in rumination over time. This result is sobering in that rumination is most strongly linked to depression when search for meaning is high. The present research makes some progress in showing *how* presence of meaning and search for meaning are related to negative psychological outcomes over time, highlighting that meaning in life, as Frankl argued, plays a significant role in reducing psychological distress.

## Bridging Comment

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Chapter Four examined the relationships among search for meaning, presence of meaning, and several ill-being indicators, in this case depression and rumination. The analyses in this case were based on longitudinal data, and provide a clearer view of how these variables are related to each other over time. This article highlighted that searching for meaning was most strongly related to depression among younger people, suggesting that the consolidated sense of meaning posited to develop with age may be protective against depression during additional search for meaning. Additionally, for older people, an established sense of meaning was predictive of a reduction in depression over time, further cementing the idea that as meaning becomes more consolidated with age it begins to exert a beneficial impact on well-being. The research findings confirmed, as expected, that presence of meaning buffered the relationship between search for meaning and negative well-being outcomes.

Building on these finding, I next sought to explore whether and how the relationships between search for meaning, presence of meaning and well-being are moderated by various dispositional traits. Of particular interest is whether certain traits might facilitate a search for meaning that *actually* leads to greater presence of meaning. In the next article the personality characteristics of hope and grit were investigated as moderators. The intention was to see whether being tenacious, determined, and believing in one's ability to reach important goals might help to mitigate the assault on well-being that occurs while searching for meaning, and additionally whether these traits assist in meaning being found after an extensive search.

## CHAPTER FIVE

### Personality Traits, Meaning, and Well-Being

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*The individual person is responsible for living his own life and for 'finding himself.' If he persists in shifting his responsibility to somebody else, he fails to find out the meaning of his own existence.*

– Thomas Merton

#### Abstract

Searching for and attaining presence of meaning in life are important goals for most people. The present study examined whether certain personality traits, i.e., hope and grit (a propensity to persevere in the face of adversity), facilitated the search for meaning in a community sample comprised of 543 young people and adults (15 to 81 years) who completed self-report measures of search, presence, hope, grit, depression, and rumination five times at three-monthly intervals. Searching for meaning led to higher presence of meaning a year later for individuals who reported high levels of grit. For individuals reporting high levels of hope, depleted presence led to an increase in search six months later. For individuals reporting low levels of grit, reduced presence predicted a decrease in search a year later. Search led to an increase in depression and rumination nine months later for individuals low in hope. Similarly, search led to increased depression three months later and increased rumination six months later for individuals reporting low levels of grit. In sum, individuals possessing high levels of hope and grit tended to persist and benefit from periods of searching for meaning in their lives.

*Keywords:* Presence of meaning, search for meaning, hope, grit, depression, rumination, time

## Introduction

Imbuing life, and the experiences contained within it, with a sense of meaning is a distinctly human motivation (Steger, 2012a). The importance of meaning in life for a person is widely accepted, and Frankl (1963) goes so far as to assert that all human beings are inherently motivated to search for meaning. Searching for meaning and attaining meaning are influenced by dispositional traits (Steger, Kashdan, Sullivan, & Lorentz, 2008), and a successful search may be dependent on these personal qualities. The present article will report on an empirical investigation of meaning in life in relation to two personality traits, namely hope and grit. We investigated how these traits might facilitate the process of searching for meaning eventually leading to the attainment of meaning, which has not been the case in empirical research (Grouden, Jose, & IWS Research Team, 2013a). Further the research investigated whether hope and grit might have a moderating influence on the positive relationship that is typically found between searching for meaning and negative well-being outcomes (e.g., Grouden, Jose, & IWS Research Team, 2013b). It was expected that hope and grit would provide a beneficial impact on this process of deriving meaning from one's life.

## Meaning in Life

Despite considerable scholarly investigation into meaning in both philosophical and psychological fields over many years, this concept has retained an enigmatic status (Feldman & Snyder, 2005). Meaning *of* life has been thoroughly examined in philosophy, with exploration of the meaning of our human existence (Joske, 1974). However, given to the difficulties in empirically investigating this topic, psychologists have sought to examine what is meaningful *in* life, the subjective experience of what is meaningful to an individual, within his or her life (Auhagen, 2000).

Making meaning, by seeking to understand events, people, and things in the world around us, is an inherently human trait and aids us the process of creating a life path (Weinstein, Ryan, & Deci, 2012) and instilling a sense of stability in our existence (Baumeister & Vohs, 2002). Meaning in life is something quintessentially personal and unique to the individual (Auhagen & Holub, 2006), and people constantly re-evaluate the meaning in their life and find new meanings in a dynamic fashion (Delle Fave, 2009). Posing goals is an instrumental process in the search for a meaningful life (Emmons, 2007). Goal attainment is perhaps the mechanism through which meaning is achieved, “the bricks of meaning—goals—are assembled into a solid foundation of life meaning” (Feldman & Snyder, 2005; p. 418). Achieving life goals (e.g., making a career, establishing a family, etc.)

is a continual process throughout the lifespan, and research should determine whether greater meaning in life accrues from the successful navigation of this process.

Further to the idea that people derive meaning from their experiences, Frankl (1963) asserted that we are also motivated to actively search for meaning. The process of seeking meaning is nicely captured in Steger, Frazier, Oishi and Kaler's (2006) two part conceptualisation. First, presence of meaning is defined as "the extent to which people comprehend, make sense of, or see significance in their lives, accompanied by the degree to which they perceive themselves to have a purpose, mission or over-arching aim in life" (Steger, Oishi, & Kashdan, 2009; p. 43). And second, search for meaning is defined as "the strength, intensity, and activity of people's desire and efforts to establish and/or augment their understanding of the meaning, significance, and purpose of their lives" (Steger et al., 2008; p. 200). As this conceptualisation of meaning encompasses both searching and presence, capturing the dynamic tension inherent in this process, this model was used in the current research.

### **Presence of Meaning and Search for Meaning**

Possessing a sense of meaning in life is widely accepted to be essential for overall well-being (e.g., Auhagen, 2000; Emmons, 2007; Ryff & Keyes, 1995; Steger, 2009) and if a person lacks presence of meaning, then meaninglessness is experienced, and individuals are at risk for various forms of psychopathology (Debats, 2000; Reker, 2000; Scannell, Allen, & Burton, 2002). Presence of meaning is related to positive well-being outcomes of happiness and positive affect (Steger, Oishi, & Kashdan, 2009) and life satisfaction (Grouden, Jose, & IWS Research Team, 2013c; Steger & Kashdan, 2006). On the other hand, having meaning in life is negatively related to depression and rumination (Grouden et al., 2013b; Steger et al., 2008). Furthermore, meaning in life has been found to be protective against the experience of depression longitudinally (Grouden et al., 2013b; Mascaro & Rosen, 2008).

A fairly established understanding of what presence of meaning is and how it relates to well-being has emerged in the literature, however, the process of searching for meaning has been largely ignored despite the argument that it is an essential component of the meaning process (Steger et al., 2006). The degree to which individuals search for meaning varies, and this process is viewed as both a component of positive functioning (Frankl, 1963), and a negative process highlighting that important human needs have been frustrated (Baumeister, 1991). Searching for meaning appears to be linked to certain qualities: a curious nature with an inclination to be investigative and questioning, and tendency to be engrossed in one's experiences (Steger et al., 2008). Search for meaning has been demonstrated to have

the opposite pattern of well-being correlates to presence of meaning as it is negatively linked to life satisfaction and happiness (Park, Park, & Peterson, 2010), and it is positively associated with depression, negative affect (Steger et al., 2009), and rumination (Steger et al., 2008).

Search for meaning and presence of meaning are considered to be related, yet separate constructs: search for meaning and presence of meaning have been found to be weakly inversely related concurrently (Steger & Kashdan, 2006), but little is known about the relationship of presence of meaning and search for meaning over time. Steger and colleagues (2008) enunciated two competing models of how search and presence might relate to one another. First, the presence-to-search model posits that if one's meaning becomes depleted, this lack of meaning instigates a search for meaning; this model could be considered a 'compensatory model' in that when presence decreases, searching increases. And second, the search-to-presence model proposes that searching for meaning builds up levels of meaning; this model could be referred to as an 'accretion model' as greater searching leads to greater presence of meaning. The compensatory model has been empirically supported concurrently (Steger et al., 2008) and longitudinally (Grouden et al., 2013a), whereas support for the accretion model is generally lacking.

It seems that personality may have an impact on the relationship between search for meaning and presence of meaning as cross-sectional research by Steger and colleagues (2008) found that people who were less autonomous were more likely to search for meaning when their meaning was depleted. To date, little research has considered how personality traits influence the relationship between presence and search over time, and it is possible that the accretion model, namely that search for meaning leads to the achievement of meaning, is supported if the individual possesses certain helpful or resourceful qualities. Steger and colleagues (2008) describe how "a healthy search is usually depicted as grounded in people's aspirations and insights they drive from engaging in life's challenges" (p. 203), so traits reflecting goal-directedness, such as hope and grit, may aid in the process of searching for meaning and ultimately leading to its achievement; this is the main question that the present research will investigate.

### **Meaning and Personality**

McAdams (2010; 2012) has argued that the human inclination to make sense of events, people, and things surrounding us in our lives is central in personality theory, and, further, our penchant to search for and achieve meaning is influenced by certain dispositional personality traits. Those of us who are most interested in searching for meaning may be

individuals who are curious about, and motivated to, answer big questions about life and existence (Steger et al., 2008). It seems that the meaning process and personality are of mutual importance to one another. Enduring traits, which form the basis of personality, account for constancy of behaviour within an individual and are differentially predictive of a large variety of psychological outcomes, for example, well-being (McAdams, 2012).

### **Meaning, Hardiness, and Grit**

Grit is a personality quality concerned with persistence and success in achieving important goals. It is defined as “perseverance and passion for long-term goals. Grit entails working strenuously toward challenges, maintaining effort and interest over years despite failure, adversity, and plateaus in progress” (Duckworth, Peterson, Matthews, & Kelly, 2007; pp. 1087-1088). Grit will be a trait at the centre of the present investigation, however it is a relatively new construct which has not been thoroughly examined in research on meaning in life. The only research to date that has examined grit in relation to meaning in life found that grit is predictive of resilience to suicidal ideation, in an indirect fashion through established meaning in life and that grit and meaning are positively related concurrently (Kleiman, Adams, Kashdan, & Riskind, 2013). In the absence of additional research on how grit is related to presence of meaning and search for meaning, predictions will be grounded in research on hardiness which as a personality trait displays some similarities to grit.

Central to the quality of hardiness is resilience, and it comprises three components: commitment, control and challenge (Maddi, Khoshaba, Harvey, Fazel, & Resurreccion, 2010). Essentially, commitment is the belief that it is important to remain involved with the world around, regardless of one’s stress levels; control is evident when individuals seek to continue to impact outcomes irrespective of any associated difficulty; and high challenge is evident in people who view stresses as growth opportunities (Maddi, 2006). Possessing hardiness not only aids people in coping with stressors, but it also helps people find meaning in life (McAdams, 2012). Hardiness has been found to facilitate performance under high stress conditions (Maddi, 2006), so it is possible that possessing courage and determination when facing the challenge of searching for meaning may ensure that searching is not a futile endeavour; but one which leads to the achievement of meaning.

Given the impact of hardiness on attaining meaning, the constancy of effort and perseverance toward long-term goals demonstrated by gritty individuals could also be a mechanism through which searching for meaning leads to achievement of meaning in life. Grit may serve to enhance one’s stick-ability when searching for meaning and distinguish between individuals who achieve meaning after searching from those who do not. Further,



given the protective role that grit was demonstrated to have in mitigating suicide risk through facilitating meaning in life (Kleiman et al., 2013), it may also protect against other negative well-being outcomes. Whether possessing grit influences the effectiveness of an individual's search for meaning, and mitigates negative well-being outcomes following a search for meaning, will be examined in the present research as these questions have not yet been empirically investigated.

### **Meaning and Hope**

A hopeful disposition is strongly associated with a sense that life is meaningful (Halama, 2003; Michael & Snyder, 2005). Hope has been conceptualised as “the perceived capability to derive pathways to desired goals, and motivate oneself via agency to use those pathways” (Snyder, 2002; p. 249). Michael and Snyder (2005) posit that, theoretically, hope and meaning should be positively associated because meaning in life is the foundation of important life goals, and hope, being a goal-directed thought process, is the means of actively progressing towards achieving those goals. In fact Feldman and Snyder (2005) highlight that hope is essential for the perception that goals and overall meaning in life are both achievable, which may in turn facilitate the belief that one's current life is meaningful.

Hope has been found to be positively associated with presence of meaning in empirical research (eg., Feldman & Snyder, 2005; Halama & Dedova, 2007); and, furthermore, meaning has been found to positively predict hope over a two month time period (Mascaro & Rosen, 2005). Additionally, with regard to negative well-being outcomes, research has found that both hope and meaning in life are negatively predictive of anxiety and depression, and it is posited that hope may in fact constitute an important part of one's wider presence of meaning in life (Feldman & Snyder, 2005; Halama, 2003). Feldman and Snyder aver that hope may act as a buffer against anxiety, in addition to meaning, because this quality involves having optimistic expectations of the future.

Given that searching for meaning is a goal-directed endeavour, it is possible that hope would be positively linked to search for meaning over time. As this possibility has not yet been examined, the current research will test this hypothesis. Furthermore, it may be possible that searching for meaning would lead to increased presence of meaning among individuals reporting higher hope (which would support the basic idea of the accretion model), and that search for meaning would not predict negative well-being outcomes longitudinally if individuals maintain a hopeful disposition.

### **Goals of the Present Study**

The goals of the present research were to investigate whether hope and grit might influence the process of searching for meaning; specifically, to determine whether hope and grit might facilitate the process of searching for meaning, resulting in greater presence of meaning and less negative well-being over time.

With longitudinal data, the research endeavoured to examine how presence of meaning and search would relate to hope and grit over time. Given that research has shown hope and presence to be positively related (Michael & Snyder, 2005), and hardiness, a similar construct to grit, has also been associated with presence of meaning (McAdams, 2012), it was anticipated that presence of meaning would positively predict hope and grit longitudinally (and vice versa). Search for meaning has not been examined in relation to these variables, however, since search, hope, and grit are all future- and goal-oriented, it was expected that search would positively predict hope and grit over time (and vice versa) (Hypothesis 1).

The research hypothesised that the personality traits of hope and grit would moderate the relationship from search to presence, such that searching would lead to increased presence over time when hope and grit were high, and would lead to decreased presence when they were low (Hypothesis 2). The investigation also expected that hope and grit would moderate the relationship from presence to search such that depleted presence would lead to increased search for meaning when hope and grit were high, and would lead to decreased search when they were low (Hypothesis 3).

A further aim was to extend previous research which has found that searching is associated with negative well-being outcomes such as depression (Steger et al., 2009) and rumination (Steger et al., 2008). Longitudinal data were used to examine whether the qualities of hope and grit were protective against the consequence of negative well-being when one is searching for meaning. It was predicted that hope and grit would moderate the relationships from search to rumination and search to depression, such that the relationship would be exacerbated when grit and hope were low, and buffered when they were high (Hypothesis 4).

### **Method**

#### **Participants**

The sample comprised 543 participants (455 females and 88 males) whose ages ranged from 15 to 81 years ( $M = 41.69$  years;  $SD = 13.93$ ). Participants elected to take part in an international research project, the International Well-Being Study (IWS), and so a wide range of nationalities are included in the sample. A total of 36 countries are represented, with

the majority of individuals coming from New Zealand (48.6%), followed by North America (19.7%) and Australia (9.6%). Participants were predominantly English speakers (89.9%), however there were 11 other first languages listed.

Recruitment of participants began in March 2009, with the final intake in March 2013. Individuals completed an online assessment five times over a year at three-monthly intervals. Individuals participating in the current research started at different times from March 2009 to June 2010, resulting in six cohorts. A MANOVA confirmed no significant differences between cohorts. The data were combined to align the five time points across the cohorts.

## Measures

**Meaning in Life Questionnaire.**<sup>8</sup> The Meaning in Life Questionnaire (MLQ; Steger et al., 2006) is a ten-item measure with two subscales measuring search for meaning and presence of meaning. Items included in the presence subscale are, for example, “I understand my life’s meaning” and “I have discovered a satisfying life purpose.” Examples of items in the search subscale are “I am always searching for something that makes my life feel significant” and “I am searching for meaning in my life.” Participants indicate choices on a 7-point Likert scale from 1 (*absolutely untrue*) to 7 (*absolutely true*). This scale has been found to exhibit excellent internal consistency with high Cronbach’s alphas (Steger, Oishi, & Kesebir, 2011). The alphas in the present research were all above .91 for both subscales at the five time points (Presence:  $\alpha$ s = .91 to .93, and Search:  $\alpha$ s = .91 to .94).

**Adult Hope Scale.**<sup>9</sup> The Adult Hope Scale (AHS; Snyder et al., 1991) is a 12-item scale which measures hope by examining goal-directed determination and planning capability for achievement of goals. The scale forms two subscales: agency and pathways. An example from the pathways subscale is, “I can think of many ways to get the things in life that are most important to me” and from the agency subscale, “My past experiences have prepared me well for my future.” Items are rated on an 8-point Likert scale from 1 (*definitely false*) to 8 (*definitely true*). The scale has previously demonstrated good internal reliability with Cronbach’s alphas between .74 and .84 (Snyder et al., 1991), however, in the current study the internal consistency was excellent with alphas above .85 ( $\alpha$ s = .85 to .86).

**Grit Scale.**<sup>10</sup> The Grit Scale (Duckworth et al., 2007) is a 17-item measure which assesses perseverance and passion for goals with two subscales: perseverance of effort and

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<sup>8</sup> See Appendix A for the Meaning in Life Questionnaire (MLQ; Steger et al., 2006).

<sup>9</sup> See Appendix F for the Adult Hope Scale (AHS; Snyder et al., 1991).

<sup>10</sup> See Appendix G for the Grit Scale (Duckworth et al., 2007).

consistency of interest. Items included in the measure are “I have overcome setbacks to conquer an important challenge” and “I have achieved a goal that took years of work.” Participants indicate their responses on a 5-point Likert scale from 1 (*not at all like me*) to 5 (*very much like me*). The scale has been found to have excellent internal consistency with a Cronbach’s alpha of .85 (Duckworth et al., 2007). Good internal consistency was found in the present research, with alphas above .79 at the five assessments ( $\alpha$ s = .79 to .81).

**Center for Epidemiologic Studies Depression Scale.**<sup>11</sup> The Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977) is a 20-item self-report measure of depressive symptoms. Examples of items in the scale are “I felt depressed” and “I had trouble keeping my mind on what I was doing.” Participants report the frequency with which the symptoms occurred in the last week by rating the items on a 4-point Likert scale from 0 (*rarely or some of the time*) to 3 (*most or all of the time*). This measure has demonstrated high internal reliability in clinical and non-clinical populations with alphas from .79 to .87 (Radloff, 1991). Excellent internal reliability was found in the current research as the Cronbach’s alphas were greater than .91 at all times of measurement ( $\alpha$ s = .91 to .95).

**Brooding rumination.**<sup>12</sup> Brooding rumination was assessed with two items from the Ruminative Response Scale (RRS; Nolen-Hoeksema, Morrow, & Fredrickson, 1993). The RRS scale has been factor analysed (Treynor, Gonzalez, & Nolen-Hoeksema, 2003) in order to more sensitively categorise rumination items into reflective and brooding categories. The items included in the current research were from the brooding category and asked participants whether they thought “Why do I always react this way?”, and “Why can’t I handle things better?” in response to stressful situations or persistent negative mood. Participants indicate their choices on a 7-point Likert scale from 1 (*strongly disagree*) to 7 (*strongly agree*). The brooding rumination scale has demonstrated good internal consistency with a Cronbach’s alpha of .77 (Treynor et al., 2003), as did the 2-item scale in the present research with alphas of greater than .83 at the five time points ( $\alpha$ s = .83 to .88).

## Procedure

As the research is part of an international collaboration, participants were recruited through a variety of strategies. Participation was voluntary and individuals were advised they could withdraw from the research at any time. The Open Polytechnic of New Zealand Human Research Ethics Committee approved the research procedure. Individuals completed the

<sup>11</sup> See Appendix D for the Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977).

<sup>12</sup> See Appendix E for the Ruminative Response Scale (RRS; Nolen-Hoeksema, Morrow, & Fredrickson, 1993).

assessments on-line using the SurveyMonkey website, each time of measurement taking approximately 25-30 minutes. Participants were e-mailed every three months inviting them to partake in the subsequent assessments. Participants selected their first language and completed the questionnaire in the language indicated at a time that suited them best.

## **Results**

### **Descriptive Statistics**

Descriptive statistics and correlations between presence of meaning, search for meaning, hope, grit, depression, and rumination are displayed in Table 5.1. Hope and grit were revealed to have moderate to strong positive associations with presence of meaning, and weak negative associations with search for meaning. Depression and rumination exhibited weak to moderate positive relationships with search for meaning and moderate negative relationships with presence of meaning, hope, and grit. Presence of meaning and search for meaning were weakly inversely related.

### **How Were Presence and Search Related to Hope and Grit Over Time?**

Latent growth curve modelling (LGCM; Duncan & Duncan, 2004) was used to look at how the longitudinal trajectories of presence and search were related to those of hope and grit over time. First it was necessary to create unconditional growth models of presence, search, hope, and grit, which describe how stable or changeable each variable is over time, in this case, over a year. LGCM calculates two estimates for each variable: the intercept, which is the mean score at the first time point; and the slope, which is the mean of all individuals' linear trajectories over multiple time points. It is possible that the variables might change in a non-linear fashion, however when this possibility was examined through the addition of quadratic and cubic slope terms into the unconditional models, the models failed to converge and addition of the terms did not increase model fit. Thus, the present research focused on linear change over time.

Fit indices obtained for the unconditional linear models of presence, search, hope, and grit showed that the models demonstrated adequate fit (see Table 5.2). The mean intercepts for presence, search, hope, and grit demonstrated significant variance, which signifies that individuals' time one (T1) scores varied considerably around the mean. All four slopes showed significant variance as well, which is indicative of differences in the rate of change in the four variables between participants. The slope for search was statistically significant and indicated a slight decline (-.07) in search over the passage of twelve months. The slopes for hope and grit were also significant, however they were both found to increase over the span

Table 5.1

*Descriptive statistics and correlation coefficients among presence of meaning, search for meaning, hope, grit, depression and rumination*

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6
1.T1 MLQ-P	25.35	6.67						
2.T1 MLQ- S	20.59	8.14	-.13**					
3.T1 AHS	69.21	12.30	.51**	-.14**				
4.T1 GRIT	3.63	.61	.39**	-.18**	.44**			
5.T1 CES-D	12.84	10.76	-.42**	.29**	-.61**	-.35**		
6.T1 RUM	8.16	3.79	-.26**	.27**	-.44**	-.33**	.47**	

\*\*  $p < .01$ , \*  $p < .05$ .

*Note.* MLQ-P = Meaning in Life Questionnaire-Presence; MLQ-S = Meaning in Life Questionnaire-Search; AHS = Adult Hope Scale; GRIT = Grit Scale; CES-D = Center for Epidemiologic Studies Depression Scale; RUM = Rumination; T = measurement occasion.

Table 5.2

*Unconditional latent growth models of presence of meaning, search for meaning, hope and grit*

Variable		Factor mean	SE	Factor variance	SE	R of intercept and slope	Model fit
MLQ-P	Intercept	5.075***	.055	1.467***	.101	-.032	$\chi^2 (14) = 23.361$ ; CFI = .997; RMSEA = .035
	Slope	.014	.010	.017***	.003		
MLQ-S	Intercept	4.133***	.066	2.018***	.145	-.081	$\chi^2 (14) = 29.311^*$ ; CFI = .993; RMSEA = .045
	Slope	-.068***	.013	.035***	.035		
AHS	Intercept	5.783***	.042	.888***	.060	-.147	$\chi^2 (10) = 15.759$ ; CFI = .998; RMSEA = .033
	Slope	.026***	.006	.006***	.001		
GRIT	Intercept	3.612***	.025	.296***	.021	.144	$\chi^2 (10) = 31.620^{***}$ ; CFI = .993; RMSEA = .063
	Slope	.017***	.017	.001*	.001		

\*\*\*  $p < .001$ , \*  $p < .05$ .

*Note.* MLQ-P = Meaning in Life Questionnaire-Presence; MLQ-S = Meaning in Life Questionnaire-Search; AHS = Adult Hope Scale; GRIT = Grit Scale; RMSEA = root mean square error of approximation; CFI = comparative fit index.

of a year (hope = .03; grit = .02). The slope for presence (.01) was not significant so it can be concluded that, on average, it was reasonably stable over time.

The unconditional LGCMs were combined to form four parallel process LGCMs (Duncan & Duncan, 2004) in order to probe how change in presence and search variable influenced change in hope and grit. Adequate fit indices were obtained for the parallel models with search predicting hope and grit, and the model fit indices for the models with presence predicting hope and grit also fit the data adequately (see Table 5.3).

**Hope.** Hypothesis 1 (H1) stipulated that presence and search would both positively predict hope as well as the reverse. The intercept to intercept coefficient for presence to hope ( $\beta = .60$ ) demonstrated that initially, those who reported high T1 presence of meaning also reported high hope. The slope to slope coefficient ( $\beta = .93$ ) suggests that an increase in presence of meaning over time predicted an increase in hope. These findings are congruent with H1 as presence positively predicted change in hope over time. Contrary to hypothesis, the intercept to intercept coefficient for search to hope ( $\beta = -.12$ ) showed that initially, those who reported high search, reported low hope; however, change in search for meaning was not found to predict change in hope longitudinally. The reverse, with hope predicting presence and search, demonstrated the same pattern of results, namely, hope positively predicted changes in presence over time but it did not predict changes in search.

**Grit.** H1 also stipulated that presence and search would positively predict grit over time (and vice versa). The intercept to intercept coefficient for presence to grit ( $\beta = .46$ ) showed that those individuals who reported presence of meaning to be high at the outset also reported high grit. The slope to slope coefficient ( $\beta = .48$ ) revealed that an increase in presence over time was predictive of an increase in grit longitudinally. In regard to search, the intercept to intercept coefficient for search to grit ( $\beta = -.20$ ) indicated that individuals who reported high search initially also reported low grit. The slope to slope coefficient ( $\beta = -.43$ ) showed that an increase in search over time was predictive of a decrease in grit. These findings partially support H1 as presence positively predicted grit longitudinally, however the results pertaining to search were inconsistent with expectation. H1 suggested that search would positively predict grit but a negative relationship over time was found instead. The same pattern of findings was evident when grit was the predictor of presence and search, namely, grit predicted an increase in presence, but it negatively predicted searching for meaning.



Table 5.3

*Parallel process latent growth models of presence of meaning, search for meaning, hope, and grit*

Predictor Variable		Predicted Variable		$\beta$	SE	Model Fit
MLQ-P	Intercept	AHS	Intercept	.596***	.032	$\chi^2 (44) = 192.608^{***}$ ; CFI = .978; RMSEA = .079
	Slope		Slope	.926***	.006	
MLQ-S	Intercept	AHS	Intercept	-.119***	-.178	$\chi^2 (43) = 94.810^{***}$ ; CFI = .991; RMSEA = .047
	Slope		Slope	-.203	-.093	
MLQ-P	Intercept	GRIT	Intercept	.461***	.020	$\chi^2 (43) = 122.982^{***}$ ; CFI = .987; RMSEA = .059
	Slope		Slope	.480**	.049	
MLQ-S	Intercept	GRIT	Intercept	-.200***	.019	$\chi^2 (43) = 105.849^{***}$ ; CFI = .998; RMSEA = .052
	Slope		Slope	-.433**	.034	

\*\*\*  $p < .001$ , \*\*  $p < .01$ , \*  $p < .05$ .

*Note.* MLQ-P = Meaning in Life Questionnaire-Presence; MLQ-S = Meaning in Life Questionnaire-Search; AHS = Adult Hope Scale; GRIT = Grit Scale; RMSEA = root mean square error of approximation; CFI = comparative fit index.

### Did Hope and Grit Moderate the Relationship from Search to Presence?

H2 expected that hope and grit would moderate the relationships from search to presence, with search leading to greater presence when hope and grit are high. Results revealed that hope did not moderate the relationship from search to presence at any time interval so the moderating influence of grit will be the focus here.

**Grit moderating search to presence.** This moderation considered whether search for meaning would lead to attainment of presence of meaning over time if individuals possessed sufficient grit. In this residualised regression, T5 presence was positively predicted by T1 presence ( $\beta = .72, p < .001$ ), however it was not significantly predicted by the main effects of search or grit in the ensuing steps. However, the interaction term positively predicted T5 presence in the final step ( $\beta = .06, p < .05$ ). The interaction (see Figure 5.1) and the pattern was consistent with H2, namely searching for meaning more strongly predicted an increase in presence of meaning a year later for individuals who reported high levels of grit.

### Did Hope and Grit Moderate the Relationship from Presence to Search?

H3 predicted that hope and grit would moderate the relationship from presence to search such that the reduced presence would instigate a search for meaning when the goal-oriented traits of hope and grit were high.

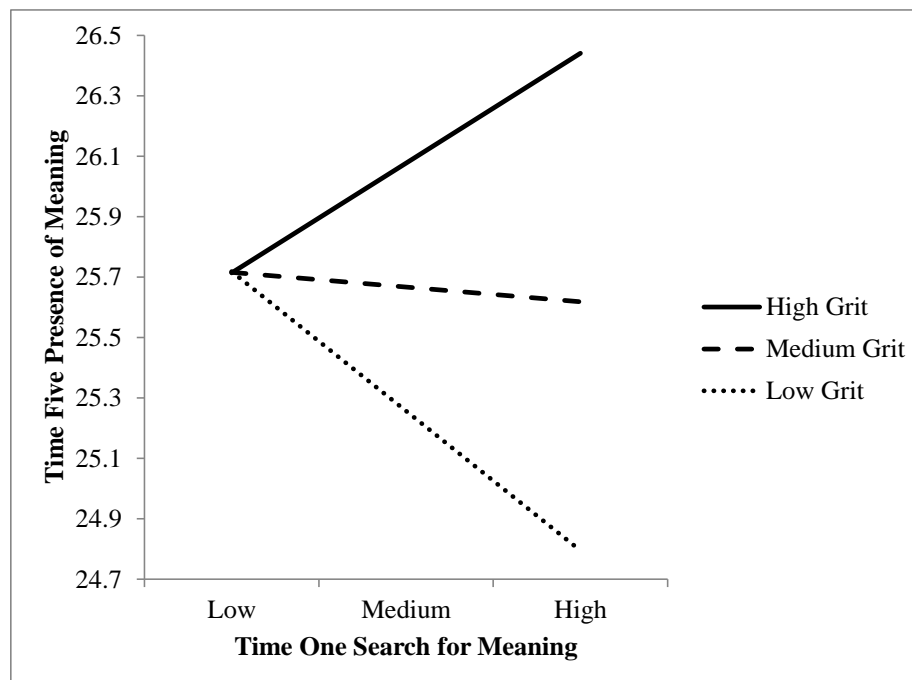


Figure 5.1. Moderation by grit on the relationship between time one search for meaning and time five presence of meaning.

**Hope moderating presence to search.** T1 presence to T3 search was moderated by T1 hope ( $\beta = .07, p < .05$ ). Simple slopes analyses revealed a marginally positive slope for the high level of hope (slope =  $-.11, t = 1.91, p = .057$ ), however the slopes for moderate and low hope were flat (statistically non-significant) (see Figure 5.2). This pattern shows that under conditions of high hope, presence led to an increase in search a year later. The moderating effect was also found for T4 search. Consistent with H3, for individuals with high hope, initial presence of meaning led to an increase in search six and nine months later.

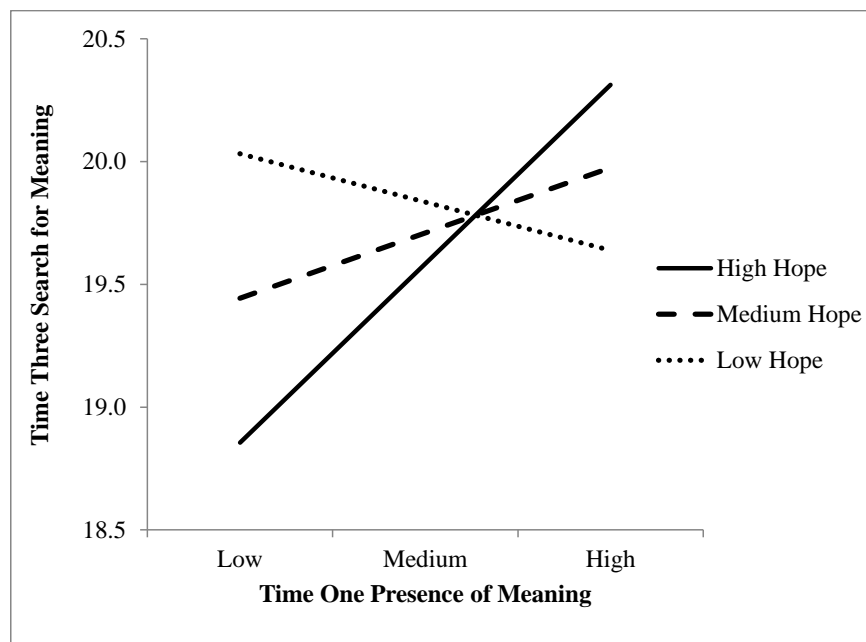


Figure 5.2. Moderation by hope on the relationship between time one presence of meaning and time three search for meaning.

**Grit moderating presence to search.** This next moderation analysis looked at whether low presence of meaning would instigate search for meaning if individuals possessed high grit. The relationship from T1 presence to T5 search was significantly moderated by grit ( $\beta = .08, p < .01$ ). Figure 5.3 graphically depicts the interaction, and simple slopes analyses, consistent with the pattern obtained for hope, revealed a significant negative relationship for low level of grit (slope =  $-.14, t = -2.58, p < .01$ ) and the slopes for the moderate and high level of grit were non-significant. This pattern indicates that, consistent with H3, under conditions of low grit, presence predicted decrease in search a year later. This moderating effect was also seen for T4 search, with presence predicting a decrease in search nine months later under conditions of low grit.

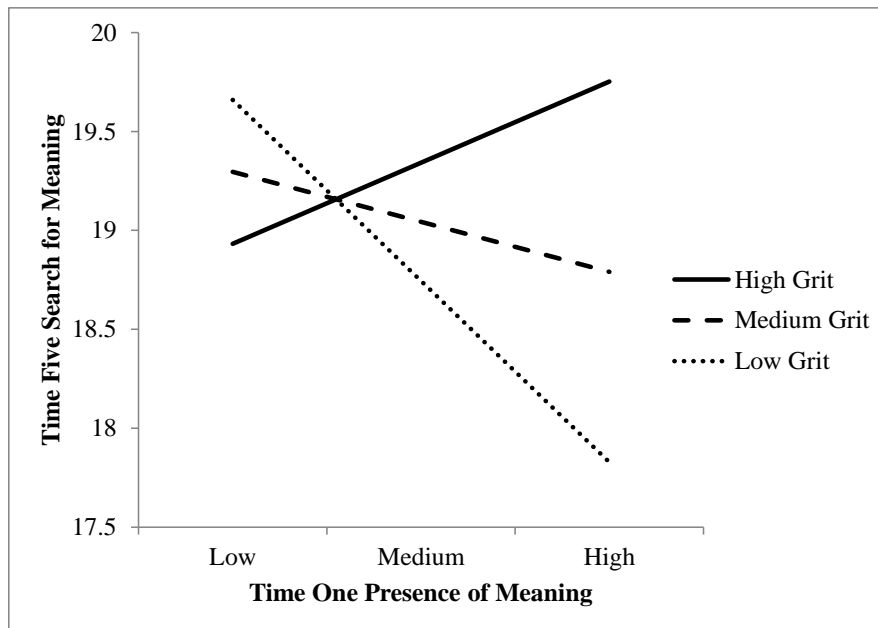


Figure 5.3. Moderation by grit on the relationship between time one presence of meaning and time five search for meaning.

### Did Hope and Grit Moderate the Relationships from Search to Negative Well-Being?

H4 hypothesised that hope and grit would longitudinally moderate the relationships from search to depression and search to rumination: low levels of hope or grit were expected to exacerbate the relationships from search to negative well-being. Hope was not found to moderate search to rumination at any time intervals.

**Hope moderating search to depression.** T1 search to T4 depression was significantly moderated by hope ( $\beta = -.08, p < .05$ ). Simple slopes analyses revealed a significant positive relationship when hope was low (slope = .13,  $t = 1.95, p < .05$ ), however the other slopes were non-significant (see Figure 5.4). This pattern suggests that, in agreement with H4, under conditions of low hope, searching for meaning led to an increase in depression.

**Grit moderating search to depression.** T1 search to T2 depression was significantly moderated by grit ( $\beta = .07, p < .05$ ). Simple slopes analyses revealed a significant positive relationship for very low grit (slope = .20,  $t = 2.00, p < .05$ ), however the other slopes were non-significant (see Figure 5.5). This indicates that, in alignment with H4, searching for meaning predicted an increase in depression when grit was very low.

**Grit moderating search to rumination.** T1 search to T3 rumination was significantly moderated by grit ( $\beta = -.08, p < .01$ ). Simple slopes analyses showed positive

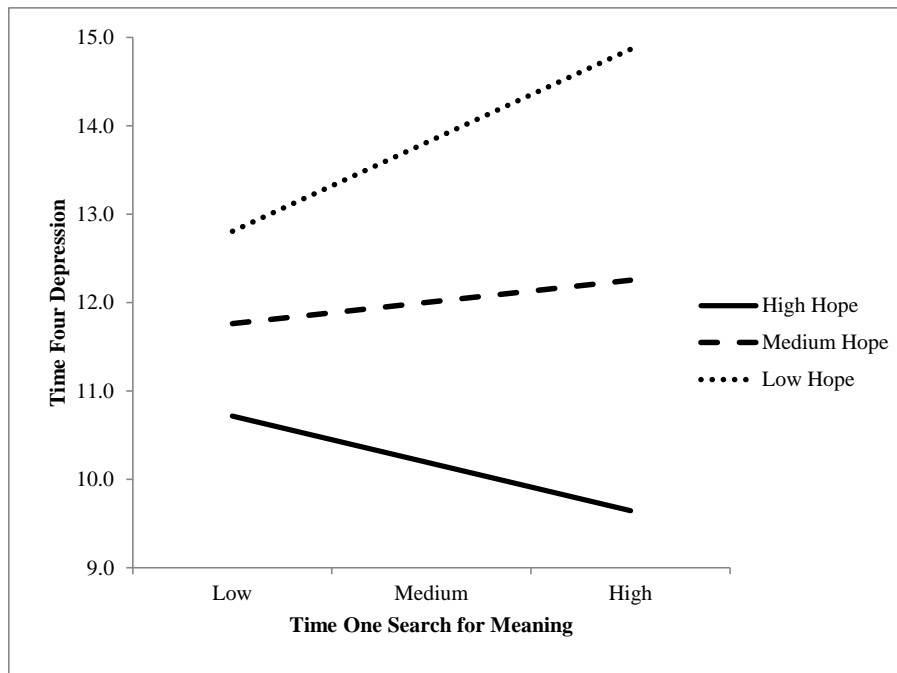


Figure 5.4. Moderation by hope on the relationship between time one search for meaning and time four depression.

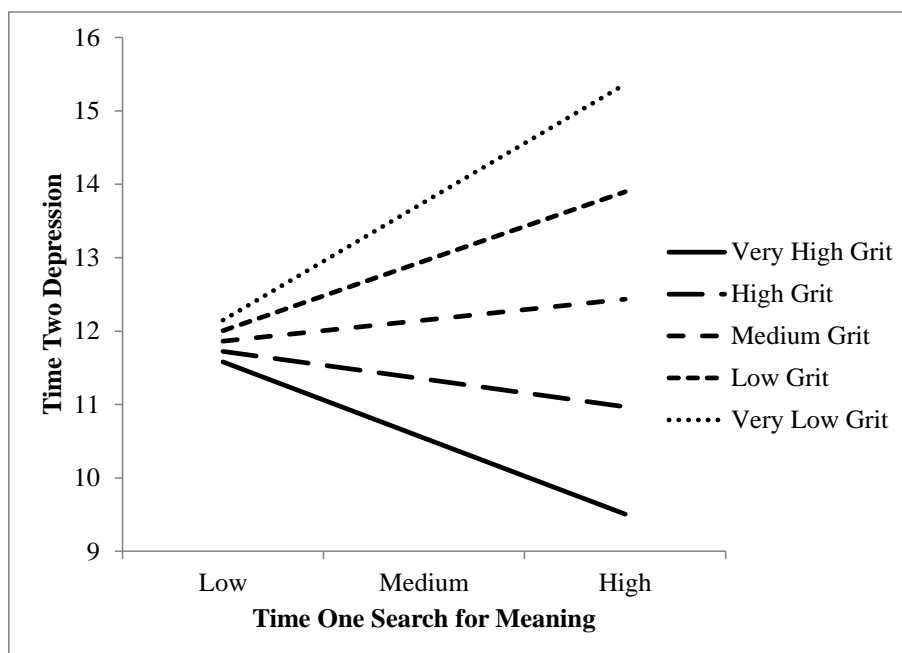
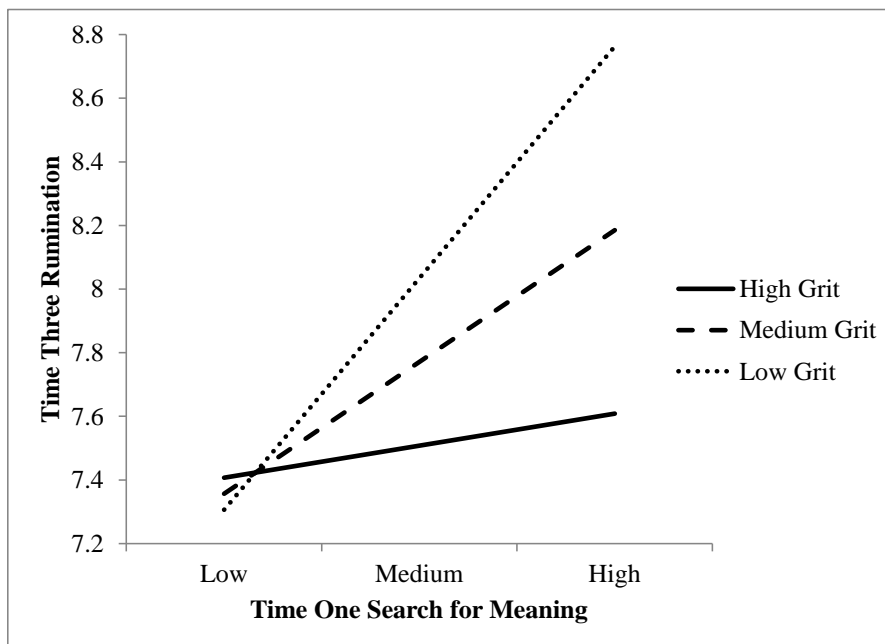


Figure 5.5. Moderation by grit on the relationship between time one search for meaning and time two depression.

relationships for the low (slope = .09,  $t = 3.72$ ,  $p < .001$ ) and moderate (slope = .05,  $t = 3.10$ ,  $p < .001$ ) but not high levels of grit (see Figure 5.6). This indicates that, consistent with H4,

three months later, search predicted an increase in rumination, with the greatest increase under conditions of low grit.



*Figure 5.6.* Moderation by grit on the relationship between time one search for meaning and time three rumination.

## Discussion

The present research explored whether certain personality traits would facilitate the human inclination to search for and find meaning. The more specific hypotheses and findings from the research will be discussed in turn. First, it was hypothesised that presence of meaning and search for meaning would positively predict hope and grit longitudinally. LGCM results showed initial levels of presence of meaning and hope were positively related which is consistent with previous research (Feldman & Snyder, 2005; Halama & Dedova, 2007). Presence of meaning was also positively associated with grit concurrently, which is consistent with findings from Kleiman and colleagues (2013), and is in alignment with research on the related construct of hardiness which has also been found to be positively related to meaning (Maddi et al., 2010). The longitudinal extension also supported this pattern as an increase in presence of meaning corresponded to increases in hope and grit over the span of a year. In the absence of research on the relationships between search for meaning, hope and grit, it was predicted that they would be positively related as they are future- and goal-oriented. However, contrary to expectation, search was negatively related to

hope and grit initially, an increase in search for meaning predicted a decrease in grit over a year, and change in search and hope were not significantly related.

The research also stipulated that searching for meaning would lead to increased presence over time when hope and grit are high, and decreased presence when they are low. Searching for meaning led to an increase in presence of meaning one year later when grit was very high. This is an important finding because it demonstrates that searching for meaning *does* lead to its attainment in some circumstances, in this case when people show perseverance and passion for their future goals. This result validates the usefulness of the process of searching for meaning, as it shows that it is not a fruitless undertaking and it does predicate a sense that life is meaningful *if* one has a persistent attitude when searching. It also provides support for the intuitive accretion model, that searching for meaning leads to greater presence of meaning (Grouden et al., 2013a), albeit under certain conditions.

It was predicted that diminished presence would lead to increased search for meaning when hope and grit are high, and decreased search when they are low. As expected, when hope was high, initial presence of meaning led to an increase in search six and nine months later. Under conditions of very high hope, presence predicted an increase in search six months later. The compensatory model is impacted by hope such that when presence was diminished and hope was high, this instigated a search for meaning. So, being hopeful, possessing belief in one's ability to achieve goals and motivation to pursue them, is crucial in compensating for a reduced sense of meaning in life. Similarly, when grit was low, presence predicted a decrease in search nine months and one year later. This shows that if one does not demonstrate passion and perseverance towards important goals, individuals do not initiate a search for meaning when meaning in life becomes reduced, highlighting how important grit is for the compensatory model too.

The research also investigated whether these traits would attenuate the pathway from searching for meaning to negative well-being. It was expected that relationships from search to depression, and search to rumination, would be exacerbated when grit and hope are low, and attenuated when they are high. Moderational analyses examining the impact of hope on search for meaning leading to negative well-being showed that under conditions of very low hope, search led to an increase in depression nine months later. This extends previous research which found a consistent positive link between search for meaning and negative well-being (e.g., Steger et al., 2009) as it shows that when hope is low, searching leads to greater depression over time but that when hope is moderate to high, this effect is not seen. These results are important because they illustrate that hope is able to attenuate the

relationship from searching for meaning to negative well-being and highlights that searching for meaning does not always lead to negative outcomes.

Furthermore, searching for meaning predicted an increase in depression three months later when grit was low. This shows that the quality of grit also plays a role in attenuating the link from searching for meaning to depression as the increase in depression occurred under conditions of low grit. Additionally, when grit was low to moderate, searching predicted an increase in rumination six months later, with the most growth under conditions of low grit; again illustrating that the tendency for searching to lead to negative outcomes is not evident when grit is high. Together these findings show that search for meaning need not encroach on individual well-being if one possesses an attitude characterised by belief in one's ability to achieve important goals, and persistence in striving toward them. These are important findings because although searching for meaning is an instinctively human endeavour, empirical research has consistently shown that it is plagued with negative outcomes. We can now see that certain personality traits play a pivotal role in alleviating this pattern.

### **Limitations and Implications**

While this research makes some excellent longitudinal contributions to the study of meaning in life, it does have its limitations. The sample comprised predominantly female, English-speaking participants so it is not known whether the results might be generalised to a more balanced sample in terms of gender, or to other cultures. It would be of interest to see whether similarities or differences are seen between cultures. Additionally, the research examined searching for meaning and presence of meaning in relation to personality traits, but the specific sources (e.g., family) from which meaning was derived were not investigated. Research should examine whether hope and grit are instrumental for searching in particular realms. Because both grit and hope are oriented toward the future, they might be influential in the search for meaning in areas in which attainment of meaning is not immediate: for example, parenting one's children to become well-rounded, flourishing individuals.

This research only considered the negative well-being outcomes of rumination and depression, however it would be illuminating to see whether similar or diverging results would be obtained for other outcomes such as anxiety or negative affect. Similarly, the focus of the present research was on how hope and grit impacted on presence of meaning, search for meaning, and negative well-being, but other dispositional traits could also have an influence. Resilience is a good candidate: the ability to be adaptive in the face of difficult events (Compton & Hoffman, 2013) might aid in making the search for meaning more productive and less aversive. Additionally, possessing certain strengths of character such as



zest, gratitude, and love of learning (Park, Peterson, & Seligman, 2004) might also facilitate the achievement of meaning following a search and protect against reduced well-being.

An important implication from this research is that if individuals would like to enhance their meaning in life (which is widely beneficial for sense of well-being) we now know that this might be facilitated by strong belief in one's ability, tenacity, and determination. If treatment focusing on enhancing meaning in life, for example Meaning-Centered Counseling (Wong, 1997), were also to teach individuals skills in being gritty and hopeful, this may improve the likelihood of a sense of meaning being found. It would also be beneficial for the general population as it would be useful for people to know that being hopeful and gritty in character would aid them in attaining a sense of meaning.

While it makes intuitive sense that searching for meaning would subsequently lead to presence of meaning, empirical research has failed to support this pathway (Grouden et al., 2013a; Steger et al., 2008), and this result unfortunately begs the question: why bother searching? This present research suggests that if one demonstrates tenacity, determination, and passion for long-term goals when searching for meaning, one's chances of attaining meaning are enhanced. This research indicates that searching for meaning can be a fruitful endeavour and grit and hope protect against negative impacts on well-being following a search for meaning. Based on these results, it is evident that treatment approaches could be developed to encourage individuals to search for meaning, while also fostering hope and grit, in order to achieve meaning in life and avoid negative well-being outcomes.

One of the major contributions of this research is its longitudinal findings, as despite a long history of research into meaning in life, how it unfolds over time has not been thoroughly been explored. The research has shown that when searching for meaning is accompanied by tenacity, it results in presence of meaning over time. Furthermore, the frequently observed pathways from search for meaning to negative well-being are attenuated for individuals displaying a hopeful, gritty disposition. Essentially, searching for meaning *can* lead to its attainment; and hope and grit mitigate the negative well-being outcomes subsequent to searching for meaning.

## Bridging Comment

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Chapter Five explored how search for meaning might be differentially related to presence of meaning and negative well-being outcomes as a function of dispositional traits. The research showed that having a gritty personality--manifesting determination, perseverance, and tenacity--assists in the process of searching for meaning that actually leads to a sense of meaningfulness. Although it is intuitive to think that searching for meaning will lead to its attainment, this outcome has not been generally demonstrated in empirical research. This, the present finding that those individuals high in grit are able to manifest this dynamic is an important contribution to the literature. Additionally, the findings demonstrated that possessing grit and hope--having belief in important goals and the motivation to achieve them--helped to mitigate the impoverished well-being that so frequently co-occurs with searching for meaning.

The first four articles constitute a suite of papers based on a single dataset and focused on relationships with presence of meaning and search for meaning. Numerous interesting findings were identified in this work, however all the preceding chapters have considered meaning in a general sense. A representative item from the MLQ is “My life has a clear sense of purpose”, and it shows that the measure assesses meaning in a global or general fashion. The last two articles are based on a different dataset and explore in a more detailed and differentiated way, the contents (or sources) of what is meaningful for people. What is meaningful for one person is not going to be meaningful to another, as finding and creating meaning is a uniquely personal process. The subsequent article sought to explore variations in sources of meaning according to different demographic factors: age, gender, and education level.

## CHAPTER SIX

### Sources of Meaning and Demographic Factors

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*The people in your life are important. Meaningful relationships with those people are very important.*

– Ed Bradley

#### Abstract

Research has identified the most vital sources of meaning in people's lives with varying results. The present research first examined how important sources of meaning varied according to demographic characteristics, and secondly whether these sources predicted well-being differentially by demographic characteristics. A community sample of 247 individuals (30 to 69 years) provided open-ended descriptions of the meaning in their lives, rated their meaning in certain domains, and completed 11 well-being measures. The most frequently reported source of meaning was family, followed by interpersonal relations. Younger adults were more likely to find personal growth meaningful, whereas older adults were more likely to report standard of living and community activities meaningful. Leisure activities were more meaningful for males, whereas females derived meaning from life across a wide range of sources ('in general'). Meaning from personal growth and life in general predicted well-being for females. More educated individuals found community activities meaningful, whereas those with less education found family, standard of living, health, leisure activities and life in general more meaningful. Religiosity/spirituality predicted well-being for more educated people whereas for those with less education, life in general predicted well-being. Findings show that certain aspects of life are consistently reported to be meaningful for the population at large, however we should be aware that there are significant variations that occur between demographic groups.

*Keywords:* Sources of meaning, age, gender, education level, well-being.

## Introduction

The desire to seek and attain meaning in life is a fundamental human inclination, and although there is considerable variation in how this is approached, it seems to be a universal process (Reker & Chamberlain, 2000). In fact, human beings are posited to be the only species to be motivated to examine and evaluate life events and experiences in order to make meaning (Emmons, 2005). This longing for meaning is a mechanism through which humans endeavour to create a sense of stability within our ever-changing existence (Baumeister & Vohs, 2002). Evidently, making meaning is a distinctly human motivation which helps to imbue the process of living life with a sense of continuity.

When considering meaning in life, the aim is to consider what different experiences and goals make life worth living for the individual rather than the overall abstract meaning *of* a life. Thus, psychological research has focused on ‘meaning in life’ lately in comparison to philosophy’s interest in ‘meaning of life’. The experience of meaning, then, for an individual is fundamentally unique and reflective of themes in the person’s life, although history, culture, socio-demographic status, and developmental stage will exert influence over values and beliefs and the nature of the meaning that is constructed (Prager, 1996). “People do not exist in isolation. They have families, live in communities, and share ethnic, gender, and professional backgrounds that generate specific meanings” (Bar-Tur, Savaya, & Prager, 2001, p. 255). The key message of the present paper is that the meaning that individuals generate is influenced by background demographic status variables.

### What is Meaningful in Life?

Although having meaning in life has been found to be important for a multitude of reasons, from the physical to psychological, it is also vital to consider *what* provides human beings with this sense of meaning. Empirical research indicates that meaning can arise from a variety of sources, from interpersonal relationships to religious activities to personal development (O’Connor & Chamberlain, 1996). Typically, individuals experience meaning in several different spheres (Pöhlmann, Gruss, & Joraschky, 2006) and it has been suggested that deriving meaning from multiple sources is in fact protective. If meaning in one domain is compromised, then remaining sources can be strengthened and thus overall meaning is not lost (Heine, Proulx, & Vohs, 2006).

### Central Sources of Meaning

The areas in life from which meaning is derived are termed sources of meaning. Sources of meaning are assembled into overarching categories in varied ways across different investigations: they are described differently, the total number of categories vary, as do the

research methods of ascertaining the sources of meaning (Schnell, 2011). One approach to understanding sources of meaning is qualitative interviews which ask individuals what is meaningful in their life. De Volger and Ebersole (1981) found that relationships, service, belief, life work, growth, pleasure, obtaining, and health were overarching categories which subsumed all of the various answers. Similarly, O'Connor and Chamberlain (1996) identified six sources of meaning through interviews: relationships, creativity, personal development, relationship with nature, religiosity/spirituality, and social/political beliefs. Wong (1998) took a slightly different approach and asked participants to describe the nature of an archetypal meaningful life, which produced seven sources of overall meaning (similar to the previous listed sources above). A more quantitative approach which has been utilised is to ask individuals to rate the degree to which they experience meaning in a list of different domains (e.g., Prager, Bar-Tur, & Abramowici, 1997; Reker & Wong, 1988). Additionally, Delle Fave and colleagues (2010) used a mixed qualitative/quantitative approach with open-ended answers and ratings on the following domains: family, work, interpersonal relations, health, personal growth, standard of living, religiosity/spirituality, leisure/free time, community/society, life in general, and education.

It is evident that considerable variation exists between studies as to how sources of meaning are categorised. However, one consistent finding is that interpersonal relationships have been found to be the most frequently reported source of meaning across numerous studies (e.g., Baum & Stewart, 1990; Debats, 1999; O'Connor & Chamberlain, 1996; De Vogler & Ebersole, 1981; Yalom, 1980). Social connection appears to be essential to evaluating one's life as meaningful (Lambert et al., 2010). However, when the next most important sources are probed, a varied picture emerges with no consistent pattern. Examples of the second most important sources of meaning include preservation of values (Bar-Tur & Prager, 1996; Prager, 1998), personal growth (Prager, 1996), creativity (O'Connor & Chamberlain, 1996), and work (Debats, 1999; Delle Fave et al., 2010).

### **Variation across the Lifespan**

Several findings have been obtained for particular periods in the lifespan. One challenge for describing the state of a person's meaning in life at a particular point in time is that constant adaptation is required due to the perpetually changing nature of life (Bar-Tur & Prager, 1996). As individuals age, previous and current experiences are constantly re-evaluated in response to personal values so that they may be integrated to form a coherent self-concept (Prager, 1998). Reker and colleagues (1987) discovered that older individuals have a more established sense of purpose in life; this may be due to the fact that meaning in

life becomes more integrated and consolidated with age (Dittmann-Kohli & Westerhof, 2000; Krause, 2012). Conversely, it has been suggested that while the sources from which people derive a sense of meaning change at different developmental stages, one's overall level of meaning in life stays relatively constant across the lifespan (Yalom, 1980); this hypothesis has been supported in empirical research (Prager, 1998; Zika & Chamberlain, 1992).

Mixed results have been obtained with regard to finding differences in sources of meaning according to particular age periods. For example, research has shown differences according to age: acknowledgment of achievement, personal growth, and hedonistic enjoyment are more important for younger people; whereas, preserving values and financial security are more important for older individuals (Prager, 1996; Prager, 1998). Family has been found to be the most important source of meaning for younger people (Lambert et al., 2010). Religiosity/spirituality, tradition, practicality, morality, and reason have been found to be of greater importance in older age (Schnell, 2009). Further, older people have been found to most highly endorse personal relationships, preserving values, humanistic concerns, and financial security (Bar-Tur & Prager, 1996). Consistency in sources of meaning identified as being especially important for certain age groups has not been found, however, taken together these findings provide some support for the idea that younger individuals have more of a focus on meaning concerning self-interests, and as they get older, meaning shifts to become more focused on humanistic concerns (Prager, 1996).

### **Gender and Level of Education**

Gender seems to influence the sources of meaning which are deemed important. Although interpersonal relationships appear to be universally meaningful to people, research has revealed this source to be rated as more important for females (Debats, 1999; Wong, 1998). Furthermore, religiosity/spirituality is more valued by females (Wong, 1998), as are well-being and relatedness. In comparison, self-actualisation is an important source for males; this gender difference is thought to reflect the common belief that females value communion and males value agency (Schnell, 2009). Another study revealed work, love/marriage, independent pursuits, and leisure as centrally important for males, and birth of children, love/marriage, and work as most meaningful for females (Baum & Stewart, 1990).

Investigations of differences in sources of meaning as a function of education level are few, however it has been found that older adults with higher education report greater purpose in life overall (Pinquart, 2002). In relation to specific sources of meaning, one study revealed religiosity/spirituality, tradition, normality, practicality, and reason to be of reduced significance the more educated individuals are (Schnell, 2009). When considering the realms

in life in which people hope to experience meaning and fulfilment, individuals with less education frequently reported the domains of family and health more often than their more educated counterparts, whose life longings tended to emphasise personal characteristics such as growth (Kotter-Grühn, Wiest, Zurek, & Scheibe, 2009).

### **Meaning, Well-Being and Demographics**

Previous research has ascertained that having meaning in life is positively associated with happiness and life satisfaction (e.g., Cohen & Cairns, 2011; Park, Park, & Peterson, 2010; Reker et al., 1987; Steger, Oishi, & Kashdan, 2009; Zika & Chaimberlain, 1992). Furthermore, feeling that one's life is imbued with meaning acts as a buffer against experiencing depression (e.g., Feldman & Snyder, 2005; Mascaro & Rosen, 2006; Steger, Kashdan, Sullivan, & Lorentz, 2008) and rumination (Steger et al., 2008). Research has also found that specific sources of meaning were positively related to well-being outcomes, but unrelated to ill-being outcomes (Schnell, 2009). However, it is not known whether various sources of meaning are more predictive of well-being as a function of demographic characteristics, and relatedly whether certain sources of meaning are more predictive of well-being by gender, age, and level of education.

### **Goals of the Present Study**

Although there is convergence on the idea that relationships with others make the largest contribution to a sense of meaningfulness, different types of interpersonal relationships might have different degrees of impact. Some evidence suggests that familial relationships are more strongly linked to meaning than are friendships (Delle Fave et al., 2010; Lambert et al., 2010), but this research ought to be replicated in order for more weight to be given to this result. Further, research results are mixed when it comes to unearthing the second most important source of meaning. Therefore, it was expected that family would be the most important source of meaning followed by interpersonal friendships (Hypothesis 1). In the absence of consistency in previous research as to the next most meaningful sources, we explored the relative importance of other sources.

Though there have been differences with what sources are important at different stages across the lifespan, the results have not been consistent. In the absence of consistent empirical research to inform the hypothesis, the current study turns to theoretical assertions as to what is expected to be meaningful at particular ages. It was theorised by Prager (1996) that younger people would be preoccupied with self-interests such as identity establishment, materialism, creation of relationships, and being productive, whereas in older age, people would be more concerned with the well-being of others and humankind in general, finding

community activities, welfare of others and religious activities to be of higher importance. It was expected that younger individuals would highly endorse personal growth, interpersonal relations, leisure activities, and work, and their older counterparts would value community activities and religiosity/spirituality, but that, consistent with Yalom (1980) overall meaning would be constant over the lifespan (Hypothesis 2). Gender differences have not been consistent either, so our predictions were based on the idea that males have a preference for agency and females for communion (Schnell, 2009). Thus, it was expected that females would more highly endorse interpersonal relationships and religiosity/spirituality, and males would more highly value work (Hypothesis 3). And with regard to education level, based on previous research (Kotter-Grühn et al., 2009; Schnell, 2009), family, health, and religiosity/spirituality were expected to be of greater importance to those with less education, and personal growth of more importance to those with higher education (Hypothesis 4).

And last, it was expected that the hypothesised important sources of meaning would be more predictive of positive well-being than less important sources, and that the strength of these relationships would be moderated by age, gender, and education level. Personal growth, interpersonal relations, leisure and work were anticipated to be more highly predictive of positive well-being for younger people, and community activities and religiosity/spirituality would be more highly predictive of positive well-being for older people (Hypothesis 5). It was hypothesised that interpersonal relations and religiosity/spirituality would be more strongly predictive of positive well-being for females, and work would be more strongly predictive of positive well-being for males (Hypothesis 6). Finally, it was anticipated that family, health, and religiosity/spirituality would be more highly predictive of positive well-being for those with less education (Hypothesis 7).

## **Method**

### **Participants**

Participants included in this study were 247 New Zealand individuals from a wider cross-cultural investigation, the Eudaimonic and Hedonic Happiness Investigation (EHHI). The sample was composed of 139 females and 108 males, and the age of participants ranged from 30 to 69 years ( $M = 44.28$  years;  $SD = 9.30$ ). The sample was composed so that education level was a clear demographic factor: 112 individuals possessed a non-tertiary education level, and 135 had a tertiary education.



## Measures

**Eudaimonic and Hedonic Happiness Investigation.**<sup>13</sup> The EHHI (Delle Fave et al., 2010) is a mixed methods questionnaire asking participants to outline their goals, sources for meaning in life, and subjective definitions of happiness. The present study will focus on the qualitative descriptions of what participants described was meaningful in their lives, and their quantitative endorsement of meaningfulness in 11 different domains. Participants were asked to “Please list the three things that you consider most meaningful in your present life”. Participants then indicated, on a 7-point Likert scale from 1 (*not meaningful at all*) to 7 (*extremely meaningful*), the degree to which they derived meaning from the following domains: work, family, standard of living, interpersonal relationships, health, personal growth, leisure, religiosity/spirituality, community issues, society issues, and life in general.

**Subjective Happiness Scale.**<sup>14</sup> The Subjective Happiness Scale (SHS; Lyubomirsky & Lepper, 1999) is a 4-item measure of global subjective happiness. Participants are asked to describe their degree of happiness in relation to their peers and archetypal happy and unhappy people. An example question is “Compared with most of my peers, I consider myself:” and on a 7-point Likert scale participants choose from 1 (*less happy*) to 7 (*more happy*). Another item is “Some people are generally happy. They enjoy life regardless of what is going on, getting the most out of everything. To what extent does this characterisation describe you?” and respondents choose an option between 1 (*not at all*) and 7 (*a great deal*). The SHS is a reliable measure, with alphas ranging from .85 to .95 (Lyubomirsky & Tucker, 1998). Internal reliability was also evidenced in the present investigation with an alpha of .87.

**Satisfaction with Life Scale.**<sup>15</sup> The Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985) is a 5-item subjective measure of a person’s degree of satisfaction with their life as a whole. Items included are “In most ways, my life is close to my ideal” and “I am satisfied with my life” and responses are indicated in a 7-point Likert scale from 1 (*strongly disagree*) to 7 (*strongly agree*). This scale has good internal consistency, with alphas reported between .79 and .89 (Pavot & Diener, 1993). Internal reliability was also seen in the current research as the alpha was .89.

**Mental Health Continuum.**<sup>16</sup> The short form of the Mental Health Continuum (MHC-SF; Keyes, 2009) is a 14-item measure of emotional, social, and psychological well-being. Participants indicate how often they felt a certain way during the past month on a 7-

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<sup>13</sup> See Appendix H for the Eudaimonic and Hedonic Happiness Investigation (EHHI; Delle Fave et al., 2010).

<sup>14</sup> See Appendix B for the Subjective Happiness Scale (Lyubomirsky & Lepper, 1999).

<sup>15</sup> See Appendix I for the Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen, & Griffen, 1985).

<sup>16</sup> See Appendix J for the Mental Health Continuum (MHC; Keyes, 2009).

point Likert scale from 1 (*never*) to 7 (*every day*). “Interested in life” is an example of an item in the emotional well-being subscale, “That you had something important to contribute to society”, is one from the social well-being subscale, and “That you had experiences that challenged you to grow and become a better person” is an example from the psychological well-being subscale. The scale has demonstrated good internal consistency with alphas in excess of .80 (Keyes, 2009). Internal reliabilities in the present study were .84 for emotional well-being, .78 for social well-being, and .82 for psychological well-being.

**Basic Psychological Needs Scale.**<sup>17</sup> The Basic Psychological Needs Scale (BPNS) is a measure stemming from Self Determination Theory which posits three basic psychological needs: autonomy, relatedness, and competence (Deci & Ryan, 2000). The 9-item measure used here is an adaptation, and examples from the three subscales are: “I feel like I am free to decide for myself how to live my life” (autonomy); “People are generally pretty friendly towards me” (relatedness); and “People I know tell me I am good at what I do” (competence). Participants indicate responses on a 7-point Likert scale from 1 (*not at all true*) to 7 (*very true*). The reliability of the scale is good, with alphas for the subscales ranging from .69 to .86 (Gagné, 2003). In the present research the alphas were .70 for autonomy, .69 for competence, and .76 for relatedness.

**Depression Anxiety Stress Scales.**<sup>18</sup> The Depression Anxiety Stress Scales (DASS; Lovibond & Lovibond, 1995) measures depression, anxiety, and stress. A shortened 7-item version of the depression scale was utilised here. Participants describe how much they felt that statements such as “I couldn’t seem to experience any positive feeling at all” and “I felt I wasn’t worth much as a person” were applicable over the previous week. Responses were indicated on a 7-point Likert scale from 1 (*not at all*) to 7 (*very much, or most of the time*). The DASS has excellent internal consistency with an alpha above .91 (Lovibond & Lovibond, 1995). Internal reliability in the current research was .88.

**The Positive and Negative Affect Schedule.**<sup>19</sup> The Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988) measures affective well-being. The short scale includes 28 items, and individuals are asked how much they experience different feelings on average on a 5-point Likert scale from 1 (*very slightly or not at all*) to 5 (*extremely*). Examples from the positive affect scale include “Interested” and “Proud” and example items from the negative affect scale are “Ashamed” and “Jittery.” The PANAS has

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<sup>17</sup> See Appendix K for the Basic Psychological Needs Scale (BPNS; Deci & Ryan, 2000).

<sup>18</sup> See Appendix L for the Depression Anxiety Stress Scales (DASS; Lovibond & Lovibond, 1995).

<sup>19</sup> See Appendix M for the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988).

demonstrated excellent reliability with alphas of .89 for positive affect and .85 for negative affect (Crawford & Henry, 2004). Good internal reliability was obtained in the current study with alphas of .90 for both positive and negative affect.

### **Procedure**

In late 2010 recruitment of participants began and this process was concluded by mid-2012. A variety of recruitment methods were utilised, for example posters at the university and locations around Wellington city, newspaper advertisements, and mail-drops. Individuals participated in the research on an entirely voluntary basis. The Victoria University of Wellington Ethics Committee granted ethical approval to conduct the research. Participants completed the questionnaire online using the SurveyMonkey website. It took approximately 30-40 minutes on average for participants to complete the questionnaire. As a thank you, participants were posted a \$10 voucher of their choice.

### **Coding**

The qualitative meaning descriptions were coded with the following 11 codes: work, family, standard of living, interpersonal relationships, health, personal growth, leisure activities, religiosity/spirituality, community issues, life in general, and education. Two coders coded 25% of the responses in order to examine inter-rater reliability. Reliability for coding of the things that were described to be meaningful was excellent (Cohen's  $\kappa = .94$ ). Each of the coders coded 50% of the responses analysed here.

### **Results**

So as to avoid producing a large number of results based on 11 well-being variables, a data reduction technique was employed. Depression and negative affect were reverse coded, then the 11 well-being variables were transformed into z-scores, and combined into one measure of overall positive well-being. The internal reliability of the positive well-being measure was excellent with an alpha of .82.

#### **What are the Most Common Sources of Meaning?**

When asked to list three things that were meaningful in life, participants reported an average of 2.98 aspects. Figure 6.1 delineates the percentages of mentions for the 11 domains. Family was by far the most commonly cited source of meaning in life (36.14%), interpersonal relations was the next most mentioned source of meaning (14.40%), followed by personal life (9.65%), and work (8.83%). The least commonly reported sources of meaning were life in general (2.6%) and education (.54%). These frequencies were consistent with Hypothesis 1 (H1) which predicted that family would be the most commonly reported source of meaning, followed by interpersonal relations. The degree to which other sources

were mentioned will help provide a clearer understanding of the rankings of important sources of meaning. The rankings of quantitative ratings did not agree precisely with the rankings of qualitative ratings. Family was the domain which people described as most meaningful, but the next most meaningful was health, and then life in general (see Table 6.1).

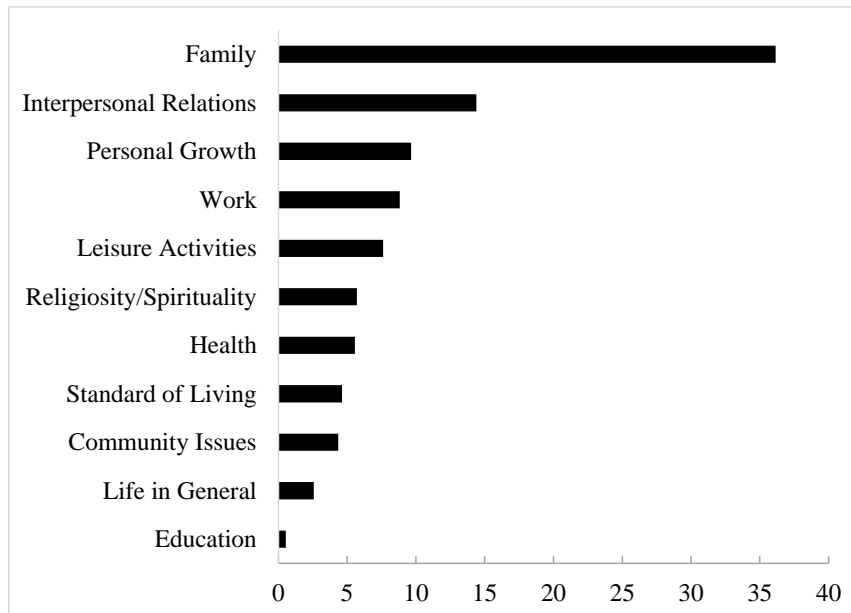


Figure 6.1. Percentages of qualitative mentions of meaningful things in life.

Table 6.1

*Levels of meaning derived from eleven quantitative domains.*

Quantitative Domain	<i>M</i>	<i>SD</i>
Family	6.43	1.12
Health	6.30	0.88
Life in General	6.13	1.02
Interpersonal Relations	6.10	1.05
Personal Growth	5.93	1.08
Leisure Activities	5.67	1.11
Standard of Living	5.15	1.25
Work	5.13	1.42
Community Issues	4.82	1.33
Society Issues	4.64	1.43
Religiosity/Spirituality	4.34	2.18

Family being rated the most important source of meaning was consistent with H1, however health and life in general being the next most important sources was not expected. These differences seemingly reflect an effect of method of ascertaining meaning: the meaning that comes to mind when asked an open-ended question vs. the degree to which one endorses domains when presented with a list (some of which might not be thought of spontaneously). See Figure 6.2 for a comparison of the qualitatively and quantitatively reported rankings of sources of meaning.

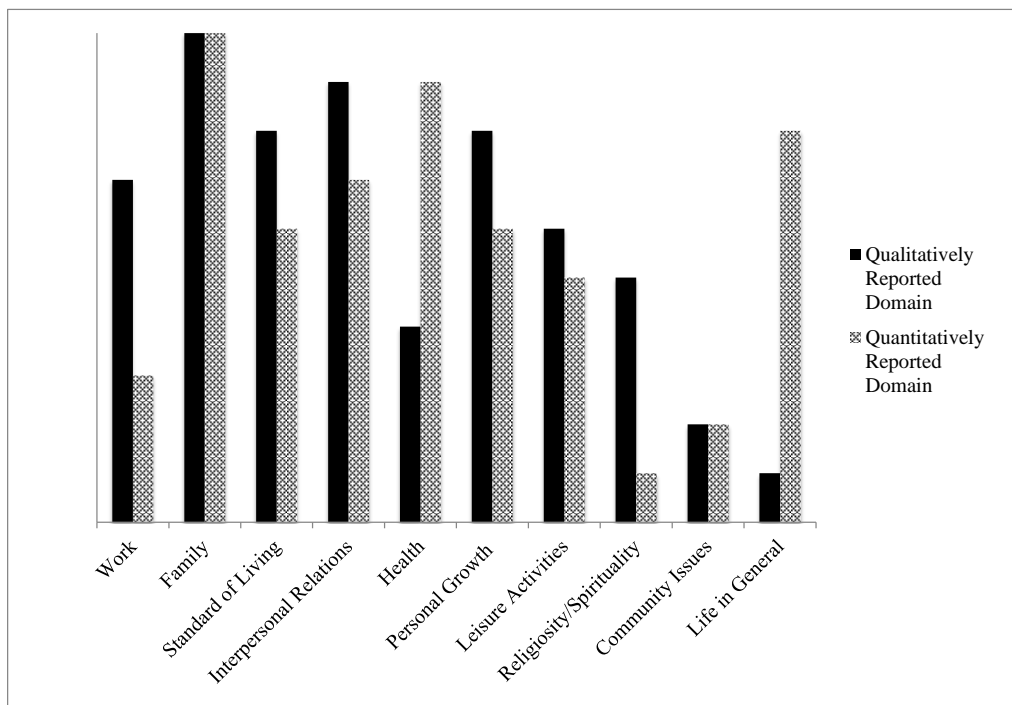


Figure 6.2. Comparison of quantitatively and qualitatively reported rankings of sources of meaning.

### Did Sources of Meaning Vary According to Demographic Variables?

Chi-square analyses were performed to examine whether qualitatively reported meaning domains varied by age, gender, and level of education. Relationships were found between age and standard of living,  $\chi^2(2, N = 247) = 6.06, p < .05$ , and community issues,  $\chi^2(2, N = 247) = 6.84, p < .05$ . People aged 30 to 49 years were less likely to rate standard of living and community issues as meaningful compared to those aged 50 to 60 years. These findings provided partial support for H2, which predicted that older people would endorse community issues more than their younger counterparts. The other hypothesised differences, namely younger people valuing personal growth, interpersonal relations, leisure activities and work and older people endorsing religiosity/spirituality were not supported. A 1 (total

meaning) x (age group: 30 to 39, 40 to 49, 50 to 60+) one-way ANOVA was computed in order to see whether meaning (all the sources of meaning summed together) varied across the lifespan. The ANOVA did not reveal a significant main effect for age, ( $F(2, 244) = .33, p = .72$ ), providing support for H2, that meaning stays relatively stable over time (although sources may fluctuate in importance). Due to the fact that the resultant graph would be a flat line it was decided that the finding would not be graphed.

Significant chi-square relationships were found between gender and leisure activities,  $\chi^2(1, N = 247) = 7.60, p < .01$ , and life in general,  $\chi^2(1, N = 245) = 8.39, p < .01$ . These results indicated that leisure/free time was less likely to be reported as meaningful by females than males, and life in general was more likely to be considered more meaningful for females than males. H3 did not predict these findings, as it stipulated that females would highly endorse interpersonal relationships and religiosity/spirituality, and males would highly value work.

A significant chi-square relationship was also found between education level and community issues,  $\chi^2(1, N = 247) = 4.18, p < .05$ . Those individuals possessing tertiary level education were more likely to nominate community issues as meaningful than those with non-tertiary education. This result did not support H4, which predicted that family, health, and religiosity/spirituality would be more important to those individuals possessing less education and personal growth would be more important for those with higher education.

To investigate whether meaningfulness of domains varied quantitatively according to age, an 11 (domain: work, family, standard of living, interpersonal relations, health, personal growth, leisure activities, religiosity/spirituality, community issues, society issues, life in general) x 3 (age group: 30 to 39, 40 to 49, 50 to 60+) multivariate analysis of variance (MANOVA) was computed. The MANOVA yielded a significant main effect of age for personal growth ( $F(11, 235) = 3.82, p < .05$ ). A post-hoc Tukey test revealed that individuals aged 50 to 60+ found personal growth to be significantly less meaningful than those aged 30 to 39. This result was partially consistent with H2 which expected that younger adults would highly endorse personal growth, interpersonal relations, leisure activities, and work, and older adults would value community activities and religiosity/spirituality; however support for the other aspects of the prediction was not found.

To examine whether quantitative endorsement of the various domains as meaningful varied by level of education, an 11 x 2 (education level: tertiary vs. non-tertiary) multivariate analysis of variance (MANOVA) was performed. The MANOVA yielded significant main effects of level of education for family ( $F(11, 235) = 4.25, p < .05$ ), standard of living ( $F(11, 235) = 11.70, p < .001$ ), health ( $F(11, 235) = 3.83, p < .05$ ), leisure activities ( $F(11, 235) =$

4.20,  $p < .05$ ), and life in general ( $F(11, 235) = 4.65$ ,  $p < .05$ ). Post-hoc Tukey tests indicated that individuals with non-tertiary education found the domains of family, standard of living, health, leisure activities, and life in general to be more meaningful than those with tertiary education. These results provided support for H4 which anticipated that family, health, and religiosity/spirituality would be of greater importance to those with less education, though the differences in the domains of leisure activities, standard of living, and life in general were not expected, and there was no difference with regard to endorsement of religiosity/spirituality.

### **Did Demographic Variables Influence the Relationship between Domains and Positive Well-Being?**

In order to examine whether the relationships between meaning from various domains to positive well-being was moderated by age, gender and level of education, regression-based moderation analyses were computed. Age was not found to be a significant moderator in any of the cases, so H5, which expected that personal growth, interpersonal relations, leisure and work would be more highly predictive of positive well-being for younger people, and community activities and religiosity/spirituality would be more highly predictive of positive well-being for older people, was not supported.

Gender was found to moderate the relationship between meaning from personal growth and positive well-being ( $\beta = .19$ ,  $p < .05$ ). A significant simple slope was found for females (slope = .16,  $t = 2.79$ ,  $p < .01$ ) indicating that females manifested a positive relationship between meaning from personal growth and positive well-being, but males did not (males' simple slope = -.15,  $p = .88$ ; see Figure 6.3).

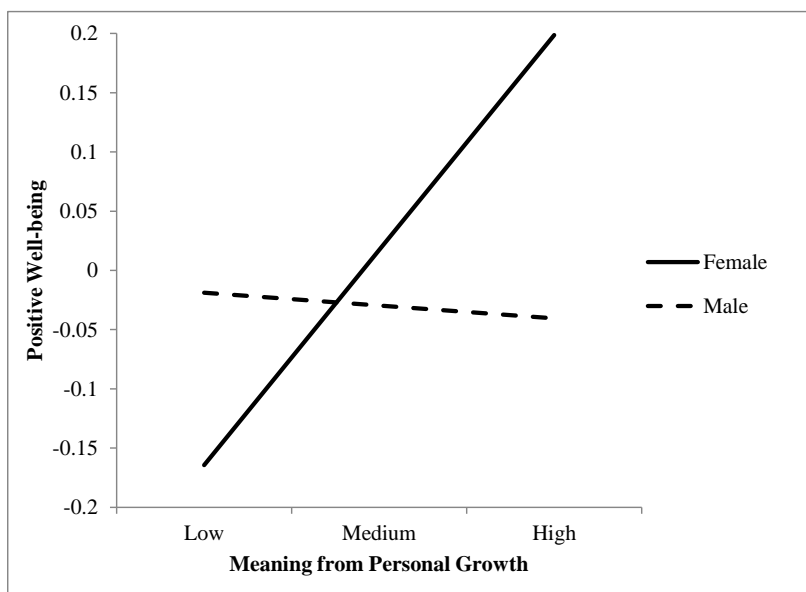


Figure 6.3. Moderation by gender on meaning from personal growth to positive well-being.

Gender also moderated the relationship between meaning from life in general and positive well-being ( $\beta = .20, p < .05$ ). Significant simple slopes were obtained for both males (slope = .23,  $t = 3.50, p < .001$ ) and females (slope = .43,  $t = 7.95, p < .001$ ), however females manifested a steeper positive slope than males (see Figure 6.4). This result is inconsistent with H6, which predicted that interpersonal relations and religiosity/spirituality would be more predictive of positive well-being for females, and work would be more predictive of positive well-being for males.



Figure 6.4. Moderation by gender on meaning from life in general to positive well-being.

Level of education was found to moderate the relationship between meaning from religiosity/spirituality and positive well-being ( $\beta = .10, p < .05$ ). A significant simple slope was obtained for those with tertiary education (slope = .09,  $t = 3.06, p < .001$ ) but not for non-tertiary individuals, indicating that meaning from religiosity/spirituality was a stronger well-being predictor for those individuals who possessed tertiary education (see Figure 6.5). Finally, education moderated the relationship between meaning from life in general and positive well-being, ( $\beta = -.21, p < .05$ ). Significant simple slopes were found for both tertiary (slope = .27,  $t = 4.87, p < .001$ ) and non-tertiary (slope = .48,  $t = 7.29, p < .001$ ) education levels, however the relationship was stronger for those with non-tertiary education (see Figure 6.6). These results were not congruent with H7, as it was anticipated that family, health, and religiosity/spirituality would be more predictive of positive well-being for those with less education.



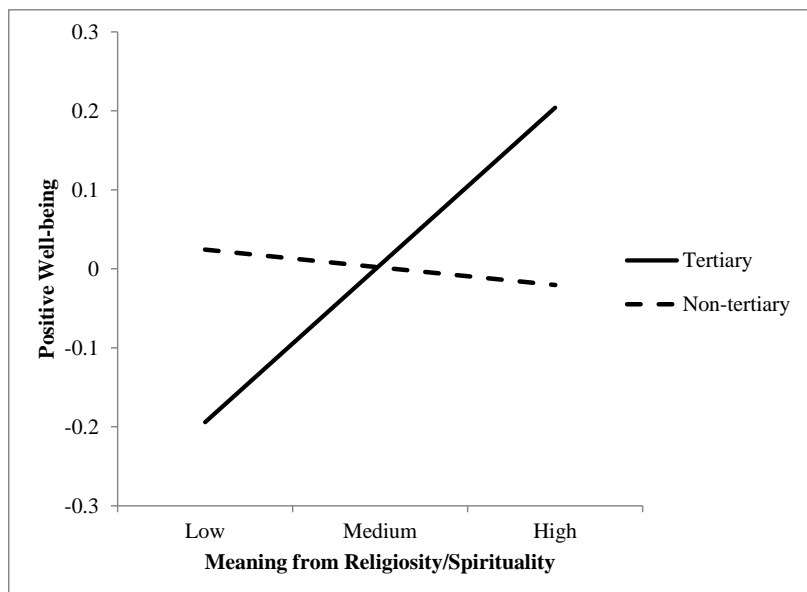


Figure 6.5. Moderation by education level on meaning from religiosity/spirituality to positive well-being.

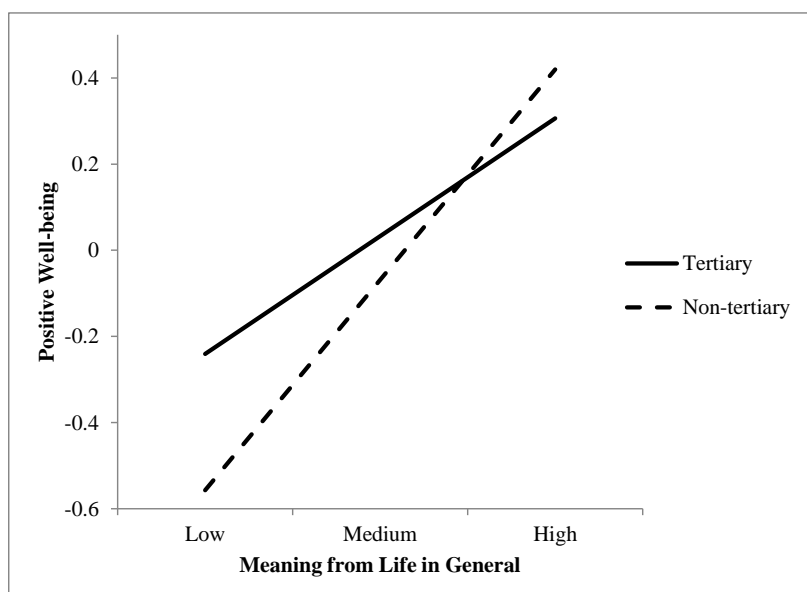


Figure 6.6. Moderation by education on meaning from life in general to positive well-being.

## Discussion

The main intention of this research was to examine in more depth the nature of what people find to be meaningful in life and how this might vary according to demographic factors. Previous research has ascertained the most frequently cited contributor to meaning in life to be interpersonal relationships (e.g., Baum & Stewart, 1990; Debats, 1999; O'Connor & Chamberlain, 1996; De Vogler & Ebersole, 1981; Yalom, 1980), with additional research finding that familial relationships were of particular importance as well (Delle Fave et al.,

2010; Lambert et al., 2010). The qualitative descriptions of meaning in the present research replicated the finding that family is the most important source of meaning in life, followed in importance by other interpersonal relationships. When individuals quantitatively rated the degree to which certain domains were meaningful, family was still the most important source, however health and life in general were the next most important; this result was not expected based on previous research and might suggest that people take health and meaning in one's whole life for granted, only considering these realms as meaningful if prompted. Personal growth and work were the next most qualitatively mentioned sources of meaning, which shows some alignment with previous research in which personal growth (Prager, 1996), work (Debats, 1999; Delle Fave et al., 2010) were ranked second. Overall, it appears that when individuals are asked to elucidate the domains in life that are meaningful, relationships with others, especially family, feature heavily and some emphasis is placed on personal development and work endeavours; however when the domains are provided first, health and life in general also feature. Consequently, this gives rise to the question, is quantitative or qualitative reporting of meaning in life better in terms of predicting the amount of meaningfulness in one's life? This would need to be addressed in future research as it cannot be answered with the current data.

Research has ascertained that meaning in life changes across the lifespan to become more integrated (Dittmann-Kohli & Westerhof, 2000), but generally the degree of meaningfulness in life is constant (Yalom, 1980) with the sources of meaning showing variation (Prager, 1998; Zika & Chamberlain, 1992). Consistent with this, the present study showed that when sources of meaning were combined to create an overall level of meaning in life, it remained constant, regardless of age. Further, the present research found that younger individuals aged 30 to 49 were less likely to report that standard of living and community issues were important sources of meaning than were their older counterparts aged 50 to 60+. This is generally consistent with research from Schnell which found that older people place greater importance on practicality and morality (2009), and Bar-Tur and Prager (1994) who found that preserving values, humanistic concerns and financial security were important in older age. Additionally, the present research found that personal growth was more important for those aged 30 to 39 than for those aged 50 to 60+; although this was not predicted by previous research, it has been theorised that identity development and self-exploration is more integral in younger years (Steger et al., 2009). Overall this result suggests that older individuals have spent time on tasks important for the self, such as developing an identity and

facilitating personal growth, enabling them to put effort into establishing financial security for their family and making a contribution to future generations.

Research examining gender differences in sources of meaning has not been entirely consistent, as some research has shown that interpersonal relationships are more valued by females (Debats, 1999; Wong, 1998), and other research has indicated that well-being and relatedness are more important for females, and self-actualisation for males (Schnell, 2009). The present research showed that leisure activities contributed to males' meaning in life more than females', and deriving meaning from life in general was more important for females. Research on gender differences with regard to leisure activities has suggested that due to gender inequity, females are more constrained than males from engaging in such pastimes, so this difference in meaningfulness may reflect the fact that females are less able to participate in leisure activities, so are less likely to rank this source highly (Shaw, 1994). The increased importance of leisure activities for males may also reflect the male stereotype which includes the notion that physical strength and prowess are of utmost importance, and thus activities that support this view are seen to contribute to meaning. Meaning from personal growth and life in general predicted well-being for females but not males. This result is consistent with research which found personal growth to be more predictive of well-being for females than for males (Robitschek, 1999). The tendency for life in general to be more meaningful for females may suggest that women take a broader perspective when considering meaning, and consider the degree to which their whole life is imbued with a sense of meaning.

Investigations into variation in sources of meaning in response to level of education are scarce, however, one study did find that religiosity/spirituality, tradition, normality, practicality and reason were of less importance for more educated individuals (Schnell, 2009). The current research revealed community issues to be of greater importance for those with tertiary education, which was not expected. However, involvement with community issues has been found to increase as individuals have higher education (Coulthard, Walker, & Morgan, 2002), so this domain may be more meaningful for those with more education because they are more likely to be engaged with their community. Additionally, family, standard of living, health, leisure activities and life in general were deemed to be of greater importance for individuals with non-tertiary education, which is partially consistent with research which found life hopes pertaining to family and health to be more important for individuals with less education (Kotter-Grühn et al., 2009); the authors argue that this is due to the fact that individuals with less education are likely to experience disadvantage with regard to health and have experienced less family stability. Additionally those with less

education tend to have a lower standard of living (Scott, 2010), so perhaps achievement of meaning in these domains is consequently of greater importance. When considering how different sources of meaning might differentially impact well-being in relation to level of education, the present research discovered that religiosity/spirituality predicted well-being for those with tertiary education, whereas life in general did for those with non-tertiary education. The implication is that for individuals with less education, viewing one's entire life as meaningful, in a global way, is essential in facilitating well-being. Additionally it shows that although those with tertiary education might experience meaning in a variety of domains, meaning derived from spiritual beliefs is especially important in fostering well-being.

### **Limitations**

No research is without limitations, and these limitations must be considered in light of any contributions that are made. In the present instance, the data were cross-sectional and so while the research has generated some findings pertaining to differences in sources of meaning across the lifespan, this question would be best examined using longitudinal data. Further, the research looked at how sources of meaning were differentially predictive of well-being outcomes according to different demographic variables.

An aspect of the study which is both a strength and a limitation is the use of the mixed qualitative-quantitative design. By asking individuals to describe the nature of the meaning in their life using their own words, greater detail and subtlety is allowed, however coding this information does result in complex, detailed information being reduced to a series of numbers. Additionally, this approach has not been standardised, rather it is an exploration into individuals' meaning frameworks, so future research should endeavour to establish the psychometric properties of the measure in order for the research to be more scientifically rigorous (Delle Fave et al., 2010).

### **Practical Implications**

This research has provided weight to the idea that individuals find interpersonal relationships, especially with family members, to be of the greatest importance to their sense of meaning. However it is evident that there is some variation between what is reported to be meaningful of one's own volition, and what is rated to be meaningful when individuals are prompted. For example the domain of health resonates as meaningful when people are asked to consider a variety of domains more so than when they describe the meaning in the life in an open-ended fashion. It may be that people take health for granted most of the time, whereas religiosity/spirituality is supposed to be meaningful so people are more likely to

mention the latter than the former. In a similar fashion, people might assume overall meaning in life which is why they are less likely to report this source of their own volition.

This research also confirmed the idea that meaning in life is fluid across the lifespan with different spheres of life contributing to different degrees at different ages, for example, life being financially stable and making a contribution to the wider community both increase in meaningfulness with age. However, all the other domains measured here were evaluated as having the same degree of importance regardless of age, suggesting that perhaps sources of meaning vary *less* than one might expect over the lifespan. It also showed that what is meaningful in life differs according to gender and level of education, highlighting how the process of making meaning is unique to the individual. The fact that variation was discovered has implications for interventions which might be developed around the idea of bolstering a sense of meaning in order to promote well-being: there does not seem to be a “one-size-fits-all” approach or algorithm for achieving a meaningful existence, but rather it depends on demographic and individual factors. Knowing this may be of importance for individuals who are endeavouring to search for meaning (Steger et al., 2006) as it highlights that meaning can be found in a plethora of avenues and in a changeable manner, which may lift some of the pressure to find a meaning for the whole of one’s life.

Further, the research has demonstrated that certain meaning domains predict overall well-being, albeit with variation according to demographic factors. These results are useful as they may suggest that it is more worthwhile to pursue meaning in certain domains for some people than others, in order to facilitate a sense of well-being. For example, and as described previously, deriving a sense of meaning from personal growth is more salient for women’s well-being, and meaning from religiosity/spirituality shows a stronger link with well-being for individuals with higher education. Future research might examine how other factors, for example curiosity, determination, and grit influence the content of an individual’s meaning in life and whether certain domains are more predictive of well-being according to such variables. Further, it would be important to conduct longitudinal research of the sources of meaning in life as it is vital to discover how the nature of meaning changes over time, rather than comparing different age cohorts cross-sectionally. Ultimately, this research has shown general constancy in the domains that provide people with a sense of meaning over the lifespan, but it has also identified that there is variation according to gender and level of education which accentuates the idea that creating meaning is quintessentially a personal and individual process.

### **Bridging Comment**

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Chapter Six investigated whether sources of meaning vary according to different demographic variables such as age, gender, and education level. Being financially stable and making a contribution to the wider community were more important in older age, however all of the other sources of meaning examined were similarly important, suggesting *less* variation than one might expect. Variations by gender and level of education were found, with family, standard of living, health, leisure activities and life in general being more important for those with secondary education, whereas community issues and religiosity/spirituality were of greater importance for individuals who had achieved a tertiary education. Leisure activities contributed to males' meaning in life more than for females', whereas meaning from life in general was more important for females.

An area yet to be explored is whether certain domains are more strongly linked with indicators of well-being, overall presence of meaning and search for meaning for all individuals. This question was tackled in Chapter Seven, and further, it sought to determine whether strongly endorsing a wide variety of domains might be linked with greater overall presence of meaning and well-being.

## CHAPTER SEVEN

### Sources of Meaning and Well-Being

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*Such happiness as life is capable of comes from the full participation of all our powers in the endeavor to wrest from each changing situations of experience its own full and unique meaning.*

– John Dewey

#### Abstract

Possessing meaning in life is vital for one's well-being. Research has examined important sources of meaning, however it has not yet investigated whether certain sources of meaning might be more predictive of overall meaning and well-being. A community sample of 247 individuals (30 to 69 years) rated the degree of meaningfulness they experienced in certain domains and completed 11 well-being measures as well. Presence of meaning was positively predicted by family and interpersonal relations, and negatively by leisure activities. In contrast, search for meaning was positively predicted by personal growth and religiosity/spirituality. Meaning from family and health aided in the process of searching for meaning leading to greater presence of meaning; similarly, meaning from family, interpersonal relationships, health, religiosity/spirituality and life in general buffered against impoverished well-being when searching for meaning. Presence of meaning and well-being were both found to be higher if the domains of work, family, interpersonal relations, community/society issues, and life in general were highly endorsed. And last, highly endorsing a larger number of sources buffered against negative well-being outcomes when searching for meaning. In sum, the research found that meaning was obtained from important domains such as family and interpersonal relationships, and strongly endorsing a wide variety of sources protected against negative well-being outcomes when searching for meaning.

*Keywords:* Sources of meaning, search for meaning, presence of meaning, well-being, breadth of meaning.

## Introduction

The impetus to make meaning is essential to human nature and the way that we are motivated to understand experiences and make connections between them is thought to be fundamental for fostering personal growth and creating a coherent life course (Weinstein, Ryan, & Deci, 2012). In fact, Frankl (1966) famously asserted that the primary human concern, or psychological need, was to find meaning – to search for and attain meaningfulness and purpose in life. Meaning in life is unique to the individual, yet it is not created in a vacuum so the nature of meaning is influenced by external factors. Kenyon (2000) describes this idea nicely, “we create our world personally, idiosyncratically and dynamically, yet to a significant extent, we are also influenced and created by a world that is larger than ourselves, individually speaking” (p. 10).

Despite a resurgence in theoretical and empirical explorations of meaning in life, there is an absence of consensus as to how the construct should be defined and operationalised (Steger, 2009). A widely cited definition of meaning is that it is “the cognizance of order, coherence, and purpose in one’s existence, the pursuit and attainment of worthwhile goals, and an accompanying sense of fulfilment” (Reker 2000, p. 41). Although this definition neatly encapsulates the nature of having attained meaning in life, it does not include the seemingly essential component of searching for meaning. For this reason, the two part conceptualisation by Steger and colleagues (2006), which features both presence of meaning and the important search for meaning, will serve as the definition for the present research. Presence of meaning and search for meaning have been found to share an negative relationship, and research has found that searching for meaning does not appear to lead to measurable attainment of meaning in life (Steger, Kashdan, Sullivan, & Lorentz, 2008; Grouden, Jose, & IWS Research Team, 2013a).

## Sources of Meaning in Life

Possessing a sense of meaning in life has been posited to have wide-reaching benefits for a range of outcomes, including psychological well-being to physical health (Ryff & Keyes, 1995). Although this view establishes the construct of meaning as an important one for overall functioning, it does not illuminate the domains in life from which individuals derive this sense of meaningfulness. Meaning originates from a number of different spheres in life, from leisure activities, to spirituality, to relationships with others, to making a contribution to the wider community (Reker & Woo, 2011).

Various investigations have sought to examine the overarching categories that encapsulate more specific sources of meaning in order to glean some understanding of which



are of particular importance. Some lists of sources share commonalities, while others disagree, and these differences highlight variations in how sources of meaning are categorised. De Volger and Ebersole (1981) identified eight categories: relationships, service, belief, life work, growth, pleasure, obtaining, and health from interviews in which they asked individuals what domains were meaningful in their lives. Another approach taken to elucidating the possible sources of meaning was by Wong (1998), who asked participants to identify the components of a stereotypical 'meaningful life'. He found that these descriptions fell into these categories: religion, achievement, relationship, fulfilment, transcendence, intimacy, acceptance, and fairness. Sources of meaning are also probed by asking individuals to quantitatively rate the degree to which they experience meaning in a list of domains (Delle Fave, Brdar, Freire, Vella-Brodrick, & Wissing, 2010; Prager, Savaya & Bar-Tur, 2000; Reker & Wong, 1988); the advantage of this approach is that it circumvents the problem of individuals forgetting to mention certain domains in an open-ended format.

Despite the varied approaches to categorising sources of meaning, Prager (1998) argues that there is agreement regarding several sources of meaning: personal growth, altruism, relationships, belief, expression and creativity, materialism and existential-hedonistic orientations. Further, across numerous empirical studies, interpersonal relationships has been found to be the most commonly cited central source of meaning (e.g., Baum & Stewart, 1990; Debats, 1999; O'Connor & Chamberlain, 1996; De Vogler & Ebersole, 1981; Yalom, 1980). However, the particular aspects of life that are experienced as meaningful have been found in research to vary in frequency and intensity over the lifespan (e.g., Baum & Stewart, 1990; Lambert et al., 2010; Prager, 1998; Reker, Peacock & Wong 1987; Schnell, 2009), and vary according to demographic factors such as gender and socioeconomic status (e.g., Debats, 1999; Kotter-Grühn, Wiest, Zurek, & Scheibe, 2009; Schnell, 2009).

### **Do Sources of Meaning Predict Search and Presence?**

Research has shown that most people have some degree of insight into sources of meaning, as they are able to describe an archetypal meaningful life and describe the meaning in their own lives when asked about it. We also know that relationships with family and friends are most frequently mentioned as being meaningful (Debats, 1999). One might expect that meaning from especially important sources of meaning would be most predictive of overall meaning, but this association might not be found if: a) non-important sources are mentioned more because they are very salient in memory or attention, or b) if individuals lack

sufficient insight into what contributes *most* to their meaning in life. The question, what sources best predict overall meaning, warrants further investigation.

In the related study of goals, research has found that goals pertaining to relationships with others, spirituality, contribution to the community, and leaving a legacy were more predictive of meaningfulness and purpose (Emmons, 2003). Further, holding aspirations described as being intrinsic, such as contributing to the community, good relationships, and personal growth, have been found to relate positively to the desire to experience meaning in life, the search for it, and lastly, the *actual* experience of meaningfulness. On the other hand, more extrinsic goals, such as amassing wealth and fame, have been found to relate to the wish for meaning and the resultant search but *not* the attainment of meaning (Weinstein et al., 2012). So it appears that goals are differentially predictive of presence of meaning and search for meaning. Consequently, certain sources of meaning might also predict presence and search in divergent ways, and research ought to investigate this fertile set of questions.

### **Sources of Meaning and Well-Being**

Research has established that having a sense of meaning in life is beneficial for well-being, as people experience greater happiness (e.g., Cohen & Cairns, 2011), are more satisfied with their lives (e.g., Steger & Kashdan, 2006), and experience greater positive affect (e.g., King, Hicks, Krull, & Del Gaiso, 2006) and less anxiety, depression (e.g., Debats, van der Lubbe, & Wezeman, 1993), and rumination (e.g., Steger et al., 2008). In contrast, the process of searching is linked to diminished happiness and life satisfaction (e.g., Park, Park, & Peterson, 2010), and greater anxiety, depression, rumination, and negative affect (e.g., Steger et al., 2008). Furthermore, having presence of meaning appears to be protective against negative well-being outcomes when searching for meaning (Park et al., 2010). However, this research has considered the impact of the totality of meaning in life, not how meaning derived from particular spheres predict well-being. It is plausible that certain types of meaning are more able to mitigate the negative well-being outcomes when searching for meaning than others, and facilitate a process of searching for meaning that actually leads to attainment of meaning.

Research has found that meaning derived from goals related to intimacy, spirituality, and generativity has been found to predict greater subjective well-being, whereas power strivings tend to be associated with lower subjective well-being (Emmons, 2003). Research has also found that goals which were described as being intrinsic in nature, such as personal growth and contribution to the community, were positively predictive of well-being; whereas goals which were described as extrinsic, such as financial success, and fame, were

negatively predictive of well-being (Emmons, 2003; Martos & Kopp, 2011; Sheldon, Ryan, Deci, & Kasser, 2004).

### **Breadth of Meaning**

It is rare for individuals to only experience a sense of meaning which emanates from only one area in their life; in fact, having a larger network of different sources of meaning has been found to be related to greater overall meaning and well-being (Reker & Woo, 2011). Baumeister (1991) asserts that this is true because if an important source of meaning is compromised, then the person can turn to other sources to maintain their sense of meaning and purpose at previous levels. A theoretical model, named the Meaning Maintenance Model, has developed out of this idea, and it asserts that by having a wide scope of sources of meaning, if any particular source of meaning is threatened, others can be reaffirmed in a process of fluid compensation, and thus the individual avoids a period of meaninglessness (Proulx & Heine, 2008). So it seems that having sufficient breadth of meaning—meaning in lots of spheres—is beneficial.

Additionally, research has found that further to breadth of meaning being beneficial, how intensely sources of meaning are endorsed and the strength of commitment to these sources also makes a difference for overall well-being (Battista & Almond, 1973; Pöhlmann, Gruss, & Joraschky, 2006). Though these two cited examples of research did not consider the specific impacts of highly endorsing sources of meaning, research has found that individuals report an average of six very important sources of meaning (De Volger-Ebersole & Ebersole, 1985; Prager, 1996). Although highly endorsing sources of meaning is advantageous in facilitating presence of meaning, it is not known what influence this intensity might have on search for meaning. Investigation into whether strong commitment to a wide variety of sources of meaning would mitigate against the negative impact on overall meaning and well-being when searching for meaning would also be advantageous, as this has not yet been adequately explored.

### **Goals of the Present Study**

Although it makes intuitive sense that the most important sources of meaning would best predict overall meaning, this question has not yet been explored. Further, certain sources may instigate continued search for meaning. Previous research has found intrinsic aspirations such as contribution to the community, personal growth, and good relationships are predictive of presence of meaning and search for meaning, whereas extrinsic goals such as financial status is predictive solely for search for meaning (Weinstein et al., 2012). In line with this view, we would hypothesise that meaning from family, interpersonal relationships, personal

growth, and community issues would predict presence of meaning and search for meaning, whereas standard of living would predict search for meaning but not presence of meaning (Hypothesis 1).

Empirical research has investigated the realms of life that provide people with meaning, but it has not considered how various sources might be differentially related to overall meaning and well-being. Given that intrinsic goals have been found to be positively associated with well-being (Emmons, 2003; Martos & Kopp, 2011; Sheldon et al., 2004), the research hypothesised that meaning from family, interpersonal relationships, personal growth, and community issues would buffer the negative relationships between search for meaning and presence of meaning, and between search for meaning and well-being (Hypothesis 2).

Being strongly committed to one's meaning in life has been found to be beneficial for well-being (Battista & Almond, 1973; Pöhlmann et al., 2006). Extrapolating from this finding, it was hypothesised that strongly endorsing sources of meaning would result in higher well-being and presence of meaning, but diminished search for meaning (Hypothesis 3).

Finally, given that deriving meaning from a number of sources of meaning is advantageous (e.g., Reker & Woo, 2011), it was hypothesised that strongly endorsing a greater number of sources of meaning would facilitate the search for meaning leading to presence of meaning, and also mitigate the negative impact on well-being when searching for meaning (Hypothesis 4).

## Method

### Participants

The sample comprised 247 individuals (139 females and 108 males) from a cross-cultural investigation, the Eudaimonic and Hedonic Happiness Investigation (EHHI). Participants' ages ranged from 30 to 69 years ( $M = 44.28$  years;  $SD = 9.30$ ). All participants in the sample lived in New Zealand. With regard to educational background, 112 individuals reported having a non-tertiary education, and 135 reported having a tertiary education.

### Measures

**Eudaimonic and Hedonic Happiness Investigation.**<sup>20</sup> The EHHI (Delle Fave et al., 2010) is a questionnaire with open-ended descriptions of happiness, goals, and sources of meaning, and quantitative measures of meaningfulness and happiness in 11 domains. The emphasis for the current research was on meaning. Participants reported how meaningful the

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<sup>20</sup> See Appendix H for the Eudaimonic and Hedonic Happiness Investigation (EHHI; Delle Fave et al., 2010).

following domains were on a 7-point Likert scale from 1 (*not meaningful at all*) to 7 (*extremely meaningful*): work, family, standard of living, interpersonal relationships, health, personal growth, leisure, religiosity/spirituality, community issues, society issues, and life in general.

**Meaning in Life Questionnaire.**<sup>21</sup> The MLQ (Steger et al., 2006) is a 10-item measure of two components of meaning: presence and search. Examples of items in the presence subscale are “I have a good sense of what makes my life meaningful” and “I have discovered a satisfying life purpose”; and examples from the search subscale are “I am always searching for something that makes my life feel significant” and “I am always looking to find my life’s purpose.” Participants specify their responses on a 7-point Likert scale from 1 (*absolutely untrue*) to 7 (*absolutely true*). High Cronbach’s alphas for the subscales in previous research indicates very good internal consistency (Steger, Oishi, & Kesebir, 2011). The alphas obtained in the present research were excellent, .90 for presence of meaning, and .91 for search for meaning.

**Subjective Happiness Scale.**<sup>22</sup> The Subjective Happiness Scale (SHS; Lyubomirsky & Lepper, 1999) is a 4-item self-report measure of subjective global happiness. Participants describe how happy they are in relation to peers and also compared with archetypal happy and unhappy people. For example, participants respond to this statement: “In general, I consider myself:” on a 7-point Likert scale from 1 (*not a very happy person*) to 7 (*a very happy person*). Another item is “Some people are generally not very happy; although they are not depressed, they never seem as happy as they might be. To what extent does this characterization describe you?” and the choice options range from 1 (*not at all*) and 7 (*a great deal*). This scale has demonstrated good reliability with alphas between .85 and .95 (Lyubomirsky & Tucker, 1998). The alpha in the current research was .87.

**Satisfaction with Life Scale.**<sup>23</sup> The Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985) is a 5-item measure of a person’s evaluation of their overall satisfaction with their entire life. Example items are “If I could live my life over, I would change almost nothing” and “So far I have gotten the important things in life.” Participants indicate their agreement with the statements on a 7-point Likert scale from 1 (*strongly disagree*) to 7 (*strongly agree*). Studies have shown this scale to have respectable

<sup>21</sup> See Appendix A for the Meaning in Life Questionnaire (Steger et al., 2006).

<sup>22</sup> <sup>22</sup> See Appendix B for the Subjective Happiness Scale (Lyubomirsky & Lepper, 1999).

<sup>23</sup> See Appendix I for the Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen, & Griffen, 1985).

internal consistency, with alphas ranging from .79 to .89. In the present investigation the alpha was .89.

**Mental Health Continuum.**<sup>24</sup> The short form of the Mental Health Continuum (MHC-SF; Keyes, 2009) measures emotional, social and psychological well-being with 14 items. Participants report how often they felt a certain way during the past month on a 7-point Likert scale from 1 (*never*) to 7 (*every day*). “Satisfied” is an example of an item in the emotional well-being subscale, “That our society is becoming a better place for people”, is one from the social well-being subscale, and “Confident to think or express your ideas and opinions” is an example from the psychological well-being subscale. The scale has shown good reliability with alphas above .80 (Keyes, 2009). The alphas were .84 for emotional well-being, .78 for social well-being, and .82 for psychological well-being in the current study.

**Basic Psychological Needs Scale.**<sup>25</sup> The Basic Psychological Needs Scale (BPNS) is a measure developed from Self Determination Theory and centres on the three needs of central importance: autonomy, competence and relatedness (Deci & Ryan, 2000). The measure has been modified to make it shorter, and a 9-item version is used here. An example item from the autonomy subscale is “I feel like I can pretty much be myself in my daily situations”, one from the competence subscale is “Most days I feel a sense of accomplishment from what I do” and one in the relatedness subscale is “I really like the people I interact with.” Participants provide their responses on a 7-point Likert scale from 1 (*not at all true*) to 7 (*very true*). This scale has adequate internal consistency as subscale alphas have ranged from .69 to .86 (Gagné, 2003). The subscales proved to be reliable in the present investigation, with alphas of .70 for autonomy, .69 for competence, and .76 for relatedness.

**Depression Anxiety Stress Scales.**<sup>26</sup> The Depression Anxiety Stress Scales (DASS; Lovibond & Lovibond, 1995) measures self-reported depression, anxiety and stress. The current research used a short version of the depression subscale with seven items. Participants indicate to what degree they felt that statements such as “I found it difficult to work up the initiative to do things” and “I felt down-hearted and blue” were applicable over the previous week. Participants indicate their answers on a 7-point Likert scale from 1 (*not at all*) to 7 (*very much, or most of the time*). The DASS has been found to be reliable with an alpha of .91 (Lovibond & Lovibond, 1995). It was also reliable in this research with an alpha of .88.

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<sup>24</sup> See Appendix J for the Mental Health Continuum (MHC:SF; Keyes, 2009).

<sup>25</sup> See Appendix K for the Basic Psychological Needs Scale (BPNS; Deci & Ryan, 2000).

<sup>26</sup> See Appendix L for the Depression Anxiety Stress Scales (DASS; Lovibond & Lovibond, 1995).

**The Positive and Negative Affect Schedule.**<sup>27</sup> The Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988) is a 28-item measure of affective well-being. Individuals are asked how much they experience different feelings on average on a 5-point Likert scale from 1 (*very slightly or not at all*) to 5 (*extremely*). Examples from the positive affect scale include “Enthusiastic” and “Strong” and items in the negative affect scale are “Nervous” and “Hostile.” The PANAS has been shown to have excellent reliability: an alpha of .89 for positive affect and an alpha of .85 for negative affect (Crawford & Henry, 2004). This was also the case in the present research as alphas of .90 were obtained for both positive and negative affect factors.

### Procedure

Recruitment of participants began in late 2010 and was completed by mid-2012. Participants were recruited through a range of strategies including posters, newspaper advertisements, and mail-drops. Individuals partook in the research on a voluntary basis and were able to withdraw at any time if they so wished. The Victoria University of Wellington Ethics Committee granted ethical approval to commence with the research. Participants completed the questionnaire online (using the SurveyMonkey website), with completion time approximately 30-40 minutes on average. Participants were sent a \$10 voucher of their choice to thank them for their efforts.

### Results

Conducting analyses with all 11 well-being variables was infeasible, so to produce a more succinct set of results, a data reduction technique was employed. After reverse-coding negative affect and depression, the 11 well-being variables were transformed into z-scores and then linearly combined to form one overall measure of positive well-being. An alpha of .82 indicated excellent internal consistency of the resultant positive well-being measure.

### Descriptive Statistics

Descriptive statistics for presence of meaning, search for meaning, sources of meaning, and the composite well-being measure are shown in Table 7.1. This table also shows the correlations among the variables: moderate negative correlations were found between search for meaning, presence of meaning, and positive well-being; and a strong positive correlation occurred between presence of meaning and positive well-being. Presence of meaning yielded weak to moderate positive correlations with meaning from work, family, interpersonal relations, personal growth, religiosity/spirituality, community activities, society

<sup>27</sup> See Appendix M for the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988).

activities, and life in general; search for meaning manifested weak positive correlations with personal growth and religiosity/spirituality; and positive well-being was found to have weak to moderate positive correlations with work, family, standard of living, interpersonal relations, personal growth, community activities, society activities, and life in general.

Table 7.1

*Descriptive statistics and correlation coefficients among presence of meaning, search for meaning, positive well-being, and sources of meaning*

	<i>M</i>	<i>SD</i>	1	2	3
1. MLQ-Presence	25.95	6.44			
2. MLQ-Search	20.57	8.20	-.36**		
3. Positive Well-Being	.00	.76	.68**	-.32**	
4. Work	5.13	1.42	.15*	.00	.22**
5. Family	6.43	1.12	.22**	-.09	.23**
6. Standard of Living	5.15	1.25	.08	.02	.16*
7. Interpersonal Relations	6.10	1.05	.26**	-.07	.31**
8. Health	6.30	0.88	.05	.06	.11
9. Personal Growth	5.93	1.08	.14*	.25**	.13*
10. Leisure Activities	5.67	1.11	-.08	.09	.05
11. Religiosity/Spirituality	4.34	2.18	.22**	.17**	.13*
12. Community Issues	4.82	1.33	.22**	-.00	.35*
13. Society Issues	4.64	1.43	.19**	.06	.25**
14. Life in General	6.13	1.02	.47**	-.09	.47**

\*\*  $p < .01$ , \*  $p < .05$

*Note.* MLQ-Presence = Meaning in Life Questionnaire-Presence; MLQ-Search = Meaning in Life Questionnaire-Search; Positive Well-Being is a composite z-score of eleven well-being measures.

### **Did Sources of Meaning Predict Presence, Search, and Well-Being?**

Hypothesis 1 (H1) stipulated that meaning from family, interpersonal relationships, personal growth, and community issues would predict presence of meaning and search for meaning; whereas standard of living would predict search for meaning but not presence of



meaning. The first regression ( $R^2 = .16$ ,  $F(10, 236) = 4.49$ ,  $p < .001$ ) indicated that presence of meaning was positively predicted by meaning from family ( $\beta = .15$ ,  $p < .05$ ), interpersonal relationships ( $\beta = .14$ ,  $p < .05$ ), and negatively predicted by leisure activities ( $\beta = -.18$ ,  $p < .05$ ). The next regression ( $R^2 = .12$ ,  $F(10, 236) = 3.11$ ,  $p < .001$ ) revealed that search for meaning was positively predicted by meaning from personal growth ( $\beta = .26$ ,  $p < .001$ ) and religiosity/spirituality ( $\beta = .18$ ,  $p < .01$ ). These results provide partial support for H1, however the findings that presence was negatively predicted by leisure activities and search was positively predicted by religiosity/spirituality were not hypothesised, and community activities and standard of living did not exhibit the hypothesised influence.

### **Did Sources of Meaning Influence the Relationships between Search, Presence and Well-Being?**

Moderation analyses were conducted in order to investigate whether meaning from different spheres exerted an influence on the relationships between search for meaning and attainment of meaning, and between search for meaning and well-being. H2 suggested that meaning from family, interpersonal relationships, personal growth, and community issues would buffer the negative relationships between search for meaning and presence of meaning, and between search for meaning and well-being.

**Search to presence.** Meaning from family was found to moderate the relationship from search for meaning to presence of meaning ( $\beta = .05$ ,  $p < .01$ ). Simple slopes analyses revealed significant negative slopes for high (slope = .14,  $t = 2.07$ ,  $p < .05$ ), medium (slope = .28,  $t = 6.17$ ,  $p < .001$ ), and low (slope = .43,  $t = 5.90$ ,  $p < .001$ ) levels of the moderator, however the least positive relationship between search for meaning and presence of meaning occurred under conditions of high meaning from family (see Figure 7.1). This result provides support for H2 in that it suggests that meaning derived from family enhances the relationship between searching for meaning and the attainment of meaning.

Meaning from health was also a moderator of the relationship from search for meaning to presence of meaning ( $\beta = .11$ ,  $p < .05$ ). Simple slopes were computed and showed significant negative slopes for high (slope = .20,  $t = 3.17$ ,  $p < .01$ ), medium (slope = .30,  $t = 6.37$ ,  $p < .001$ ), and low (slope = .40,  $t = 5.67$ ,  $p < .001$ ) levels of meaning from health, however the relationship between search for meaning and presence of meaning was least negative when meaning from health was high (see Figure 7.2). This pattern indicates that meaning from health may also be useful for the attainment of meaning when searching. This result was not expected by H2, but it is congruent with and similar to other sources of meaning itemised in H2.

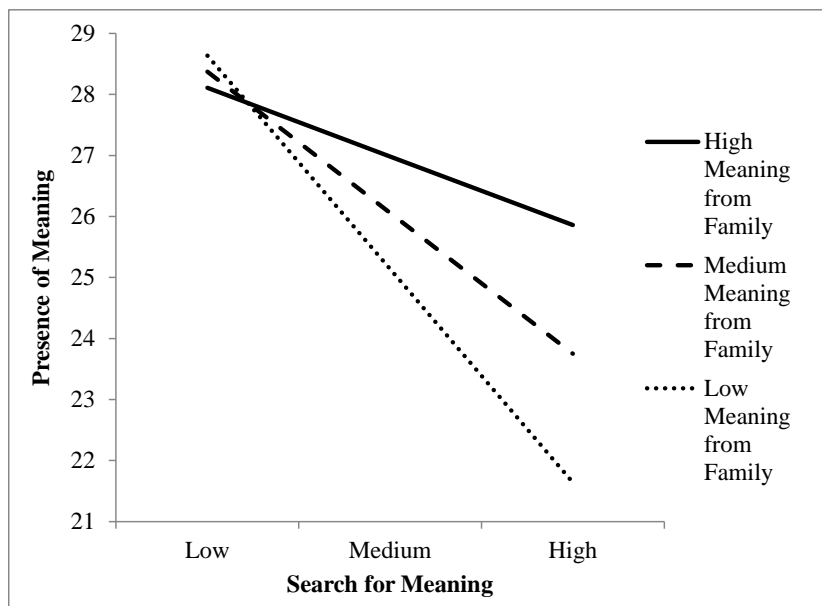


Figure 7.1. Moderation by meaning from family on search for meaning to presence of meaning.

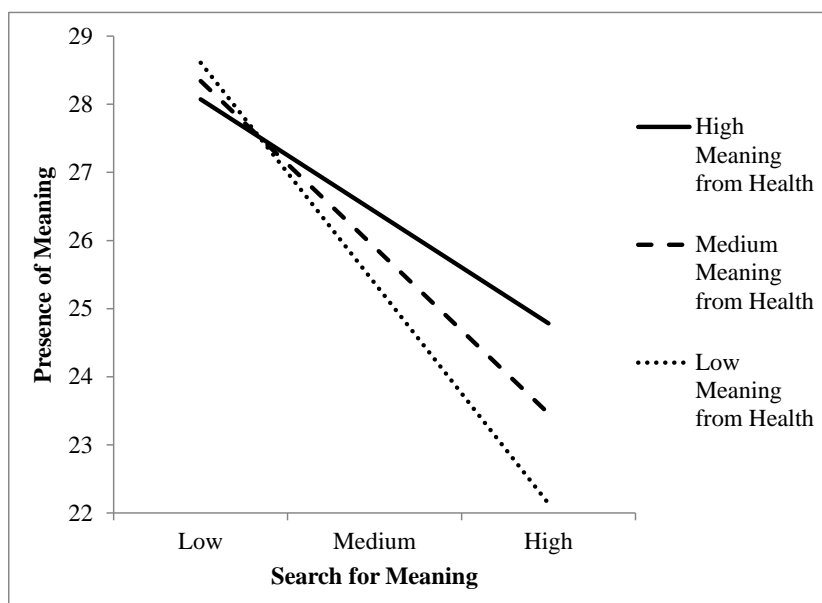


Figure 7.2. Moderation by meaning from health on search for meaning to presence of meaning.

**Search to well-being.** In the first moderation, meaning from family moderated the relationship from search for meaning to positive well-being ( $\beta = .02, p < .001$ ). Simple slopes analyses revealed a significant positive relationship for moderate (slope = .02,  $t = 2.88, p < .001$ ) and high (slope = .13,  $t = 16.25, p < .001$ ) meaning from family, and a negative relationship for low (slope = -.09,  $t = -11.31, p < .001$ ) meaning from family. This set of

results indicated that, consistent with H2, experiencing high meaning from family acted as a buffer against diminished well-being when searching for meaning (see Figure 7.3).

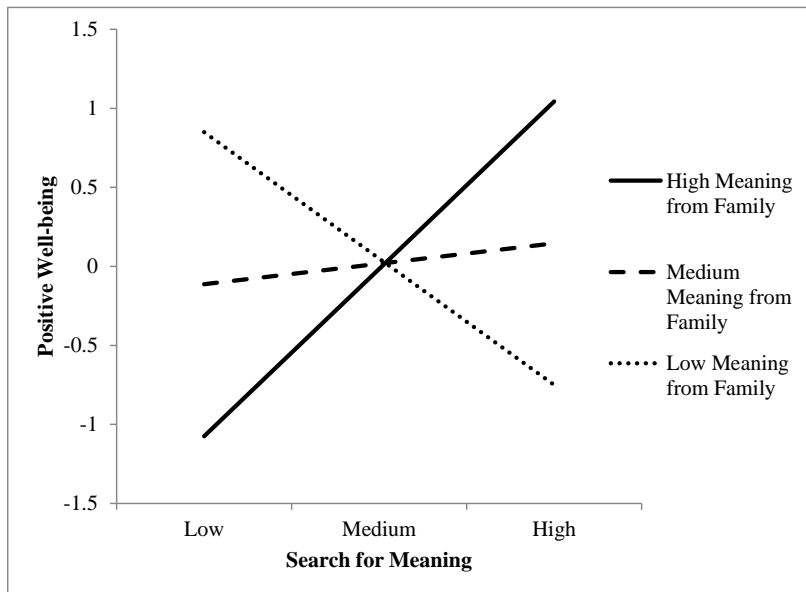


Figure 7.3. Moderation by meaning from family on search for meaning to positive well-being.

Meaning from interpersonal relations was also a significant moderator of the relationship between search for meaning and positive well-being ( $\beta = .01, p < .05$ ). Significant simple slopes were obtained for low (slope =  $-.04, t = -5.33, p < .001$ ), moderate (slope =  $-.03, t = -5.30, p < .001$ ), and high (slope =  $-.02, t = -2.17, p < .05$ ) meaning from interpersonal relations. The result indicated that, also in alignment with H2, under conditions of high meaning from interpersonal relations, search for meaning manifested a weaker negative relationship with positive well-being (see Figure 7.4).

Next, health significantly moderated the relationship from search for meaning to positive well-being ( $\beta = .01, p < .05$ ). Simple slopes analyses indicated that negative relationships between search for meaning and positive well-being for high (slope =  $-.02, t = -2.53, p < .01$ ), medium (slope =  $-.03, t = -5.66, p < .001$ ), and low (slope =  $-.04, t = -5.32, p < .001$ ) meaning from health. The relationship was least negative under conditions of high meaning from health, suggesting that this type of meaning acted as a buffer (see Figure 7.5). This finding was not stipulated by H2, but is congruent with other findings identified in this section.

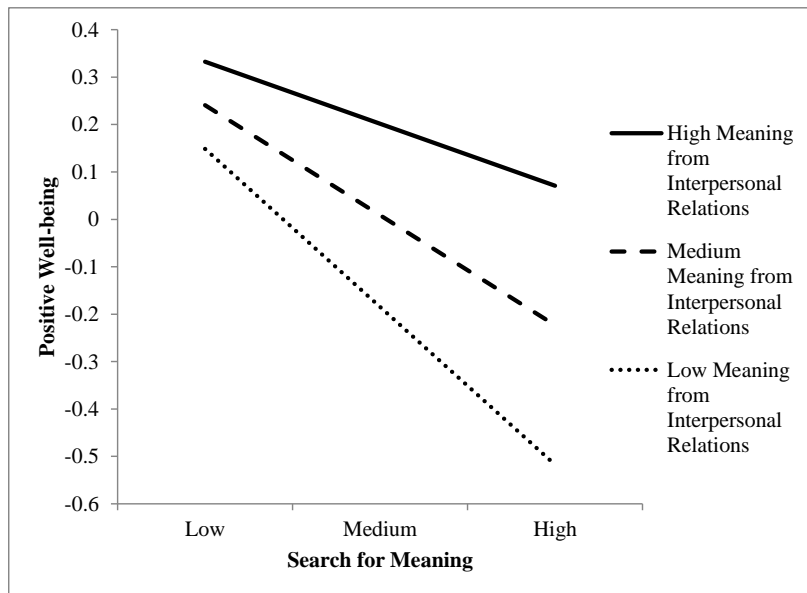


Figure 7.4. Moderation by meaning from interpersonal relations on search for meaning to positive well-being.

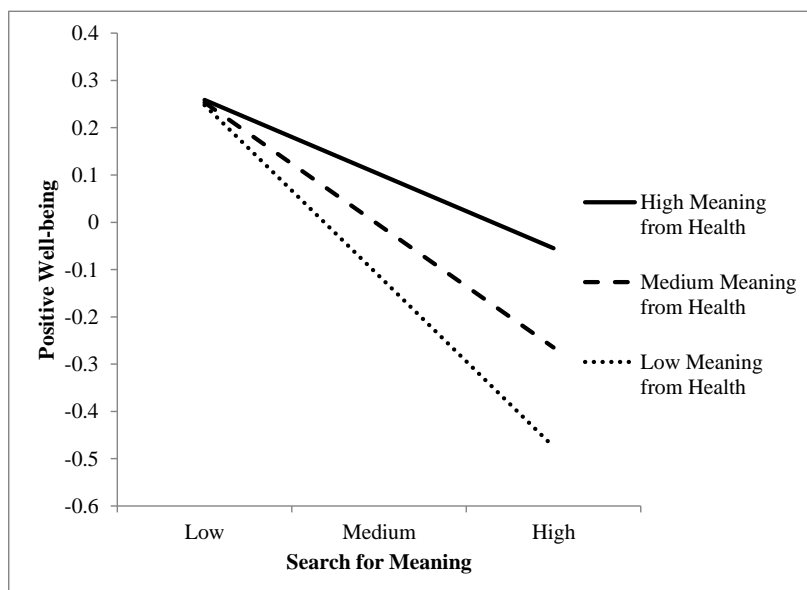


Figure 7.5. Moderation by meaning from health on search for meaning to positive well-being.

Meaning from religiosity/spirituality was also found to act as a moderator between search for meaning and positive well-being ( $\beta = .01, p < .01$ ). Again, simple slopes analyses revealed significant negative relationships for high (slope =  $-.01, t = -2.34, p < .05$ ), medium (slope =  $-.03, t = -6.13, p < .001$ ), and low (slope =  $-.05, t = -6.11, p < .001$ ) meaning from religiosity/spirituality; with the least negative relationship occurring under conditions of high meaning from religiosity/spirituality (see Figure 7.6). This result was not hypothesised in H2 but is congruent with other findings.

The last source of meaning to moderate the relationship from search for meaning to positive well-being was life in general ( $\beta = .02, p < .01$ ). Simple slopes analyses yielded significant negative relationships for medium (slope =  $-.03, t = -5.41, p < .001$ ), and low (slope =  $-.04, t = -5.86, p < .001$ ) meaning from life in general, and the relationship between search for meaning and positive well-being under conditions of high meaning from life in general was non-significant (see Figure 7.7).

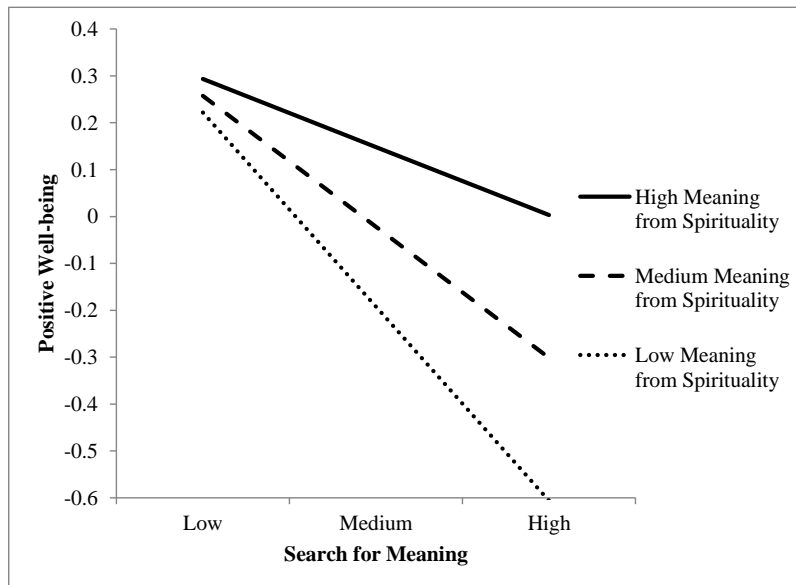


Figure 7.6. Moderation by meaning from religiosity/spirituality on search for meaning to positive well-being.

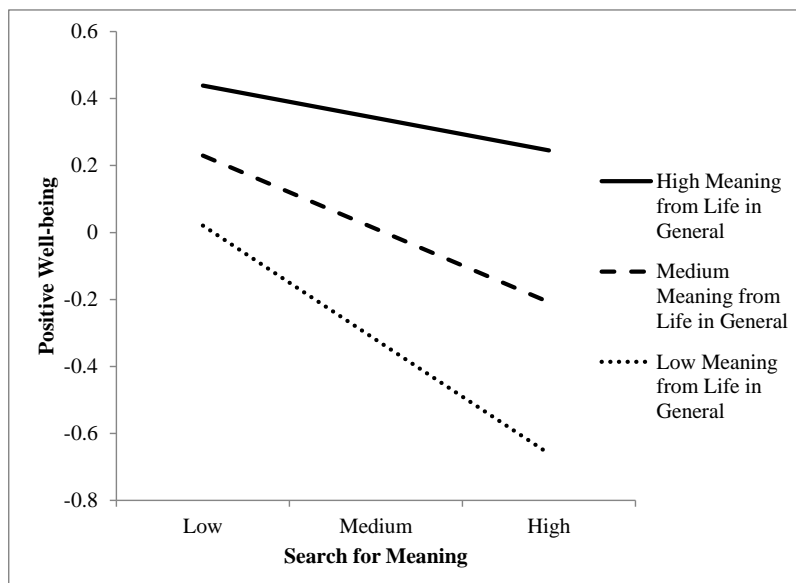


Figure 7.7. Moderation by meaning from life in general on search for meaning to positive well-being.

Although not expected by H2, the previous pattern shows that meaning derived broadly from life in a general sense mitigates the frequently observed detrimental impact on well-being when searching for meaning. Taken together all of these moderation findings provide significant support for H2, but results did not agree with H2 in all cases.

### **Did Degree of Endorsement of Sources of Meaning Influence Levels of Presence, Search and Well-Being?**

H3 stipulated that individuals who highly endorsed sources of meaning would report greater well-being and presence of meaning, and lower levels of search for meaning. For each source of meaning, scores 6 to 7 were coded as high (numerical value = 1) and scores below 1 to 5 were coded as low (numerical value = 0). In order to examine whether high endorsement of the various sources was advantageous, a MANOVA was computed with the eleven sources of meaning (work, family, standard of living, interpersonal relations, health, personal growth, leisure/free time, religiosity/spirituality, community issues, society issues, and life in general) functioning as repeated measures independent variables on the three dependent variables of presence of meaning, search for meaning, and positive well-being.

Significant main effects were yielded for meaning from work ( $F(3, 241) = 2.19, p < .05$ ), family ( $F(3, 241) = 3.27, p < .05$ ), interpersonal relations ( $F(3, 241) = 5.99, p < .001$ ), community issues ( $F(3, 241) = 6.96, p < .001$ ), and society issues ( $F(3, 241) = 7.48, p < .001$ ). Post-hoc Tukey tests indicated that presence of meaning and positive well-being were both significantly greater if these sources of meaning were highly endorsed. A significant main effect was found for meaning from personal growth ( $F(3, 241) = 7.36, p < .001$ ), with a post-hoc Tukey test indicating that presence of meaning and search for meaning were both higher if this domain was highly endorsed. A significant main effect was also found for meaning from religiosity/spirituality ( $F(3, 241) = 9.24, p < .001$ ), and a post-hoc Tukey test indicated that presence of meaning was higher if this source was highly endorsed. There was a significant main effect for life in general ( $F(3, 241) = 23.07, p < .001$ ), and a post-hoc Tukey test revealed that presence of meaning and positive well-being were both higher, while search for meaning was lower, for individuals who highly endorsed meaning from life in general. Given that not all of these results were expected, there was moderate support for H3.

### **Did Highly Endorsing a Number of Sources Influence the Relationships from Search to Presence and Well-Being?**

H4 anticipated that highly endorsing a greater number of sources of meaning would facilitate the search for meaning leading to presence of meaning, and also mitigate the negative impact on well-being when searching for meaning.

**Search to presence.** A moderation analysis was conducted to see whether strongly endorsing a wide range of sources enhanced the relationship between search for meaning and presence of meaning. Contrary to H4, high endorsement of a large number of sources of meaning was not found to significantly moderate the relationship from search for meaning to presence of meaning.

**Search to well-being.** Another moderation was computed and, consistent with H4, the total number of highly endorsed sources of meaning moderated the relationship between search for meaning and positive well-being ( $\beta = .01, p < .05$ ). Significant simple slopes were obtained for medium (slope =  $-.03, t = -6.48, p < .001$ ), and low (slope =  $-.08, t = -4.13, p < .001$ ), but not high (slope =  $.01, t = .48, p = .63$ ) number of sources of meaning highly endorsed (see Figure 7.8). The slope for the high number of sources of meaning showed a non-significant relationship, suggesting that highly endorsing many sources of meaning protects well-being from being compromised by the process of searching for meaning. Thus partial H4 was supported as strong endorsement of a large number of sources was shown to mitigate the negative impact on well-being when searching for meaning.

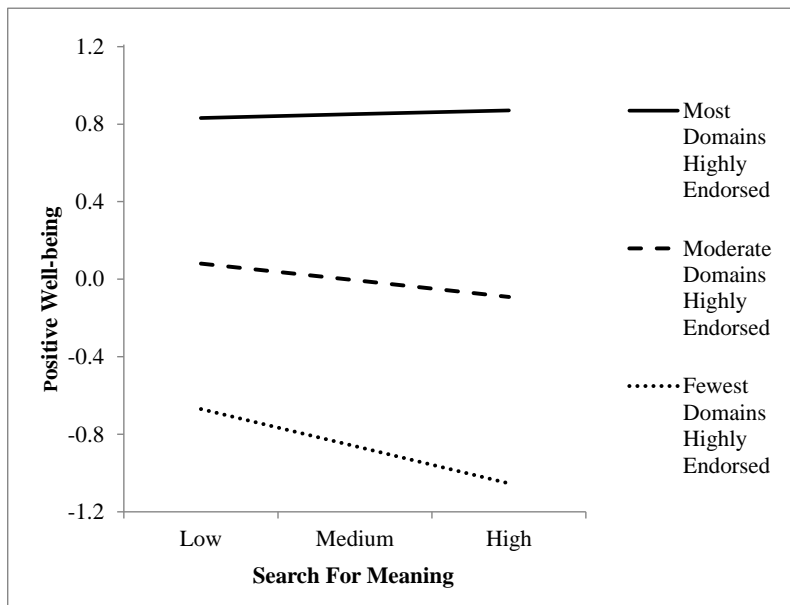


Figure 7.8. Moderation by total number of meaning domains highly endorsed on search for meaning to positive well-being.

## Discussion

The present research examined which sources of meaning best predicted overall meaning in life. Further, it investigated whether certain sources facilitated productive

searching for meaning, and whether they buffered against the negative well-being outcomes frequently experienced during the search for meaning. Previous research found that aspirations deemed to be of an intrinsic nature such as community activities, personal development, and relationships with others were predictive of presence of meaning and search for meaning, whereas more extrinsic aspirations such as achieving financial security were predictive of search for meaning but not attainment of meaning (Weinstein et al., 2012). The current results partially supported these hypotheses as meaning from family and interpersonal relationships positively predicted meaning. Contrary to predictions, however, search for meaning was positively predicted by religiosity/spirituality and personal growth. These results suggest that meaning attainment is strongly based on having significant relationships with other people, and that the searching for meaning is associated with a focus on inward growth and self-transcendence. The theoretical position that intrinsic or extrinsic goals can distinguish between presence and search for meaning was not closely supported.

Research has found intrinsic goals to be linked with well-being (Emmons, 2003; Martos & Kopp, 2011; Sheldon et al., 2004), however investigations have not yet looked at whether particular sources, perhaps those intrinsic in nature, exert an influence on the relationships between search for meaning and its attainment, and search for meaning and well-being. The current research revealed that meaning derived from family and health both facilitated the association between searching for meaning and presence of meaning. These two sources were the two most highly rated, suggesting that important and highly meaningful domains enhance the relationship between searching for meaning and presence of meaning, rather than intrinsic meaning. Further, meaning originating from family, interpersonal relationships, health, religiosity/spirituality, and life in general alleviated the negative well-being outcomes often manifested while searching for meaning. Family, health, life in general, and interpersonal relationships were the four meaning domains with the highest average ratings, so again, this result suggests that the strength of meaning from a source is important. Although religiosity/spirituality was not a particularly highly endorsed source of meaning, research has shown that spiritual goals are particularly important for well-being (Steger & Frazier, 2005), which may explain why meaning from religiosity/spirituality mitigated the negative well-being outcomes when searching for meaning.

Research has found that a strong commitment to one's meaning in life is advantageous for well-being (Battista & Almond, 1973; Pöhlmann et al., 2006). Consistent with this view, the present research found that those individuals who highly endorsed meaning from work, family, interpersonal relationships, community/society issues, and life in



general also reported greater overall meaning in life and well-being, and highly endorsing meaning from religiosity/spirituality was associated with greater presence. Highly endorsing meaning from life in general was associated with higher presence and well-being, and with lower search. The finding that highly endorsing meaning from life in general was associated with a decrease in search for meaning was the only one in which a source of meaning was associated with degree of searching. This result suggests that a global view of life in its entirety is helpful to the search for meaning. High endorsement of meaning from personal growth was associated with greater presence and search. The fact that highly endorsing meaning from personal growth was associated with *increased* search for meaning was unexpected, however it is consistent with research that found meaning from personal growth to positively predict searching for meaning (Grouden, Jose, & EHHI Research Team, 2013). Ultimately, the strength of an individual's conviction about where he or she derives meaning appears to be important for the person's overall attainment of meaning and well-being: in other words, it pays to wholeheartedly experience meaning in the various spheres of one's life.

It has been ascertained in previous research (e.g., Reker & Woo, 2011) that deriving meaning from a number of sources of meaning, in essence, obtaining a greater breadth of meaning, is beneficial for maintaining a steady level of meaning in one's life. This strategy seems to be especially helpful in situations when meaning from one sphere might be compromised; in this eventuality, meaning from other domains can then be strengthened and the individual need not experience a significant loss of overall meaning (Proulx & Heine, 2008). The present research found that *highly endorsing* a wide variety of sources is protective against negative well-being outcomes as a result of searching for meaning. The last two results noted here highlight that it is not only useful to have a wide variety of sources of meaning, but it is also essential to strongly endorse these facets of meaning.

### **Limitations**

Although this research has made a contribution to the field with regard to its examination of how sources of meaning are differentially predictive of well-being, it is not without its limitations. Firstly, the data were cross-sectional, not longitudinal, so it is not possible to ascertain causality between variables. Future research should aim to remedy this shortcoming through the use of a longitudinal design, and aim to replicate the current findings. Additionally, the mixed qualitative-quantitative approach used to examine sources of meaning has not been standardised, and consequently, the psychometric properties of the questions included, in terms of reliability and validity, have not yet been evaluated. In order

to be confident about the findings generated, future research should aim to standardise the approach.

### **Practical Implications**

The current research has identified that certain domains of meaning are predictive of overall meaning, search for meaning, and well-being; further, it has identified that particular sources of meaning facilitate the type of searching for meaning that actually leads to its attainment, and mitigate the negative well-being outcomes associated with searching. Because searching for meaning is an inherently human endeavour, these findings are of importance for most people, and highlight that searching for meaning need not be a negative process if we endorse central sources of meaning such as interpersonal relationships (especially family), health, life in general, and religiosity/spirituality. As we all strive for meaning it is beneficial for most people to know that strongly endorsing sources of meaning is advantageous for facilitating overall meaning and positive well-being.

The research also revealed that strongly endorsing a larger number of sources of meaning is beneficial for well-being; this is an important finding as it has been theorised to be the case but it had not been demonstrated empirically. The notion of breadth of meaning suggests that it is vital to derive meaning from a variety of sources so that if one source is threatened, overall meaning in life is not compromised. The current finding adds to this discussion by highlighting that *strongly endorsing* a wide variety of these sources is protective against negative well-being outcomes when searching for meaning. Essentially, quantity and quality of sources of meaning both exert an influence on well-being. This insight might be helpful in designing interventions centred on facilitating meaning in life as it would be important for such programmes to not only facilitate meaning derivation from many areas in life, but also encourage individuals to endeavour to draw a great deal of meaning from each source.

Searching for meaning is a natural process for human beings in their lives, however, it appears to be a journey rife with difficulty, as meaning is not always attained after searching, and it has been found to impinge negatively on overall well-being. What the present research contributes is greater understanding of how those negative outcomes might be averted or lessened, through deriving meaning from particular sources, and strongly endorsing a wide variety of meaning domains. Ultimately it is important not to put all one's eggs in one basket and endorse only a few sources of meaning, but it is also vital to feel impassioned about those sources of meaning.

## CHAPTER EIGHT

### General Discuss: Contributions of the Research

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*There is not one big cosmic meaning for all; there is only the meaning we each give to our life, an individual meaning, an individual plot, like an individual novel, a book for each person.*

– Anaïs Nin

The broad aims of this investigation were to explore meaning in life in relation to well-being, personality factors, and more specifically, the life domains from which individuals derive a sense of meaning. Firstly, the research examined how search for meaning and presence of meaning relate to one another in a longitudinal capacity and at different developmental stages (discussed in depth in Chapter Two). Further, it aimed to glean greater understanding of subtlety in the relationships between presence of meaning, and search for meaning in relation to indicators of positive and negative well-being (reviewed in Chapters Three and Four). Next, the research described the influence of personality factors on these constructs, with particular focus on whether certain qualities might facilitate the search for meaning that leads to its attainment (discussed in Chapter Five). The research also strived to garner greater understanding of *what* provides us with a sense of meaning, and how this might vary according to demographic factors (see Chapter Six for in-depth discussion). The final goal was to discover how certain sources of meaning, are related to overall meaning, search for meaning, and well-being, and whether holding a strong commitment to one's meaning in life facilitates the search for meaning and buffers against negative well-being outcomes (reviewed in Chapter Seven).

The present (and last) chapter will consider the key findings resulting from these investigations, with the aim to explore their implications and significance. Further, this chapter will endeavour to explore clinical and practical implications following-on from the current findings, and consider the strengths/major contributions of the research. As no research is without flaws, this section will also enumerate limitations associated with the research and consider what future directions research might take in order to develop the meaning in life literature further. Lastly, the chapter will close with concluding remarks, summarising the most essential contributions.

## Key Findings and Implications

### Relationship between Search and Presence across the Lifespan

Although there have been numerous investigations of meaning in life, these have been predominantly cross-sectional, and consequently, there is a dearth of longitudinal research. Further, although the notion of having meaning has been reasonably thoroughly explored, another quintessential component of meaning, the process of searching for it, has been consistently neglected in the meaning literature (e.g., Steger et al., 2006). The current dissertation focused on these two deficits and explored how search for meaning and presence of meaning were related to one another longitudinally, and at different life stages.

Based on previous research (Steger & Kashdan, 2006) it was expected that the two constructs would remain stable over time. Generally consistent with this, the present research showed that when five assessment points were analysed with LGCM, presence of meaning remained stable over the span of a year, whereas search for meaning showed a very subtle decline over time. Further, research has considered the interesting question of whether searching for meaning actually leads to presence of meaning, or whether we are motivated to search for meaning because of deterioration of our overall meaning (Steger et al., 2008). The present research used longitudinal data, consequently illuminating the ways in which search for meaning and presence of meaning are temporally related to one another. Consistent with this research the *accretion* model, namely meaning being sought in order to enhance and build on existing meaning in an accumulative fashion, was not supported. The research did support the latter model, showing that if meaning becomes depleted, this perceived lack acts as a catalyst, instigating a search for meaning in a *compensatory* manner.

The current investigation extended existing research by entertaining the possibility of a more complex relationship between the constructs of search and presence, such that the stability of each might depend on particular levels of the other. Although, as previously mentioned, the research did not suggest that simply searching for meaning led to its achievement, it did unearth a finding showing that, contrary to expectation, presence of meaning is most stable over time under conditions of high search for meaning. This result is an important and novel finding which highlights that searching for meaning plays an important role in the *maintenance* of meaning in life. This finding aligns with the idea that individuals who perceive a sense of significance and meaning in life in an ongoing capacity are also heavily involved in the process of seeking additional meaning (Steger et al., 2008). Going hand-in-hand with this finding is the one that shows that search for meaning was most stable over time under conditions of low presence of meaning. This result is consistent with

previous assertions that human beings are prompted to continue searching for meaning until they establish presence of meaning to a reasonable extent.

Previous research identified that search for meaning was an especially important task earlier in the lifespan, whereas presence of meaning increases and becomes more consolidated with age (Reker, 2005; Reker, et al., 1987; Steger, et al., 2009; Van Ransst & Marcoen, 1997). The current research aligned with these findings as younger participants reported higher search for meaning and their older counterparts reported higher presence of meaning. As research had not yet examined whether creation of meaning is especially pertinent at certain life stages, the current study investigated this possibility. The results showed that younger people demonstrated a significant increase in meaning over time, whereas older individuals did not. This pattern suggests that once meaning has been established to a certain degree, significant increases are not found over time. This study hypothesised that age would also predict change in search for meaning over time, however this prediction was not supported, indicating that, consistent with research showing that individuals at all ages search for meaning (Steger et al., 2009), the search for meaning is a continual, lifelong process.

Essentially, this group of results highlights how crucial searching for meaning is and collectively the results add definition to the meaning in life literature by showing that although it does not directly lead to meaning, it is vital in the maintenance of meaning. This research goes some distance in highlighting the complex nature of the relationship between search for meaning and presence of meaning over the lifespan.

### **Search, Presence and Well-Being**

It has been fairly well established that presence of meaning is positively related to happiness and life satisfaction (e.g., Diener et al., 2012; Steger et al., 2006; Steger & Kashdan, 2006; Zika & Chamberlain, 1992), and negatively related to depression (e.g., Mascaro & Rosen, 2008; Park et al., 2010) and rumination (Steger et al., 2008). Conversely, search for meaning has consistently evidenced a negative relationship with happiness and life satisfaction (e.g., Cohen & Cairns, 2011; Park et al., 2010) and positive linkages with depression and rumination (Steger et al., 2008). Further, research has shown that this pattern is fairly consistent cross-sectionally at different developmental stages (Steger et al., 2009); however, the way in which these concurrent relationships are manifested across time is territory not yet well explored.

As expected, and consistent with previous research, these concurrent relationships were replicated with longitudinal data in the present work. These results showed that a

positive trajectory of presence of meaning over a year was associated with positive trajectories for happiness and life satisfaction and a negative trajectory for depression; on the other hand, increases in search for meaning over the span of a year predicted a decrease in happiness and an increase in rumination over time. These findings are important because they show what one can practically do to achieve tangible increases in happiness and life satisfaction and reduce depression.

Research has shown that the aforementioned pattern of correlates between presence, search, and well-being is found regardless of age, although searching is more strongly linked to impoverished well-being in later life (Steger et al., 2009). Contrary to expectation, and previous research, the current study unearthed some interesting age-related findings: firstly, presence of meaning instigated an *increase* in happiness and life satisfaction for older people over the course of a year. This result may be due to the fact that meaning increases over the lifespan (Reker & Fry, 2003; Reker et al., 1987; Van Ranst & Marcoen, 1997) so perhaps presence of meaning enables the development of greater well-being. Further, meaning becomes more consolidated (Steger, 2009) and directed toward intrinsic meaning (Morgan & Robinson, 2013), and as research has shown that meaning of this nature is especially related to well-being, this may go some distance in explaining this latter finding (Martos & Kopp, 2011; Sheldon et al., 2004). Also contrary to expectation, younger people displayed the strongest association between search for meaning and depression. It may be, for older people, that because meaning increases and becomes more amalgamated over life, any additional search does not have the same detrimental effect as it does earlier in the lifespan. Another finding which deviated from the research by Steger and colleagues (2009) was that presence of meaning was found to lead to a decrease in depression over time for older individuals. Again, this outcome suggests that although meaning is a beneficial construct, it is most active in reducing psychopathology in older age when it has become more cemented.

The finding by Park and colleagues (2010), that having an established sense of meaning in life when searching for meaning buffers against negative well-being, was replicated with presence moderating the relationship between search for meaning and happiness and depression concurrently. The same pattern was also found for rumination. These results provide further weight to the idea that searching can in fact be an adaptive process, as long as one has a foundation of existing meaning as a basis. Further, this research found that presence of meaning moderated the relationship between search for meaning and life satisfaction over a year in a non-linear way; evidently those individuals reporting high presence of meaning did not experience less satisfaction with life after searching for meaning,

but individuals reporting moderately low presence did evidence a negative relationship between the two longitudinally. This finding was not expected, but it adds colour to the complex ways in which search and presence are related to well-being, suggesting that searching for meaning is not *always* a maladaptive process.

Steger and colleagues (2011) demonstrated that presence of meaning had a stronger relationship with well-being if individuals were actively searching for meaning. This finding was replicated in the present research, although it was not found with longitudinal data. This finding resonates strongly with the previously discussed result in which searching for meaning was found to *maintain* the stability of presence of meaning as it maintains well-being too.

The present research endeavoured to extend previous findings which showed that search for meaning and presence of meaning are inversely related (e.g., Steger & Kashdan, 2006; Steger et al., 2011), by examining whether aspects of well-being might change how the constructs related to one another. As expected, feeling happy and satisfied with life had an impact such that the relationship between search and presence was actually *positive* under these conditions. This is a pertinent finding as it suggests that individuals may most benefit from searching for meaning when they experience life as satisfying and happiness-filled. Essentially, these findings confirm that having meaning in life is related to good outcomes in terms of well-being, whereas searching for meaning is linked to well-being deficits. However, they also highlight *how* one can search for meaning without adversely impinging on overall well-being. They suggest that meaning is especially crucial in later life as it is then, after it has been established in a number of realms and revised over time, that it begins to mitigate negative well-being outcomes and meaninglessness.

### **The Influence of Personality on Search, Presence, and Well-Being**

Personality has been considered in relation to meaning in the research literature (McAdams 2012; Steger et al., 2008), however the question of whether certain personality traits might expedite a search for meaning that lead to its attainment has not been widely considered. Research has shown that having a hopeful disposition is related to meaning in life (Halama & Dedova, 2007; Mascaro & Rosen, 2005; Michael & Snyder, 2005), as is hardiness (Maddi et al., 2010; McAdams, 2012), which is a similar construct to that of grit. Consistent with this research, presence of meaning was found to relate positively to hope and grit longitudinally, as an increase in one paralleled an increase in the other. Search for meaning has not been examined in relation grit and hope in empirical research, so given that they all share a future orientation, it was hypothesised that search for meaning would be positively

related with hope and grit. Contrary to expectation, search for meaning was not related to the trait of hope over time, and it predicted a decrease in grit over a year.

Research has not yet considered how personality traits, in this case hope and grit, might enhance one's ability to find meaning after searching for it. Support was found for this idea as search for meaning predicted achievement of presence of meaning a year later under conditions of very high grit. This is an important finding because it demonstrates that it is not just a matter of searching, but rather the attitude one holds when searching which is integral to actually achieving meaning. Evidently being determined, tenacious and persevering toward future goals is key to the achievement of meaning. Further, it was expected that if meaning were to become threatened, then this situation would instigate a search for meaning for individuals high in hope and grit, in alignment with the compensatory/presence-to-search model (Steger et al., 2008). This hypothesis was demonstrated longitudinally, highlighting that having belief that one is able to achieve goals, motivation to do so, perseverance and passion are essential ingredients in initiating search for meaning when overall meaning becomes depleted. It appears that although search was negatively related to grit over time, and not related to hope directly, these two dispositional traits *enhance* the process of searching, rendering it more fruitful.

Previous research has found that the search for meaning is associated with poorer well-being (e.g., Mascaro & Rosen, 2005; Steger et al., 2008; Park et al., 2010), so the present research endeavoured to examine whether this association might be impacted by different levels of dispositional traits. Search was found to lead to greater depression over time if hope and grit were low, however when these qualities were moderate to high, the pathway was buffered.

### **Sources of Meaning, and Demographic Factors**

Consistent with previous research, relationships with other people were found to be of utmost importance in fostering a sense of meaning in life (Baum & Stewart, 1990; Debats, 1999; De Volger & Ebersole, 1981; Ebersole, 1998; O'Connor & Chamberlain, 1996; Yalom, 1980). The present research showed that when individuals are asked to describe what is most meaningful to them, relationships with family are most frequently cited, followed by other interpersonal relationships, however, this outcome deviated from the quantitative examination in which individuals were presented with a list of possible sources, as health was listed as the next most important after family.

When considering whether these sources of meaning might vary across the lifespan, research has shown that there are some components of meaning that are more important in



older age, for example practicality and morality (Schnell, 2009), preserving values, humanistic concerns, and financial security (Bar-Tur & Prager, 1994). In general alignment with these findings, the present research showed that standard of living and community issues were more meaningful to older individuals. Further, personal growth was more important for younger individuals; this result has not been found previously in the meaning literature, however it is consistent with the idea that tasks crucial earlier in life are identity development and self-development (Steger et al., 2009).

With regard to gender differences in sources of meaning, research has not been entirely consistent, however research has found that relationships with others are more meaningful for females (Debats, 1999; Wong, 1998), and well-being and relatedness are important for females in contrast to self-actualisation for males (Schnell, 2009). Contrary to these findings, the present results showed that leisure activities were more meaningful for men, and life in general was more meaningful for women. Additionally, for women, meaning from personal growth and life in general predicted well-being, but not for males. The way that different sources of meaning might predict well-being outcomes differently based on gender has not been explored before so this finding cannot be compared with previous research. However, personal growth has been found to be predictive of well-being for females (Robitschek, 1999).

Not much research has examined differences in sources of meaning as a function of level of education, however Schnell (2009) did find that religiosity/spirituality, tradition, normality, practicality and reason were less important for more educated individuals. Contrary to this prediction, community issues were deemed to be of greater meaningfulness for more educated people; however research has shown that involvement in community activities increases in tandem with level of education (Coulthard et al., 2002), so perhaps involvement makes the domain more salient, and consequently more meaningful. Family, standard of living, health, leisure activities, and life in general were more meaningful for individuals with less education, which is somewhat consistent with research showing that health and family were of greater importance for those with less education (Kotter-Grühn et al., 2009). Finally, for those with more education, religiosity/spirituality predicted well-being, whereas life in general did for those with less education. This has not been considered in research before, however it suggests that for those with non-tertiary education taking a global view of meaning is advantageous, whereas those with tertiary education benefit from fostering the specific source of religiosity/spirituality. These findings highlight that while

there are some unanimously meaningful spheres of life, there are also differences in what is deemed to be important according to demographic factors.

### **Sources of Meaning, Search, Presence, and Well-Being**

Although research has established that meaning is quintessential for well-being, and investigated what is meaningful in life, these two ideas have not been examined in conjunction with one another: how certain sources of meaning might differentially predict well-being outcomes and might certain sources be more likely to result in a successful search for meaning? Further, are certain sources of meaning more predictive of search for meaning and presence of meaning? In the absence of directly applicable research, explorations of goals of extrinsic and intrinsic natures were examined, with results showing that extrinsic goals were positively related to presence of meaning, and negatively related to search for meaning, whereas intrinsic goals were positively related to both (Weinstein et al., 2012). Presence of meaning was positively predicted by family and interpersonal relationships, which is partially consistent with this research, however, search for meaning was positively predicted by personal growth and religiosity/spirituality, both of which could be considered to be intrinsic. Further, intrinsic goals have been found to be related to well-being (Martos & Kopp, 2011; Sheldon et al., 2004).

This research revealed meaning from family and health to predict well-being, which, given that these two were highly endorsed sources, suggests that the degree to which a domain is meaningful influences the impact that it will have on well-being, rather than whether it might be classed as intrinsic or extrinsic. In addition to this, family, health, religiosity/spirituality, life in general, and interpersonal relationships were all domains which served to mitigate the well-being deficits which accrued following a search for meaning. Given that these sources, barring religiosity/spirituality, were all rated as being centrally important, this suggests that strongly meaningful domains serve a protective function. In a similar vein, this research also showed that strongly endorsing sources of meaning was beneficial for enhancing overall meaning and well-being, and for reducing search. Further to this idea, and extending research on the benefit of breadth of meaning (e.g., Reker & Woo, 2011; Proulx & Heine, 2008), this research showed that highly endorsing a large number of domains was protective against well-being deficits that tend to occur when searching for meaning. Evidently, it is important to consider multiple aspects of life to be *extremely* meaningful, not just a few sources to a small degree.

### Practical Applications

The present research aligns well with the overarching positive psychology aim to facilitate well-being by focusing on people's strengths and abilities, rather than aiming to target deficits alone (Seligman, 2002), as it is evident that meaning both builds well-being, and mitigates ill-being, in a two-pronged approach. This knowledge is arguably applicable to all human beings, given the inherent motivation to seek and achieve meaningfulness in life.

The new findings identified have implications the development of effective interventions. There are already some approaches designed to increase meaning for therapeutic benefits (e.g., Meaning-Centered Counseling; Wong, 1997), however the present research might help to modify such programmes and make them more effective. For example, we now know that it is possible to encourage people to search for meaning without fear that they will experience negative well-being outcomes as a result, as long as their present meaning in life is supported and enhanced. Another useful approach is to foster a hopeful and gritty attitude in people so that they are actually able to achieve meaning in life from their searching efforts.

Since the incidence of depression worldwide is growing (Mascaro & Rosen, 2005), and it is a major mental health concern in New Zealand (Bromet et al., 2011), it is extremely useful to know that having meaning in life is one pathway through which depression can be reduced. Due to the significant impact that depression has on people's ability to continue functioning in life, interventions targeting depression through development of meaning would be a welcome addition to the treatment approaches currently available. Additionally, although cognitive behavioural therapy (CBT) has been shown to be efficacious in treating depression, not every patient responds well to it (Karwoski, Garratt, & Ilardi, 2006), and since CBT focuses on deficits and problematic thinking patterns, it does little to build resilience and positive capacity. Karwoski and colleagues describe that such interventions can be expanded to incorporate positive psychology ideas, and based on the findings of the present research, facilitation of meaning is a strong contender. Interventions focusing on meaning would take more of a positive, strengths-based approach, which would complement the traditional CBT approach.

The finding that it is beneficial for overall meaning and well-being to experience areas of life as *strongly* meaningful might also be incorporated into interventions. Such interventions could encourage participants to not just enhance the meaning in their lives, but to become passionate about what is meaningful to them. Further, since the present research showed that strongly endorsing a wider range of sources was beneficial for averting the path

from searching for meaning to psychopathology, this approach would also inform interventions. We should advocate developing a sense of meaning in a variety of areas of life, not just one or two. Additionally, given that sources of meaning differ between individuals in response to developmental stage, gender, and education level, it is vital that such treatment programmes are not prescriptive, with a set approach for achieving meaning; rather they ought to be flexible and encourage meaning to be explored in all manner of realms depending on the characteristics, strengths, and weaknesses of the individual. Given that most individuals have an inclination to search for meaning, it may be reassuring to know that meaning can be derived from a plethora of domains in life, and that these are fluid, not static, over time.

By extending these findings beyond the scope of positive psychology and the science of flourishing, it is evident that they also fit well with the theoretical approach for offender rehabilitation proposed by Ward (e.g., Ward & Brown, 2004). Ward's theory champions the notion of creating a meaningful existence for offenders when they leave prison as a means of reducing reoffending, rather than solely targeting risk factors in treatment. As the present research detailed in this thesis has shown a range of benefits for developing a sense of meaning in life, it would be useful to for future research to examine whether the same pattern of results might be found with an offender population, and whether after release from imprisonment, having meaning serves to preclude re-offending.

### **Strengths and Contributions**

As previously mentioned, the important notion of the search for meaning has not been examined much with empirical research. So the suite of studies in this thesis is one major contribution of the present exploration: unearthing the dynamic manner in which searching for meaning relates to having meaning, and the complicated ways in which they are linked with well-being indicators. Previously, the view about search for meaning was leaning toward the conclusion that it was not an adaptive process in which to engage, as it would not lead to meaning and it manifested negative associations with well-being indicators. Even though searching for meaning is an inherent motivation, if the benefits appear to be few, the question "why bother?" surfaces. The present research shows that searching for meaning need not be futile, nor riddled with depression and rumination, as long as one has an established sense of meaning in other areas of life, one searches in a tenacious, hopeful way or is happy and satisfied with life. The evidence suggests that searching for meaning and attaining it is difficult but it is not impossible: there are numerous ways and routes that one can search and *not* reach a destination characterised by an absence of meaning and impoverished well-being.

This investigation makes some excellent contributions with its longitudinal analyses, as, with a handful of exceptions, longitudinal examinations of meaning in life have been absent in the literature. The research has begun to illuminate the dynamic ways in which search for meaning and presence of meaning relate to one another longitudinally, as well as how each links to well-being over time. Further, the research has uncovered what conditions facilitate the fruitful search for meaning. Although future research needs to confirm these new findings, they already offer a significant contribution as to the nature of this dynamic process.

This research also makes a contribution to the field with its combined exploration into meaning, both globally with its consideration of presence of meaning and search for meaning, as well as specifically through looking at *what* provides meaning in life. Insight into the sources of meaning is important as it has demonstrated that not all sources are equally predictive of overall presence, search, and well-being. It may be advantageous to channel one's energy into developing meaning in certain domains over others. Further, the research showed that the strength of one's conviction to sources of meaning, and strongly endorsing many sources, promotes overall meaning and weakens the pathway from searching to negative well-being outcomes. This is an interesting finding as it confirms the intuitive idea that believing in one's source of meaning fully is adaptive.

### **Limitations and Future Directions**

Although, as outlined, this research has made some valuable contributions to the fabric that is the meaning in life literature, there are of course areas for improvement and future research. The sample used for Chapters Two to Five comprised predominantly female, English-speakers, which means that the results might not be equally applicable in non-Western or male populations. It would be important to endeavour to determine whether the current findings are also found in different cultures as they might be manifested differently. Research has examined search and presence levels cross-culturally (e.g., Steger, Kawabata, Shimai & Otake, 2008), however it would also be important to investigate cross-culturally their shared relationship, linkages with well-being outcomes, whether personality factors exert similar influences, and whether sources of meaning vary.

In Chapters Six and Seven, the data were cross-sectional, and although differences according to life stage and the ways in which sources of meaning predicted well-being were discovered, these would be more persuasive if they were revealed longitudinally. This would be an important avenue for future research to explore as although the research found differences in what is meaningful according to different life stages, genders, and education

levels, it would be import to follow this over time as cohort effects may exert an influence longitudinally. Further, the design used in Chapters Six and Seven was a mixed qualitative-quantitative one which has not been rigorously standardised, so this would need to be done in order to ensure adequate psychometric properties in terms of reliability and validity.

Future research might seek to reproduce the findings presented here so as to further cement them, giving them increased credibility. The present investigation used a variety of well-being indicators, but it would be vital to examine the full range of psychological and health outcomes. Further, there might be additional dispositional traits that might exert an influence on this process, for example possessing resilience might aid in the process of searching for meaning, as the notion of coping despite adversity (Compton & Hoffman, 2013) is integral to this concept. Furthermore, character strengths might also enhance the process of searching for meaning, as research has shown linkages between zest, gratitude, love, curiosity and life satisfaction (Park et al., 2004). These personal qualities might also have an influence on *what* individuals describe as meaningful, given that the present research showed that sources of meaning do vary between people.

As has been described earlier, search for meaning is a construct that has received very little attention in the literature. Further research ought to examine the construct in more detail in order to further tease out its complexities and subtleties. For example, although we know that people are inherently motivated to search for meaning, and that particular realms provide people with meaning in different ways, we do not yet know how much people are actively searching for meaning in the various domains identified. Further, searching for meaning is unlikely to be a uniform process, and as the findings pertaining to personality traits suggested, there may be different types, or stages, of searching, some with greater utility than others. Wong (2012) has suggested that there are different stages of searching, from exploration, to discovery, completion, emergency, and to stagnation, with the latter two involving search following a traumatic event, and being stuck in an ineffectual search due to asking unhelpful questions or reaching conclusions that are not satisfactory, respectively. These sources should be investigated in empirical research, with a focus on whether certain search strategies are more predictive of overall meaning and well-being. In this vein, it might be beneficial to develop a measure which incorporates these search styles, as it would complement the more general MLQ by examining the nature of searching for meaning in more detail.

## Conclusions

What are the take-home messages that have arisen from this investigation? It is difficult to distil the findings down to several main points, as this research has produced a wide variety of fascinating results. However, broadly, I can enumerate some key ideas that encapsulate the important discoveries here. The present research has shown that searching for meaning and having meaning share a complicated, dynamic relationship, and that without the input of other resources, searching for meaning does not lead directly to its attainment.

Both aspects of meaning, search and presence, are intricately related to well-being, albeit in complicated ways. Searching for meaning appears to be an essential part of being human, yet it is clear that this process may have at least a temporary detrimental effect on well-being. The research has highlighted the importance of providing scaffolding when embarking on this process: for example possessing tenacity, determination, and holding a strong belief in one's goals/ability to achieve goals when searching for meaning. Furthermore, having an established sense of meaning in life, or other experiences of well-being can be protective against ill-being when searching for meaning. The present research has also shown that having meaning serves to keep psychological distress at bay, and provides empirical support for the idea that meaning in life reduces psychopathology (Steger, 2012a). Facilitating a sense of meaningfulness was shown to not only be a contender for interventions aiming to reduce depression and negative impacts on well-being, but also increasing well-being and flourishing in life.

There are some aspects of life that provide a sense of meaning for most individuals, for example relationships with others and the associated feeling of connection with others (Stillman et al., 2009). Yet there is also variation as some realms in life are especially meaningful for some individuals, and sources of meaning show a fluidity over the course of the lifespan. Essentially, the present research also confirmed the idea that construction of meaning is an individual, unique process. This investigation also demonstrated that there is variability in the way that different sources predict overall meaning and well-being, and that how strongly one perceives something to be meaningful is of importance. Evidently, stronger endorsement of sources, especially of a wide variety, was found to be beneficial. This finding shows that both quality and quantity of sources of meaning are important. Ultimately, this research highlights that, meaning does in fact matter, it is inherent to human nature and is inextricably linked with our ability to flourish in life.

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**Appendix A**  
**The Meaning in Life Questionnaire**

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Please take a moment to think about what makes your life feel important to you. Please respond to the following statements as truthfully and accurately as you can, and also please remember that these are very subjective questions and that there are no right or wrong answers. Please answer according to the scale below:

Absolutely Untrue	Mostly Untrue	Somewhat Untrue	Can't Say True or False	Somewhat True	Mostly True	Absolutely True
1	2	3	4	5	6	7

1. \_\_\_\_I understand my life's meaning.
2. \_\_\_\_I am looking for something that makes my life feel meaningful.
3. \_\_\_\_I am always looking to find my life's purpose.
4. \_\_\_\_My life has a clear sense of purpose.
5. \_\_\_\_I have a good sense of what makes my life meaningful.
6. \_\_\_\_I have discovered a satisfying life purpose.
7. \_\_\_\_I am always searching for something that makes my life feel significant.
8. \_\_\_\_I am seeking a purpose or mission for my life.
9. \_\_\_\_My life has no clear purpose.
10. \_\_\_\_I am searching for meaning in my life.



## Appendix B

### Subjective Happiness Scale

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For each of the following statements and/or questions, please circle the point on the scale that you feel is most appropriate in describing you.

1. In general, I consider myself:

1	2	3	4	5	6	7
not a very happy person						a very happy person

2. Compared to most of my peers, I consider myself:

1	2	3	4	5	6	7
less happy						more happy

3. Some people are generally very happy. They enjoy life regardless of what is going on, getting the most out of everything. To what extent does this characterization describe you?

1	2	3	4	5	6	7
not at all						a great deal

4. Some people are generally not very happy. Although they are not depressed, they never seem as happy as they might be. To what extent does this characterization describe you?

1	2	3	4	5	6	7
not at all						a great deal

## Appendix C

### Temporal Satisfaction with Life Scale

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Below are 15 statements with which you may agree or disagree. These statements concern either your past, present, or future. Using the 1-7 scale below, indicate your agreement with each item by placing the appropriate number on the line preceding that item. Please be open and honest in your responding. The 7-point scale is:

- 1 = strongly disagree
- 2 = disagree
- 3 = slightly disagree
- 4 = neither agree nor disagree
- 5 = slightly agree
- 6 = agree
- 7 = strongly agree

- \_\_\_\_ 1. If I had my past to live over, I would change nothing.
- \_\_\_\_ 2. I am satisfied with my life in the past.
- \_\_\_\_ 3. My life in the past was the ideal for me.
- \_\_\_\_ 4. The conditions of my life in the past were excellent.
- \_\_\_\_ 5. I had the important things I wanted in my past.
- \_\_\_\_ 6. I would change nothing about my current life.\*
- \_\_\_\_ 7. I am satisfied with my current life.\*
- \_\_\_\_ 8. My current life is ideal for me.\*
- \_\_\_\_ 9. The current conditions of my life are excellent.\*
- \_\_\_\_ 10. I have the important things I want right now.\*
- \_\_\_\_ 11. There will be nothing that I will want to change about my future.
- \_\_\_\_ 12. I will be satisfied with my life in the future.
- \_\_\_\_ 13. I expect my future will be ideal for me.
- \_\_\_\_ 14. The conditions of my life will be excellent.
- \_\_\_\_ 15. I will have the important things I want in the future.

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*Note.* \* = items from the present subscale used in Chapter Three.

## Appendix D

### Center for Epidemiologic Studies Depression Scale

**Instructions:** Please read each question carefully, then **circle** one of the numbers to the right to indicate how you have felt or behaved **during the past week**, including today.

	Rarely or none of the time (less than 1 day)	Some or a little of the time (1 - 2 days)	Occasionally or a moderate amount of time (3 - 4 days)	Most or all of the time (5 - 7 days)
1. I was bothered by things that usually don't bother me.	0	1	2	3
2. I did not feel like eating; my appetite was poor.	0	1	2	3
3. I felt that I could not shake off the blues even with help from my family or friends.	0	1	2	3
4. I felt that I was just as good as other people.	0	1	2	3
5. I had trouble keeping my mind on what I was doing.	0	1	2	3
6. I felt depressed.	0	1	2	3
7. I felt that everything I did was an effort.	0	1	2	3
8. I felt hopeful about the future.	0	1	2	3
9. I thought my life had been a failure.	0	1	2	3
10. I felt fearful.	0	1	2	3
11. My sleep was restless.	0	1	2	3
12. I was happy.	0	1	2	3
13. I talked less than usual.	0	1	2	3
14. I felt lonely.	0	1	2	3
15. People were unfriendly.	0	1	2	3
16. I enjoyed life.	0	1	2	3
17. I had crying spells.	0	1	2	3
18. I felt sad.	0	1	2	3
19. I felt that people dislike me.	0	1	2	3
20. I could not get "going."	0	1	2	3

## Appendix E

### Ruminative Response Scale

We are interested in how you responded to negative events, as well as any other problems or stressors, you have experienced in the last three months.

Would you say you...?

	Strongly Disagree			Neutral			Strongly Agree
1. Thought "Why can't I get going?"	1	2	3	4	5	6	7
2. Thought "Why do I always react this way?"*	1	2	3	4	5	6	7
3. Thought "I won't be able to concentrate if I keep feeling this way."	1	2	3	4	5	6	7
4. Thought "Why can't I handle things better?"*	1	2	3	4	5	6	7
5. Thought about your shortcomings, failings, faults, mistakes.	1	2	3	4	5	6	7
6. Thought about how angry you were with yourself.	1	2	3	4	5	6	7

*Note.* \* = items used in Chapter Four.

**Appendix F**  
**Adult Hope Scale**

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Directions: Read each item carefully. Using the scale shown below, please select the number that best describes YOU and put that number in the blank provided. Thank you.

1 = Definitely false    3 = Mostly true  
2 = Mostly false      4 = Definitely true

- \_\_\_\_ 1. I can think of many ways to get out a jam.
- \_\_\_\_ 2. I energetically pursue my goals.
- \_\_\_\_ 3. I feel tired most of the time.
- \_\_\_\_ 4. There are lots of ways around a problem.
- \_\_\_\_ 5. I am easily downed in an argument.
- \_\_\_\_ 6. I can think of many ways to get the things in life that are most important to me.
- \_\_\_\_ 7. I worry about my health.
- \_\_\_\_ 8. Even when others get discouraged, I know I can find a way to solve the problem.
- \_\_\_\_ 9. My past experiences have prepared me well for my future.
- \_\_\_\_ 10. I've usually been pretty successful in life.
- \_\_\_\_ 11. I usually find myself worrying about something.
- \_\_\_\_ 12. I meet the goals that I set for myself.

## Appendix G

### The Grit Scale

Read each statement and then indicate how much each statement is like you.

	Not at all like me	A little like me	Somewhat like me	Mostly like me	Very much like me
1. I aim to be the best in the world at what I do.	1	2	3	4	5
2. I have overcome setbacks to conquer an important challenge.	1	2	3	4	5
3. New ideas and new projects sometimes distract me from previous ones.	1	2	3	4	5
4. I am ambitious.	1	2	3	4	5
5. My interests change from year to year.	1	2	3	4	5
6. Setbacks don't discourage me.	1	2	3	4	5
7. I have been obsessed with a certain idea or project for a short time but later lost interest.	1	2	3	4	5
8. I am a hard worker.	1	2	3	4	5
9. I often set a goal but later choose to pursue a different one.	1	2	3	4	5
10. I have difficulty maintaining my focus on projects that take more time than a few months to complete	1	2	3	4	5
11. I finish whatever I begin.	1	2	3	4	5
12. Achieving something of lasting importance is the highest goal in life.	1	2	3	4	5
13. I think achievement is overrated.	1	2	3	4	5
14. I have achieved a goal that took years of work.	1	2	3	4	5
15. I am driven to succeed.	1	2	3	4	5
16. I become interested in new pursuits every few months.	1	2	3	4	5
17. I am diligent.	1	2	3	4	5

## Appendix H

### Eudaimonic and Hedonic Happiness Investigation

1. What is **happiness** for you? Take your time and provide your definition.

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2. Please rate your level of happiness in each of the following domains, marking the corresponding number on the scale (**1 = extremely low; 7 = extremely high**). If a specific domain does not apply to you, mark with "X" the cell "Does Not Apply."

	<i>Does Not Apply</i>						
Work	1	2	3	4	5	6	7
Family	1	2	3	4	5	6	7
Standard of living	1	2	3	4	5	6	7
Interpersonal relations	1	2	3	4	5	6	7
Health	1	2	3	4	5	6	7
Personal growth	1	2	3	4	5	6	7
Leisure - free time	1	2	3	4	5	6	7
Spirituality/ religion	1	2	3	4	5	6	7
Community issues <sup>1</sup>	1	2	3	4	5	6	7
Society issues <sup>2</sup>	1	2	3	4	5	6	7
Life in general	1	2	3	4	5	6	7

<sup>1</sup> *Community* - People who live in the same area or share the same interests, usually interacting with one another

<sup>2</sup> *Society* - An extended social group having a distinctive cultural and economic organization.

3. Please list the three **most important future goals** for you:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

4. For each of them, please specify why it is **important**:

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

5. Please list the three things that you consider **most meaningful** in your **present life**:\*

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

6. For each of them, please specify why it is **meaningful** (try to be as specific as possible):

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

7. Please rate to what extent each of the following domains is **meaningful** for you, marking the corresponding number on the scale (**1- not meaningful at all; 7 - extremely meaningful**).\*\*

Work	1	2	3	4	5	6	7
Family	1	2	3	4	5	6	7
Standard of living	1	2	3	4	5	6	7
Interpersonal relations	1	2	3	4	5	6	7
Health	1	2	3	4	5	6	7
Personal growth	1	2	3	4	5	6	7
Leisure - free time	1	2	3	4	5	6	7
Spirituality/ religion	1	2	3	4	5	6	7
Community issues <sup>1</sup>	1	2	3	4	5	6	7
Society issues <sup>2</sup>	1	2	3	4	5	6	7
Life in general	1	2	3	4	5	6	7

<sup>1</sup>*Community* - People who live in the same area or share the same interests, usually interacting with one another.

<sup>2</sup>*Society* - An extended social group having a distinctive cultural and economic organization.

8. Please recall happy situations occurred during the last 6 months. Describe the three situations in which your happiness was **most intense**:

1. \_\_\_\_\_



2. \_\_\_\_\_

3. \_\_\_\_\_

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*Note.* \* = items used in Chapter Six. \*\* = items used in Chapters Six and Seven.

**Appendix I**  
**Satisfaction with Life Scale**

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Below are five statements with which you may agree or disagree. Using the 1-7 scale below, indicate your agreement with each item by placing the appropriate number in the line preceding that item. Please be open and honest in your responding.

- 1 = Strongly Disagree
- 2 = Disagree
- 3 = Slightly Disagree
- 4 = Neither Agree or Disagree
- 5 = Slightly Agree
- 6 = Agree
- 7 = Strongly Agree

- \_\_\_\_\_ 1. In most ways my life is close to my ideal.
- \_\_\_\_\_ 2. The conditions of my life are excellent.
- \_\_\_\_\_ 3. I am satisfied with life.
- \_\_\_\_\_ 4. So far I have gotten the important things I want in life.
- \_\_\_\_\_ 5. If I could live my life over, I would change almost nothing.

## Appendix J

### Mental Health Continuum

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Please answer the following questions are about how you have been feeling during the last month. Place a check mark in the box that best represents how often you have experienced or felt the following:

During the last month how often did you feel ...	Never	Once or twice	About once a week	About 2 or 3 times a week	Almost every day	Every day
1. happy						
2. interested in life						
3. satisfied						
4. that you had something important to contribute to society						
5. that you belonged to a community (like a social group, or your neighborhood)						
6. that our society is becoming a better place for people like you						
7. that people are basically good						
8. that the way our society works makes sense to you						
9. that you liked most parts of your personality						
10. good at managing the responsibilities of your daily life						
11. that you had warm and trusting relationships with others						

12. that you had experiences that challenged you to grow and become a better person						
13. confident to think or express your own ideas and opinions						
14. that your life has a sense of direction or meaning to it						

## Appendix K

### Basic Psychological Needs Scale

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Please read each of the following items carefully, thinking about how it relates to your life, and then indicate how true it is for you. Use the following scale to respond:

1	2	3	4	5	6	7
not at all			somewhat			very
true			true			true

1. I feel like I am free to decide for myself how to live my life.
2. I really like the people I interact with.
3. Often, I do not feel very competent.
4. I feel pressured in my life.
5. People I know tell me I am good at what I do.
6. I get along with people I come into contact with.
7. I pretty much keep to myself and don't have a lot of social contacts.
8. I generally feel free to express my ideas and opinions.
9. I consider the people I regularly interact with to be my friends.
10. I have been able to learn interesting new skills recently.
11. In my daily life, I frequently have to do what I am told.
12. People in my life care about me.
13. Most days I feel a sense of accomplishment from what I do.
14. People I interact with on a daily basis tend to take my feelings into consideration.

## Appendix L:

### Depression Anxiety Stress Scales

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

1. I found it hard to wind down	0	1	2	3
2. I was aware of dryness of my mouth	0	1	2	3
3. I couldn't seem to experience any positive feeling at all*	0	1	2	3
4. I experienced breathing difficulty (eg, excessively rapid breathing, breathlessness in the absence of physical exertion)	0	1	2	3
5. I found it difficult to work up the initiative to do things*	0	1	2	3
6. I tended to over-react to situations	0	1	2	3
7. I experienced trembling (eg, in the hands)	0	1	2	3
8. I felt that I was using a lot of nervous energy	0	1	2	3
9. I was worried about situations in which I might panic and make a fool of myself	0	1	2	3
10. I felt that I had nothing to look forward to*	0	1	2	3
11. I found myself getting agitated	0	1	2	3
12. I found it difficult to relax	0	1	2	3
13. I felt down-hearted and blue*	0	1	2	3
14. I was intolerant of anything that kept me from getting on with what I was doing	0	1	2	3
15. I felt I was close to panic	0	1	2	3
16. I was unable to become enthusiastic about anything*	0	1	2	3
17. I felt I wasn't worth much as a person*	0	1	2	3
18. I felt that I was rather touchy	0	1	2	3
19. 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)	0	1	2	3
20. I felt scared without any good reason	0	1	2	3
21. I felt that life was meaningless*	0	1	2	3

*Note.* \* = items used in Chapters Six and Seven.

## Appendix M:

### The Positive and Negative Affect Schedule

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This scale consists of a number of words that describe different feelings and emotions. Read each item and then circle the appropriate answer. Indicate to what extent you generally feel that is, how you feel on the average.

- 1 - Very slightly or not at all
- 2 - A little
- 3 - Moderately
- 4 - Quite a bit
- 5 - Extremely

1. Interested	1	2	3	4	5	15. Nervous	1	2	3	4	5
2. Distressed	1	2	3	4	5	16. Determined	1	2	3	4	5
3. Excited	1	2	3	4	5	17. Attentive	1	2	3	4	5
4. Upset	1	2	3	4	5	18. Jittery	1	2	3	4	5
5. Strong	1	2	3	4	5	19. Active	1	2	3	4	5
6. Guilty	1	2	3	4	5	20. Afraid	1	2	3	4	5
7. Scared	1	2	3	4	5	21. Peaceful	1	2	3	4	5
8. Hostile	1	2	3	4	5	22. Bored	1	2	3	4	5
9. Enthusiastic	1	2	3	4	5	23. Content	1	2	3	4	5
10. Proud	1	2	3	4	5	24. Sad	1	2	3	4	5
11. Irritable	1	2	3	4	5	25. At ease	1	2	3	4	5
12. Alert	1	2	3	4	5	26. Drowsy	1	2	3	4	5
13. Ashamed	1	2	3	4	5	27. Relaxed	1	2	3	4	5
14. Inspired	1	2	3	4	5	28. Down	1	2	3	4	5